City of Oregon City

625 Center Street
Oregon City, OR 97045
503-657-0891

Meeting Agenda - Final

Planning Commission

Monday, May 18, 2015 | **7:00 PM** | **Commission Chambers**

1. Call to Order

2. Public Comments

3. Public Hearing

Proposed Moss Campus Master Plan and Oregon City School District Transportation Maintenance Facility (Planning Files CP 14-03: Master Plan, DP 14-04: Detailed Development Plan, and NR 14-10: Natural Resource Overlay District Review)

Sponsors: Community Development Director Tony Konkol

Attachments: Commission Report

Staff Report and Recommended Conditions of Approval

Exhibit 2: Land Use Application Form

Exhibit 2: Master Plan Narrative

Exhibit 2: Site-Design Review Narrative

Exhibit 2: Additional Code Reponses

Exhibit 2: Chapter 17.65 Narrative

Exhibit 2: Plans and Drawings

Exhibit 2: Title Reports

Exhibit 2: Original Conditional Use Applciation

Exhibit 2: Existing Site photos

Exhibit 2: Pre-Application Meeting Notes

Exhibit 2: Neighborhood Meeting Notes

Exhibit 2: Storm Drainage Calcs

Exhibit 2: Stormwater Memo

Exhibit 2: Wetland Delination Report

Exhibit 2: NROD Report Appendix A: Figures and Plan Sheets

Exhibit 2: NROD Report Appendix B: DSL Concurrence Letters

Exhibit 2: NROD Report Appendix C: Vegetation Data and Photos

Exhibit 2: Arborist Report

Exhibit 2: Tree Mitigation Table

Exhibit 2: Bike & Pedestrian Circulation Map

Exhibit 2: Vehicular Circulation Map

Exhibit 2: Meyers Road

Exhibit 2: Loder Road

Exhibit 2: Responses to Building Official

Exhibit 2: Environmental Assessment Part 1

Exhibit 2: Environmental Assessment Part 2

Exhibit 2: Environmental Assessment Part 3

Exhibit 2: Environmental Assessment Part 4

Exhibit 3: Public Comment

Exhibit 4: Final Traffic Impact Report

Exhibit 5: Letter from John Replinger

Exhibit 6: Transportation Demand Management Plan, 2001

Exhibit 7: Response to Conditions of Approval for SP 01-06

Exhibit 8: NROD Review from David Evans Associates

Exhibit 9: Applicant's Supplemental Information submitted after public notice

4. Adjournment

Public Comments: The following guidelines are given for citizens presenting information or raising issues relevant to the City but not listed on the agenda.

- *Complete a Comment Card prior to the meeting and submit it to the staff member.*
- *When the Chair calls your name, proceed to the speaker table and state your name and city of residence into the microphone.*
- *Each speaker is given 3 minutes to speak. To assist in tracking your speaking time, refer to the timer at the dais.*
- *As a general practice, Oregon City Officers do not engage in discussion with those making comments.*

Agenda Posted at City Hall, Pioneer Community Center, Library, and City Web site(oregon-city.legistar.com).
Video Streaming & Broadcasts: The meeting is streamed live on Oregon City's Web site at www.orcity.org and is available on demand following the meeting.
ADA: City Hall is wheelchair accessible with entry ramps and handicapped parking located on the east side of the building. Hearing devices may be requested from the City staff member prior to the meeting. Disabled individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-657-0891.

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625 Center Street
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Staff Report

File Number: PC 15-176

Agenda Date: 5/18/2015

Status: Draft

To: Planning Commission

Agenda #: 3a.

From: Community Development Director Tony Konkol

File Type: Land Use Item

SUBJECT:
Proposed Moss Campus Master Plan and Oregon City School District Transportation Maintenance Facility (Planning Files CP 14-03: Master Plan, DP 14-04: Detailed Development Plan, and NR 14-10: Natural Resource Overlay District Review)

RECOMMENDED ACTION (Motion):
Staff recommends the Planning Commission approve the proposal with the conditions listed in the staff report.

BACKGROUND:
The applicant has submitted a Master Plan, Detailed Development Plan, and Natural Resource Overlay Review for a Master Plan for the Moss High School Campus at 19761 Beavercreek Road. The Master Plan area includes the existing high school and assoicated parking lots, athletic fields, and a new transportation maintenance facility. The vacant 10.5 acre portion of the site is proposed to accommodate the District's Transportation and Maintenance Facility and associated storage areas for buses, vans, maintenance vehicles and staff and visitor parking. The Transportation Facility is propsed as Phase One of the Master Plan and is included in this application as a detailed development plan. Future phases are also proposed for the 10-year Master Plan. The subject site contains a wetland and 50 foot vegetated buffer area, which the applicant proposes to disturb minimally to construct a stormwater outfall. A mitigation plan has been submitted for a Natural Resource Overlay review.

BUDGET IMPACT:
Amount:
FY(s):
Funding Source:

OREGON CITY

Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

MASTER PLAN AND SITE PLAN AND DESIGN REVIEW
QUASI-JUDICIAL LAND USE DECISION (TYPE III)
STAFF REPORT AND RECOMMENDATION TO THE PLANNING COMMISSION

May 12, 2015

FILE NUMBER: CP 14-03: Master Plan
DP 14-04: Detailed Development Plan
NR 14-10: Natural Resource Review

Submitted: 12/23/2014
Complete: 3/24/2015
120 Day Deadline: 7/21/2015

APPLICANT: Ronald Lee
BBL Architecture
200 N State Street, suite 200
Lake Oswego, OR 97034

OWNER: Oregon City School District
PO Box 2110
Oregon City, OR 97045

REQUEST: The applicant has submitted a Master Plan, Detailed Development Plan, and Natural Resource Overlay Review for a Master Plan for the Moss High School Campus to include the existing high school, ball fields, and a new transportation maintenance facility. The vacant 10.5 acre portion of the site is proposed to accommodate the District's Transportation and Maintenance Facility and associated parking areas for buses, vans, maintenance vehicles and Transportation and Maintenance Staff and visitor parking.

LOCATION: Clackamas County Map 3-2E-09D- Lots 1200, 1300, 1380, and 1400

REVIEWER: Kelly Moosbrugger, Planner
Aleta Froman-Goodrich, City Engineer

RECOMMENDATION: Staff recommends the Planning Commission approve the application with Conditions.

PROCESS: Type III decisions involve the greatest amount of discretion and evaluation of subjective approval standards, yet are not required to be heard by the city commission, except upon appeal. The process for these land use decisions is controlled by ORS 197.763. Notice of the application and the planning commission or the historic review board hearing is published and mailed to the applicant, recognized neighborhood association and property owners within three hundred feet. Notice must be issued at least twenty days pre-hearing, and the staff report must be available at least seven days pre-hearing. At the evidentiary hearing held before the planning commission or the historic review board, all issues are addressed. The decision of the planning commission or historic review board is appealable to the city commission, on the record. A city-recognized neighborhood association requesting an appeal fee waiver pursuant to 17.50.290(c) must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal. The city commission decision on appeal from the historic review board or the planning commission is the city's final decision and is appealable to LUBA within twenty-one days of when it becomes final.

Conditions of Approval
Planning File CP 14-03, DP 14-04, NR 14-10

(P) = Verify that condition of approval has been met with the Planning Division.
(DS) = Verify that condition of approval has been met with the Engineering Development Services Division.
(B) = Verify that condition of approval has been met with the Building Division.
(F) = Verify that condition of approval has been met with Clackamas Fire Department #1.

1. The applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the applicant to provide any public improvements. As part of this policy the applicant shall schedule a meeting with the City Public Works Engineering development services staff prior to beginning design. (DS)

2. The applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement. (Code section 17.62.050.A.22) (DS)

3. The applicant shall provide an Erosion Prevention and Sedimentation Control Plan to the City for approval. The applicant shall provide a Preliminary Lot Grading Plan to the City for review prior to the approval of construction plans. A final site Lot Grading Plan shall be required as part of the final construction plans per the City's Lot Grading Criteria and the International Building Code. (DS)

4. Prior to starting construction the applicant shall obtain all Public Works permits including the public improvements and site grading permit, and erosion control permit, and shall install tree protection fencing. The applicant shall also participate in a pre-construction conference with Public Works. (DS)

5. The applicant shall be required to provide stormwater quantity and quality control. A final stormwater report shall be submitted with the improvement design. This shall include a preliminary evaluation of the stormwater facilities for the newly dedicated portion of High School Avenue. (DS)

6. The stormwater facilities on the extension of Meyers Road shall include a swale system for detention and treatment that is located in the planter strip. The discharge from the system of swales shall be collected in standard pipe and manhole facilities located in the street and within an easement on the Park property. The discharge shall be to Caulfield creek, and shall include erosion control measures. Temporary collection facilities may be required on the south side of Meyers Road until the remainder of the street is constructed by the Community Services Department, Parks and Recreation Division. (DS)

7. The applicant shall obtain a temporary construction easement, and a 15 foot wide permanent public easement on the property owned by the Community Services Department, Parks and Recreation Division, for operation and maintenance of the storm system. (DS)

8. As part of the dedication and improvement of High School Avenue, the applicant shall provide a stormwater collection, treatment and detention system. The details of this system shall be established in the final storm report and design. The final design and construction of the stormwater system shall be done concurrently with the final street design and construction of High School Avenue. (DS)

9. The stormwater system on private property for the parking lots and buildings shall be a privately owned, operated and maintained system. It shall consist of collection pipe and manholes, a CDS swirl concentrator (or equivalent) treatment system and detention ponds. The discharge shall be to the wetlands and shall include erosion control measures. (DS)

10. The applicant shall record a maintenance covenant and access easement agreement that provides the City the right to access and monitor the private stormwater quality and detention facilities. The applicant shall provide the City with a yearly report that indicates the monitoring and maintenance that has been conducted on the stormwater quality and detention facilities. (DS)

11. The Meyers Road extension shall include a 12 inch water line. The applicant shall obtain a temporary construction easement, and a 15 foot wide permanent public easement on the Park property for operation and maintenance of the portion of the water line that is in Park property. (DS)

12. The High School Avenue improvement shall include a 12 inch water line. The final design and construction of the water line shall be done concurrently with the final street design and construction of High School Avenue. (DS)

13. An appropriately sized domestic water service line and meter shall be provided to the property with approved backflow prevention assembly. The water service and meter shall comply with Public Works standards and the applicable building and plumbing codes. (DS)

14. Provide an appropriately sized fire service line to the property with approved backflow prevention assembly. The fire service and backflow assembly shall comply with Public Works standards and the applicable building and plumbing codes. (DS)

15. Prior to construction plan approval, coordinate with the Community Services Department, Parks and Recreation Division, to determine if the proposed park development on the south side of proposed Meyers Road extension requires water service connection off of the proposed 12-inch Meyers Road water line. (DS)

16. As part of design review, the applicant shall submit the proposed development plans to Clackamas Fire District No. 1 for review and conditions, and install fire hydrants per requirements. (F)

17. Provide a temporary sanitary sewer service line from the property, crossing High School Avenue and connecting to the public sanitary sewer on Quaking Aspen Avenue. This sanitary sewer service line shall consist of a privately owned and operated pump station and force main. The force main shall discharge to manhole located on the applicant's

property, and then flow by gravity into the City manhole on Quaking Aspen Avenue. The applicant shall execute an agreement with the City for the operations and maintenance of the private system within the dedicated High School Avenue right-of-way and Meyers Road. (DS)

18. Provide a gravity sanitary sewer service line to the west end of the property at Meyers Road for future connection to the sanitary sewer when it is constructed. When the gravity sanitary sewer connection is made at Meyers Road, then the temporary pressure service line shall be plugged and abandoned or removed per City requirements. (DS)

19. For all pavement cuts required for the development such as for new water lines, storm and sanitary sewer service lines, the City Pavement Cut Policy and Standards shall be followed. The Full Standard shall be required for pavement cuts. (DS)

20. Prior to construction plan approval, ten-foot public utility easements along all street frontages, right-of-way dedications and all public easements shall be recorded. All existing and proposed utilities, road right-of-ways and easements shall be indicated on the construction plans. (DS)

21. There shall be no vehicular access along the south side of the Meyers Road extension for the entire site frontage until Glen Oak Park is developed. (DS)

22. The full street improvements for the Meyers Road extension shall consist of: 100 foot ROW, 68 feet of pavement (7 foot parking lanes, 6 foot bike lanes with 3 foot buffers, two 12 foot travel lanes, and one 12 foot turning lane), 10.5 foot planter strip including the curb, and a 5 foot sidewalk. The applicant shall construct a half street improvement plus 10 feet of pavement which shall consist of: 60 foot ROW dedication, 44 feet of pavement (7 foot parking lane, 6 foot bike lane with a 3 foot buffer), 10.5 foot planter strip including the curb, and a 5 foot sidewalk curb return radii, curb (handicap) ramps, centerline monumentation in monument boxes, traffic control devices, street trees, and street lights. (DS)

23. The applicant shall obtain a temporary construction easement, and permanent easement for the construction of the portion of the Meyers Road extension that is located on the Park property. The easement shall be voided when the Community Services Department Parks and Recreation Division dedicates the remainder of the ROW for Meyers Road. (DS)

24. The centerline of the extension of Meyers Road shall match the existing centerline at the intersection of High School Avenue, and shall a have an angle of at least 84-degrees. (DS)

25. Meyers Road shall be striped for a parking lane, bike lane and two travel lanes. When the remainder of the street is constructed the street shall be restriped to include two travel lanes and a turn lane. (DS)

26. The street trees in the planter strip along Meyers Road shall be selected such that they are compatible with the use of the planter strip as a stormwater swale. (DS)

27. There shall be two driveways on the Meyers Road extension for the bus parking area, which shall be approximately 200 feet apart. Both ingress and egress shall be allowed for the driveway nearest to the Meyers Road and High School Avenue intersection; the applicant's site design shall take into account sight distance requirements for vehicles

exiting at this driveway and shall provide evidence in a supporting document submitted with the construction plans that these requirements have been met. (DS)

28. The applicant shall dedicate a 54-foot wide Right of Way for High School Avenue (the future Loder Road connection) from Meyers Road to the north end of the applicant's property. The location shall be approximately where the existing private portion of High School Avenue is located, but the final dedication shall be based upon the horizontal design of the street. The horizontal design and right-of-way dedication shall occur at the same time as the Meyers Road improvements along the frontage of the Transportation Facility development. The improvements shall accommodate two travel lanes, one parking lane, bicycle and pedestrian travel in both directions. The sidewalk on the west side may be located in an easement. The final configuration for the street shall be determined by the City. Within five years of the notice of decision of this staff report the applicant shall design and construct the street including the storm system and water line. This condition shall be superseded by any development agreement for the design and construction of Loder Road entered into by the City of Oregon City and the applicant. (DS)

29. The centerline of the reconstruction of High School Avenue shall have a maximum of a 5-foot offset with the existing centerline of the public portion of High School Avenue at the intersection of Meyers Road, and shall a have an angle of 90-degrees. The west curb line at the intersection shall be 12-feet from the centerline. (DS)

30. There shall be two driveways on the newly dedicated portion of High School Avenue. One shall be for the parking area at the intersection of Meyers Road and High School Avenue and shall be approximately 280 feet from the intersection. The other driveway shall be for the northerly parking area, and shall be spaced at approximately 380 feet from the first driveway. A third driveway may be approved by the City upon receiving sufficient data providing justification for its need. (DS)

31. The curves for the Meyers Road extension shall have a radius of 400 foot or greater. The curves on the High School Avenue reconstruction at the north end shall meet industry standards as provided in the AASHTO manual on Geometric Design of Highways and Street. (DS)

32. Applicant is required to coordinate street light design and construction with Portland General Electric (PGE). Prior to final construction plan approval, the applicant shall submit a copy of PGE's work order to construct the street light system improvements and prior to issuing building permits, the applicant shall submit PGE's final acceptance of street light improvements to the City. *(DS)*

33. The intersection of Meyers Road and High School Avenue shall be constructed to accommodate bus turning movements such that they do not impede other travel or turning lanes. This may preclude the proposed curb extensions on Meyers Road. (DS)

34. The applicant may request adjustments to the Meyers Road cross section in order to better match the Meyers Road Concept Plan as it is developed. (DS)

35. The applicant shall dedicate a 25-foot wide easement for sanitary sewer along the northern boundary of tax lot 01300, from the western property line to the realigned and dedicated location for High School Avenue. The final alignment shall be determined during the design phase. (DS)

36. The applicant shall reconfigure the site design such that no portions of the parking lot are within the 20 foot setback along Meyers Road. (P)
37. The applicant shall make the parking lot available to the public after hours, as proposed, and shall provide visible signage that identifies the hours during which the lot is available for public use and directs drivers to the parking lot entrance. (P)
38. The applicant shall provide details in the final lighting plan to demonstrate that the 35 foot lights are full-cut off. (P)
39. Staff finds that the intent of the standard can be met through enhanced landscaping along the southern and eastern edges of the site, combined with decorative fencing and the addition of other pedestrian elements such as benches, public art, or other elements suggested by the applicant or the Planning Commission. The corner at the intersection of Meyers Road and the future Loder Road shall be particularly emphasized with decorative elements, public art, or other features of interest. (P)
40. There is currently a gated entry along the private drive portion of High School Avenue. The applicant shall either eliminate the gate or move the gate to the north to allow the public to access the parking lot after hours. The gate shall be completely removed when Loder Road is constructed. (P)
41. The applicant shall install a pedestrian path to connect the southeast corner of the parking lot to the sidewalk at the intersection of Meyers and Loder Road. If park and athletic field users are to park in the lot, there should be a direct connection from the lot to the crosswalks at the intersection so these users can easily access the street. (P)
42. The applicant shall only be required to include a walkway up to the northern edge of the public parking lot on the eastern side of the transportation site. If the applicant chooses to eliminate the walkway farther north of that point, a painted crosswalk across existing High School Lane and future Loder Road shall be required. (P)
43. The Master Plan shall address the pathway from CCC to the site and include plans to upgrade it pursuant to OCMC 12.044.199 – Pedestrian and Bicycle Accessways, or an alternative approved through a future detailed development plan, to provide safe and secure walking and bicycling connection between these two important community sites. A public access easement shall also be recorded for this path. The applicant shall propose an improvement to this pathway and implement it in one of the phases of this Master Plan, or no later than five years from the notice of decision of this land use application. (P, DS)
44. Prior to issuance of building permits, the applicant shall provide the details about the coverings and ensure that they meet building materials standards in OCMC 17.62.050.A.21. (P)
45. Prior to issuance of permits, the applicant shall demonstrate that the ground floor of the north façade contains arcades, display windows, entry areas, awnings or other such features along no less than sixty percent of their horizontal length. (P)
46. Prior to issuance of building permits, the applicant shall demonstrate that the requirements for façade transparency on the front façade are met. (P)
47. The applicant shall provide a final lighting plan that addresses all standards in 17.62.065.D. (P)
48. Prior to issuance of permits, the applicant shall submitted a revised photometric plan that meets OCMC 17.62.065.D.4. (P)
49. Prior to issuance of building permits, the applicant shall provide a written response demonstrating compliance with 17.62.065.D.12 through D.15. (P)
50. Prior to issuance of permits, the applicant shall provide documentation ensuring that the refuse area is designed with sturdy materials, which are compatible to the primary structure. (P)

51. The applicant shall provide documentation to verify the total enrollment, number of staff, and projected future enrollment and shall provide a revised parking count if these numbers are different from those provided. (P)
52. The applicant shall produce a Transportation Demand Management and Parking Management Plan that reflects current traffic and parking issues. The applicant shall either present a TDM scope of work and contract for City staff approval prior to issuance of building permits, or post a performance guarantee for such a study prior to issuance of building permits. The TDM plan shall include reporting requirements and enforcement mechanisms to ensure that the school district follows the recommendations in the plan. (P)
53. The applicant shall modify the final plans to reflect the required number of carpool/vanpool spaces, no less than 5% of the total parking spaces provided at the transportation facility. (P)
54. Prior to issuance of building permits, the applicant shall revise the site plan to demonstrate that 40 carpool/vanpool spaces will be provided at the high school as part of this detailed development plan. (P)
55. The number of carpool/vanpool spaces provided by the end of the Master Plan period shall equal at least 5% of the total parking provided on site. (P)
56. The applicant shall propose a method to enhance the existing bicycle parking near the high school entrance by covering and/or better securing at least 50% the 60 racks that are near the building entrances. Approval from community development director of the method of covering shall be required; and implementation of this improvement shall be required as part of this detailed development plan. (P)
57. The applicant shall submit details about the location, style, and security of the bicycle parking prior to issuance of permits. (P)
58. The applicant shall provide a means of access through the fence that is accessible by all employees or shall reconfigure the bicycle parking to have direct access to pedestrian pathways. (P)
59. The tree varieties proposed for the parking lot include only maple trees. The applicant shall add coniferous tree(s) to provide a mix of species.
60. The applicant shall provide a final landscaping plan that contains an example with detail for each proposed "landscaping zone" to ensure that the shrubs and groundcover meet the standard. (P)
61. The applicant shall provide trees every 35 feet along the pedestrian walkway on the west side of the parking lot. (P)

62. Prior to issuance of permits, the applicant shall confirm that the loading standards set forth in Code Section 17.52.090 is not applicable or provide documentation showing compliance with loading requirements. (P)

63. Prior to issuance of building permits The applicant shall provide the following
    - recent AM and PM peak hour traffic counts at the intersections of High School Avenue/Meyers Road and High School Avenue/Glen Oak Road
    - an operational analysis of these two intersections under current conditions
    - estimates of AM and PM peak period traffic forecast at each proposed site access

    If these studies result in recommended safety improvements, the applicant shall make these improvements prior to a Certificate of Occupancy for the transportation facility. (P)

64. The applicant shall provide a neighboring City's list that includes this species, or choose a different species from the adopted list. Trees on Loder Road will be placed behind the sidewalk; trees on Meyers will be placed in the 10-foot planter strip. (P)

65. The applicant shall provide the frontage length along Loder Rd. and ensure that the final street tree plan includes one for every 35 feet on frontage. (P)

66. The applicant shall provide a revised tree removal plan that separates trees in construction area from trees outside of the area, and preserves all trees outside of the construction area to the extent practicable. The applicant shall make an attempt to reduce the size of the parking lot and modify the overall site layout to preserve trees. (P)

67. The applicant may utilize the park as a mitigation tree planting area only if a written and signed agreement is made with the City Parks and recreation department that specifies the contribution of the school district. (P)

68. Prior to issuance of the certificate of occupancy, the school district shall finalize the tree mitigation requirements and shall submit a final tree mitigation plan. (P)

69. The applicant shall record a covenant to protect all preserved trees and all mitigation trees with a restrictive covenant. (P)

70. The applicant shall pay a fee in lieu for all trees that are unable to be planted on or off site through Option 1. (P)

71. The applicant shall retain a Project Arborist to sign off on the tree protection plan and methods, and shall follow all measures required in 17.41.130. (P)

72. The applicant provide a weed/invasive species removal plan and ensure that Personnel hired to remove invasive species must be licensed and trained to use herbicides in the vicinity of water bodies, if such chemicals are to be used. The applicant shall follow these recommendations and submit documentation to demonstrate compliance to the City before plant removal begins. (P)

73. The applicant shall record a restrictive covenant or conservation easement for the NROD mitigation plantings including a financial guarantee in the form provided by the city, that will require owners and assigns of the property to comply with the applicable mitigation. (P)

74. Clearing of vegetation (trees and shrubs) within the NROD shall occur outside of the nesting season in accordance with the Migratory Bird Treaty Act. (P)

75. The applicant shall submit a final NROD planting plan that specifies smaller trees than in the original application and includes a temporary irrigation plan prior to the grading permit and ensure frequent watering during establishment. (P)

76. Prior to issuance of permits, the applicant shall submit documentation that demonstrates the value of the proposed exterior alterations or additions to the site. (P)

77. The applicant shall propose a final nonconforming upgrade plan that meets the requirements of Chapter 17.58. (P)

I. BACKGROUND:

1. Existing Conditions

This application concerns the Oregon City School District Moss Campus, where the Oregon City High School is located, along with athletic fields and a proposed new transportation maintenance facility. The entire site acreage is approximately 73 acres. The east side of the site includes the existing Oregon City High School and associated site improvements, including parking and playfields, fenced tennis courts, and minor support buildings including a greenhouse, one playfield concession stand, a pump house, announcer's shed, portable bleachers, backstops and dugouts at baseball and softball fields. A house, garage and barn located at the south soccer fields are planned for future demolition.

The vacant 10.5 acre portion of the site, located west of the private drive High School Avenue, is proposed to accommodate the School District's Transportation and Maintenance Facility and associated parking areas for buses, vans, maintenance vehicles and Transportation and Maintenance Staff and visitor parking. It is intended to replace existing facilities currently located at 14268 Maple Lane Court. The site currently contains one pole barn building, a wetland, and a majority of the site is densely forested with a variety of mostly native tree species. The City's Goal 5 inventory identifies a Natural Resource Overlay that is partially located on the very north end of the portion of the High School Campus located west of High School Avenue. This area is completely within the delineated wetlands area and is proposed to be protected in keeping with the City's Natural Resource Overlay district requirements.

The Oregon City High School Campus was originally designed and built in 1976 as a Junior High School and converted to Ninth grade use with minimal physical change. A Conditional Use Permit (CU 01-01 and SP 01-06) was approved in 2001 by the City for the portion of the site occupied by the High School and it associated playfields. Prior to construction build-out of the high school campus in 2001 and 2002 the students were generally bused into the campus from the Jackson Campus.

The campus does not currently have a Master Plan. When it was developed in 2001, the City did not require Master Plan for institutional sites over 10 acres in size, as required in today's code. Since 2001, the High School has made minor changes that have been processed through Type II site plan design review:

- SP 02-07: Addition of two softball fields and associated parking
- SP 05-06: Parking lot modifications (adjacent to the driveway on Beavercreek Road)
- SP 10-06: A concession stand
- SP 12-16: New batting buildings adjacent to the softball and baseball fields. Only one of these building has been built; the other is proposed as a phase of the master plan

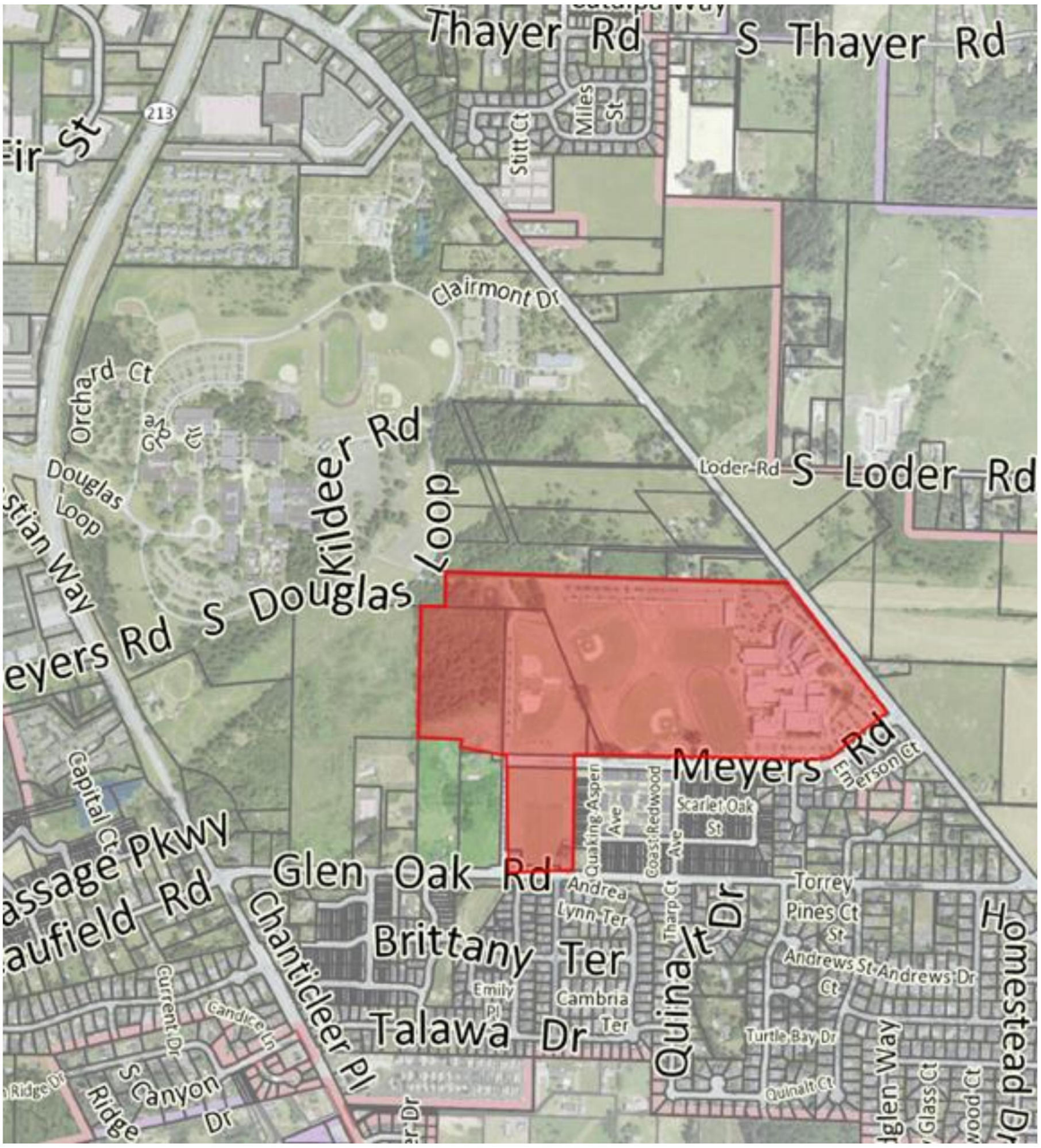


Figure 1. Vicinity Map

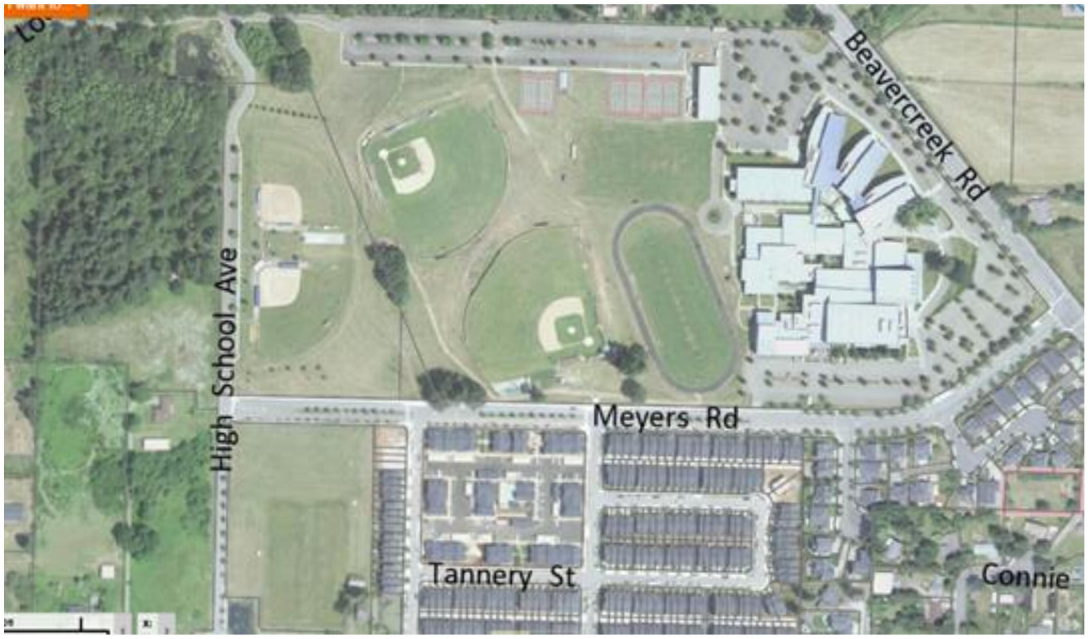


Figure 2: Existing Conditions – Aerial Image

2. Project Description

This project consists of a Master Plan for the entire Moss campus, a detailed development plan for the development of a new transportation maintenance facility on the campus, and a natural resource review for the wetland area north of the proposed facility.

Master Plan

The proposed duration of the Master Plan is 10 years. The Master Plan includes all of the following structures:

Proposed HS Building Areas	
Building 1: Main High School Building	218,321 SF
Building 2: Existing ROTC/Shop	9,280 SF
Building 3: Announcer Shed	100 SF
Building 4: Greenhouse (Phase 4 Removal)	1,420 SF
Building 5: Baseball Hitting Facility	12,800 SF
Building 6: Concessions #1	288 SF
Building 7: Shed Near Hitting Facility	120 SF
Building 8: Irrigation Pump House	154 SF
Building 9: Pole Barn (Phase 1 Removal)	1,300 SF
Building 10: House (Phase 4 Removal)	947 SF
Building 11: Garage (Phase 4 Removal)	225 SF
Building 12: Barn (Phase 4 Removal)	1,029 SF
Proposed Building 13: Transportation Maintenance Facility (Phase 1)	25,691 SF
Proposed Building 14: Softball Hitting Facility (Phase 2)	12,800 SF
Total Phase 1 Floor Area	270,941 SF
Total Phase 4 Floor Area	279,554 SF

The phases proposed include:
Phase 1: Transportation Maintenance Facility and associated site work on currently vacant portion of the site located west of High School Avenue. Anticipated Completion Date of Construction: June 2016.

Phase 2: Corrective actions to bring non-conforming conditions at High School into compliance: 3 years

- Landscaping at parking lot interior (islands) generally conforms to zoning requirements at the existing High School except at 2 non-conforming locations:
  - North Portion of parking lot besides Baseball fields
  - Southwestern portion of main parking lot by Gymnasium
  - (Installation of new planting islands at these two parking lots will occur in future phases of work.)
- Additional bicycle parking spaces; cover 50% of the spaces (if City rejects request to relax requirements given underutilization of existing spaces)
- Screening at electrical transformers and gas meters if//as required by City.
- Designate carpool/vanpool parking spaces at High School (43 required; only one currently designated)

Phase 3: Softball hitting facility construction: 3 years

Phase 4: Demolition of old house, garage and barn demolition of existing greenhouse near soccer fields: 3 to 5 years

Phase 5: Tenant improvements to unfinished areas at 2nd floor of new Transportation Maintenance Facility: 5 to 10 years

The applicant has requested several adjustments to development standards through the Master Plan process, including adjustments to allow the parking lot to be built in front of the building proposed for Phase 1, to increase the building setbacks for Phase 1, to allow decorative chain link fencing for Phase 1, and to maximize parking and limit bicycle parking increases on the high school campus. According to the applicant, the decorative chain link fencing includes student involvement in the design portion to produce the decorative design. The applicant indicated a desire for designs that "fit" the forested nature of the site as well as themes related to Oregon City School District. The applicant's requested adjustments are addressed within this staff report.

Detailed Development Plan

The proposed Phase 1 development is the subject of the DP14-04 Detailed Development Plan. The applicant provided the following narrative regarding this development:

"The Oregon City School District is planning to construct a new state-of-the-art facility to house and maintain buses and other transportation service and district maintenance vehicles. The facility will house related supervisory and maintenance staff, and bus drivers. This modern facility is envisioned to address the District's needs for at least the next 30 years. The goal is to provide a building that is functional, durable, constructed of low maintenance materials, and modern in its appearance.

The new facility will provide shop areas (with support spaces) that need to be secured within a fenced compound. Bus parking and other District vehicles need to also be within the fenced compound. On the other hand, staff and visitor parking needs to be outside the bounds of the fenced compound with its own separate direct access to office areas (and Drivers Lounge) of the facility. Site geometry is not adequate in size or shape to accommodate these requirements if the building were positioned close to the Meyers Road frontage.
The placement of the staff/visitor parking lot at the Southeast corner of the property (at the intersection of Meyers Road and High School Avenue) also provides beneficial access for public use given its proximity to the High School play fields on the East side of High School Avenue and the proposed City park being planned on the South side of Meyers Road.

Functionally, the Bus Maintenance and Facility Maintenance shops need direct access to service yards and bus parking areas which occupy the West and East sides of the facility. Bus Maintenance shops are most efficient and safe with a "drive-through" layout requiring circulation and bus wash areas occupying the third (North) side of the facility. These functional requirements leave only the fourth (South) side of the facility available for staff and driver parking, making it impossible to locate the building closer to the street.

The site layout, as designed, fulfills the need for separate bus parking and staff parking access/egress off Meyers Road. It also allows for drive through bus service bays. In essence, there is a formal public side of the facility to the South (with staff/visitor parking) and a less formal, more utilitarian, private side of the facility to the North and with buses and other district vehicles stored to the West, North and East of the building.) In particular, the bus parking and circulation have been laid out to allow bus movement that avoids the need for buses to back up. The means to construct this parking compound requires grading and activities which prohibited saving perimeter trees at the west boundary."

Proposed site development includes:

- 30,000 square foot building that includes office spaces and covered washing and maintenance areas
- Parking for Staff and Visitors to the Transportation Facility: 138 spaces including 5 accessible spaces
- Larger and Mid-Size Bus Parking: 96 spaces for standard size buses
- Small Buses, Vans and Miscellaneous Maintenance Vehicles: 96 (plus 6 after hour drivers) spaces for small buses, vans and other maintenance vehicles (mowers, etc.)
- Fencing of the bus/van/equipment storage compound area for security purposes
- A stormwater pond
- A partial extension of Meyers Road

The design of the Meyers Road extension is not certain at this time. The City is currently undergoing a concept planning process for the alignment and design of Meyers Road. The final plan, which is expected to be completed in late summer 2015, will result in a design that has been vetted by stakeholders, including city staff, the community, property owners, school district, and Community College. This staff report includes a design option based on our code and stakeholder input, but also encourages as an alternative option that the applicant meet the design recommended by the final Meyers Road Concept Plan. Both options are expected to result in minor changes to the school district's detailed development plan for the transportation facility. These changes are anticipated and will not result in additional land use

review unless the changes are substantial. The applicant has agreed to develop Meyers Road consistent with those adopted changes.

The City's Transportation System Plan adopted in 2013 includes extensions of Meyers Road and Loder Road through the general area of the undeveloped lands near the subject site. The school district has not proposed to build or dedicate right of way for Loder Road in this application. As a condition of approval, the school district will be required to dedicate right of way for Loder Road along the existing private drive, High School Avenue. The construction of Loder Road is required as a condition with the expectation that the City will enter into a development agreement with the School District for the design and construction of Loder Road. The right of way width for Loder Road has been specified in this staff report, but the final design of the street will be determined through a planning process at a later date.

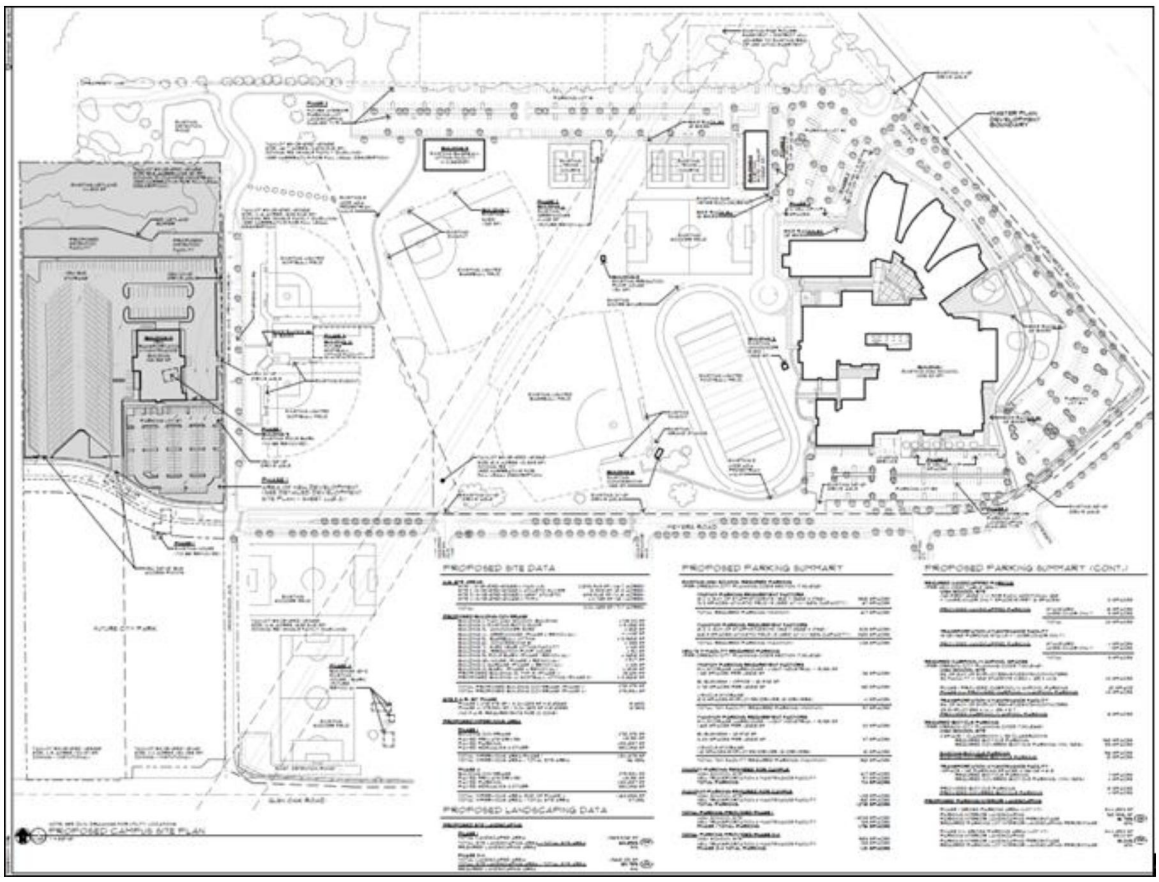


Figure 3: Proposed Master Plan

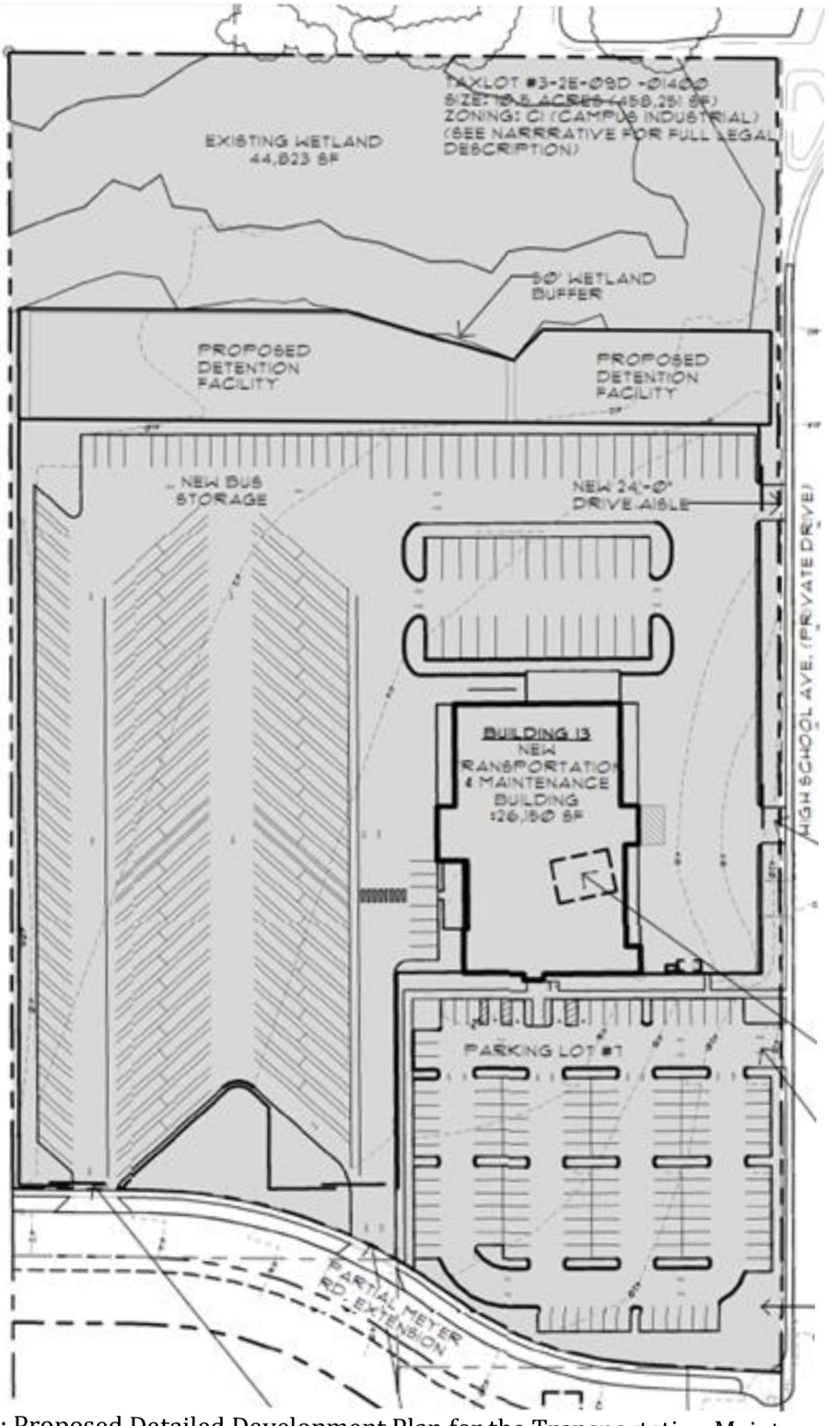


Figure 4: Proposed Detailed Development Plan for the Transportation Maintenance Facility



Figure 5: Proposed Building Elevations

3. **Zoning/Permitted Uses:** The subject site is within the "CI" Campus Industrial district and the R-8 Single Family District. Much of the land surrounding the high school is lightly developed, formerly a rural area with single family homes and pastures. Future plans for these areas call for industrial uses. The Beavercreek Concept Plan will guide development to the east of the site – plans currently call for mixed use and industrial development.

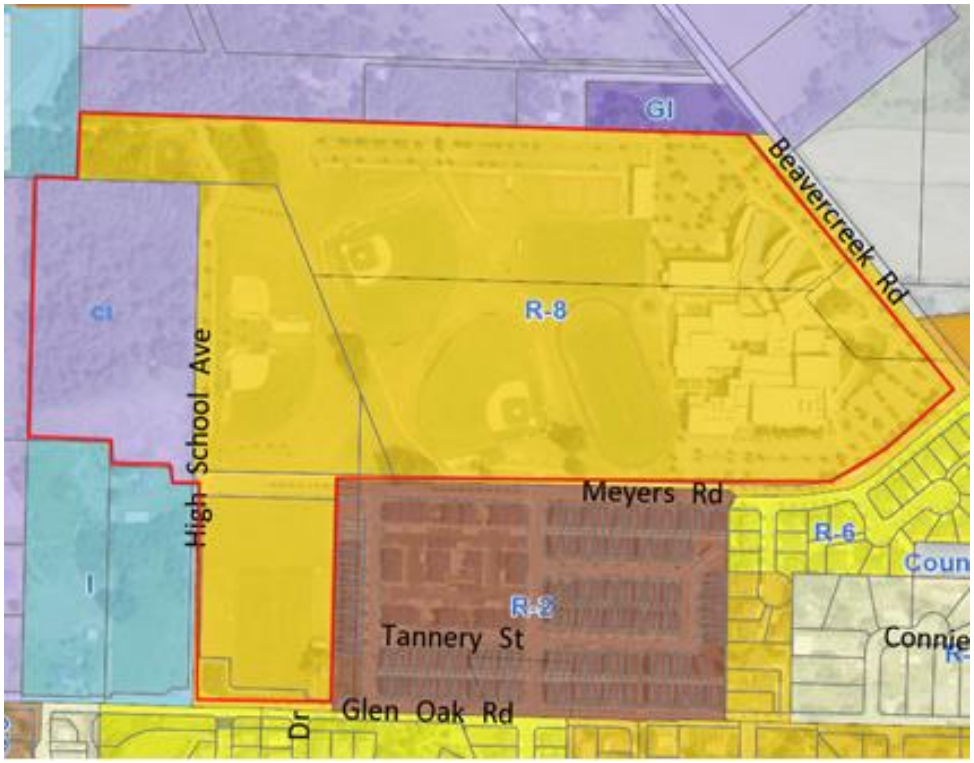


Figure 6: Zoning Map

Direction	Zoning Designation	Land Use
North	GI/CI/I	Clackamas Community College, Single Family homes, Undeveloped
East	MUC-1/County Future Urban	Undeveloped
South	R2/R6/R8/I	Single family homes, townhomes, apartment complex, future park
West	CI	Single Family homes, Undeveloped

4. Notice and Public Comment

Notice of the proposal was sent to various City departments, affected agencies, property owners within 300 feet, and the Neighborhood Association. Additionally, the subject property was posted with signs identifying that a land use action was occurring on the property. Notice was published in the Clackamas Review on April 15, 2015. One comment was received before the publication of this staff report (Exhibit 3):

Ronald Saunders, who owns property to the west of the site, submitted a letter that expressed concern for negative impacts to his property. Mr. Saunders is very concerns about the proposal by the applicant to locate the Loder Road extension on Mr. Sauders' property. The Meyers Road alignment is a concern as well, Mr. Saunders comments that the jog is the road was not originally envisioned and thinks that there has to be an agreement between adjacent property owners if Meyers Road will enter their properties. He also concerned that the site will drain onto his property.

Mr. Saunders' comments are addressed within the staff report. The Loder Road proposal that was submitted with the application is not acceptable to the City; conditions of approval include the dedication of ROW for Loder Road on the east side of the bus facility site, instead of on Mr. Saunders' property. The Meyers Road alignment has been arranged so that the various property owners are impacted fairly equally, with the road arranged on the property boundary so that each property owner will dedicate a portion of Meyers and no one property owner is solely responsible for the dedication. The plan attempts to split the difference between the school property on the north side and the park property on the south side. The property lines vary along this boundary, so that a curve is the best solution. The school district has proposed a storm pond where all the runoff from the site will be directed and treated.

Comments of the Public Works Department and Development Services Division are incorporated into this report and Conditions of Approval.

5. **Municipal Code Standards and Requirements:** The following sections of the Oregon City Municipal Code are applicable to this land use approval:

   17.37 – Campus Industrial District
   17.10 – R-8 Single Family Dwelling District
   17.65 – Master Plans
   17.62 - Site Plan and Design Review
   17.52 - Off Street Parking and Loading
   13.12 - Stormwater Management
   12.04 - Streets, Sidewalks, and Public Places
   12.08 - Public and Street Trees
   15.48 - Grading, Filling and Excavating
   17.47 - Erosion and Sediment Control
   17.41 – Tree Protection
   17.49 – Natural Resource Overlay District
   17.58 – Nonconforming Uses, Structures, and Lots
   17.50 - Administration and Procedures

   The City Code Book is available on-line at www.orcity.org.

EXHIBITS:

1. Vicinity Map
2. Applicant's Narrative and Plans (On File)
3. Public Comment
4. Traffic Analysis Letter
5. Letter from John Replinger
6. Transportation Demand Management Plan, 2001
7. Response to Conditions of Approval for SP 01-06
8. NROD Review from David Evans Associates
9. Applicant's supplemental information submitted after the application was publicly noticed

II. ANALYSIS AND FINDINGS:

CHAPTER 17.37 (CI) CAMPUS INDUSTRIAL DISTRICT

17.37.010 Designated.
The campus industrial district is designed for a mix of clean, employee-intensive industries, and offices serving industrial needs. These areas provide jobs that strengthen and diversify the economy. The uses permitted on Campus Industrial Lands are intended to improve the region's economic climate and to protect the supply of sites for employment by limiting incompatible uses within Industrial and Employment Areas and promoting industrial uses, uses accessory to industrial uses, offices for industrial research and development and large corporate headquarters.
17.37.020 Permitted Uses.
The following uses may occupy up to one hundred percent of the total floor area of the development, unless otherwise described:
A. Experimental or testing laboratories;
B. Industrial uses limited to the design, light manufacturing, processing, assembly, packaging, fabrication and treatment of products made from previously prepared or semi-finished materials
C. Public and/or Private educational or training facilities
D. Corporate or government headquarters or regional offices with fifty or more employees.
E. Computer component assembly plants
F. Information and Data processing centers
G. Software and Hardware development
H. Engineering, architectural and surveying services
I. Non-commercial, educational, scientific and research organizations
J. Research and development activities
K. Industrial and professional equipment and supply stores, which may include service and repair of the same
L. Retail sales and services, including eating establishments for employees (I.E. a café or sandwich shop), located in a single building or in multiple buildings that are part of the same development shall be limited to a maximum of 20,000 square feet or 5% of the building square footage, whichever is less, and the retail sales and services shall not occupy more than 10% of the net developable portion of all contiguous Industrial Lands.
M. Financial, insurance, real estate, or other professional offices, as an accessory use to a permitted use, located in the same building as the permitted use and limited to ten percent of the total floor area of the development. Financial institutions shall primarily serve the needs of businesses and employees within the development, and drive-through features are prohibited.
N. Utilities: basic and linear facilities, such as water, sewer, power, telephone, cable, electrical and natural gas lines, not including major facilities such as sewage and water treatment plants, pump stations, water tanks, telephone exchanges and cell towers.
O. Transportation facilities

Finding: Complies as Proposed. A portion of the site is within the Campus Industrial zone. The transportation facility is proposed to be located in this portion. Staff considers the transportation maintenance facility as an ancillary use to the High School. The zone permits public educational facilities.

17.37.030 Conditional Uses.
The following conditional uses may be established in a campus industrial district subject to review and action on the specific proposal, pursuant to the criteria and review procedures in Chapters 17.50 and 17.56:
A. Distribution or warehousing
B. Any other use which, in the opinion of the Planning Commission, is of similar character of those specified in Sections 17.37.020 and 17.37.030. In addition, the proposed conditional uses:
Will have minimal adverse impact on the appropriate development of primary uses on abutting properties and the surrounding area considering location, size, design and operating characteristics of the use;

2. Will not create odor, dust, smoke, fumes, noise, glare, heat or vibrations which are incompatible with primary uses allowed in this district;
3. Will be located on a site occupied by a primary use, or, if separate, in a structure which is compatible with the character and scale or uses allowed within the district, and on a site no larger than necessary for the use and operational requirements of the use;
4. Will provide vehicular and pedestrian access, circulation, parking and loading areas which are compatible with similar facilities for uses on the same site or adjacent sites.
Finding: Not applicable. No conditional uses are proposed.

17.37.040 Dimensional Standards.
Dimensional standards in the CI district are:
A. Minimum lot area: no minimum required.
B. Maximum building height: except as otherwise provided in subsection B (1) of this section building height shall not exceed forty-five feet.
1. In that area bounded by Leland Road, Warner Milne Road and Molalla Avenue, and located in this zoning district, the maximum building height shall not exceed eighty-five feet in height.
C. Minimum required setbacks:
1. Front yard: twenty feet minimum setback;
2. Interior side yard: no minimum setback;
3. Corner side yard: twenty feet minimum setback;
4. Rear yard: ten feet minimum setback.
D. Buffer zone: If a use in this zone abuts or faces a residential use, a yard of at least twenty-five feet shall be required on the side abutting or facing the adjacent residential or commercial zone in order to provide a buffer area, and landscaping thereof shall be subject to site plan review.
E. If the height of the building exceeds forty-five feet, as provided in subsection B (1) of this section for every additional story built above forty-five feet, an additional twenty-five foot buffer shall be provided.
Finding: Complies as Proposed. Proposed building height is 28 feet. The front setback is proposed to be 275 feet, the rear setback 443 feet, and side setbacks are 96 and 309 feet.

17.37.050 Development Standards.
All development within the CI district is subject to the review procedures and application requirements under Chapter 17.50, and the development standards under Chapter 17.62. Multiple building developments are exempt from the setback requirements of Chapter 17.62.055.
Finding: Complies as Proposed. There is only one building proposed in the CI zone. The setback requirements in 17.62.055 apply.

In addition, the following specific standards, requirements and objectives shall apply to all development in this district. Where requirements conflict, the more restrictive provision shall govern:
A. Landscaping. A minimum of fifteen percent of the developed site area shall be used for landscaping. The design and development of landscaping in this district shall:
1. Enhance the appearance of the site internally and from a distance;
2. Include street trees and street side landscaping;
3. Provide an integrated open space and pedestrian system within the development with appropriate connections to surrounding properties;
4. Include, as appropriate, a bikeway, pedestrian walkway or jogging trail;
5. Provide buffering or transitions between uses;
6. Encourage outdoor eating areas conveniently located for use by employees;
7. Encourage outdoor recreation areas appropriate to serve all the uses within the development.
Finding: Complies as Proposed. 41% of the new Transportation Maintenance Facility site (bounded by Meyers Road extension on south and High School Avenue on the east) is landscaped. This includes the delineated wetland, the 50 ft. buffer of the wetland, and overall site landscaping areas. Street trees and street side landscaping is provided along Meyers Road extension. To the North, trees in the wetland provide a dense buffer and separation between the bus/vehicle

storage area and the neighboring Clackamas Community College. To the South, significant new plantings of trees and shrubs block view of the bus/vehicle storage area and appropriate landscaping is proposed at the staff/visitor parking lot perimeter (both at the South and at the East). New trees and shrubs are proposed at the east perimeter of the site to buffer views from High School Avenue and the High School play fields of the Transportation Maintenance Facility. At the West side of the site, a single row of evenly spaced trees is planted as a buffer between this site and the CI-Zoned neighboring property.

The Meyers Road extension will provide pedestrian circulation to the east and west, along with a walkway around the staff/visitor parking lot that connects to the building entrance. The need for secure bus storage precludes pedestrian walkways through other portions of the site, and precludes additional connections to the west. The stormwater pond and protected wetland preclude pedestrian connections through the site to the north. The future park across the street and the adjacent athletic fields provide recreational opportunities and walking trails. The applicant also proposes an outdoor patio for use by the employees of the maintenance facility.

B. Parking. No parking areas or driveways, except access driveways, shall be constructed within the front setback of any building site or within the buffer areas without approved screening and landscaping.
Finding: Complies with Condition. The proposed staff/visitor parking lot is partially within the minimum front setback of 20 feet. The applicant shall reconfigure the site design such that no portions of the parking lot are within the 20 foot setback along Meyers Road. **The applicant can meet this standard through Condition of Approval 36.**

C. Fences. Periphery fences shall not be allowed within this district. Decorative fences or walls may be used to screen service and loading areas, private patios or courts. Fences may be used to enclose playgrounds, tennis courts, or to secure sensitive areas or uses, including but not limited to, vehicle storage areas, drainage detention facilities, or to separate the development from adjacent properties not within the district. Fences shall not be located where they impede pedestrian or bicycle circulation or between site areas.
Finding: Complies as Proposed. Fencing is proposed to secure vehicle storage areas, and to surround the stormwater facility, as permitted by this section.

D. Signs. One ground-mounted sign may be provided for a development. Other signage shall be regulated by Title 15.
Finding: Complies as Proposed. One ground mounted monument sign is proposed at the corner of Meyers Road and High School Avenue to identify the new Transportation Maintenance Facility. Signs will be reviewed through Chapter 15.48 as a separate process from this land use application.

E. Outdoor Storage and Refuse/Recycling Collection Areas.
1. No materials, supplies or equipment, including company owned or operated trucks or motor vehicles, shall be stored in any area on a lot except inside a closed building, or behind a visual barrier screening such areas so that they are not visible from the neighboring properties or streets. No storage areas shall be maintained between a street and the front of the structure nearest the street;
2. All outdoor refuse/recycling collection areas shall be visibly screened so as not to be visible from streets and neighboring property. No refuse/recycling collection areas shall be maintained between a street and the front of the structure nearest the street.
Finding: Complies as Proposed. Materials, supplies, equipment, buses and other vehicles will be stored within the fenced compound. An emergency generator and its back-up fuel storage, and refuse/recycling collection areas are also located within the fenced compound. The fenced area is proposed to be visually screened by landscaping, which includes approximately 12 foot wide landscaped buffer on the west side and 20 feet buffer on the east side, both planted with shrubs, arborvitae, and trees spaced every 20 to 30 feet.

CHAPTER 17.10 - R-8 SINGLE-FAMILY DWELLING DISTRICT

17.10.010 Designated.

This residential district is designed for single-family homes on lot sizes of approximately eight thousand square feet.

17.10.020 Permitted Uses.

Permitted uses in the R-8 district are:

A. Single-family detached residential units;

B. Parks, playgrounds, playfields and community or neighborhood centers;

C. Home occupations;

D. Farms, commercial or truck gardening and horticultural nurseries on a lot not less than twenty thousand square feet in area (retail sales of materials grown on site is permitted);

E. Temporary real estate offices in model homes located and limited to sales of real estate on a single piece of platted property upon which new residential buildings are being constructed;

Accessory uses, buildings and dwellings;

G. Family day care provider, subject to the provisions of Section 17.54.050.

H. Residential home per ORS 443.400

I. Cottage housing

J. Transportation Facilities

17.10.030 Conditional Uses.

The following conditional uses are permitted in this district when authorized by and in accordance with the standards contained in Chapter 17.56:

A. Golf courses, except miniature golf courses, driving ranges or similar commercial enterprises;

B. Bed and breakfast inns / boarding houses;

C. Cemeteries, crematories, mausoleums and columbariums;

D. Child care centers and nursery schools;

E Emergency service facilities (police and fire), excluding correctional facilities;

F. Residential care facility;

G. Private and/or public educational or training facilities;

H. Public utilities, including sub-stations (such as buildings, plants and other structures);

I. Religious institutions.

J. Assisted living facilities; nursing homes and group homes for over 15 patients

Finding: Complies as Proposed. A large portion of the site is within the R-8 zone, where public educational facilities are a conditional use. The school district obtained a Conditional Use permit for the Moss High School campus in 2001 (CU 01-01). Minor modifications to conditional uses are permitted without an additional conditional use permit. As listed in chapter 17.65.025.C, a small addition or subtraction of building square footage, a revision to parking, or other minor site changes are considered a minor modifications to a conditional use. Thus, an additional conditional use review is not required. The transportation facility is an ancillary use to the high school, and because it is a permitted use in the CI zone where it is located, it does not fall under the conditional use permit for the high school.

17.10.040 Dimensional Standards.

Dimensional standards in the R-8 district are:

A. Minimum lot area, eight thousand square feet;

B. Minimum lot width, sixty feet;

C. Minimum lot depth, seventy-five feet;

D. Maximum building height, two and one-half stories, not to exceed thirty-five feet;

E. Minimum required setbacks:

Front yard fifteen feet minimum setback,

Front porch, ten feet minimum setback,

2. Attached and detached garage, twenty feet minimum setback from the public right-of-way where access is taken, except for alleys. Detached garages on an alley shall be setback a minimum of five feet in residential areas.

3. Interior side yard, nine feet minimum setback for at least one side yard, seven feet minimum setback for the other side yard,
4. Corner side yard, fifteen feet minimum setback,
Rear yard, twenty feet minimum setback,
Rear porch, fifteen feet minimum setback.
Garage Standards: See Section 17.20 – Residential Design Standards.
G. Maximum Lot Coverage: The footprint of all structures 200 square feet or greater shall cover a maximum of 40 percent of the lot area.

Finding: Complies as Proposed. No development within the R-8 zone is currently proposed. Setbacks will be reviewed during detailed development plan processes for projects within the R-8 area of the site.

CHAPTER 17.65 - MASTER PLANS

17.65.030 Applicability of the Master Plan Regulations.
Submission. A master plan shall be submitted for any institutional development on a site over ten acres in size. If the boundaries of an institutional development exceed ten acres in size, the proposed development shall be master planned using the regulations of this chapter. No permit under this title shall by issued for any institutional development in excess of ten acres in total acreage unless it is accompanied by or preceded by a master plan approval under this chapter.
The provisions of this chapter do not apply to modifications to existing institutional developments unless the modification results in a cumulative square footage increase of over ten thousand total building square feet in an existing institutional development over ten acres.
When Required as Part of Previous Land Use Review. The master plan regulations may be used to fulfill a condition of approval from a previous land use decision-requiring master planning for a development.
When Identified in the Oregon City Comprehensive Plan. The master plan regulations are required for all properties identified for master planning in the Land Use section of the Oregon City Comprehensive Plan.
D. Voluntarily. An applicant may voluntarily submit a master plan as part of a land use review.

Finding: Complies as Proposed. A Master Plan is required for this proposal because it is part of an institutional development over 10 acres in size.

17.65.040 Procedure.
A. Preapplication Review. Prior to filing for either General Development Plan or detailed development plan approval, the applicant shall file a pre-application conference pursuant to Section 17.50.030.
General Development Plan. An application for a General Development Plan describing the long-term buildout of the site shall be reviewed through a Type III procedure. An applicant must have an approved
B. General Development Plan before any detailed development plan may be approved, unless both are approved or amended concurrently. Amendments to an approved General Development Plan shall be reviewed under a Type III procedure pursuant to Section 17.65.080.
C. Detailed Development Plan. An application for a detailed development plan, is processed through a Type II procedure, as long as it is in conformance with the approved General Development Plan. Amendments to an approved detailed development plan shall be processed pursuant to Section 17.65.080. Once a development has an approved detailed development plan, Chapter 17.62 Site Plan and Design Review is not be required.
D. Concurrent Review. An applicant may concurrently apply for a General Development Plan and a detailed development plan, or any phase of a detailed development plan. Such a concurrent application is reviewed through a Type III procedure.

Finding: Complies as Proposed. In accordance with this section of the code, the applicant has applied for a concurrent Type III review for the proposed General Development Plan and Detailed Development Plan. The applicant understands that a detailed development plan would normally be processed as a Type II procedure. However, because both the General Development Plan and the Detailed Development Plan are being submitted concurrently, they are both being reviewed through the Type III procedure.

17.62.050.B. Proposed Development Submittal Requirements
h. In addition to the summary statement of anticipated transportation impacts, an applicant shall provide a traffic impact study as specified by City requirements. The transportation impact study shall either:
(1) address the impacts of the development of the site consistent with all phases of the General Development Plan; or
(2) address the impacts of specific phases if the City Engineer determines that the traffic impacts of the full development can be adequately evaluated without specifically addressing subsequent phases.
i. If an applicant chooses to pursue option h(1), the applicant may choose among three options for implementing required transportation capacity and safety improvements:
(1) The General Development Plan may include a phasing plan for the proposed interior circulation system and for all on-site and off-site transportation capacity and safety improvements required on the existing street system as a result of fully implementing the plan. If this option is selected, the transportation phasing plan shall be binding on the applicant.
(2) The applicant may choose to immediately implement all required transportation safety and capacity improvements associated with the fully executed General Development Plan. If this option is selected, no further transportation improvements will be required from the applicant. However, if a General Development Plan is later amended in a manner so as to cause the projected average daily trips, the projected AM or PM peak hour trips, or the peak parking demand of the development to increase over original projections, an additional transportation impact report shall be required to be submitted during the detailed development plan review process for all future phases of the development project and additional improvements may be required.
(3) The applicant may defer implementation of any and all capacity and safety improvements required for any phase until that phase of the development reaches the detailed development plan stage. If this option is selected, the applicant shall submit a table linking required transportation improvements to vehicle trip thresholds for each development phase.

Finding: Complies as Proposed. The applicant has provided a traffic study that includes all Phases of the Master Plan, and has not proposed to delay or defer any improvements for circulation or traffic capacity until later phases. See Chapter 12.04 for a discussion related to traffic improvements.

j. The applicant or city staff may propose objective development standards to address identified impacts that will apply within the proposed development on land that is controlled by the institution. Upon approval of the General Development Plan, these standards will supercede corresponding development standards found in this code. Development standards shall address at least the following:
(1) Pedestrian, bicycle and vehicle circulation and connectivity;
(2) Internal vehicle and bicycle parking;
(3) Building setbacks, landscaping and buffering;
(4) Building design, including pedestrian orientation, height, bulk, materials, ground floor windows and other standards of Chapter 17.62; and
(5) Other standards that address identified development impacts.

Finding: Not Applicable. The applicant has not proposed objective development standards to supercede the development standards in the code.

17.62.050.C. Approval Criteria for a General Development Plan. The Planning Commission shall approve an application for General Development Plan approval only upon finding that the following approval criteria are met.

1. The proposed General Development Plan is consistent with the purposes of Section 17.65.

Finding: Complies as Proposed. A master plan is appropriate for large scale sites that will be phasing development over time, and is required for institutional sites over 10 acres in size. Therefore, the proposed master plan is consistent with the purposes of the Chapter 17.65.

2. Development shall demonstrate compliance with Chapter 12.04 - Streets, Sidewalks and Public Places by the time each phase of the development is completed.
Finding: See section 12.04 for an evaluation of the public streets.

3. Public services for water supply, police, fire, sanitary waste disposal, and storm-water disposal are capable of serving the proposed development, or will be made capable by the time each phase of the development is completed.
Finding: See section 17.62.050.A.6 and A.14 for an evaluation of the public facilities.

4. The proposed General Development Plan protects any inventoried Goal 5 natural, historic or cultural resources within the proposed development boundary consistent with the provisions of applicable overlay districts.
Finding: Complies as Proposed. The site's inventoried Goal 5 resources include the Natural Resources Overlay Zone, including a Title 3 wetland and stream, that run along the west and north sides of the portion of the High School Campus located west of High School Avenue. The proposed development of a new Transportation Maintenance Facility on that portion of the site is proposed to be located outside the overlay zone's boundaries. The applicant has submitted a Natural Resource Overlay application (NR 14-10). Goal 5 resources within 250 feet include additional wetlands to the west and north and a stream west and north of the site.

5. The proposed General Development Plan, including development standards and impact mitigation thresholds and improvements adequately mitigates identified impacts from each phase of development. For needed housing, as defined in ORS 197.303(1), the development standards and mitigation thresholds shall contain clear and objective standards.
Finding: Complies as Proposed. The submitted Traffic Impact Study indicates no adverse impact due to the proposed new Transportation Maintenance Facility. See discussion in Chapter 12.04 for detailed findings. The project does not include housing.

6. The proposed General Development Plan is consistent with the Oregon City Comprehensive Plan and its ancillary documents.
Finding: Complies with Condition. See discussion below:

Policy 1.2.1: Encourage citizens to participate in appropriate government functions and land-use planning.
Goal 1.4 Community Involvement: Provide complete information for individuals, groups, and communities to participate in public policy planning and implementation of policies.
Policy 1.4.1: Notify citizens about community involvement opportunities when they occur.
The School District met with the Caulfield Neighborhood Association on Tuesday, January 27, 2015 to present the proposed new Transportation Maintenance Facility and to garner input regarding its design and community impact.
In addition, the District solicited input from the Neighborhood Association regarding the existing High School's presence in the area. The District has scheduled a meeting with the Meyers Road neighbors to examine the situation first hand, discuss possible solutions, and then meet with City of Oregon City staff to find agreeable actions.
School Board meetings are broadcast on the community access cable channel and each month a project update is given keeping viewers current regarding the project. Also, the district will continue to use its social media presence to communicate information concerning the project.

Goal 2.1 Efficient Use of Land
Ensure that property planned for residential, commercial, office, and industrial uses is used efficiently and that land is developed following principles of sustainable development.

The applicant provided the following response to this Comprehensive plan section:
"The available site area is being maximized in its use while avoiding intrusion into the wetlands located at the northern portion of the Transportation Maintenance Facility site area. The overall School District Site concentrates building and parking areas in order to free up much of the property for use as open play fields.
In addition photovoltaic solar panels are included at both the current high school facility and the new transportation and maintenance facility."

Goal 2.4 Neighborhood Livability
Provide a sense of place and identity for residents and visitors by protecting and maintaining neighborhoods as the basic unit of community life in Oregon City while implementing the goals and policies of the other sections of the Comprehensive Plan.
The applicant provided the following response to this Comprehensive plan section:
"The existing High School, by its very nature, provides a sense of place as a focal educational destination for many residents of Oregon City. This sense of place is further enhanced by the various play fields which are heavily used by the community.
The new proposed Transportation Maintenance Facility is designed to serve as a flagship for future development (by others) in the Campus Industrial area to the west. Constructed of quality materials, this attractive facility could serve as a standard of quality for future industrial facilities to meet."
The proposed new Transportation Maintenance Facility will generate some noise that may affect livability in the neighborhood, but the site is located with significant separation to neighboring residential areas. The proposed facility is bounded on the north by the wetland, on the east by High School playfields, on the south by a future City park, and on the west by vacant land zoned Campus Industrial (CI).
The applicant proposes that the staff/visitor parking lot being provided at the southeast corner of the Transportation Maintenance Facility portion of the High School Campus will be available for after-hours use by the public using both the high school playfields and the future city park. The applicant states that this additional public parking will benefit the neighborhood by reducing the amount of vehicles driving around the neighborhood searching for an on-street parking space. Staff supports the proposal to make the parking lot available for public use after hours, considering that Meyers Road will not have on-street parking on the north side of the street, the proximity of the athletic fields, and the future city park on the opposite side of the Meyers Road extension. The parking lot could provide overflow parking for these uses and increases the utility of the parking lot overall. Thus, the applicant shall make the parking lot available to the public after hours, as proposed, and shall provide visible signage that identifies the hours during which the lot is available for public use and directs drivers to the parking lot entrance. **The applicant can meet this standard through Condition of Approval 37.**

Goal 2.6 Industrial Land Development
Ensure an adequate supply of land for major industrial employers with family wage jobs.
The applicant provided the following response to this Comprehensive plan section:
"At the time of its opening, the proposed new Transportation Maintenance Facility will employ an estimated 65 bus drivers, 3 bus mechanics, 2 dispatchers, 4 Transportation staff, and 10 Maintenance staff."
Of the entire project site, 10.5 acres are within the Campus Industrial zone. The Campus Industrial zone includes educational facilities as a permitted use.

Policy 2.6.2: Ensure that land zoned or planned for industrial use is used for industrial purposes, and that exceptions are allowed only where some other use supports industrial development. New non-industrial uses should especially be restricted in already developed, active industrial sites.
The applicant provided the following response to this Comprehensive plan section:
"The portion of the District's property zoned Campus-Industrial will be the site of the new proposed Transportation Maintenance Facility. While not industrial in use, this educational support facility does share many similarities with potential industrial uses that are expected to develop in the area. These include:

- Securely fenced vehicle storage areas
- Staff parking area
- A building housing maintenance and repair activities"

Of the entire project site, 10.5 acres are within the Campus Industrial zone. The Campus Industrial zone includes educational facilities as a permitted use.

Policy 2.6.3: Protect the city's supply of undeveloped and underdeveloped land zoned for industrial uses by limiting nonindustrial community uses, such as schools, parks, and churches on such properties and by limiting larger commercial uses within those areas.
The applicant provided the following response to this Comprehensive plan section:
"The Campus-Industrial zoned site area will not be used for community uses or for any commercial (or retail) enterprises."
Of the entire project site, 10.5 acres are within the Campus Industrial zone. The Campus Industrial zone includes educational facilities as a permitted use.

Policy 5.4.3: Identify, initiate and cooperate in partnerships with other jurisdictions, businesses, neighborhoods, schools and organizations to conserve and restore natural resources within and adjacent to Oregon City.
The applicant provided the following response to this Comprehensive plan section:
"Required tree mitigation (triggered by the removal of trees on the new Transportation Maintenance Facility) is proposed to occur at the Oregon City High School Site and at Holcomb Elementary School. The District is also discussing how it can assist Oregon City Parks with the planting of future trees at the proposed city park located directly south (across from the proposed Meyers Road extension). An addition twenty-five (1 ½" caliper) trees will be donated to the Eastham Arbor Day Event."

Policy 5.4.5: Ensure that riparian corridors along streams and rivers are conserved and restored to provide maximum ecological value to aquatic and terrestrial species. This could include an aggressive tree and vegetation planting program to stabilize slopes, reduce erosion, and mitigate against invasive species and stream impacts where appropriate.
Policy 5.4.6: Support and promote public education, interpretation, and awareness of the city's ecological resources.
Policy 5.4.8: Conserve natural resources that have significant functions and values related to flood protection, sediment and erosion control, water quality, groundwater recharge and discharge, education, vegetation and fish, and wildlife habitat.
Policy 5.4.11: Maintain and enhance the function and quality of natural wetlands and create, where appropriate, wetlands or swales to moderate the quantity and velocity of water runoff entering streams during storm events and to reduce the amount of pollutants carried into streams.
The applicant provided the following response to this Comprehensive plan section:
"The existing wetlands are being preserved at the north end of the Transportation Maintenance Facility site. Because of its close proximity to the High School, science programs can take

advantage of the wetlands as a "laboratory" to educate students and encourage sound ecological management."

Policy 6.4.1
Provide for noise abatement features such as sound-walls, soil berms, vegetation, and setbacks, to buffer neighborhoods from vehicular noise and industrial uses.
The applicant provided the following response to this Comprehensive plan section:
"Due to its location, the new Transportation Maintenance Facility is isolated from local neighborhoods by a substantial distance."

Policy 9.8.4: Promote "shared parking" and transportation demand management techniques such as transit vouchers, car or van pooling, and flexible schedules and telecommuting options to reduce peak hour trips.
Policy 12.1.1: Maintain and enhance citywide transportation functionality by emphasizing multi-modal travel options for all types of land uses.
The applicant provided the following response to these Comprehensive plan sections:
"A primary purpose of the new proposed Transportation Maintenance Facility is to support the transportation of students to and from school and other school related activities, thus reducing the need for other means of student transport to and from school. Employees of the facility are scheduled to arrive and to depart the facility at nonpeak hours. Refer to Addendum D – Final Traffic Impact Report (Revised Exhibit C) prepared by Lancaster Engineering.
The staff/visitor parking lot is envisioned to be available to pubic park goers on off-hours. The District is in discussion with the City Parks Department to develop an agreement to formalize this arrangement. The District encourages its employees to carpool whenever possible.
The new proposed Transportation Maintenance Facility supports the School District's student transportation system including buses and smaller van transports."

Staff also finds that the through the Meyers Road extension along the site's frontage, the applicant will provide sidewalks and protected bicycle lanes. These will encourage multi-modal travel and eventually connect to the section of Meyers Road west of Highway 213 and provide far greater connectivity. However, the applicant has proposed a parking plan that does not meet the goals of the Comprehensive Plan.

There are documented parking issues at the high school, including parents and students parking in the bicycle lane on Meyers Road, and neighborhood concerns about students parking on the street within the adjacent neighborhood. The applicant states that the existing parking lots at the High School are not fully utilized – the farthest spaces past the tennis courts are usually empty. Thus, it seems that students are parking in the neighborhood and the bike lanes out of convenience, rather than due to lack of on-site parking. Yet, the applicant has requested to maximize parking spaces for Phase 1 and for the beginning of the Master Planning period, and to only reduce parking eventually by replacing spaces with landscaping in future phases of the Master Plan. The City's transportation consultant, John Replinger, has the following comments regarding the amount of parking requested by the applicant:

> "(The applicant's proposal) could lead to an overabundance of parking and encourage more, rather than less, vehicle travel and single-occupancy vehicle use. I recommend that the applicant and the city review the assumptions and refine the parking proposal to come to an agreement on a reduced number of spaces that is more supportive of regional and city goals. I further recommend that the OCSD commit to a transportation

demand management program focused on the maintenance facility to help achieve the broader transportation goals and reduce the need for parking at that site."

The applicant proposed a Transportation Demand Management (TDM) Plan with its original Conditional Use permit application in 2001 (Exhibit 6). This 2001 TDM plan included measures to encourage carpooling and transit use by offering free carpool parking and reduced rate transit passes, by providing a bicycle and pedestrian route between the Community College and the High School, and charging a higher fee to park on site for Single Occupancy vehicles, among other measures. However, the applicant stated that there is no current TDM plan in place at the High School, and the City has no record that one has been completed. Staff finds that the applicant has neither met applicable standards nor the intent of the Comprehensive Plan with the proposed parking plan. See discussion in Chapter 17.52.020 for conditions and findings.

The applicant has requested to not add bicycle parking at the high school to bring the site up to current standards. Bicycle parking is an essential part of providing multi modal travel options and encouraging multi modal travel. While the applicant points out that the bicycle parking is currently underutilized, staff finds that providing cover and/or better security for some of the bicycle parking may improve usage. See discussion in Chapter 17.52.040 for conditions and findings.

The High School campus contains an informal gravel pathway that connects to the neighboring Clackamas Community College campus. This pathway is used as the most direct route for students, staff, and visitors to access the nearest Trimet bus stop and the walking trails and amenities on the college campus. This pathway is unimproved with lighting.
The applicant has not identified this pathway on their pedestrian circulation plan. See findings and conditions in 17.62.050.A.9.

Policy 12.6.1
Provide a transportation system that serves existing and projected travel demand.
The applicant provided the following response to this Comprehensive plan section:
"The goal of the new Transportation Maintenance Facility is to meet the needs of current and future projected bus routes."
In addition, the applicant will contribute to Transportation System Plan projects including the extensions of Meyers Road and Loder Road.

Policy 12.6.4
Identify and prioritize improved connectivity throughout the city street system.
The applicant provided the following response to this Comprehensive plan section:
"Meyers Road will be extended westward."
In addition, ROW will be dedicated for Loder Road. These two road extensions will improve connectivity in the area.

Goal 13.1 Energy Sources
Conserve energy in all forms through efficient land-use patterns, public transportation, building siting and construction standards, and city programs, facilities, and activities.
The applicant provided the following response to this Comprehensive plan section:
The proposed new Transportation Maintenance Facility will be designed to meet or exceed current Oregon Energy Codes. In addition, photovoltaic solar panels will be included.

17.65.60 Detailed Development Plan
B. Approval Criteria. The Community Development Director shall approve an application for detailed development plan approval only upon findings that:
All development standards and impact mitigation meet the requirements of the approved General Development Plan, including conditions of approval.
Any other applicable zoning regulations that are not addressed in the General Development Plan are met, unless an adjustment to those regulations has been applied for and is approved. The approval standards applicable to adjustments required as part of a master plan are contained in 17.65.070.
The detailed development plan conforms with the standards contained in Chapter 17.62, unless adjusted as provided in 17.65.070.
C. Duration of Detailed Development Plan. Unless substantial expenditures have been made to implement the approved detailed development plan, defined as the submittal to the city of engineered plans for approval, a detailed development plan shall expire twenty-four months from the notice of decision date. The date of final approval includes the resolution of all appeals. Upon the receipt from the applicant of a written request and payment of the required fee prior to the expiration dated of the Detailed Development Plan, the Community Development Director may, on a one-time basis, grant a 12-month extension.

Finding: Complies as Proposed. The detailed development plan is consistent with the General Development Plan and with Chapter 17.62. See findings in 17.62 and 17.65.070.

17.65.070 Adjustments to Development Standards.
Purpose. In order to implement the purpose of the City's master plan process, which is to foster the growth of major institutions and other large-scale development, while identifying and mitigating their impacts on surrounding properties and public infrastructure, an applicant may request one or more adjustments to the applicable development regulations as part of the master planning process. These include, but are not limited to, items such as: dimensional standards of the of the underlying zone, Site Plan and Design Review criteria, residential design standards, and standards for land division approval.
Procedure. Requests for adjustments shall be processed concurrently with a General Development Plan. An adjustment request at the detailed development plan review shall cause the detailed development plan to be reviewed as a Type III application.
Regulations That May Not be Adjusted. Adjustments are prohibited for the following items:
1. To allow a primary or accessory use that is not allowed by the regulations;
2. To any regulation that contains the word "prohibited";
3. As an exception to a threshold review, such as a Type III review process; and
4. Any exception to allow a use not identified as a permitted or conditional use in the underlying zone.

Finding: Complies as Proposed. The following adjustments are requested. Adjustments 5, 6, and 9 are handled through their respective code sections and will be addressed elsewhere in this report.

1) Adjustment to 17.62.065.D.3 for installation of 30 foot high light poles in bus storage area in order to provide sufficient lighting with minimal shading between buses.
17.62.065.D.3: The maximum height of any lighting pole serving a multi-family residential use shall be twenty feet. The maximum height serving any other type of use shall be twenty-five feet, except in parking lots larger than five acres, the maximum height shall be thirty-five feet if the pole is located at least one hundred feet from any residential use.

2) Adjustment to 17.62.050.21.b for use of modified (vinyl coated) chain link fencing at north, east and west perimeters of the developed Site area. Consider modified chain link fencing fronting Meyers Road with suitable landscape screening.
17.62.050.21.b: The following materials shall be prohibited in visible locations unless an exception is granted by the community development director based on the integration of the material into the overall design of the structure.
iv. Chain link fencing (except for temporary purposes such as a construction site or as a gate for a refuse enclosure).

Section 17.62.050.A.21 prohibits chain link fencing in visible locations, but allows the Community Development Direct to approve the material if integrated into the overall design. Fencing along Meyers Road and along the existing High school Avenue will be visible. The Planning Commission may consider an adjustment for chain link fencing in areas of the site that are not visible, namely the eastern and northern edges of the site, and may find that the chain link is integrated into the overall site design for the visible edges of the site. See additional findings below.

3) Adjustment to 17.62.055.C.5 and D.1 to allow building to be set back from Street frontage/Meyers Road as shown on accompanying site plan.

17.62.055.C.5 On sites with one hundred feet or more of frontage at least sixty percent of the site frontage width shall be occupied by buildings placed within five feet of the property line, unless a greater setback is accepted under the provisions of Section 17.62.055D. For sites with less than one hundred feet of street frontage, at least fifty percent of the site frontage width shall be occupied by buildings placed within five feet of the property line unless a greater setback is accepted under the provisions of Section 17.62.055D.

17.62.055.D.1 Buildings shall be placed no farther than five feet from the front property line. A larger front yard setback may be approved through site plan and design review if the setback area incorporates at least one element from the following list for every five feet of increased setback requested:

a. Tables, benches or other approved seating area.
b. Cobbled, patterned or paved stone or enhanced concrete.
c. Pedestrian scale lighting.
d. Sculpture/public art.
e. Fountains/Water feature.
f. At least twenty square feet of landscaping or planter boxes for each tenant facade fronting on the activity area.
g. Outdoor café.
h. Enhanced landscaping or additional landscaping.
i. Other elements, as approved by the community development director, that can meet the intent of this section.

4) Adjustment to 17.62.055.I.1 to relax any building façade transparency requirements along High School Avenue (should it become the Loder Road extension); limit transparency requirements to frontage along Meyers Road only.

17.62.055.I.1 Transparent windows or doors facing the street are required. The main front elevation shall provide at least sixty percent windows or transparency at the pedestrian level. Facades on corner lots shall provide at least sixty percent windows or transparency on all corner-side facades. All other side elevations shall provide at least thirty percent transparency. The transparency is measured in lineal fashion. For example, a one hundred-foot long building elevation shall have at least sixty feet (sixty percent of one hundred feet) of transparency in length. Reflective, glazed, mirrored or tinted glass is limited to ten percent of the lineal footage of windows on the street facing facade. Highly reflective or glare-producing glass with a reflective factor of one-quarter or greater is prohibited on all building facades. Any glazing materials shall have a maximum fifteen percent outside visual light reflectivity value. No exception shall be made for reflective glass styles that appear transparent when internally illuminated.

Adjustment 5) Allow one bus entrances/exit and one bus exit only off Meyers Road as illustrated on accompanying Site Plan. See attached Site Plans for bus traffic patterns.

Adjustment 6) Meyers Road Extension to match existing Meyers Road ROW width.

Adjustment 7) Bicycle ridership at the High School has, since its construction, been low, due perhaps to both Oregon City's rainy climate and its students' general disinterest in this mode of transportation. Given the historic underutilization of the existing bicycle parking spaces at the High School, applicant requests that the City not require additional spaces to meet the existing nonconforming Zoning Code requirements at this time. Applicant proposes a phased approach to increasing bicycle parking spaces as popularity of this option of travel increases and bicycle parking demand is demonstrated.

Adjustment 8) Maximize the quantity of vehicle parking spaces in order to better satisfy parking demand at the Site(s) and address Neighborhood complaints/concerns.

Adjustment 9) Permit adjustment to Section 17.49.155 as described in ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49

Approval Criteria. A request for an adjustment to one or more applicable development regulations under this section shall be approved if the review body finds that the applicant has shown the following criteria to be met.
1. Granting the adjustment will equally or better meet the purpose of the regulation to be modified;
Finding: Complies with Conditions.

Adjustment	Code	Purpose
1	17.62.065.D.3	Control glare and excessive brightness to improve visual performance, allow better visibility with relatively less light, and protect residents from nuisance and discomfort; Control light pollution to minimize the negative effects of misdirected light and recapture views to the night sky
2	17.62.050.21.b	Conserve the city's natural beauty and visual character
3	17.62.055.C.5 17.62.055.D.1 17.62.050.A.2.a	Promote the design of an urban environment that is built to human scale by creating buildings and streets that are attractive to pedestrians, create a sense of enclosure
4	17.62.055.I.1	Promote the design of an urban environment that is built to human scale by creating buildings and streets that are attractive to pedestrians
5	12.04.195	This is a modification requested through 12.04.007.
6	12.04.180	This is a modification requested through 12.04.007.
7	17.52.040.B	To encourage bicycle transportation to help reduce principal reliance on the automobile, and to ensure bicycle safety and security.
8	17.52.020.A	Maximum parking standards are meant to reduce the amount of land used for parking and to avoid reliance on the automobile.
9	17.49.155	This is an alternative requested through 17.49.

Adjustment #1
This adjustment equally meets the intent of the standard. The standard allows poles up to 35 feet in parking lots greater than 5 acres. The facility proposed is similar in size, use, and character to a parking lot, and is located well over 100 feet from any residential uses. The applicant states the use of 30 foot poles will result in fewer poles required overall. Staff finds that the 30 foot poles will not cause glare or excessive brightness to neighboring residents, and will have the same impact as a larger number of shorter poles, as long as they are full-cut off. The applicant shall provide details in the final lighting plan to demonstrate that the 35 foot lights are full-cut off. **The applicant can meet this standard through Condition of Approval 38.**

Adjustment #2
The applicant provided the following explanation for this adjustment:

"Allowing use of modified (vinyl coated) chain link fencing at north, east and west perimeters of the developed Site area can be mixed with decorative elements to provide an attractive character comparative to other decorative fencing alternatives. Enhanced landscaping along perimeter fencing (at East, South and West) will include shrubbery to further mute the appearance of the fencing."

The northern and western edges of the site are not visible from public areas or rights of way, and staff supports the use of vinyl coated chain link fencing (decorative or non decorative), screened by the proposed landscaping on these edges. On the southern and eastern edges of the transportation facility, staff finds that decorative elements within a vinyl coated chain link fence may be appropriate as integrated into the overall design of the site, including proposed landscape screening. The landscaping, once mature, will likely obscure a majority of the fencing. The Meyers Road frontage will be the most visible frontage, being that it will be across the street from the future Glen Oak Park. Although staff is satisfied with the applicant's use if decorative elements and landscaping along the Meyers Road frontage, should the Planning Commission wish to require a different material or enhanced decorative elements on the fencing, staff recommends that the Meyers Road frontage be prioritized.

Adjustment #3

The applicant provided the following explanation for this adjustment:
"Allowing the building to be set back from Street frontage/Meyers Road is necessitated in order to:
a. Isolate secured bus/vehicle storage areas from the public/staff parking.
b. Provide dual sided ingress/egress of vehicles at shop areas.
c. Provide public domain with staff parking and front entrance to office areas at south portion of the site. Also, relieve parking congestion on High School Avenue due to simultaneous sporting events on the High School sports fields. Special events parking could be available to the City Parks Department during non-employee use.
The geometry of the site precludes a solution that positions the building at a closer setback."

The underlying zone requires a 20 foot minimum setback, but 17.62.055 requires institutional buildings to be built to the street, superseding the setbacks required in the zone. Chapter 17.62.055 also requires corner lots to have buildings built at the corner with entrances at or near the corner. The dedication of ROW for Loder Road makes this a corner site. The applicant also proposes to place the parking lot in front of the building, meaning the requirements in 17.62.055 along with 17.62.050.A.2.a all need to be adjusted, if the proposed site design is to be approved.

The purpose of these standards is generally to create pedestrian-friendly environments. In this case, the applicant proposes decorative fencing and landscaping along the edge of the site. Staff finds that the intent of the zone and the overall function of the site, as explained by the applicant, create a situation in which landscaping and other elements may be appropriate to enrich the pedestrian environment, rather than relying upon the building placement and orientation. Although the building is institutional and is thus required to meet design requirements in 17.62.055, staff does note that the Campus Industrial District would not require industrial buildings to meet the standards in 17.62.055. In addition, the zone further exempts multiple building developments from meeting the standards in 17.62.055, no matter their use. The requirement to place parking next to or behind buildings rather than in front (OCMC 17.52.050.A.2.A), however, applies to every building that is reviewed through site plan and design review, including industrial buildings that would be developed along Meyers Road in the

future. In this particular case, the applicant has proposed that the parking lot in front of the building be open to the public after hours and serve the adjacent athletic fields and park, in order to both justify its placement in front of the building and to mitigate its impact. If the Planning Commission agrees with the applicant's reasoning, staff recommends the following mitigation:

1. enhanced landscaping along the southern and eastern edges of the site
2. proposed decorative fencing
3. the addition of other pedestrian elements such as benches, public art, or other elements suggested by the applicant or the Planning Commission
4. The corner at the intersection of Meyers Road and the future Loder Road shall be particularly emphasized with decorative elements, public art, enhanced landscaping and/or other features of interest

Staff has written a condition of approval to require this mitigation, should the Planning Commission decide to permit the proposed site layout.
The applicant can meet this standard through Condition of Approval 39.

Adjustment #4
The applicant points out that High School Avenue is not currently a public right of way, so the eastern side of the building should not be considered to be facing a street. However, this decision includes a condition that the applicant dedicate right of way along High School Avenue for the future alignment of Loder Road, which will ultimately result in the east side of the building facing a street. The façade of the building is not proposed to be close to the street (see adjustment #3), and will not have an immediate impact on the pedestrian environment. The eastern façade contains garage door openings with glazing, with an overall transparent percentage of 51%. Considering the setback of the building and the mitigation that is required for adjustment #3, it appears the intent of the standard has been met.

Adjustment #7
This adjustment does not equally meet the intent of the standard. The applicant states that existing bicycle parking spaces at the High School are (and always have been) sufficient in number and very underutilized. Other transportation options have been more acceptable to students. Applicant proposes phasing the addition of more bicycle parking spaces as the need for them is demonstrated. Staff supports the phasing in of additional bicycle parking spaces, but also recommends covering some of the existing spaces along with implementation of a Transportation Demand Management plan that reduces reliance on vehicles in favor of other modes. See discussion in 17.65.050.C.6 and 17.52.040.

Adjustment #8
This adjustment does not equally meet the intent of the standard. The applicant states that maintaining the existing parking on the High School Site will avoid increasing neighborhood concerns regarding on-street parking demands on streets neighboring the High School. Provision of new parking at the Transportation Maintenance Facility Site will alleviate parking demands generated by High School Play Field events and potential parking needs for future City Park events/activities. Staff finds that the existing parking lots are not fully utilized and does not agree that auto parking should be maximized to the extent requested. See discussion in 17.65.050.C.6 and 17.52.020.

2. If more than one adjustment is being requested, the cumulative effect of the adjustments results in a project that is still consistent with the overall purpose of the zone;
Finding: Complies with Condition. The overall purpose of the zone does not refer to aesthetics or design. The overall purpose of the Campus Industrial zone is:
The campus industrial district is designed for a mix of clean, employee-intensive industries, and offices serving industrial needs. These areas provide jobs that strengthen and diversify the economy. The uses permitted on campus industrial lands are intended to improve the region's economic climate and to protect the supply of sites for employment by limiting incompatible uses within industrial and employment areas and promoting industrial uses, uses accessory to industrial uses, offices for industrial research and development and large corporate headquarters.

In response to this criteria, the applicant states:
"The proposed Transportation Maintenance Facility will be compatible with the neighboring Campus Industrial development to the west and is well buffered to the north. The staff/visitor parking at the facility is easily accessed by the public off-hours from the east and will aid in alleviating parking demand by visitors to events on the High School play fields. A future City Park is planned for development to the south of the Transportation Maintenance Facility (across the Meyers Road extension) and park visitors too can use the facility's staff/visitor parking on off-hours. The staff/visitor parking is located at the intersection of Meyers Road and High School Avenue in order to be easily visible and accessible to would-be users. Finally, with the staff/visitor parking nearest to Meyers Road, users of that end of the future Glen Oak Park will have more visual openness as they look in that direction versus the view of an industrial building directly across from the park."

Staff finds that the cumulative effect of the adjustments requested result in a project that is compatible with the overall purpose of the zone, if the applicant complies with the recommended conditions of approval. The detailed development plan is consistent with other campus industrial uses that are expected to be developed along the Meyers Road extension. The proposal will result in a site that serves as a transition between the future industrial uses and the high school campus.
The applicant can assure that the cumulative effect of the requested adjustments complies with the intent of the Campus Industrial zone through compliance with Conditions of Approval 38 and 39.

3. City-designated Goal 5 resources are protected to the extent otherwise required by Title 17;
Finding: Complies as Proposed. The adjustments requested do not impact the City's Goal 5 resources.

4. Any impacts resulting from the adjustment are mitigated; and
Finding: Complies with Condition. See findings in 17.65.070.1.

5. If in an environmental zone, the proposal has as few significant detrimental environmental impacts on the resource and resource values as is practicable.
Finding: Complies as Proposed. The adjustments requested do not impact the City's Goal 5 resources. The applicant's proposal protects the wetland and fully mitigates the minor disturbance to the wetland buffer area on site. The applicant has submitted a Natural Resource Overlay District review (NR 14-10).

6. The proposed adjustment is consistent with the Oregon City Comprehensive Plan and ancillary documents.

Finding: Complies as Proposed. See findings in 17.65.050.C.6. The adjustments requested do not affect the project's consistency with the Comprehensive Plan.

17.65.090 Regulations that Apply
An applicant is entitled to rely on land use regulations in effect on the date its General Development Plan application was initially submitted, pursuant to ORS 227.178(3), as that statute may be amended from time to time. After a General Development Plan is approved, and so long as that General Development Plan is in effect, an applicant is entitled to rely on the land use regulations in effect on the date its General Development Plan application was initially submitted, as provided above, when seeking approval of detailed development plans that implement an approved General Development Plan. At its option, an applicant may request that a detailed development plan be subject to the land use regulations in effect on the date its detailed development plan is initially submitted.
Finding: Complies as Proposed. The applicant did not request that future detailed development plans be subject to today's code.

CHAPTER 17.62 SITE PLAN AND DESIGN REVIEW

Application. The application for the minor site plan and design review shall contain the following elements:
1. The submittal requirements of Chapter 17.50.
2. A narrative explaining all aspects of the proposal in detail and addressing each of the criteria listed in Section 17.62.035(C) below.
3. Site plan drawings showing existing conditions/uses and proposed conditions/uses.
4. Architectural drawings, including building elevations and envelopes, if architectural work is proposed.
5. Additional submittal material may be required by the Community Development Director on a case-by-case basis.
Finding: Complies as Proposed. The applicant submitted a narrative, drawings, photos, and code responses and the application was deemed complete on March 24, 2015.

17.62.015 Modifications that will better meet design review requirements.
The review body may consider modification of site-related development standards. These modifications are done as part of design review and are not required to go through the Variance process pursuant to section 17.60.020*. Adjustments to use-related development standards (such as floor area ratios, intensity of use, size of the use, number of units, or concentration of uses) are required to go through the Variance process pursuant to* section 17.60.020*. Modifications that are denied through design review may be requested as Variance through the Variance process pursuant to* section 17.60.020*. The review body may approve requested modifications if it finds that the applicant has shown that the following approval criteria are met:*
A. The modification will result in a development that better meets design guidelines; and
B. The modification meets the intent of the standard. On balance, the proposal will be consistent with the purpose of the standard for which a modification is requested.
Finding: The applicant is seeking adjustments through the Master Plan adjustment process pursuant to 17.65.070. The applicant has also requested modifications to design standards in 17.62.055 with a supplemental narrative submitted subsequent to the public notice mailing. These modifications are addressed in their respective code sections.

17.62.020 Preapplication conference.
Prior to filing for site plan and design review approval, the applicant shall confer with the community development director pursuant to Section 17.50.030*. The community development director shall identify and explain the relevant review procedures and standards.*
Finding: Complies as Proposed. A pre-application conference was held on October 9, 2014.

17.62.050 Standards.
A. All development shall comply with the following standards:
17.62.050.A.1. Landscaping, A minimum of fifteen percent of the lot shall be landscaped. Existing native vegetation shall be retained to the maximum extent practicable. All plants listed on the Oregon City Nuisance Plant List shall be removed from the site prior to issuance of a final occupancy permit for the building.
Finding: Complies as Proposed. The total site landscaping for the campus, including the wetland and the ball fields, is 57%. The detailed development plan includes 41% landscaping, which includes the wetland and 50ft buffer, and buffer and screening landscaping throughout the site. The applicant indicates that nuisance plants will be removed.

17.62.050.A.1.a. Except as allowed elsewhere in the zoning and land division chapters of this Code, all areas to be credited towards landscaping must be installed with growing plant materials. A reduction of up to twenty-five percent of the overall required landscaping may be approved by the community development director if the same or greater amount of pervious material is incorporated in the non-parking lot portion of the site plan (pervious material within parking lots are regulated in OCMC 17.52.070).
Finding: Not applicable. Reduction of landscaped areas is not being requested.

17.62.050.A.1.b. Pursuant to Chapter 17.49, landscaping requirements within the Natural Resource Overlay District, other than landscaping required for parking lots, may be met by preserving, restoring and permanently protecting native vegetation and habitat on development sites.
Finding: Complies as Proposed. The applicant proposes to preserve and enhance the NROD on site. See section 17.49 for more information.

17.62.050.A.1.c. The landscaping plan shall be prepared by a registered landscape architect and include a mix of vertical (trees and shrubs) and horizontal elements (grass, groundcover, etc.) that within three years will cover one hundred percent of the Landscape area. No mulch, bark chips, or similar materials shall be allowed at the time of landscape installation except under the canopy of shrubs and within two feet of the base of trees. The community development department shall maintain a list of trees, shrubs and vegetation acceptable for landscaping.
Finding: Complies as Proposed. The landscaping plans have been prepared by an Oregon State registered landscape architect from Walker Macy. The landscape will comprise a mix of trees, shrubs and groundcovers. Within 3 years from final completion of the project, 100% of the landscape area will be covered by growing plant material. No mulch will be used on the project unless it is under the canopy of shrubs or within two feet of a trees trunk. All plants shall be selected from the Oregon City approved plant material list.

17.62.050.A.1.d. For properties within the Downtown Design District, or for major remodeling in all zones subject to this chapter, landscaping shall be required to the extent practicable up to the ten percent requirement.
Finding: Not applicable. The site is not within the downtown design district.

17.62.050.A.1.e. Landscaping shall be visible from public thoroughfares to the extent practicable.
Finding: Complies as Proposed. Landscaping at the High School Portion of the Site is visible from Beavercreek Road and Meyers Road. Landscaping at the Transportation Maintenance Site will be visible along the Meyers Road extension, from the High School playfields, High School Avenue.

17.62.050.A.1.f. Interior parking lot landscaping shall not be counted toward the fifteen percent minimum, unless otherwise permitted by the dimensional standards of the underlying zone district.
Finding: Complies as Proposed. Landscaping area calculations do not include interior parking lot landscaping.

17.62.050.A.2. Vehicular Access and Connectivity
17.62.050.A.2.a. Parking areas shall be located behind buildings, below buildings, or on one or both sides of buildings.
Finding: Staff/visitor parking is located at front of building; the applicant has requested an adjustment. See findings in 17.65.070.

17.62.050.A.2.b. Ingress and egress locations on thoroughfares shall be located in the interest of public safety. Access for emergency services (fire and police) shall be provided.
Finding: Complies with Condition. One-way ingress and one-way egress of buses and emergency vehicles is proposed on south end of the site along Meyers Road.
Ingress/egress of staff/visitor parking occurs off the less trafficked private drive portion of High School Avenue/future Loder Road. There is currently a gated entry along the private drive portion of High School Avenue. The applicant shall either eliminate the gate or move the gate to the north to allow the public to access the parking lot after hours. The gate shall be completely removed when

Loder Road is constructed. **The applicant can meet this standard through Condition of Approval 40.**

17.62.050.A.2.c. Alleys or vehicular access easements shall be provided in the following Districts: R-2, MUC-1, MUC-2, MUD and NC zones unless other permanent provisions for access to off-street parking and loading facilities are approved by the decision-maker. The corners of alley intersections shall have a radius of not less than ten feet.
17.62.050.A.2.d. Sites abutting an alley shall be required to gain vehicular access from the alley unless deemed impracticable by the community development director.
17.62.050.A.2.e. Where no alley access is available, the development shall be configured to allow only one driveway per frontage. On corner lots, the driveway(s) shall be located off of the side street (unless the side street is an arterial) and away from the street intersection. Shared driveways shall be required as needed to accomplish the requirements of this section. The location and design of pedestrian access from the sidewalk shall be emphasized so as to be clearly visible and distinguishable from the vehicular access to the site. Special landscaping, paving, lighting, and architectural treatments may be required to accomplish this requirement.
Finding: Not applicable. Alleys are not required in the CI zone.

17.62.050.A.2.f. Driveways that are at least twenty-four feet wide shall align with existing or planned streets on adjacent sites.
Finding: Complies as Proposed. Proposed driveways on Meyers Road are 30 feet wide. There are no planned streets on the adjacent park site. Proposed driveways on Loder Road are between 24 and 30 feet wide. There are no planned streets on the adjacent high school site. There are no planned or aligned streets to line up to.

17.62.050.A.2.g. Development shall be required to provide existing or future connections to adjacent sites through the use of vehicular and pedestrian access easements where applicable. Such easements shall be required in addition to applicable street dedications as required in Chapter 12.04
Finding: Complies as Proposed. Adjacent sites are not currently developed. The western boundary of the property is fenced to secure the School District's fleet. No pedestrian connections are proposed other than the public sidewalk on Meyers.

17.62.050.A.2.h. Vehicle and pedestrian access easements may serve in lieu of streets when approved by the decision maker only where dedication of a street is deemed impracticable by the city.
17.62.050.A.2.i. Vehicular and pedestrian easements shall allow for public access and shall comply with all applicable pedestrian access requirements.
Finding: Not Applicable. No access easements are proposed. Access is made available with construction of extension of Meyers Road which provides access for vehicles, bicycles and pedestrians.

17.62.050.A.2.j. In the case of dead-end stub streets that will connect to streets on adjacent sites in the future, notification that the street is planned for future extension shall be posted on the stub street until the street is extended and shall inform the public that the dead-end street may be extended in the future.
Finding: Not Applicable. No dead end streets are proposed.

17.62.050.A.2.k. Parcels larger than three acres shall provide streets as required in Chapter 12.04. The streets shall connect with existing or planned streets adjacent to the site.
Finding: Complies as Proposed. The 10.5 acre site is located in the Campus Industrial District, where industrial uses require large contiguous sites. The applicant does not require an internal street network. Streets connecting to the north are undesirable due to the large wetland on the north edge of the site. Streets connecting south and west are unnecessary because of the adjacent uses (athletic fields and future park) that have no internal streets to connect to. Streets connecting to the west are not necessary because of the adjacent Campus Industrial zone and the likely desire for a large contiguous site. For these reasons: the zoning, the size and shape of the site, and the adjacent uses and features, no public streets are required in this instance.

17.62.050.A.2.l. Parking garage entries shall not dominate the streetscape. They shall be designed and situated to be ancillary to the use and architecture of the ground floor. This standard applies to both public garages and any individual private garages, whether they front on a street or private interior access road.
17.62.050.A.2.m. Buildings containing above-grade structured parking shall screen such parking areas with landscaping or landscaped berms, or incorporate contextual architectural elements that complement adjacent buildings or buildings in the area. Upper level parking garages shall use articulation or fenestration treatments that break up the massing of the garage and/or add visual interest.
Finding: Not Applicable. No parking garages are proposed.

17.62.050.A.3. Building structures shall be complimentary to the surrounding area. All exterior surfaces shall present a finished appearance. All sides of the building shall include materials and design characteristics consistent with those on the front. Use of inferior or lesser quality materials for side or rear facades or decking shall be prohibited.

- *a. Alterations, additions and new construction located within the McLoughlin Conservation District, Canemah National Register District, and the Downtown Design District and when abutting a designated Historic Landmark shall utilize materials and a design that incorporates the architecture of the subject building as well as the surrounding district or abutting Historic Landmark. Historic materials such as doors, windows and siding shall be retained or replaced with in kind materials unless the Community Development Director determines that the materials cannot be retained and the new design and materials are compatible with the subject building, and District or Landmark. The Community Development Director may utilize the Historic Review Board's Guidelines for New Constriction (2006) to develop findings to show compliance with this section.*
- *b. In historic areas and where development could have a significant visual impact, the review authority may request the advisory opinions of appropriate experts designated by the Community Development Director from the design fields of architecture, landscaping and urban planning. The applicant shall pay the costs associated with obtaining such independent professional advice; provided, however, that the review authority shall seek to minimize those costs to the extent practicable.*

Finding: Complies as Proposed. The proposed Transportation and Maintenance Facility employs a modern architectural design variety of exterior materials. A combination of painted concrete, smooth and textured colored concrete masonry, metal siding in three surface profiles, aluminum framed storefronts and windows, and glazed overhead doors (at shop areas) will be used to provide an engaging composition and a finished appearance.

17.62.050.A.4. Grading shall be in accordance with the requirements of Chapter 15.48 and the public works stormwater and grading design standards.
Finding: Complies with Condition. See section 15.48 of this report.

17.62.050.A.5. Development subject to the requirements of the Geologic Hazard overlay district shall comply with the requirements of that district.
Finding: Not Applicable. The site is not within the Geologic Hazard Overlay district.

17.62.050.A.6. Drainage shall be provided in accordance with city's drainage master plan, Chapter 13.12, and the public works stormwater and grading design standards.
Finding: See section 13.12 of this report for the applicability of detention and treatment requirements.

Under existing conditions the storm water flow overland across open fields. A small portion of the flow goes north the existing wetlands, and most of the flows west to the neighboring property and eventually to a small tributary of Caulfield Creek.

The proposed improvements includes two separate storm drainage systems which are the on-site storm flow, and the public storm water flow on the Meyers Road extension along the property frontage. For the majority of the site the storm water is redirected to the wetlands along the northern boundary of the site. Treatment is proposed through CDS swirl concentrators produced by Contech, and detention will be provided with two ponds. The flow will be discharged to the wetlands. Based

upon an evaluation by wetland scientists the additional flow to the wetland and the point discharge will not negatively impact the wetlands. This entire system is proposed to be a private facility.

The applicant shall record a maintenance covenant and access easement agreement that provides the City the right to access and monitor the private stormwater quality and detention facilities. The applicant shall provide the City with a yearly report that indicates the monitoring and maintenance that has been conducted on the stormwater quality and detention facilities.

The storm water flow from Meyers Road is proposed to flow into a storm water swale in the planter strip, which will provide treatment and a small amount of detention. The discharge from the swale will be piped to Caulfield Creek on the City Park property. A public easement for storm water will be required across the Park property.

The street is proposed to be a crown section and eventually there will be swales on both sides. However, only a half street plus 10-feet will be constructed as part of this project. Therefore, there will be street storm run-off that is not collected or treated. A temporary swale on the south side of the street would be required.

It appears that portions of the public storm drainage pipe in the street section will actually be on Park property. Public easements will be required.

The preliminary storm water report evaluated downstream impacts and found that they will be negligible. However, at the discharge points there will need to be erosion control measures taken to reduce velocity and mitigate erosion.

Per section 12.04.180 of this report the extension of Loder Road will be High School Avenue north of Meyers Road, which will be required to be dedicated as a public street per the conditions-of-approval. Public storm drainage detention and treatment will be required for High School Avenue. The storm drainage facilities may affect the street alignment, the existing storm facility on the applicant's property, or may affect the proposed storm facilities for the transportation facility. Therefore, a preliminary storm report is required for the future improvements of High School Avenue. The actual storm improvments for High School Avenue shall be constructed when the street improvements are constructed.

A final storm water report shall be required as part of the public facilities design and shall be submitted to the City with the design. This shall include a preliminary evaluation of the storm facilities for the future High School Avenue improvements.

The applicant has proposed a storm drainage system appears to meet the City code requirements with a few modifications.

The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10.

17.62.050.A.7. Parking, including carpool, vanpool and bicycle parking, shall comply with city off-street parking standards, Chapter 17.52.

Finding: See analysis in Chapter 17.52.

17.62.050.A.8. Sidewalks and curbs shall be provided in accordance with the city's transportation master plan and street design standards. Upon application, the community development director may waive this requirement in whole or in part in those locations where there is no probable need, or comparable alternative location provisions for pedestrians are made.

Finding: See analysis in Chapter 12.04.

17.62.050.A.9. A well-marked, continuous and protected on-site pedestrian circulation system meeting the following standards shall be provided:

17.62.050.A.9.a. Pathways between all building entrances and the street are required. Pathways between the street and buildings fronting on the street shall be direct. Exceptions may be allowed by the Director where steep slopes or protected natural resources prevent a direct connection or where an indirect route would enhance the design and/or use of a common open space.

17.62.050.A.9.b. The pedestrian circulation system shall connect all main entrances on the site. For buildings fronting on the street, the sidewalk may be used to meet this standard. Pedestrian connections to other areas of the site, such as parking areas, recreational areas, common outdoor areas, and any pedestrian amenities shall be required.

17.62.050.A.9.c. Elevated external stairways or walkways, that provide pedestrian access to multiple dwelling units located above the ground floor of any building are prohibited. The Community Development Director may allow exceptions for external stairways or walkways located in, or facing interior courtyard areas provided they do not compromise visual access from dwelling units into the courtyard.

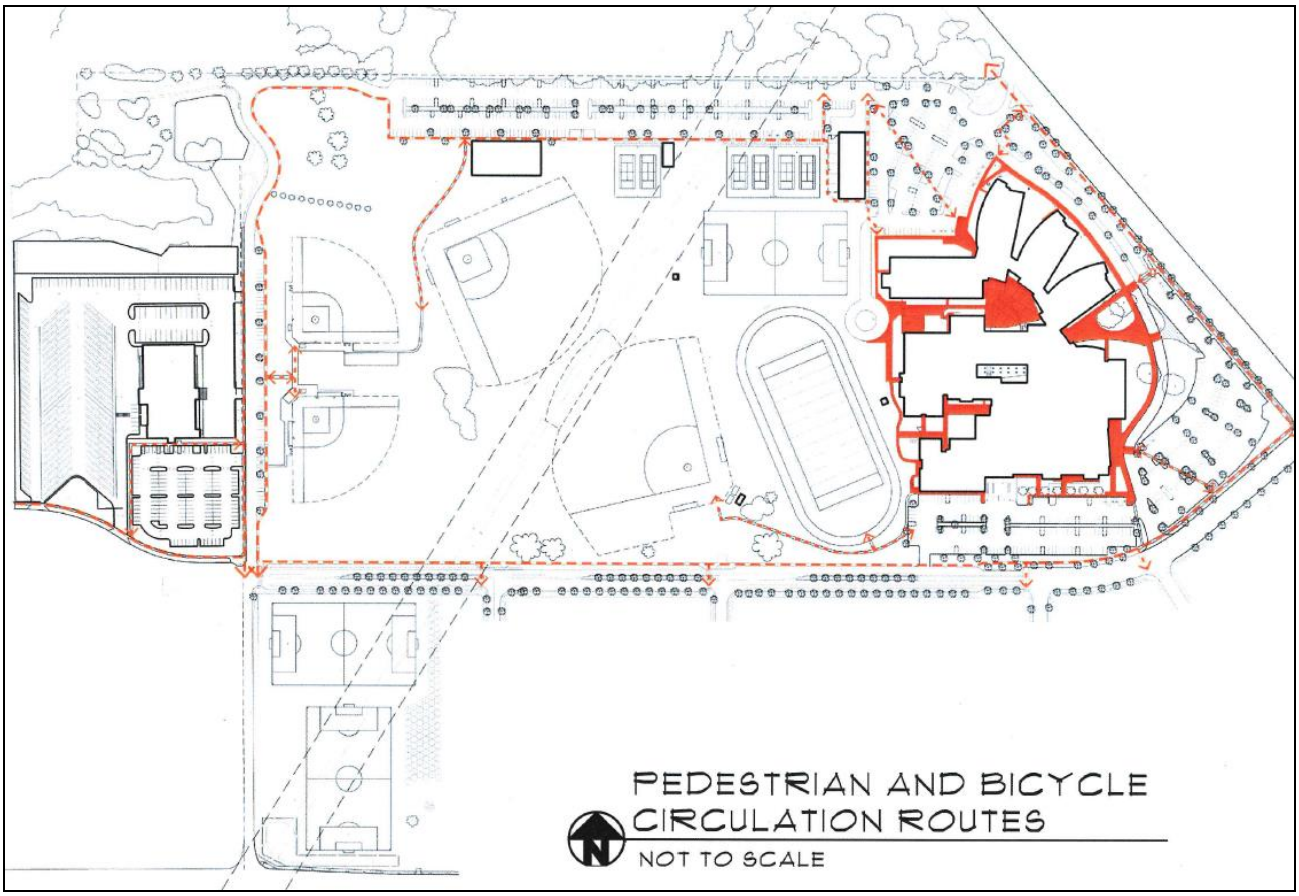
17.62.050.A.9.d. The pedestrian circulation system shall connect the main entrances of adjacent buildings on the same site.

17.62.050.A.9.e. The pedestrian circulation system shall connect the principal building entrance to those of buildings on adjacent commercial and residential sites where practicable. Walkway linkages to adjacent developments shall not be required within industrial developments or to industrial developments or to vacant industrially-zoned land.

17.62.050.A.9.f. On-site pedestrian walkways shall be hard surfaced, well drained and at least five feet wide. Surface material shall contrast visually to adjoining surfaces. When bordering parking spaces other than spaces for parallel parking, pedestrian walkways shall be a minimum of seven feet in width unless curb stops are provided. When the pedestrian circulation system is parallel and adjacent to an auto travel lane, the walkway shall be raised or separated from the auto travel lane by a raised curb, bollards, landscaping or other physical barrier. If a raised walkway is used, the ends of the raised portions shall be equipped with curb ramps for each direction of travel. Pedestrian walkways that cross drive isles or other vehicular circulation areas shall utilize a change in textual material or height to alert the driver of the pedestrian crossing area.

Finding: Complies with Conditions. The applicant submitted a pedestrian circulation plan that includes connections to all main building entrances. Many of the pathways on the high school campus are existing and some are of substandard width (see Chapter 17.58 Nonconforming Uses, Structures, and Lots). Within the detailed development plan area, the pathways are 7 feet in width and connect the main south entrance to the public rights of way on Meyers and Loder Roads. The applicant shall install a pedestrian path to connect the southeast corner of the parking lot to the sidewalk at the intersection of Meyers and Loder Road. If park and athletic field users are to park in the lot, there should be a direct connection from the lot to the crosswalks at the intersection so these users can easily access the street. **The applicant can meet this standard through Condition of Approval 41.** Walkway linkages are not required to vacant industrial land, thus no additional pedestrian circulation is required. It is noted that the pedestrian circulation plan includes a walkway along the eastern edge of the transportation site. The applicant shall only be required to include a walkway up to the northern edge of the public parking lot on the eastern side of the transportation site. If the applicant chooses to eliminate the walkway farther north of that point, a painted crosswalk across existing High School Lane and future Loder Road shall be required. **The applicant can meet this standard through Condition of Approval 42.**

The High School campus contains an informal gravel pathway that connects to the neighboring Clackamas Community College campus. This pathway is used as the most direct route for students, staff, and visitors to access the nearest Trimet bus stop and the walking trails and amenities on the college campus. A site visit confirmed that this pathway is unimproved with lighting.
The applicant has not identified this pathway on their pedestrian circulation plan. The Master Plan shall address the pathway from CCC to the site and include plans to upgrade it pursuant to OCMC 12.044.199 – Pedestrian and Bicycle Accessways, or an alternative approved through a future detailed development plan, to provide safe and secure walking and bicycling connection between these two important community sites. A public access easement shall also be recorded for this path. The applicant shall propose an improvement to this pathway and implement it in one of the phases of this Master Plan, or no later than five years from the notice of decision of this land use application. **The applicant can meet this standard through Condition of Approval 43.**



17.62.050.A.10. There shall be provided adequate means to ensure continued maintenance and necessary normal replacement of private common facilities and areas, drainage ditches, streets and other ways, structures, recreational facilities, landscaping, fill and excavation areas, screening and fencing, groundcover, garbage storage areas and other facilities not subject to periodic maintenance by the city or other public agency.
Finding: Complies as Proposed. The owner shall be responsible for maintenance.

17.62.050.A.11. Site planning shall conform to the requirements of OCMC Chapter 17.41 Tree Protection
Finding: See analysis in Chapter 17.41.

17.62.050.A.12. Development shall be planned, designed, constructed and maintained to protect water resources and habitat conservation areas in accordance with the requirements of the city's Natural Resources Overlay District, Chapter 17.49, as applicable.

Finding: A portion of the site is within the Natural Resources Overlay District, see findings in Chapter 17.49.

17.62.050.A.13. All development shall maintain continuous compliance with applicable federal, state, and city standards pertaining to air and water quality, odor, heat, glare, noise and vibrations, outdoor storage, radioactive materials, toxic or noxious matter, and electromagnetic interference. Prior to issuance of a building permit, the Community Development Director or building official may require submission of evidence demonstrating compliance with such standards and receipt of necessary permits. The review authority may regulate the hours of construction or operation to minimize adverse impacts on adjoining residences, businesses or neighborhoods. The emission of odorous gases or other matter in such quantity as to be readily detectable at any point beyond the property line of the use creating the odors or matter is prohibited.
Finding: Complies as Proposed. The applicant indicated compliance with these standards.

17.62.050.A.14. Adequate public water and sanitary sewer facilities sufficient to serve the proposed or permitted level of development shall be provided. The applicant shall demonstrate that adequate facilities and services are presently available or can be made available concurrent with development. Service providers shall be presumed correct in the evidence, which they submit. All facilities shall be designated to city standards as set out in the city's facility master plans and public works design standards. A development may be required to modify or replace existing offsite systems if necessary to provide adequate public facilities. The city may require over sizing of facilities where necessary to meet standards in the city's facility master plan or to allow for the orderly and efficient provision of public facilities and services. Where over sizing is required, the developer may request reimbursement from the city for over sizing based on the city's reimbursement policy and fund availability, or provide for recovery of costs from intervening properties as they develop.
Finding: Complies with Conditions.

Water – There is existing 8 inch water line on Meyers Road, and on the public portion of High School Avenue (south of Meyers Road). The applicant proposes to extend an 8 inch water line along the Meyers Road extension. Portions of the water line are in the Park property, so easements will be required until such time as the land is dedicated for right-of-way.

The water master plans call for the water line along Meyers road to be 12-inch. The water master plan also calls for a 12 inch water line on High School Avenue.

The 12-inch water line on High School Avenue shall be designed and constructed at the time that the street improvements are constructed.

Appropriately sized domestic water service and fire service lines shall be provided, and they shall both have approved backflow prevention assemblies.

The Community Services Department, Parks and Recreation Division, may required a water service line on Meyers Road. The applicant shall coordinate with the Parks and Recreation Division during design and construction to provide an appropriately sized water service if required.

During the design the applicant shall coordinate with the Clackamas Fire District #1 with regard to fire flow requirements and fire hydrant locations.

Sanitary Sewer – The nearest sanitary sewer is an 8 inch pipe on Quaking Aspen Avenue. The pipe elevation is too high to serve the proposed facility by gravity. There is also a 12 inch pipe on Glen Oak Road. While this pipe may be able to serve the proposed facility by gravity, there is no direct access to it.

The applicant has proposed to install a private single service pump station and force main that would cross the School district property and connect to the pipe on Quaking Aspen Way. A gravity service

line would be installed from the facility to the west end of the property near Meyers road. In the future when the sanitary sewer is extended up Meyers Road, the School District would disconnect the private pump station, and connect to the new gravity line. The private force main would either be filled, plugged and abandoned, or removed per City requirements at the time.

It is City policy that private force mains do not discharge directly to the City collection system. Therefore, a private manhole would be located on the applicants property near Quaking Aspen Avenue, and then flow by gravity to the City manhole.

Per section 12.04.180 of this report the extension of Loder Road will be High School Avenue north of Meyers Road, which will be required to be dedicated as a public street per the conditions-of-approval. Therefore, the proposed service main would cross the public right-of-way which is not allowed. However, this would be allowed as a temporary service until the gravity main on the future extension from Highway 213 along Meyers Road is constructed.

The applicant shall execute an agreement with the City for the operation and maintenance of the private system within the dedicated right-of-way of High School Avenue and Meyers Road.

The recently adopted Sanitary Sewer mater Plan show a future main extension crossing the applicants property near the north west corner. In order to accommodate the future extension the applicant shall provide a 25-foot wide sanitary sewer easement for the construction, operation and maintenance of a sanitary sewer. The easement shall be located along the northern boundary of tax lot 01300 from the western property line to the right-of-way of the realigned High School Avenue.

The applicant has proposed a sanitary sewer system appears to meet the City code requirements with a few modifications.

The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 4, 11, 12, 13, 14, 15, 16, 17 and 18.

17.62.050.A.15. Adequate right-of-way and improvements to streets, pedestrian ways, bike routes and bikeways, and transit facilities shall be provided and be consistent with the city's transportation master plan and design standards and this title. Consideration shall be given to the need for street widening and other improvements in the area of the proposed development impacted by traffic generated by the proposed development. This shall include, but not be limited to, improvements to the right-of-way, such as installation of lighting, signalization, turn lanes, median and parking strips, traffic islands, paving, curbs and gutters, sidewalks, bikeways, street drainage facilities and other facilities needed because of anticipated vehicular and pedestrian traffic generation.

When approving land use actions, Oregon City requires all relevant intersections to be maintained at the minimum acceptable level of service (LOS) upon full build-out of the proposed land use action. The minimum acceptable LOS standards are as follows:

a. For signalized intersection areas of the city that are located outside the Regional Center boundaries a LOS of "D" or better for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of critical movements.

b. For signalized intersections within the Regional Center boundaries a LOS "D" can be exceeded during the peak hour; however, during the second peak hour, LOS "D" or better will be required as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0.

c. For unsignalized intersection throughout the city a LOS "E" or better for the poorest approach and with no movement serving more than twenty peak hour vehicles operating at worse than LOS "F" will be tolerated for minor movements during a peak hour.

Finding: See analysis in Chapter 12.04.205.

17.62.050.A.16. If Tri-Met, upon review of an application for an industrial, institutional, retail or office development, recommends that a bus stop, bus turnout lane, bus shelter, bus landing pad or transit stop connection be constructed at the time of development, the review authority shall require such improvement, using designs supportive of transit use.

Finding: Complies as Proposed. The application was transmitted to Trimet. No specific recommendations were given, however, Trimet staff stated: "we do want to stay apprised of the master plan process and roadway infrastructure development here. As you mention, improved connectivity amongst the college, high school and future housing development should increase the functional utility of our current service, and offer the potential to modify future service at TriMet's discretion."

17.62.050.A.17. All utility lines shall be placed underground.

Finding: Complies with Conditions. All utility lines (water, gas, sewer, power, telephone, etc.) will be placed underground. The applicant shall coordinate with PGE in regard to street light placement and design. Before final construction design plan approval, the applicant shall submit a plan of the PGE work order to construct the street lights. Prior to issuing building permits, the applicant shall submit PGE's final acceptance of the street lights. A 10 foot wide PUE shall be provided along the street frontages prior to design approval.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 20 and 32.

17.62.050.A.18. Access and facilities for physically handicapped people shall be incorporated into the site and building design consistent with applicable federal and state requirements, with particular attention to providing continuous, uninterrupted access routes.

Finding: Complies as Proposed. The applicant stated that existing facilities were designed to meet ADA accessibility standards, and new proposed facilities will also be designed in compliance with ADA Guidelines. The Building Department will review all building plans for compliance with ADA standards.

17.62.050.A.19. For a residential development, site layout shall achieve at least eighty percent of the maximum density of the base zone for the net developable area. Net developable area excludes all areas for required right-of-way dedication, land protected from development through Natural Resource or Geologic Hazards protection, and required open space or park dedication.

Finding: Not applicable. This is not a residential development.

17.62.050.A.20. Screening of Mechanical Equipment:

17.62.050.A.20.a. Rooftop mechanical equipment, including HVAC equipment and utility equipment that serves the structure, shall be screened. Screening shall be accomplished through the use of parapet walls or a sight-obscuring enclosure around the equipment constructed of one of the primary materials used on the primary facades of the structure, and that is an integral part of the building's architectural design. The parapet or screen shall completely surround the rooftop mechanical equipment to an elevation equal to or greater than the highest portion of the rooftop mechanical equipment being screened. In the event such parapet wall does not fully screen all rooftop equipment, then the rooftop equipment shall be enclosed by a screen constructed of one of the primary materials used on the primary facade of the building so as to achieve complete screening.

Finding: Complies as Proposed. The proposed new Transportation Maintenance Facility will employ roof top units screened by building wall parapets.

17.62.050.A.20.b. Wall-mounted mechanical equipment shall not be placed on the front facade of a building or on a facade that faces a right-of-way. Wall-mounted mechanical equipment, including air conditioning or HVAC equipment and groups of multiple utility meters, that extends six inches or more from the outer building wall shall be screened from view from streets; from residential, public, and institutional properties; and from public areas of the site or adjacent sites through the use of (a) sight-obscuring enclosures constructed of one of the primary materials used on the primary facade of the structure, (b) sight-obscuring fences, or (c) trees or shrubs that block at least 80 percent of the equipment from view or (d) painting the units to match the building. Wall-mounted mechanical equipment that extends six inches or less from the outer building wall shall be designed to blend in with the color and architectural design of the subject building.

Finding: Not Applicable. No wall-mounted equipment is proposed.

17.62.050.A.20.c. Ground-mounted above-grade mechanical equipment shall be screened by ornamental fences, screening enclosures, trees, or shrubs that block at least 80 percent of the view. Placement and type of screening shall be determined by the Community Development Director.

Finding: Complies as Proposed. An emergency generator will be screened from view from Meyers Road by fencing and landscaping. The generator is located behind the proposed fence for the bus storage area.

17.62.050.A.21. Building Materials

17.62.050.A.21.a. Preferred building materials. Building exteriors shall be constructed from high quality, durable materials. Preferred exterior building materials that reflect the City's desired traditional character are as follows:

- *i. Brick.*
- *ii. Basalt stone or basalt veneer*
- *iii. Narrow horizontal wood or composite siding (generally 5 inches wide or less); wider siding will be considered where there is a historic precedent.*
- *iv. Board and baton siding*
- *v. Other materials subject to approval by the Community Development Director.*
- *vi. Plywood with battens or fiber/composite panels with concealed fasteners and contagious aluminum sections at each joint that are either horizontally or vertically aligned.*
- *vii. Stucco shall be trimmed in wood, masonry, or other approved materials and shall be sheltered from extreme weather by roof overhangs or other methods.*

Finding: Complies with Condition. The proposed new Transportation Maintenance Facility will employ a combination of exterior building materials including painted tilt-up concrete, colored concrete masonry (in a composition of split faced and ground faced textures), pre-finished flat and patterned metal panels. The applicant also proposed a covered storage area and a future covered storage area in sections of the bus storage area. No details about the materials used for such covered storage areas were provided. Prior to issuance of building permits, the applicant shall provide the details about the coverings and ensure that they meet building materials standards in OCMC 17.62.050.A.21. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 44.**

17.62.050.A.21.b. Prohibited materials. The following materials shall be prohibited in visible locations unless an exception is granted by the Community Development Director based on the integration of the material into the overall design of the structure.

- *i. Vinyl or plywood siding(including T-111 or similar plywood).*
- *ii. Glass block or highly tinted, reflected, translucent or mirrored glass (except stained glass) as more than 10 percent of the building façade*
- *iii. Corrugated fiberglass.*
- *iv. Chain link fencing (except for temporary purposes such as a construction site or as a gate for a refuse enclosure).*
- *v. Crushed colored rock/crushed tumbled glass.*
- *vi. Non-corrugated and highly reflective sheet metal.*

Finding: Prohibited materials listed are not proposed except for the inclusion of black vinyl coated chain link fencing required for security of the bus/van/equipment vehicle storage area. See section 17.65.070 for findings regarding this proposed adjustment.

17.62.050.A.21.c. Special material standards: The following materials are allowed if they comply with the requirements found below:

1. *Concrete block. When used for the front façade of any building, concrete blocks shall be split, rock- or ground-faced and shall not be the prominent material of the elevation. Plain concrete block or plain concrete may be used as foundation material if the foundation material is not revealed more than 3 feet above the finished grade level adjacent to the foundation wall.*
2. *Metal siding. Metal siding shall have visible corner moldings and trim and incorporate masonry or other similar durable/permanent material near the ground level (first two feet above ground level).*
3. *Exterior Insulation and Finish System (EIFS) and similar troweled finishes shall be trimmed in wood, masonry, or other approved materials and shall be sheltered from extreme weather by roof overhangs or other methods.*
4. *Building surfaces shall be maintained in a clean condition and painted surfaces shall be maintained to prevent or repair peeling, blistered or cracking paint.*

Finding: Complies as Proposed. No EIFS is being used at the new Transportation Maintenance Facility. Concrete masonry is proposed to be a combination of split faced and ground faced colored units. At the front façade, the building exterior is a combination of two patterns of pre-finished metal siding and aluminum storefront. The east façade facing Loder Road is primarily metal and glazing. The applicant has requested a modification to this standard, stating:

> "To help meet the District's desire for low maintenance materials, 3 types of metal siding have been juxtaposed on the building's front façade to introduce variety in lieu of moldings and trim that would be inconsistent with the clean look of the building.
> The introduction of masonry at the ground level would be inconsistent with that clean look and would provide no additional durability or permanence. Instead, the general metal wall panel type has been interrupted with a second type of metal panel at the base of window to add an alternative form of visual interest. (These panels and the windows are recessed from the plane of the main wall panels.)
> The material selections at the various portions of the building define use. Metal siding was selected at office areas. Concrete and concrete masonry are being used at high impact maintenance portions of the building."

The use of quality materials and modern architecture meet the intent of the building materials standards. Staff finds that the design better meets the standard.

17.62.050.A.22. Conditions of Approval. The review authority may impose such conditions as it deems necessary to ensure compliance with these standards and other applicable review criteria, including standards set out in city overlay districts, the city's master plans, and city public works design standards. Such conditions shall apply as described in Sections 17.50.310, 17.50.320 and 17.50.330. The review authority may require a property owner to sign a waiver of remonstrance against the formation of and participation in a local improvement district where it deems such a waiver necessary to provide needed improvements reasonably related to the impacts created by the proposed development. To ensure compliance with this chapter, the review authority may require an applicant to sign or accept a legal and enforceable covenant, contract, dedication, easement, performance guarantee, or other document, which shall be approved in form by the city attorney.

Finding: Complies with Conditions. As demonstrated within this report, the proposal will comply with the standards of the Oregon City Municipal Code with conditions. **Staff determined that it is likely and reasonable that the applicant can meet this standard through all Conditions of Approval.**

17.62.055 Institutional and Commercial Building Standards.
17.62.055.C. Relationship between zoning district design standards and requirements of this section.

17.62.055.C.1. Building design shall contribute to the uniqueness of the underlying zoning district by applying appropriate materials, elements, features, color range and activity areas tailored specifically to the site and its context.

Finding: Complies as Proposed. The proposed Transportation Maintenance Facility is located on property within the Campus Industrial (CI) zone. Its design is in keeping with the industrial nature of the zone. It will be constructed of a combination of durable materials often found on industrial campuses, including tilt-up concrete, concrete masonry, and metal siding. These materials are compatible with building materials used at the existing High School portion of the site.

17.62.055.C.2. A standardized prototype or franchise design shall be modified if necessary to meet the provisions of this section.

Finding: Complies as Proposed. The design is not standardized or a prototype.

17.62.055.C.3. In the case of a multiple building development, each individual building shall include predominant characteristics, architectural vocabulary and massing shared by all buildings in the development so that the development forms a cohesive place within the underlying zoning district or community.

Finding: Complies as Proposed. Because the function of the existing High School facility and the function of the proposed new Transportation Maintenance Facility differ and because the two facilities are not in close proximity, the characteristics, architectural vocabulary and massing are not completely shared. Each is designed to suitably reflect its function. Both the High School and the proposed Transportation Maintenance Facility do employ certain shared elements:

- Split faced colored concrete masonry
- Aluminum storefront systems
- Metal siding panels

17.62.055.C.4. With the exception of standards for building orientation and building front setbacks, in the event of a conflict between a design standard in this section and a standard or requirement contained in the underlying zoning district, the standard in the zoning district shall prevail.

Finding: Not applicable. There is no conflict.

17.62.055.C.5. On sites with 100 feet or more of frontage at least 60 percent of the site frontage width shall be occupied by buildings placed within five feet of the property line, unless a greater setback is accepted under the provisions of 17.62.055(D). For sites with less than 100 feet of street frontage, at least 50 percent of the site frontage width shall be occupied by buildings placed within five feet of the property line unless a greater setback is accepted under the provisions of 17.62.055(D).

Finding: The proposed Transportation Facility site has over 100 feet of frontage on two sides. The applicant has requested an adjustment to this standard. See adjustments discussion in 17.65.070.

17.62.055.D. Relationship of Buildings to Streets and Parking.
17.62.055.D.1. Buildings shall be placed no farther than five feet from the front property line. A larger front yard setback may be approved through site plan and design review if the setback area incorporates at least one element from the following list for every 5 feet of increased setback requested:

a. Tables, benches or other approved seating area
b. Cobbled, patterned or paved stone or enhanced concrete
c. Pedestrian scale lighting
d. Sculpture / public art
e. Fountains / Water feature
f. At least 20 square feet of landscaping or planter boxes for each tenant façade fronting on the activity area
g. Outdoor cafe
h. Enhanced landscaping or additional landscaping.
i. Other elements, as approved by the Community Development Director, that can meet the intent of this section.

Finding: Complies as Proposed. The applicant has requested an adjustment to this standard. See adjustments discussion in 17.65.070.

17.62.055.D.2. The front most architecturally significant façade shall be oriented toward the street and shall be accessed from a public sidewalk. Primary building entrances shall be clearly defined and recessed or framed by a sheltering element such as an awning, arcade or portico in order to provide shelter from the summer sun and winter weather.

Finding: Complies as Proposed. The most architecturally significant façade is oriented toward Meyers Road, which is the major street. The entrance faces Meyers and is connected to the sidewalk by a 7-foot walkway. The entrance is clearly defined, and marked by a vertical expansion of glass storefront running the full height of the facility.

17.62.055.D.3. Entryways. The primary entranceway for each commercial or retail establishment shall face the major street. The entrance may be recessed behind the property line a maximum of five feet unless a larger setback is approved pursuant to Section17.62.055.D.1 and shall be accessed from a public sidewalk. Primary building entrances shall be clearly defined, highly visible and recessed or framed by a sheltering element including at least four of the following elements, listed below.

- *a. Canopies or porticos;*
- *b. Overhangs;*
- *c. Recesses/projections;*
- *d. Arcades;*
- *e. Raised corniced parapets over the door;*
- *f. Peaked roof forms;*
- *g. Arches;*
- *h. Outdoor patios;*
- *i. Display windows;*
- *j. Architectural details such as tile work and moldings which are integrated into the building structure and design;*
- *k. Integral planters or wing walls that incorporate landscaped areas and/or places for sitting.*
- *l. Planter boxes and street furniture placed in the right-of-way shall be approved for use according to materials, scale and type.*

Finding: Complies as Proposed. The primary entranceway is clearly defined and framed by a sheltering element and includes four elements: canopies, overhangs, display windows and projections. A vertical and horizontal portico-like entrance canopy element, clad in smooth metal panels and modestly projecting from the front plane of the building, to "announce" the main entrance to the facility. The horizontal element represents a modern geometric alternative to corniced parapets. The applicant states that peaked roof forms or arches are not necessary to add emphasis to this entrance element. Its smooth texture is in obvious contrast to the surrounding textured metal panel wall plane and adequately and clearly defines the front entrance.

17.62.055.D4. Where additional stores will be located in the large retail establishment, each such store shall have at least one exterior customer entrance, which shall conform to the same requirements.

Finding: Not applicable. This is not a retail project.

17.62.055.D5. Trellises, canopies and fabric awnings may project up to five feet into front setbacks and public rights-of-way, provided that the base is not less than eight feet at the lowest point and no higher than ten feet above the sidewalk. Awnings shall be no longer than a single storefront.

Finding: Complies as Proposed. No trellises, canopies and fabric awnings will project into the setback.

17.62.055.E. Corner Lots.
For buildings located at the corner of intersections, the primary entrance of the building shall be located at the corner of the building or within 25 feet of the corner of the building. Additionally, one of the following treatments shall be required:
17.62.055.E.1. Incorporate prominent architectural elements, such as increased building height or massing, cupola, turrets, or pitched roof, at the corner of the building or within 25 feet of the corner of the building.

17.62.055.E.2. Chamfer the corner of the building (i.e. cut the corner at a 45-degree angle and a minimum of 10 feet from the corner) and incorporate extended weather protection (arcade or awning), special paving materials, street furnishings, or plantings in the chamfered area.

Finding: Complies as Proposed. The applicant has requested an adjustment to this standard. See adjustments discussion in 17.65.070.

17.62.055.F. Commercial First Floor Frontage.
In order to ensure that the ground floor of structures have adequate height to function efficiently for retail uses, the first floor height to finished ceiling of new infill buildings in the mixed use and neighborhood commercial districts shall be no lower than 14feet floor to floor Where appropriate, the exterior façade at the ceiling level of new structures shall include banding, a change of materials or relief which responds to the cornice lines and window location of existing buildings that abut new structures.

Finding: Not applicable. No commercial use is proposed, and the site is not within the MUC or NC zone.

17.62.055.G. Variation in Massing
17.62.055.G.1. A single, large, dominant building mass shall be avoided in new buildings and, to the extent reasonably feasible, in development projects involving changes to the mass of existing buildings.

Finding: Complies as Proposed. The street facing facades of the building include substantial variation.

17.62.055.G.2. Horizontal masses shall not exceed a height: width ratio of 1:3 without substantial variation in massing that includes a change in height and projecting or recessed elements.

Finding: Complies as Proposed. The longest horizontal mass of the proposed new Transportation Maintenance Facility is at the East and West Elevations and conforms to the height:width ratio: 24'-6" high x 70 feet wide; which is less than 1:3.

17.62.055.G.3. Changes in mass shall be related to entrances, the integral structure and/or the organization of interior spaces and activities and not merely for cosmetic effect.

Finding: Complies as Proposed. Massing variations at the proposed new Transportation Maintenance Facility are the product of differentiation between office and meeting uses at the south end of the building versus the shop activities to the north. The main entrance at the south end of the building effectively dominates the façade by virtue of its fully glazed tower-like presence.

17.62.055.H. Minimum Wall Articulation.
17.62.055.H.1. Facades shall add architectural interest and variety and avoid the effect of a single, long or massive wall with no relation to human size. No wall that faces a street or connecting walkway shall have a blank, uninterrupted length exceeding thirty feet without including, but not be limited to, at least two of the following:

i. Change in plane,
ii. Change in texture or masonry pattern or color,
iii. Windows, treillage with landscaping appropriate for establishment on a trellis.
iv. An equivalent element that subdivides the wall into human scale proportions.

Finding: Complies as Proposed. The facades contain a change in texture and color, and windows, that break up the mass of the building.

17.62.055.H.2. Facades greater than one hundred feet in length, measured horizontally, shall incorporate wall plane projections or recesses having a depth of at least three percent of the length of the facade and extending at least twenty percent of the length of the facade. No uninterrupted length of any facade shall exceed one hundred horizontal feet.

Finding: Complies as Proposed. The east façade, facing Loder Road contains projections of 27 feet and 19 feet, making up 22% of the total length. The depth of these projections is 9 feet, or 4% of the length. The south façade facing Meyers Road is 137 feet in length and has projections of 11 feet and 17 feet, or 23 percent.

17.62.055.H.3. Ground floor facades that face public streets shall have arcades, display windows, entry areas, awnings or other such features along no less than sixty percent of their horizontal length.

Finding: Complies with Condition. The applicant has proposed sunshades on the south and east façades for over 60% of the façade length. The south (front) façade is 137 feet in length, with 72 feet of transparency at the pedestrian level, or 52%. The applicant states that window shapes have been carefully employed to differentiate the office areas from the horizontal entrance element. The recessed office windows run in horizontal bands and have projecting sun shades, whereas the entrance element glazing is vertical in shape. Prior to issuance of permits, the applicant shall demonstrate that the ground floor of the north façade contains arcades, display windows, entry areas, awnings or other such features along no less than sixty percent of their horizontal length. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 45.**

17.62.055.H.4. Building facades must include a repeating pattern that includes any one or more of the following elements:

a. Color change;
b. Texture change;
c. Material module change.

Finding: Complies as Proposed. Proposed building facades employ a variety of repeating colors and textures, including flat and patterned metal panels, smooth painted tilt-up concrete, and ground faced and split faced concrete masonry.

17.62.055.H.5. Facades shall have an expression of architectural or structural bays through a change in plane no less than twelve inches in width, such as an offset, reveal or projecting rib.

Finding: Complies as Proposed. Proposed glazed aluminum in between the windows reflects the regularity of bays within the building. Vertical glazing treatment further identifies shop bays at east and west facades.

17.62.055.H.6. Facades shall have at least one of elements subsections (H) 4 or 5 of this section repeat horizontally. All elements shall repeat at intervals of no more than thirty feet, either horizontally or vertically.

Finding: Complies as Proposed. Color, texture and material changes occur horizontally along the facades, every 30 feet or less.

17.62.055.I. Façade Transparency.

17.62.055.I.1. Transparent windows or doors facing the street are required. The main front elevation shall provide at least sixty percent (60%) windows or transparency at the pedestrian level. Facades on corner lots shall provide at least sixty percent (60%) windows or transparency on all corner-side façades. All other side elevations shall provide at least thirty percent (30%) transparency. The transparency is measured in lineal fashion. For example, a one-hundred-foot long building elevation shall have at least sixty feet (60% of 100 feet) of transparency in length. Reflective, glazed, mirrored or tinted glass is limited to ten percent (10%) of the lineal footage of windows on the street facing façade. Highly reflective or glare-producing glass with a reflective factor of .25 or greater is prohibited on all building facades. Any glazing materials shall have a maximum fifteen (15) percent outside visual light reflectivity value. No exception shall be made for reflective glass styles that appear transparent when internally illuminated.

Finding: Complies with Condition. The applicant has requested an adjustment to this standard for the eastern façade of the building. See findings in 17.65.070. The west façade contains over 30% transparency as required. The south (front) façade is 137 feet in length, with 72 feet of transparency at the pedestrian level, or 52%. The applicant did not provide information about the reflectivity of glass used. Prior to issuance of building permits, the applicant shall demonstrate that the requirements for façade transparency on the front façade are met. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 46.**

17.62.055.I.2. Side or rear walls that face walkways may include false windows and door openings only when actual doors and windows are not feasible because of the nature of the use of the interior use of the building. False windows located within 20 feet of a Right of Way shall be utilized as display windows with a minimum display depth of 36 inches.

Finding: Not Applicable. No false window or door openings are required or proposed at side or rear elevations facing walkways.

17.62.055.J. Roof Treatments.

17.62.055.J.1. All facades shall have a recognizable "top" consisting of, but not limited to:

- *a. Cornice treatments, other than just colored "stripes" or "bands," with integrally textured materials such as stone or other masonry or differently colored materials; or*
- *b. Sloping roof with overhangs and brackets; or*
- *c. Stepped parapets;*
- *d. Special architectural features, such as bay windows, decorative roofs and entry features may project up to three feet into street rights-of-way, provided that they are not less than nine feet above the sidewalk.*

Finding: Complies as Proposed. The applicant has proposed a parapet and sunshades at south, east and west office windows. Coping height at the main entry to the building is raised to make entrance more prominent.

17.62.055.J.2. Mixed use buildings: For flat roofs or facades with a horizontal eave, fascia, or parapet, the minimum vertical dimension of roofline modulation is the greater of two feet or 0.1 multiplied by the wall height (finish grade to top of wall). The maximum length of any continuous roofline shall be 75 feet.

Finding: Not Applicable. The project is not mixed use.

17.62.055.K. Drive-through facilities shall:

1. *Be located at the side or rear of the building*
2. *Be designed to maximize queue storage on site.*

Finding: Not Applicable. No drive through is proposed.

17.62.065 Outdoor Lighting

17.62.065.B. Applicability

1. General

a. All exterior lighting for any type of commercial, mixed-use, industrial or multi-family development shall comply with the standards of this Section, unless excepted in Subsection B.3.

b. The City Engineer/Public Works Director shall have the authority to enforce these regulations on private property if any outdoor illumination is determined to present an immediate threat to the public health, safety and welfare.

Finding: Applicable. The project must meet the standards in this section.

17.62.065.B.2. Lighting Plan Requirement

All commercial, industrial, mixed-use, cottage housing and multi-family developments shall submit a proposed exterior lighting plan. The plan must be submitted concurrently with the site plan. The exterior lighting plan shall include plans and specifications for streetlights, parking lot lights, and exterior building lights. The specifications shall include details of the pole, fixture height and design, lamp type, wattage, and spacing of lights.

Finding: Complies as Proposed. The applicant submitted a lighting plan and photometric plan.

17.62.065.C. General Review Standard. If installed, all exterior lighting shall meet the functional security needs of the proposed land use without adversely affecting adjacent properties or the community. For purposes of this Section, properties that comply with the design standards of Subsection D below shall be deemed to not adversely affect adjacent properties or the community.

17.62.065.D. Design and Illumination Standards

General Outdoor Lighting Standard and Glare Prohibition

17.62.065.D.1. Outdoor lighting, if provided, shall be provided in a manner that enhances security, is appropriate for the use, avoids adverse impacts on surrounding properties, and the night sky through appropriate shielding as defined in this section. Glare shall not cause illumination on other properties in excess of a measurement of 0.5 foot-candles of light as measured at the property line. In no case shall exterior lighting add more than 0.5

footcandle to illumination levels at any point off-site. Exterior lighting is not required except for purposes of public safety. However, if installed, all exterior lighting shall meet the following design standards:
Finding: Complies as Proposed. Outdoor lighting is primarily provided to enhance security.

17.62.065.D.2. Any light source or lamp that emits more than 900 lumens (13 watt compact fluorescent or 60 watt incandescent) shall be concealed or shielded with a full cut-off style fixture in order to minimize the potential for glare and unnecessary diffusion on adjacent property. All fixtures shall utilize one of the following bulb types: metal halide, induction lamp, compact fluorescent, incandescent (including tungsten-halogen), or high pressure sodium with a color rendering index above 70.
Finding: Complies with Condition. The applicant did not provide enough detail in the lighting plan to verify that this standard has been met. The applicant shall provide a final lighting plan that addresses all standards in 17.62.065.D. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 47.**

17.62.065.D.3. The maximum height of any lighting pole serving a multi-family residential use shall be 20 feet. The maximum height serving any other type of use shall be 25 feet, except in parking lots larger than five acres, the maximum height shall be 35 feet if the pole is located at least 100 feet from any residential use.
Finding: The applicant has requested an adjustment to this standard. See findings in 17.65.070.

17.62.065.D.4. Lighting levels

Table 1-17.62.065. Foot-candle Levels

Location	*Min*	*Max*	*Avg*
Pedestrian Walkways	*0.5*	*7:1 max/min ratio*	*1.5*
Pedestrian Walkways in Parking Lots		*10:1 max/min ratio*	*0.5*
Pedestrian Accessways	*0.5*	*7:1 max/min ratio*	*1.5*
Building Entrances	*3*		
Bicycle Parking Areas	*3*		
Abutting property	*N/A*	*.05*	

Finding: Complies with Condition. The applicant submitted a photometric plan which shows lighting levels at some edges of the site to be greater than 0.5 foot candles. The entryway lighting also appears to be less than 3 foot candles. Prior to issuance of permits, the applicant shall submitted a revised photometric plan that meets OCMC 17.62.065.D.4. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 48.**

17.62.065.D.5. Parking lots and other background spaces shall be illuminated as unobtrusively as possible while meeting the functional needs of safe circulation and protection of people and property. Foreground spaces, such as building entrances and outside seating areas, shall utilize pedestrian scale lighting that defines the space without glare.
Finding: Complies with Condition. The applicant did not provide enough detail in the lighting plan to verify that this standard has been met. The applicant shall provide a final lighting plan that addresses all standards in 17.62.065.D. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 47.**

17.62.065.D.6. Any on-site pedestrian circulation system shall be lighted to enhance pedestrian safety and allow employees, residents, customers or the public to use the walkways at night. Pedestrian walkway lighting through parking lots shall be lighted to light the walkway and enhance pedestrian safety pursuant to Table 1.
Finding: Complies with Condition. The applicant did not provide enough detail in the lighting plan to verify that this standard has been met. The applicant shall provide a final lighting plan that

addresses all standards in 17.62.065.D. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 47.**

17.62.065.D.7. Pedestrian Accessways. To enhance pedestrian and bicycle safety, pedestrian accessways required pursuant to OCMC 12.28 shall be lighted with pedestrian-scale lighting. Accessway lighting shall be to a minimum level of one-half foot-candles, a one and one-half foot-candle average, and a maximum to minimum ratio of seven-to-one and shall be oriented not to shine upon adjacent properties. Street lighting shall be provided at both entrances. Lamps shall include a high-pressure sodium bulb with an unbreakable lens.
Finding: Not applicable. No pedestrian accessways are proposed.

17.62.065.D.8. Floodlights shall not be utilized to light all or any portion of a building facade between 10:00 pm and 6:00 am.
17.62.065.D.9. Lighting on automobile service station, convenience store, and other outdoor canopies shall be fully recessed into the canopy and shall not protrude downward beyond the ceiling of the canopy.
17.62.065.D.10. The style of light standards and fixtures shall be consistent with the style and character of architecture proposed on the site.
17.62.065.D.11. In no case shall exterior lighting add more than 1 foot-candle to illumination levels at any point off-site.
Finding: Complies with Condition. The applicant did not provide enough detail in the lighting plan to verify that these standards have been met. The applicant shall provide a final lighting plan that addresses all standards in 17.62.065.D. **Staff determined that it is likely and reasonable that the applicant can meet this standard through Condition of Approval 47.**

17.62.065.D.12. All outdoor light not necessary for security purposes shall be reduced, activated by motion sensor detectors, or turned off during non-operating hours.
17.62.065.D.13. Light fixtures used to illuminate flags, statues, or any other objects mounted on a pole, pedestal, or platform shall use a narrow cone beam of light that will not extend beyond the illuminated object.
17.62.065.D.14. For upward-directed architectural, landscape, and decorative lighting, direct light emissions shall not be visible above the building roofline.
17.62.065.D.15. No flickering or flashing lights shall be permitted, except for temporary decorative seasonal lighting.
17.62.065.D.17. Lighting for outdoor recreational uses such as ball fields, playing fields, tennis courts, and similar uses, provided that such uses comply with the following standards:
i. Maximum permitted light post height: 80 feet.
ii. Maximum permitted illumination at the property line: 0.5 foot-candles.
Finding: Complies with Condition. The applicant did not provide a response to these criteria. Prior to issuance of building permits, the applicant shall provide a written response demonstrating compliance with 17.62.065.D.12 through D.15. **The applicant can meet this standard through Condition of Approval 47.**

17.62.080 Special Development Standards along Transit Streets.
17.62.080.B. Applicability. Except as otherwise provide in this section, the requirements of this section shall apply to the construction of new retail, office and institutional buildings which front on a transit street.
Finding: Not Applicable. No frontage streets are currently transit streets.

17.62.085: Refuse and Recycling Standards For Commercial, Industrial, and Multi-family Developments
The purpose and intent of these provisions is to provide an efficient, safe and convenient refuse and recycling enclosure for the public as well as the local collection firm. All new development, change in property use, expansions or exterior alterations to uses other than single-family or duplex residences shall include a refuse and recycling enclosure. The area(s) shall be:
A. Sized appropriately to meet the needs of current and expected tenants, including an expansion area if necessary;
B. Designed with sturdy materials, which are compatible to the primary structure(s);
C. Fully enclosed and visually screened;
D. Located in a manner easily and safely accessible by collection vehicles;

E. Located in a manner so as not to hinder travel lanes, walkways, streets or adjacent properties;
F. On a level, hard surface designed to discharge surface water runoff and avoid ponding;
G. Maintained by the property owner;
H. Used only for purposes of storing solid waste and recyclable materials;
I. Designed in accordance with applicable sections of the Oregon City Municipal Code (including Chapter 8.20-Solid Waste Collection and Disposal) and City adopted policies.

Finding: Complies with Condition. The applicant states that the proposed refuse/recycling area will be large enough to contain 1 large bin for refuse and 1 small bin for recycling sized to meet the owner's needs. If needed, space to the east of proposed area is available for future expansion and landscape screening would need to be extended to match/conform to item C below. The refuse/recycling area will be located adjacent to the southeast corner of the building behind the fenced compound/vehicle storage area and additional landscape screening to prevent visibility from Meyers Road. Landscape screening is proposed to screen view of trash area from Meyers and Loder Roads. The applicant did not provide information about the materials proposed for the refuse area. Prior to issuance of permits, the applicant shall provide documentation ensuring that the refuse area is designed with sturdy materials, which are compatible to the primary structure. **The applicant can meet this standard through Condition of Approval 50.**

CHAPTER 17.52 OFF-STREET PARKING AND LOADING

17.52.010 Applicability.
The construction of a new structure or parking lot, or alterations to the size or use of an existing structure, parking lot or property use shall require site plan review approval and compliance with this chapter. This chapter does not apply to single- and two-family residential dwellings.

Finding: Applicable. The project includes construction of a new structure.

***17.52.20** Number of Automobile Spaces Required.*
17.52.020.A. The number of parking spaces shall comply with the minimum and maximum standards listed in Table 17.52.020. The parking requirements are based on spaces per 1,000 square feet gross leasable area unless otherwise stated.

Table 17.52.020

LAND USE	*PARKING REQUIREMENTS*	
	MINIMUM	*MAXIMUM*
Multi-Family: Studio	*1.00 per unit*	*1.5 per unit*
Multi-Family: 1 bedroom	*1.25 per unit*	*2.00 per unit*
Multi-Family: 2 bedroom	*1.5 per unit*	*2.00 per unit*
Multi-Family: 3 bedroom	*1.75 per unit*	*2.50 per unit*
Hotel/Motel	*1.0 per guest room*	*1.25 per guest room*
Welfare/Correctional Institution	*1 per 7 beds*	*1 per 5 beds*
Senior housing, including congregate care, residential care and assisted living *facilities; nursing homes and other types of group homes;*	*1 per 7 beds*	*1 per 5 beds*
Hospital	*2.00*	*4.00*
Preschool Nursery/Kindergarten	*2.00*	*3.00*
Elementary/Middle School	*1 per classroom*	*1 per classroom + 1 per administrative employee + 0.25 per seat in auditorium /assembly room/stadium*
High School/College/Commercial School for	*0.20 per # staff and*	*0.30 per # staff and students*

Adults	*students*	
Auditorium/Meeting Room/Stadium	*.25*	*0.5 per seat*
Retail Store/ Shopping Center/Restaurants	*4.10*	*5.00*
Office	*2.70*	*3.33*
Medical or Dental Clinic	*2.70*	*3.33*
Sports Club/Recreation Facilities	*Case Specific*	*5.40*
Storage Warehouse/ Freight Terminal	*0.30 per gross sq-ft*	*0.40 per gross sq-ft*
Manufacturing/ Wholesale Establishment	*1.60 per gross sq-ft*	*1.67 per gross sq-ft*
Light Industrial/ Industrial Park	*1.3*	*1.60*

1. *Multiple Uses. In the event several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements of the several uses computed separately.*
2. *Requirements for types of buildings and uses not specifically listed herein shall be determined by the Community Development Director, based upon the requirements of comparable uses listed.*
3. *Where calculation in accordance with the following list results in a fractional space, any fraction less than one-half shall be disregarded and any fraction of one-half or more shall require one space.*
4. *The minimum required parking spaces shall be available for the parking of operable passenger automobiles of residents, customers, patrons and employees only, and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business or use.*
5. *A Change in Use within an existing building located in the MUD Design District is exempt from additional parking requirements. Additions to an existing building or new construction in the District are required to meet the minimum parking requirements in Table 17.52.020.*

17.52.020.B. Parking requirements can be met either onsite, or offsite by meeting the following conditions:
17.52.020.B.1. Mixed Uses. If more than one type of land use occupies a single structure or parcel of land, the total requirements for off-street automobile parking shall be the sum of the requirements for all uses, unless it can be shown that the peak parking demands are actually less (e.g. the uses operate on different days or at different times of the day). In that case, the total requirements shall be reduced accordingly, up to a maximum reduction of fifty percent, as determined by the community development director.

Finding: Complies with Condition.

Overall parking for the Campus

The high school campus was approved in 2001 through a Conditional Use permit with 1,000 parking spaces and appears to have received approval for another 40 through revisions or later site plan approvals. The City's parking requirements have changed since the high school was approved, making the parking count nonconforming. The applicant provided the number of students at 2,500 and the number of staff at 250. The applicant shall provide documentation to verify the total enrollment, number of staff, and projected future enrollment and shall provide a revised parking count if these numbers are different from those provided. As provided, these students and staff levels would result in a parking ratio of 550 minimum to 825 maximum parking spaces for the high school as a whole.

Currently, the high school contains 1,038 parking spaces, which makes it nonconforming based on today's code. The applicant proposes to add 138 parking spaces for the Transportation Facility, for a total of 1,176 spaces. The applicant proposes to reduce the parking on the high school site in future phases of the Master Plan by 55 spaces through the addition of landscaping islands. This work will bring the total down to 1,121 spaces by the end of the Master Planning period.

The applicant provided a parking calculation that separated out the athletic fields, and provided a suggested minimum and maximum ratio based on the ITE manual. However, the City considers the athletic fields to be part of the high school campus. These fields do not increase the parking demand on site because they operate after high school hours. While the school is in session, the fields are not

available for public use. John Replinger, the City's transportation engineer, concurred in his review letter, stating,

> *"The assumption of overlap of peak demand for school parking and athletic field parking does not seem well supported. On the contrary, many of the users of athletic fields during weekday afternoons would seem to be student-athletes from the same school who do not have to travel to and park at the site. When athletic competitions or practices involve those from other schools, the travel time for the visitors would likely provide plenty of time for the majority of the host school's students to depart."*

Thus, the City will not count the athletic fields separately from the high school parking ratio as desired by the applicant.

The applicant has requested to maximize on-site parking in order to address concerns of neighbors that on-street parking is being used by high school students, and to provide convenient parking for athletic field users. There are documented parking issues at the high school, including parents and students parking in the bicycle lane on Meyers Road, and neighborhood concerns about students parking on the street within the adjacent neighborhood. However, the applicant states that the existing parking lots at the High School are not fully utilized – the farthest spaces past the tennis courts are usually empty. Thus, it seems that students are parking in the neighborhood and the bike lanes out of convenience, rather than due to lack of on-site parking.

The City's transportation consultant, John Replinger, has the following comments regarding the amount of parking requested by the applicant:

> "I recommend that the applicant and the city review the assumptions and refine the parking proposal to come to an agreement on a reduced number of spaces that is more supportive of regional and city goals. I further recommend that the OCSD commit to a transportation demand management program focused on the maintenance facility to help achieve the broader transportation goals and reduce the need for parking at that site."

The applicant proposed a Transportation Demand Management (TDM) Plan with its original Conditional Use permit application in 2001 (Exhibit 6). The proposed 2001 TDM plan included measures to encourage carpooling and transit use by offering free carpool parking and reduced rate transit passes, by providing a bicycle and pedestrian route between the Community College and the High School, and charging a higher fee to park on site for Single Occupancy vehicles, among other measures. The applicant stated that there is no current TDM plan in place at the High School, and the City has no record that one has been completed.

The applicant does propose to reduce overall parking in future phases of the development plan by 55 stalls through the addition of landscaping islands. This strategy is a good one, but does not reduce parking enough to reach the level permitted by current code.

The applicant has neither met applicable standards nor the intent of the Comprehensive Plan with the proposed parking plan. The applicant shall produce a Transportation Demand Management and Parking Management Plan that reflects current traffic and parking issues. The applicant shall either present a TDM scope of work and contract for City staff approval prior to issuance of building permits, or post a performance guarantee for such a study prior to issuance of building permits. The TDM plan shall include reporting requirements and enforcement mechanisms to ensure that the school district follows the recommendations in the plan.

Transportation Facility Parking

The applicant submitted a parking calculation for the transportation facility using gross square footage of the building, while OCMC 17.52.020 is based on net leasable area. According to the building plans, the transportation facility is proposed to have 12,257 square feet of light industrial (shops and maintenance) space, 5,379 space feet of office space, and 7,680 square feet of storage areas.

Use	Square feet	Parking ratio per 1000 sf
light industrial/shops	12257	1.3 to 1.6
office	5379	2.7 to 3.3
storage	7680	0.3 to 0.4

Use	Minimum Parking Spaces	Maximum Parking Spaces
light industrial	15.93	19.61
office	14.52	17.75
storage	2.30	3.07
TOTAL	**33**	**40**

To account for parking needs for the bus drivers themselves, the applicant suggests a parking ratio of 0.5 spaces per driver at a minimum, and 1 space per driver at a maximum. This ratio is based on the City of Hillsboro requirement for vehicle storage uses, as Oregon City does not provide such a parking ratio in its code. Oregon City does have a parking standard for storage or warehouse uses, which is 0.3 to 0.4 spaces per 1000 square feet of space. This ratio could be applied using the total square footage of outdoor bus storage proposed. Staff estimates the total storage area, including all drive aisles, at 153,000 square feet. Using the storage ratio, the parking permitted would be 43 minimum and 61 maximum spaces. The applicant provided the number of bus drivers to be 81; and using the applicant's proposed ratio the number of parking spaces would be 41 minimum and 81 maximum. The table below shows the resulting parking counts using both methods.

	OPTION 1 **Parking permitted using OCMC Storage ratio**	**OPTION 2** **Parking permitted using Hillsboro employee ratio**
Building area	33-40	33-40
Bus storage area	43-61	41-81
Total (min to max)	76-101	71-121

Staff has provided two options above that limit the parking to 101 to 121 spaces, rather than the 138 requested. These two options consider the Transportation Facility on its own, but when examined holistically with the entire Master Plan area, there are other factors to consider and shared parking opportunities:

The overall Master Plan area is overparked, both according to current maximum allowed parking and current parking underutilization.

The Transportation Facility building is approximately 1,050 feet, or 0.2 miles walking distance (a four minute walk) from the parking lot north of the ball fields, which according to the applicant is usually somewhat empty. While the school district wishes for its staff to be able to park closer to their workplace, staff is not convinced that providing a parking space for every single employee on site, and then some, is justifiable or desirable. If the parking lot is full, staff could park in the underutilized lot 0.2 miles away, or park on-street along Meyers Road.

Again, a Transportation Demand Management Study and Plan would greatly assist staff and the applicant in making decisions about parking. In the absence of such a study, staff recommends that the Planning Commission limit the amount of parking provided at the Transportation Facility.

That being said, the applicant has proposed that the parking lot serve not just the school district's Transportation Facility, but also the athletic fields and future park use. The current concept plan for the park includes a modest parking lot and on-street parking on potentially three sides of the park. The soccer field does not have a dedicated parking area and the school district has stated that users often park illegally on grass on the edge of the field. The softball fields are served by parking lining High School Avenue and the parking lot on the north edge of the site. The parking along High School Avenue will eventually be replaced with the Loder Road extension, which will have on-street parking on one side that will effectively reduce that parking by half. The park and the softball fields appear to be fairly well served by parking; the soccer field users may see the most benefit from this additional parking lot proposed by the applicant.

If the Planning Commission agrees that the applicant should maximize parking, staff recommends using one of the calculations provided in the table, or some combination thereof, with no more than 121 spaces in the new parking lot. If the Planning Commission does not agree with the applicant's argument for maximizing parking, staff recommends using Option 1 as a starting point, and points out that the number of total planned employees at the facility (approximately 91) is still less than the maximum number of parking stalls permitted in Option 1.

The applicant can meet this standard through Conditions of Approval 51 and 52.

17.52.020.B.2. Shared Parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlay (e.g., uses primarily of a daytime versus nighttime nature), that the shared parking facility is within one thousand feet of the potential uses, and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument authorizing the joint use.

Finding: Complies as Proposed. The applicant does not propose to use shared parking to meet its requirement. The applicant does intent to make the new parking lot a public lot for use by the community after operating hours.

17.52.020.B.3. On-Street Parking. On-street parking may be counted toward the minimum standards when it is on the street face abutting the subject land use. An on-street parking space must not obstruct a required clear vision area and it shall not violate any law or street standard. On-street parking for commercial uses shall conform to the following standards:

Dimensions. The following constitutes one on-street parking space:

1. *Parallel parking, each [twenty-two] feet of uninterrupted and available curb;*
2. *[Forty-five/sixty] degree diagonal, each with [fifteen] feet of curb;*
3. *Ninety degree (perpendicular) parking, each with [twelve] feet of curb.*

17.52.020.B.4. Public Use Required for Credit. On-street parking spaces counted toward meeting the parking requirements of a specific use may not be used exclusively by that use, but shall be available for general public use at all times. Signs or other actions that limit general public use of on-street spaces are prohibited.

Finding: Not Applicable. The applicant does not propose to utilize on street parking to meet its parking requirements.

17.52.020.C. Reduction of the Number of Automobile Spaces Required.
Finding: Not Applicable. The applicant has not requested a reduction.

***17.52.030** Standards for Automobile Parking.*
17.52.030.A. Access. Ingress and egress locations on public thoroughfares shall be located in the interests of public traffic safety. Groups of more than four parking spaces shall be so located and served by driveways so that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley. No driveway with a slope of greater than fifteen percent shall be permitted without approval of the city engineer.
Finding: Complies as Proposed. A driveway to the parking lot is provided on High School Avenue/Loder Road.

17.52.030.B. Surfacing. Required off-street parking spaces and access aisles shall have paved surfaces adequately maintained. The use of pervious asphalt/concrete and alternative designs that reduce storm water runoff and improve water quality pursuant to the city's Stormwater and Low Impact Development Design Standards are encouraged.
Finding: Complies as Proposed. The applicant proposes to pave the parking lot with asphalt.

17.52.030.C. Drainage. Drainage shall be designed in accordance with the requirements of Chapter 13.12 and the city public works stormwater and grading design standards.
Finding: See section 17.62.050A6 for an evaluation of the storm system and proposed conditions of approval.

17.52.030.D. Dimensional Standards.
17.52.030.D.1. Requirements for parking developed at varying angles are according to the table included in this section. A parking space shall not be less than seven feet in height when within a building or structure, and shall have access by an all-weather surface to a street or alley. Parking stalls in compliance with the American with Disabilities Act may vary in size in order to comply with the Building Division requirements. Up to 35% of the minimum required parking may be compact, while the remaining required parking stalls are designed to standard dimensions. The Community Development Director may approve alternative dimensions for parking stalls in excess of the minimum requirement which comply with the intent of this chapter.
17.52.030.D.2. Alternative parking/ plan. Any applicant may propose an alternative parking plan. Such plans are often proposed to address physically constrained or smaller sites, however innovative designs for larger sites may also be considered. In such situations, the Community Development Director may approve an alternative parking lot plan with variations to parking dimensions of this section. The alternative shall be consistent with the intent of this chapter and shall create a safe space for automobiles and pedestrians while providing landscaping to the quantity and quality found within parking lot landscaping requirements.

PARKING STANDARD
PARKING ANGLE SPACE DIMENSIONS

A ***Parking Angle***		***B*** ***Stall Width***	***C*** ***Stall to Curb***	***D*** ***Aisle Width***	***E*** ***Curb Length***	***F*** ***Overhang***
0 degrees		*8.5*	*9.0*	*12*	*20*	*0*
30 degree	*Standard* *Compact*	*9'* *8'*	*17.3'* *14.9'*	*11'* *11'*	*18'* *16'*	
45 degree	*Standard* *Compact*	*8.5* *8.5*	*19.8'* *17.0'*	*13'* *13'*	*12.7'* *11.3'*	*1.4*
60 degree	*Standard* *Compact*	*9'* *8'*	*21'* *17.9'*	*18'* *16'*	*10.4'* *9.2'*	*1.7*
90 degree	*Standard*	*9'*	*19.0'*	*24'*	*9'*	*1.5*

	Compact	*8'*	*16.0'*	*22'*	*8'*	

All dimensions are to the nearest tenth of a foot.

Finding: Complies as Proposed. The applicant did not propose an alternative plan. New parking for staff and visitors of the Transportation Maintenance Facility are 90 degree standard sized spaces and are 9 feet wide x 19 feet long. Perimeter parking stalls are 17'-6" long with a 1'-6" overhang into the landscaped area/sidewalk. In addition required ADA accessible parking spaces are provided complying with ADA and Building Division dimensional requirements. Compact spaces are not proposed. Aisle widths are 24 feet minimum.

17.52.030.E. Carpool and Vanpool Parking. New developments with seventy-five or more parking spaces, and new hospitals, government offices, group homes, nursing and retirement homes, schools and transit park-and-ride facilities with fifty or more parking spaces, shall identify the spaces available for employee, student and commuter parking and designate at least five percent, but not fewer than two, of those spaces for exclusive carpool and vanpool parking. Carpool and vanpool parking spaces shall be located closer to the main employee, student or commuter entrance than all other employee, student or commuter parking spaces with the exception of ADA accessible parking spaces. The carpool/vanpool spaces shall be clearly marked "Reserved - Carpool/Vanpool Only."

Finding: Complies with Condition. The applicant proposed 6 carpool/vanpool spaces for the new transportation facility. With 138 spaces proposed, 5% amounts to 7 required carpool and vanpool spaces. The applicant shall modify the final plans to reflect the required number of carpool/vanpool spaces, no less than 5% of the total parking spaces provided at the transportation facility. **The applicant can meet this standard through condition of approval 53.**

A non-conforming condition exits at the High School parking lot due to the lack of carpool/vanpool marked spaces. The 2001 site plan approval required 40 carpool and vanpool spaces (see Exhibit 7). A site inspection revealed that these spaces are not currently provided. The applicant shall provide 40 carpool/vanpool spaces at the high school as part of this detailed development plan. The applicant proposes to bring the existing parking lot at the high school up to conformance in Phase 2 of the proposed Master Plan, by striping a total of 43 spaces as carpool/vanpool; however, 43 spaces is not quite 5% of the proposed total parking**.** The number of carpool/vanpool spaces provided by the end of the Master Plan period shall equal at least 5% of the total parking provided on site. **The applicant can meet this standard through conditions of approval 54 and 55.**

17.52.040 *Bicycle Parking Standards*

17.52.040.B. Number of Bicycle Spaces Required. For any use not specifically mentioned in Table A, the bicycle parking requirements shall be the same as the use which, as determined by the Community Development Director is most similar to the use not specifically mentioned. Calculation of the number of bicycle parking spaces required shall be determined in the manner established in Section 17.52.020 for determining automobile parking space requirements. Modifications to bicycle parking requirements may be made through the Site Plan and Design, Conditional Use, or Master Plan review process.

TABLE A Required Bicycle Parking Spaces*

Where two options for a requirement are provided, the option resulting in more bicycle parking applies. Where a calculation results in a fraction, the result is rounded up to the nearest whole number.

USE	***MINIMUM BICYCLE PARKING***	***MINIMUM BICYCLE PARKING – COVERED*** *– The following percentage of bicycle parking is required to be covered*
Multi-family (three or more units)	*1 per 10 units (minimum of 2)*	*50% (minimum of 1)*
Institutional		
Correctional institution	*1 per 15 auto spaces (minimum of 2)*	*30% (minimum of 1)*
Nursing home or care facility	*1 per 30 auto spaces (minimum of 2)*	*30% (minimum of 1)*

USE	***MINIMUM BICYCLE PARKING***	***MINIMUM BICYCLE PARKING – COVERED*** *– The following percentage of bicycle parking is required to be covered*
Hospital	*1 per 20 auto spaces (minimum of 2)*	*30% (minimum of 1)*
Park-and-ride lot	*1 per 5 auto spaces (minimum of 2)*	*50% (minimum of 1)*
Transit center	*1 per 5 auto spaces (minimum of 2)*	*50% (minimum of 1)*
Parks and open space	*1 per 10 auto spaces (minimum of 2)*	*0%*
Public parking lots	*1 per 10 auto spaces (minimum of 2)*	*50% (minimum of 1)*
Automobile parking structures	*1 per 10 auto spaces (minimum of 4)*	*80% (minimum of 2)*
Religious institutions, movie theater, auditorium or meeting room	*1 per 10 auto spaces (minimum of 2)*	*30% (minimum of 1)*
Libraries, museums	*1 per 5 auto spaces (minimum of 2)*	*30% (minimum of 1)*
Preschool, nursery, kindergarten	*2 per classroom (minimum of 2)*	*50% (minimum of 1)*
Elementary	*4 per classroom (minimum of 2)*	*50% (minimum of 1)*
Junior high and High school	*2 per classroom (minimum of 2)*	*50% (minimum of 2)*
College, business/commercial schools	*2 per classroom (minimum of 2)*	*50% (minimum of 1)*
Swimming pools, gymnasiums, ball courts	*1 per 10 auto spaces (minimum of 2)*	*30% (minimum of 1)*
Retail stores and shopping centers	*1 per 20 auto spaces (minimum of 2)*	*50% (minimum of 2)*
Retail stores handling exclusively bulky merchandise such as automobile, boat or trailer sales or rental	*1 per 40 auto spaces (minimum of 2)*	*0%*
Bank, office	*1 per 20 auto spaces (minimum of 2)*	*50% (minimum of 1)*
Medical and dental clinic	*1 per 20 auto spaces (minimum of 2)*	*50% (minimum of 1)*
Eating and drinking establishment,	*1 per 20 auto spaces (minimum of 2)*	*0%*
Gasoline service station	*1per 10 auto spaces (minimum of 2)*	*0%*

* *Covered bicycle parking is not required for developments with two or fewer stalls.*

Finding: Complies with Condition. Other than the office portion of the use, the proposed transportation facility use is not specifically mentioned in Table A, thus the bicycle parking requirements shall be the same as the use which, as determined by the community development director, is most similar to the use not specifically mentioned. Staff finds that the office use is most similar, thus one bicycle parking space per 20 auto spaces are required. With 138 auto spaces, 7 bicycle parking spaces are required. The applicant has proposed 8 bicycle parking spaces at the new Transportation Maintenance Facility, with 4 covered.

There are currently a total of 96 uncovered bicycle parking spaces at the High School. The plans show 40 of these spaces near the front entrance of the school, 20 near a back entrance, with the rest spread throughout the site at athletic facilities. The 2001 site plan and conditional use approval

from the Planning Commission required the school district to phase in 190 bicycle parking spaces over time, in various areas of the campus.

The applicant states that the bicycle parking is underutilized; and has proposed to retain the existing spaces and to monitor bicycle ridership and to phase in additional spaces as demand increases to a level where more spaces are needed. No data on mode share or utilization of bicycle parking was provided or is available. There could be various reasons for underutilization of bicycle parking, including low bicycle mode share, but also including security concerns and lack of cover from the elements.

The school district originally proposed in 2001 to phase in 190 bicycle parking spaces, but has not done so. Staff finds that data is needed to assess whether 190 are truly needed at this time, and recommends that the applicant collect this data through a TDM plan as discussed below. Instead of requiring immediate provision of 190 spaces, staff recommends that the existing bicycle parking be upgraded to increase its utility and convenience. The applicant shall propose a method to enhance the existing bicycle parking near the high school entrance by covering and/or better securing at least 50% the 60 racks that are near the building entrances. Approval from community development director of the method of covering shall be required; and implementation of this improvement shall be required as part of this detailed development plan. **The applicant can meet this standard through Condition of Approval 56.**

The applicant proposed a Transportation Demand Management (TDM) Plan with its original Conditional Use permit application in 2001 (Exhibit 6). The 2001 TDM plan includes measures to encourage carpooling and transit use by offering free carpool parking and reduced rate transit passes, by providing a bicycle and pedestrian route between the Community College and the High School, and charging a higher fee to park on site for Single Occupancy vehicles, among other measures. The applicant stated that there is no current TDM plan in place at the High School, and the City has no record that one has been completed.

Staff finds that a Parking Study or TDM plan would benefit the school district in finding a solution for bicycle parking, to better assess the demand and possibly increase utilization through better design, placement, or incentives. The applicant shall produce a Transportation Demand Management and Parking Management Plan that reflects current traffic and parking issues. The applicant shall either present a TDM scope of work and contract for City staff approval prior to issuance of building permits, or post a performance guarantee for such a study prior to issuance of building permits. The TDM plan shall include reporting requirements and enforcement mechanisms to ensure that the school district follows the recommendations in the plan. **The applicant can meet this standard through Condition of Approval 52.**

17.52.040.C. Security of Bicycle Parking
Bicycle parking facilities shall be secured. Acceptable secured bicycle parking area shall be in the form of a lockable enclosure onsite, secure room in a building onsite, a covered or uncovered rack onsite, bicycle parking within the adjacent right-of-way or another form of secure parking where the bicycle can be stored, as approved by the decision maker. All bicycle racks and lockers shall be securely anchored to the ground or to a structure. Bicycle racks shall be designed so that bicycles may be securely locked to them without undue inconvenience and, when in the right-of-way shall comply with clearance and ADA requirements.
17.52.040.D. Bicycle parking facilities shall offer security in the form of either a lockable enclosure or a stationary rack to which the bicycle can be locked. All bicycle racks and lockers shall be securely anchored to the ground or to a structure. Bicycle racks shall be designed so that bicycles may be securely locked to them without undue inconvenience.

Finding: Complies with Condition. The applicant has proposed two stationary bicycle racks anchored to the ground; one rack for 4 bicycles will be provided in front of main entry at the south side of the building and one rack for 4 bicycles will be provided within the fenced compound area just outside the Drivers Break underneath a roof overhang at the west side of the building. The applicant shall submit details about the location, style, and security of the bicycle parking prior to issuance of permits. **The applicant can meet this standard through Condition of Approval 57.**

Location of Bicycle Parking
17.52.040.D.1. Bicycle parking shall be located on-site, in one or more convenient, secure and accessible location. The City Engineer and the Community Development Director may permit the bicycle parking to be provided within the right-of-way provided adequate clear zone and ADA requirements are met. If sites have more than one building, bicycle parking shall be distributed as appropriate to serve all buildings. If a building has two or more main building entrances, the review authority may require bicycle parking to be distributed to serve all main building entrances, as it deems appropriate.
Finding: Complies with Condition. Bicycle racks at the Transportation Maintenance Facility shall be located adjacent to the main entry on the south side of the building, as well as on the west side of the building outside Drivers Break Room underneath a roof overhang. The applicant shall submit details about the location, style, and security of the bicycle parking prior to issuance of permits. **The applicant can meet this standard through Condition of Approval 57.**

The existing bicycle racks at the High School are located at 6 locations, 2 along the front of the High School entry to the east facing Beavercreek Road, 1 adjacent to the northwest entry, 1 adjacent to the ROTC/Shop Building, 1 adjacent to the tennis courts along parking lot #1 to the north, and 1 adjacent to the softball fields at the west end of the site along High School Ave.

17.52.040.D.2 Bicycle parking areas shall be clearly marked or visible from on-site buildings or the street. If a bicycle parking area is not plainly visible from the street or main building entrance, a sign must be posted indicating the location of the bicycle parking area. Indoor bicycle parking areas shall not require stairs to access the space unless approved by the community development director.
Finding: Complies with Condition. The applicant states the racks will be clearly visible flanking the main building entrance and Drivers Break Room entry at the west side of the building. The applicant shall submit details about the location, style, and security of the bicycle parking prior to issuance of permits. **The applicant can meet this standard through Condition of Approval 57.**

17.52.040.D.3. All bicycle parking areas shall be located to avoid conflicts with pedestrian and motor vehicle movement.
- *a. Bicycle parking areas shall be separated from motor vehicle parking and maneuvering areas and from arterial streets by a barrier or a minimum of five feet.*
- *b. Bicycle parking areas shall not obstruct pedestrian walkways; provided, however, that the review authority may allow bicycle parking in the right-of-way where this does not conflict with pedestrian accessibility.*

Finding: Complies as Proposed. Physical separation of the bicycle parking area from motor vehicle parking and maneuvering areas and from streets is in excess of 5 feet either by a sidewalk, landscaped area, or both. High School bicycle parking areas are separated from motor vehicle parking and maneuvering areas and from streets by a minimum of 6'-0" wide sidewalk/landscaped area.

17.52.040.D.4. Accessibility.
- *a. Outdoor bicycle areas shall be connected to main building entrances by pedestrian accessible walkways.*
- *b. Outdoor bicycle parking areas shall have direct access to a right-of-way.*
- *c. Outdoor bicycle parking should be no farther from the main building entrance than the distance to the closest vehicle space, or 50 feet, whichever is less, unless otherwise determined by the community development director, city engineer, or planning commission.*

Finding: Complies with Condition. It is not clear if the racks to be located at the break room area will have direct access; a fence is proposed separating the sidewalk from the break area. The applicant shall provide a means of access through the fence that is accessible by all employees or shall reconfigure the bicycle parking to have direct access to pedestrian pathways. **The applicant can meet this standard through Condition of Approval 58.**

17.52.060 Parking Lot Landscaping.
17.52.060.A. Development Standards
17.52.060.A.1. The landscaping shall be located in defined landscaped areas that are uniformly distributed throughout the parking or loading area.
Finding: Complies as Proposed: The applicant submitted a landscaping plan for the parking lot. Proposed landscaping is uniformly distributed.

17.52.060.A.2. All areas in a parking lot not used for parking, maneuvering, or circulation shall be landscaped.
Finding: Complies as Proposed: The applicant's landscape plan meets this standard.

17.52.060.A.3. Parking lot trees shall be a mix of deciduous shade trees and coniferous trees. The trees shall be evenly distributed throughout the parking lot as both interior and perimeter landscaping to provide shade.
Finding: Complies with Condition. The tree varieties proposed for the parking lot include only maple trees. The applicant shall add coniferous tree(s) to provide a mix of species. **The applicant can meet this standard through condition of approval 59.**

17.52.060.A.4. Required landscaping trees shall be of a minimum two-inch minimum caliper size (though it may not be standard for some tree types to be distinguished by caliper), planted according to American Nurseryman Standards, and selected from the Oregon City Street Tree List;
Finding: Complies as Proposed. All trees are proposed as 2 inch minimum caliper size or 6-8 ft. in height for evergreen trees and will be planted according to American Nurseryman Standards.

17.52.060.A.5. Landscaped areas shall include irrigation systems unless an alternate plan is submitted, and approved by the Community Development Director, that can demonstrate adequate maintenance.
Finding: Complies as Proposed. All landscaped areas are proposed to be irrigated by an automatically computer controlled irrigation system.

17.52.060.A.6. All plant materials, including trees, shrubbery and ground cover should be selected for their appropriateness to the site, drought tolerance, year-round greenery and coverage and staggered flowering periods. Species found on the Oregon City Native Plant List are strongly encouraged and species found on the Oregon City Nuisance Plant List are prohibited.
Finding: Complies as Proposed. The applicant states that all the plant varieties are horticulturally appropriate for this site and after a period of establishment, all plants would tolerate periods of drought. Other than the deciduous trees, all plants will provide year round greenery. Flowering plants have been avoided on this site since the litter from flowers or subsequent seed pods create litter that would increase the maintenance of the site.

17.52.060.A.7. The landscaping in parking areas shall not obstruct lines of sight for safe traffic operation and shall comply with all requirements of Chapter 10.32, Traffic Sight Obstructions.
Finding: Complies as Proposed. The applicant proposes that the trees in the parking areas will be branched at 6 ft. and have been off-set from streetlights, hydrants and intersection in response to the clearance distance parameters.

17.52.060.A.8. Landscaping shall incorporate design standards in accordance with Chapter 13.12, Stormwater Management.
Finding: See analysis in Chapter 13.12 of this report.

17.52.060.B. Perimeter Parking Lot Landscaping and Parking Lot Entryway/Right-of-Way Screening. Parking lots shall include a 5-foot wide landscaped buffer where the parking lot abuts the right-of-way and/or adjoining properties. In order to provide connectivity between non-single-family sites, the Community Development Director may approve an interruption in the perimeter parking lot landscaping for a single driveway where the parking lot abuts property designated as multi-family, commercial or industrial. Shared driveways and parking aisles that straddle a lot line do not need to meet perimeter landscaping requirements.

Finding: Complies as Proposed. Five-foot minimum landscaped buffers are proposed abutting the Meyers Road right-of-way and Loder Road right of way.

17.52.060.B.1. The perimeter parking lot are shall include:

- *a. Trees spaced a maximum of thirty-five feet apart (minimum of one tree on either side of the entryway is required). When the parking lot is adjacent to a public right-of-way, the parking lot trees shall be offset from the street trees;*
- *b. Ground cover, such as wild flowers, spaced a maximum of 16-inches on center covering one hundred percent of the exposed ground within 3 years. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees; and*
- *c. An evergreen hedge screen of thirty to forty-two inches high or shrubs spaced no more than four feet apart on average. The hedge/shrubs shall be parallel to and not nearer than two feet from the right-of-way line. The required screening shall be designed to allow for free access to the site and sidewalk by pedestrians. Visual breaks, no more than five feet in width, shall be provided every thirty feet within evergreen hedges abutting public right-of-ways.*

Finding: Complies with Condition. The applicant proposes trees spaced every 30 feet along the Loder Road edge of the site. The Meyers Road edge contains Maples spaced at 15 feet. The applicant proposed shrubs and groundcover that appear to meet this standard. The applicant shall provide a final landscaping plan that contains an example with detail for each proposed "landscaping zone" to ensure that the shrubs and groundcover meet the standard. **The applicant can meet this standard through condition of approval 60.**

17.52.060.C. Parking Area/Building Buffer. Parking areas shall be separated from the exterior wall of a structure, exclusive of pedestrian entranceways or loading areas, by one of the following:

1. Minimum five-foot wide landscaped planter strip (excluding areas for pedestrian connection) abutting either side of a parking lot sidewalk with:

- *a. Trees spaced a maximum of thirty-five feet apart;*
- *b. Ground cover such as wild flowers, spaced a maximum of 16-inches on center covering one hundred percent of the exposed ground within three years. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees; and*
- *c. An evergreen hedge of thirty to forty-two inches or shrubs placed no more than four feet apart on average; or*

2. Seven-foot sidewalks with shade trees spaced a maximum of thirty-five feet apart in three-foot by five-foot tree wells.

Finding: Complies with Condition. An 11'-6" wide landscaped planter will be provided between the building and the parking lot sidewalk to the south. It appears that trees are proposed only along a portion of the buffer area. The applicant shall provide trees along the entire building buffer, spaced at 35 feet maximum. The applicant proposed shrubs and groundcover that appear to meet this standard. The applicant shall provide a final landscaping plan that contains an example with detail for each proposed "landscaping zone" to ensure that the shrubs and groundcover meet the standard. **The applicant can meet this standard through condition of approval 60.**

17.52.060.D. Interior Parking Lot Landscaping. Surface parking lots shall have a minimum ten percent of the interior of the gross area of the parking lot devoted to landscaping to improve the water quality, reduce storm water runoff, and provide pavement shade. Interior parking lot landscaping shall not be counted toward the fifteen percent minimum total site landscaping required by Section 17.62.050(1) unless otherwise permitted by the dimensional standards of the underlying zone district. Pedestrian walkways or any impervious surface in the landscaped areas are not to be counted in the percentage.

Finding: Complies as Proposed. The applicant proposes interior lot landscaping of 8,851 square feet, or 15% of the total parking lot area.

Interior parking lot landscaping shall include:
17.52.060.D.a. A minimum of one tree per six parking spaces.
Finding: Complies as Proposed. The applicant proposes 24 interior landscaping trees; 23 are required for the 138 parking spaces.

17.52.060.D.b. Ground cover, such as wild flowers, spaced a maximum of 16-inches on center covering one hundred percent of the exposed ground within three years. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees.
17.52.060.D.c. Shrubs spaced no more than four feet apart on average.
Finding: Complies with Condition. The applicant proposed shrubs and groundcover that appear to meet this standard. The applicant shall provide a final landscaping plan that contains an example with detail for each proposed "landscaping zone" to ensure that the shrubs and groundcover meet the standard. **The applicant can meet this standard through condition of approval 60.**

17.52.060.D.d. No more than eight contiguous parking spaces shall be created without providing an interior landscape strip between them. Landscape strips shall be provided between rows of parking shall be a minimum of six feet in width and a minimum of 10 feet in length.
Finding: Complies as Proposed. The applicant proposes no more than 8 contiguous spaces. All landscaping islands are at least 6 feet wide and 10 feet in length.

17.52.060.D.e. Pedestrian walkways shall have shade trees spaced a maximum of every thirty-five feet in a minimum three-foot by five-foot tree wells; or

Trees spaced every thirty-five feet, shrubs spaced no more than four feet apart on average, and ground cover covering one hundred percent of the exposed ground. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees.

Finding: Complies with Condition. The landscaping plan does not meet this standard. The applicant shall provide 2" caliper trees every 35 feet along the pedestrian walkway on the west side of the parking lot. **The applicant can meet this standard through condition of approval 61.**

17.52.70. Alternative landscaping plan.
Finding: Not Applicable. The applicant did not propose an alternative plan.

17.52.080. Maintenance.
The owner, tenant and their agent, if any, shall be jointly and severally responsible for the maintenance of the site including but not limited to the off-street parking and loading spaces, bicycle parking and all landscaping which shall be maintained in good condition so as to present a healthy, neat and orderly appearance and shall be kept free from refuse and debris.
All plant growth in interior landscaped areas shall be controlled by pruning, trimming, or otherwise so that:

a. It will not interfere with the maintenance or repair of any public utility;
b. It will not restrict pedestrian or vehicular access; and
c. It will not constitute a traffic hazard due to reduced visibility.

Finding: Complies as Proposed. The owner shall maintain the parking lot.

***17.52.090** - Loading Areas*
17.52.090.B. Applicability.
Section 17.52.090 applies to uses that are expected to have service or delivery truck visits with a 40-foot or longer wheelbase, at a frequency of one or more vehicles per week. The City Engineer and decision maker shall determine through Site Plan and Design Review the number, size, and location of required loading areas, if any.
17.52.090.C. Standards.
17.52.090.C.1. The off-street loading space shall be large enough to accommodate the largest vehicle that is expected to serve the use without obstructing vehicles or pedestrian traffic on adjacent streets and driveways.

Applicants are advised to provide complete and accurate information about the potential need for loading spaces because the City Engineer or decision maker may restrict the use of other public right-of-way to ensure efficient loading areas and reduce interference with other uses.
17.52.090.C.2. Where parking areas are prohibited between a building and the street, loading areas are also prohibited.
17.52.090.C.3. The City Engineer and decision maker, through Site Plan and Design Review, may approve a loading area adjacent to or within a street right-of-way when all of the following loading and unloading operations conditions are met:

a. *Short in duration (i.e., less than one hour);*
b. *Infrequent (less than three operations daily between 5:00 a.m. and 12:00 a.m. or all operations between 12:00 a.m. and 5:00 a.m. at a location that is not adjacent to a residential zone);*
c. *Does not obstruct traffic during peak traffic hours;*
d. *Does not interfere with emergency response services; and*
e. *Is acceptable to the applicable roadway authority.*

Finding: Complies with Condition. The applicant did not respond to this criterion. Prior to issuance of permits, the applicant shall confirm that the loading code section 17.52.090 is not applicable or provide documentation showing compliance with loading requirements. **The applicant can meet this standard through Condition of Approval 62.**

CHAPTER 12.04 STREETS SIDEWALKS AND PUBLIC PLACES

12.04.003 Applicability
A. Compliance with this chapter is required for all Land Divisions, Site Plan and Design Review, Master Plan, Detailed Development Plan and Conditional Use applications and all public improvements.
Finding: Applicable.

12.04.007 Modifications.
The review body may consider modification of this standard resulting from constitutional limitations restricting the City's ability to require the dedication of property or for any other reason, based upon the criteria listed below and other criteria identified in the standard to be modified. All modifications shall be processed through a Type II Land Use application and may require additional evidence from a transportation engineer or others to verify compliance. Compliance with the following criteria is required:

A. *The modification meets the intent of the standard;*
B. *The modification provides safe and efficient movement of pedestrians, motor vehicles, bicyclists and freight;*
C. *The modification is consistent with an adopted plan; and*
D. *The modification is complementary with a surrounding street design; or, in the alternative,*
E. *If a modification is requested for constitutional reasons, the applicant shall demonstrate the constitutional provision or provisions to be avoided by the modification and propose a modification that complies with the state or federal constitution. The City shall be under no obligation to grant a modification in excess of that which is necessary to meet its constitutional obligations.*

Finding: Complies with Conditions. A modifications to the standards for the Meyers Road extension are shown in the application. This street is classified as a minor arterial in an industrial zone. The applicant has requested a reduction in the right-of-way and the pavement width which essentially reduced the number of lanes from 5 to 3. Staff finds that this is reasonable (with some modifications as depicted in section 12.04.180) as it would generally match the existing conditions of the developed portion of Meyers Road, and provides the service required. The City is also undergoing a Concept Planning process for the Meyers Road extension, which will include a 3-lane road as well. The modification that is approved in this staff report may not match the final Meyers Road concept plan exactly.

Per section 12.04.180 of this report the extension of Loder Road will be High School Avenue north of Meyers Road, which will be required to be dedicated as a public street per the conditions-of-approval. The street section required in the conditions-of-approval is essentially a reduction in the right-of-way

and the pavement width which essentially reduced the number of lanes from 3 to 2. Staff finds that this is reasonable as it would match the existing conditions of the public portion of High School Avenue, and provides the service required.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 22 and 28.

12.04.010 Construction specifications—Improved streets.
All sidewalks hereafter constructed in the city on improved streets shall be constructed to city standards and widths required in the Oregon City Transportation System Plan. The curb shall be constructed at the same time as the construction of the sidewalk and shall be located as provided in the ordinance authorizing the improvement of said street next proceeding unless otherwise ordered by the city commission. Both sidewalks and curbs are to be constructed according to plans and specifications provided by the city engineer.
Finding: Complies as proposed.

12.04.020 Construction specifications—Unimproved streets.
Sidewalks constructed on unimproved streets shall be constructed of concrete according to lines and grades established by the city engineer and approved by the city commission. On unimproved streets curbs do not have to be constructed at the same time as the sidewalk.
Finding: Not Applicable. There are no unimproved streets.

12.04.025 - Street design—Driveway Curb Cuts.
12.04.025.A. One driveway shall be allowed per frontage. In no case shall more than two driveways be allowed on any single or two-family residential property with multiple frontages.
Finding: Complies with Conditions. The applicant has proposed to have two driveways on Meyers Road approximately 200-feet apart in order to facilitate school bus movement. Due to the size and length of the vehicles, this is acceptable.

The driveway closest to High School Avenue is shown as two-way. However, the proposed curve in the street and the landscaping there create a potential safety issue with regard to sight distance. The applicant must demonstrate that the site design will provide adequate sight distance in order for both ingress and egress to be allowed at this driveway.

The applicant has proposed three driveways on High School Avenue. As proposed this would not fall under the driveway cut section of the report as it is proposed that this section of High School Avenue would be private. However, as a COA High School Avenue will be a public street. Two of these driveways serve one parking lot and are approximately 220-feet apart. The third driveway serves a separate parking lot at the intersection of Meyers Road and High School Avenue, and is approximately 160-feet from the nearest driveway. This parking lot is proposed to have a dual function of serving the City Park. Staff finds that having a separate driveway for the parking lot that will be partially used by the Park is reasonable.

It is not clear from the information provided that two driveways are required for the second parking lot. Therefore, a single driveway will be provided for the northern parking lot unless the applicant provides sufficient data that provides justification for the second driveway in the parking lot. .

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 27 and 30.

12.04.025.B. With the exception of the limitations identified in 12.04.025.C, all driveway curb cuts shall be limited to the following dimensions.

Property Use	*Minimum Driveway Width at sidewalk or property line*	*Maximum Driveway Width at sidewalk or property line*
Single or Two-Family Dwelling with one Car Garage/Parking Space	*10 feet*	*12 feet*
Single or Two-Family Dwelling with two Car Garage/Parking Space	*12 feet*	*24 feet*
Single or Two-Family Dwelling with three or more Car Garages/Parking Space	*18 feet*	*30 feet*
Non Residential or Multi-Family Residential Driveway Access	*15 feet*	*40 feet*

The driveway width abutting the street pavement may be extended 3 feet on either side of the driveway to accommodate turn movements. Driveways may be widened onsite in locations other than where the driveway meets sidewalk or property line (for example between the property line and the entrance to a garage).

Finding: Complies as proposed.

12.04.025.C. The decision maker shall be authorized through a Type II process, unless another procedure applicable to the proposal applies, to minimize the number and size of curb cuts (including driveways) as far as practicable for any of the following purposes:

1. *To provide adequate space for on-street parking;*
2. *To facilitate street tree planting requirements;*
3. *To assure pedestrian and vehicular safety by limiting vehicular access points; and*
4. *To assure that adequate sight distance requirements are met.*
    a. *Where the decision maker determines any of these situations exist or may occur due to the approval of a proposed development for non-residential uses or attached or multi-family housing, a shared driveway shall be required and limited to twenty-four feet in width adjacent to the sidewalk or property line and may extend to a maximum of thirty feet abutting the street pavement to facilitate turning movements.*
    b. *Where the decision maker determines any of these situations exist or may occur due to approval of a proposed development for detached housing within the "R-5" Single –Family Dwelling District or "R-3.5" Dwelling District, driveway curb cuts shall be limited to twelve feet in width adjacent to the sidewalk or property line and may extend to a maximum of eighteen feet abutting the street pavement to facilitate turning movements.*

Finding: NA

12.04.025.D. For all driveways, the following standards apply.

1. Each new or redeveloped curb cut shall have an approved concrete approach or asphalted street connection where there is no concrete curb and a minimum hard surface for at least ten feet and preferably twenty feet back into the lot as measured from the current edge of street pavement to provide for controlling gravel tracking onto the public street. The hard surface may be concrete, asphalt, or other surface approved by the city engineer.

2. Driving vehicles, trailers, boats, or other wheeled objects across a sidewalk or roadside planter strip at a location other than an approved permanent or city-approved temporary driveway approach is prohibited. Damages caused by such action shall be corrected by the adjoining property owner.

3. Placing soil, gravel, wood, or other material in the gutter or space next to the curb of a public street with the intention of using it as a permanent or temporary driveway is prohibited. Damages caused by such action shall be corrected by the adjoining property owner.

4. Any driveway built within public street or alley right-of-way shall be built and permitted per city requirements as approved by the city engineer.

Finding: Complies as Proposed.

12.04.025.E. Exceptions. The public works director reserves the right to waive this standard, if it is determined through a Type II decision including written findings, that it is in the best interest of the public to do so.

Finding: Acknowledged.

12.04.030 Maintenance and repair.

The owner of land abutting the street where a sidewalk has been constructed shall be responsible for maintaining said sidewalk and abutting curb, if any, in good repair.

Finding: Acknowledged.

12.04.031 Liability for sidewalk injuries.

A. The owner or occupant of real property responsible for maintaining the adjacent sidewalk shall be liable to any person injured because of negligence of such owner or occupant in failing to maintain the sidewalk in good condition.

B. If the city is required to pay damages for an injury to persons or property caused by the failure of a person to perform the duty that this ordinance imposes, the person shall compensate the city for the amount of the damages paid. The city may maintain an action in a court of competent jurisdiction to enforce this section.

Finding: Acknowledged.

12.04.032 Required sidewalk repair.

A. When the public works director determines that repair of a sidewalk is necessary he or she shall issue a notice to the owner of property adjacent to the sidewalk.

B. The notice shall require the owner of the property adjacent to the defective sidewalk to complete the repair of the sidewalk within ninety days after the service of notice. The notice shall also state that if the repair is not made by the owner, the city may do the work and the cost of the work shall be assessed against the property adjacent to the sidewalk.

C. The public works director shall cause a copy of the notice to be served personally upon the owner of the property adjacent to the defective sidewalk, or the notice may be served by registered or certified mail, return receipt requested. If after diligent search the owner is not discovered, the public works director shall cause a copy of the notice to be posted in a conspicuous place on the property, and such posting shall have the same effect as service of notice by mail or by personal service upon the owner of the property.

D. The person serving the notice shall file with the city recorder a statement stating the time, place and manner of service or notice.

Finding: Acknowledged.

12.04.033 City may do work.

If repair of the sidewalk is not completed within ninety days after the service of notice, the public works director shall carry out the needed work on the sidewalk. Upon completion of the work, the public works director shall submit an itemized statement of the cost of the work to the finance director. The city may, at its discretion, construct, repair or maintain sidewalks deemed to be in disrepair by the public works director for the health, safety and general welfare of the residents of the city.

Finding: Acknowledged.

12.04.034 Assessment of costs.

Upon receipt of the report, the finance director shall assess the cost of the sidewalk work against the property adjacent to the sidewalk. The assessment shall be a lien against the property and may be collected in the same manner as is provided for in the collection of street improvement assessment.

Finding: Acknowledged.

12.04.040 Streets--Enforcement.

Any person whose duty it is to maintain and repair any sidewalk, as provided by this chapter, and who fails to do so shall be subject to the enforcement procedures of Chapters 1.16, 1.20 and 1.24. Failure to comply with the provisions of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.

Finding: Acknowledged.

12.04.050 Retaining walls--Required.

Every owner of a lot within the city, abutting upon an improved street, where the surface of the lot or tract of land is above the surface of the improved street and where the soil or earth from the lot, or tract of land is liable to, or does slide or fall into the street or upon the sidewalk, or both, shall build a retaining wall, the outer side of which shall be on the line separating the lot, or tract of land from the improved street, and the wall shall be so

constructed as to prevent the soil or earth from the lot or tract of land from falling or sliding into the street or upon the sidewalk, or both, and the owner of any such property shall keep the wall in good repair.
Finding: NA. No retaining walls are proposed.

12.04.060 Retaining walls--Maintenance.
When a retaining wall is necessary to keep the earth from falling or sliding onto the sidewalk or into a public street and the property owner or person in charge of that property fails or refuses to build such a wall, such shall be deemed a nuisance. The violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.
Finding: NA. No retaining walls are proposed.

12.04.070 Removal of sliding dirt.
It shall be the duty of the owner of any property as mentioned in Section 12.04.050, and in case the owner is a nonresident, then the agent or other person in charge of the same, to remove from the street or sidewalk or both as the case may be, any and all earth or dirt falling on or sliding into or upon the same from the property, and to build and maintain in order at all times, the retaining wall as herein required; and upon the failure, neglect or refusal of the land owner, the agent or person in charge of the same to clean away such earth or dirt, falling or sliding from the property into the street or upon the sidewalk, or both, or to build the retaining wall, shall be deemed guilty of a misdemeanor.
Finding: Acknowledged.

12.04.080 Excavations--Permit required.
It shall be unlawful for any person to dig up, break, excavate, disturb, dig under or undermine any public street or alley, or any part thereof or any macadam, gravel, or other street pavement or improvement without first applying for and obtaining from the engineer a written permit so to do.
Finding: Complies with conditions.

Portions of the work will be in the public ROW and will require impacts to public facilities. The applicant shall obtain appropriate Public Works permits before construction begins.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3 and 4.

12.04.090 Excavations--Permit restrictions.
The permit shall designate the portion of the street to be so taken up or disturbed, together with the purpose for making the excavation, the number of days in which the work shall be done, and the trench or excavation to be refilled and such other restrictions as may be deemed of public necessity or benefit.
Finding: Acknowledged.

12.04.100 Excavations – Restoration of Pavement
Whenever any excavation shall have been made in any pavement or other street improvement on any street or alley in the city for any purpose whatsoever under the permit granted by the engineer, it shall be the duty of the person making the excavation to put the street or alley in as good condition as it was before it was so broken, dug up or disturbed, and shall remove all surplus dirt, rubbish, or other material from the street or alley.
Finding: Complies with conditions.

The applicant has proposed work in the public ROW that will require pavement restoration. This includes new pipe lines, catch basin adjustments and curb replacement. The applicant shall restore the pavement in accordance with the City pavement cut standards and meet the Full Standard for all cuts.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 4 and 19.

12.04.110 Excavations--Nuisance--Penalty.
Any excavation in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.
Finding: Acknowledged.

12.04.120 Obstructions – Permit Required
12.04.120.A. Permanent Obstructions. It is unlawful for any person to place, put or maintain any obstruction, other than a temporary obstruction, as defined in subsection B of this section, in any public street or alley in the city, without obtaining approval for a right-of-way permit from the commission by passage of a resolution.

1. *The city engineer shall provide applicants with an application form outlining the minimum submittal requirements.*
2. *The applicant shall submit at least the following information in the permitting process in order to allow the commission to adequately consider whether to allow the placement of an obstruction and whether any conditions may be attached:*
   a. Site plan showing right-of-way, utilities, driveways as directed by staff;
   b. Sight distance per Chapter 10.32, Traffic Sight Obstructions;
   c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);
   d. Alternative routes if necessary;
   e. Minimizing obstruction area; and
   f . Hold harmless/maintenance agreement.
3. *If the commission adopts a resolution allowing the placement of a permanent obstruction in the right-of-way, the city engineer shall issue a right-of-way permit with any conditions deemed necessary by the commission.*

Finding: NA. No obstructions requested.

12.04.120.B. Temporary Obstructions.

1. *A "temporary obstruction" is defined as an object placed in a public street, road or alley for a period of not more than sixty consecutive days. A "temporary obstruction" includes, but is not limited to, moving containers and debris dumpsters.*
2. *The city engineer, or designee, is authorized to grant a permit for a temporary obstruction.*
3. *The city engineer shall provide applicants with an application form outlining the minimum submittal requirements.*
4. *The applicant shall submit, and the city engineer, or designee, shall consider, at least the following items in the permitting process. Additional information may be required in the discretion of the city engineer:*

a. Site plan showing right-of-way, utilities, driveways as directed by staff;
b. Sight distance per Chapter 10.32, Traffic Sight Obstructions;
c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);
d. Alternative routes if necessary;
e. Minimizing obstruction area; and
f. Hold harmless/maintenance agreement.

5. *In determining whether to issue a right-of-way permit to allow a temporary obstruction, the city engineer may issue such a permit only after finding that the following criteria have been satisfied:*

a. The obstruction will not unreasonably impair the safety of people using the right-of-way and nearby residents;
b. The obstruction will not unreasonably hinder the efficiency of traffic affected by the obstruction;
c. No alternative locations are available that would not require use of the public right-of-way; and
d. Any other factor that the city engineer deems relevant.

6. The permittee shall post a weatherproof copy of the temporary obstruction permit in plain view from the right-of-way.
Finding: Not applicable.

12.04.120.C. Fees. The fee for obtaining a right-of-way permit for either a permanent obstruction or a temporary obstruction shall be set by resolution of the commission.
Finding: Not applicable.

12.04.130 Obstructions--Sidewalk sales.
A. It is unlawful for any person to use the public sidewalks of the city for the purpose of packing, unpacking or storage of goods or merchandise or for the display of goods or merchandise for sale. It is permissible to use the public sidewalks for the process of expeditiously loading and unloading goods and merchandise.
B. The city commission may, in its discretion, designate certain areas of the city to permit the display and sale of goods or merchandise on the public sidewalks under such conditions as may be provided.
Finding: Not applicable.

12.04.140 Obstructions--Nuisance--Penalty.
Any act or omission in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.
12.04.150 Street and alley vacations--Cost.
At the time of filing a petition for vacation of a street, alley or any part thereof, a fee as established by city commission resolution shall be paid to the city.
Finding: Not applicable.

12.04.160 Street vacations--Restrictions.
The commission, upon hearing such petition, may grant the same in whole or in part, or may deny the same in whole or in part, or may grant the same with such reservations as would appear to be for the public interest, including reservations pertaining to the maintenance and use of underground public utilities in the portion vacated.
Finding: Not applicable.

12.04.175 Street Design--Generally.
The location, width and grade of street shall be considered in relation to: existing and planned streets, topographical conditions, public convenience and safety for all modes of travel, existing and identified future transit routes and pedestrian/bicycle accessways, and the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents and curves appropriate for the traffic to be carried considering the terrain. To the extent possible, proposed streets shall connect to all existing or approved stub streets that abut the development site. The arrangement of streets shall either:
A. Provide for the continuation or appropriate projection of existing principal streets in the surrounding area and on adjacent parcels or conform to a plan for the area approved or adopted by the city to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical;
B. Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the city engineer. Notification that the street is planned for future extension shall be posted on the stub street until the street is extended and shall inform the public that the dead-end street may be extended in the future. Access control in accordance with section 12.04 shall be required to preserve the objectives of street extensions.
Finding: Complies with conditions. The applicant has proposed the extension of Meyers Road in a reasonable fashion that located the ROW along the boundary between the Park property and the School property.

Per the Transportation System Plan the extension of Loder Road is shown to connect to Meyers Road in the general vicinity of the proposed development. The applicant has shown a proposed extension of Loder Road that crosses into the Community College site, crosses wetlands and reconnects with Meyers Road in a location that would encumber the neighboring property. This does not appear to be a reasonable routing. City staff indicated in the pre-application conference that the most logical location for the extension of Loder Road would be along the existing alignment of the private portion of High School Avenue. The dimension of the ROW and street section are discussed in section 12.04.180 of this report.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 22, 23, 24, 28, 29 and 31.

12.04.180 Street Design.
All development regulated by this Chapter shall provide street improvements in compliance with the standards in Figure 12.04.180 depending on the street classification set forth in the Transportation System Plan and the Comprehensive Plan designation of the adjacent property, unless an alternative plan has been adopted. The standards provided below are maximum design standards and may be reduced with an alternative street design which may be approved based on the modification criteria in 12.04.007. The steps for reducing the maximum design below are found in the Transportation System Plan.
Table 12.04.180 Street Design
To read the table below, select the road classification as identified in the Transportation System Plan and the Comprehensive Plan designation of the adjacent properties to find the maximum design standards for the road cross section. If the Comprehensive Plan designation on either side of the street differs, the wider right-of-way standard shall apply.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Major Arterial	Mixed Use, Commercial or Public/Quasi Public	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	Industrial	120 ft.	88 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	N/A	(5) 14 ft. Lanes	6 ft.
	Residential	126 ft.	94 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Minor Arterial	Mixed Use, Commercial or Public/Quasi Public	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	Industrial	118 ft.	86 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(5) 12 ft. Lanes	N/A
	Residential	100 ft.	68 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	6 ft.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Collector	Mixed Use, Commercial or Public/Quasi Public	86 ft.	64 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(3) 12 ft. Lanes	N/A
	Industrial	88 ft.	62 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	N/A
	Residential	85 ft.	59 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 11 ft. Lanes	N/A

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Local	Mixed Use, Commercial or Public/Quasi Public	62 ft.	40 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		N/A	8 ft.	(2) 12 ft. Lanes	N/A
	Industrial	60 ft.	38 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 19 ft. Shared Space			N/A
	Residential	54 ft.	32 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 16 ft. Shared Space			N/A

1. Pavement width includes, bike lane, street parking, travel lanes and median.
2. Public access, sidewalks, landscape strips, bike lanes and on-street parking are required on both sides of the street in all designations. The right-of-way width and pavement widths identified above include the total street section.
3. A 0.5' foot curb is included in landscape strip or sidewalk width.
4. Travel lanes may be through lanes or turn lanes.
5. The 0.5' foot public access provides access to adjacent public improvements.
6. Alleys shall have a minimum right-of-way width of 20 feet and a minimum pavement width of 16 feet. If alleys are provided, garage access shall be provided from the alley.

Finding: complies with conditions.

Meyers Road - Meyers Road is a minor arterial in an industrial designation. The applicant has proposed a street section as follows for the entire street: 92-foot ROW, two 5 foot sidewalks, two 10 foot planter strips, two curbs, 60-foot pavement that consists of two 7 foot parking lanes, two 6 foot bike lanes, two 11 foot travel lanes and one 12 foot turning lane. This is a reduction of two travel lanes, and as discussed in the modifications section 12.04.007 it is reasonable. However, the travel lanes should be 12 foot wide to meet the standards. This would make the ROW and pavement 2 foot wider.

The City has begun the process of developing the Meyers Road Concept Plan and is interested in preserving flexibility in the proposed new section of Meyers Road. In order to preserve flexibility to potentially match the future Concept Plan, the total ROW of the street should be 100 foot, and a 3 foot buffer of pavement would be added between the bike lane and the travel lane.

The applicant has proposed to construct a half street plus 10 feet. This would require a 60 foot ROW dedication and 44 foot of pavement. The improvements would include: a 5 foot sidewalk, 7 foot parking lane, 6 foot bike lane with a 3 foot buffer, one and a half 12 foot travel lanes plus 10 foot of pavement.

The applicant may request adjustments to the Meyers Road cross section in order to better match the Myers Road concept plan as it is developed.

Depending upon the schedule of the proposed project and the Meyers Road Concept Plan development, the applicant may have the opportunity to discuss changes to the street improvements based upon the Concept Plan.

The property line does not match the proposed alignment of the street, so some of the improvements will actually be on Park property. The applicant will be required to obtain an agreement that is either ROW dedication or an easement from the Community Services Department, Parks and Recreation Division, both for construction and permanent facilities (street and utilities) until such time as the ROW is fully dedicated by the Parks and Recreation Division.

Initially the street should be striped for the parking, bike lane and two travel lanes. It will need to be restriped when the remainder of the street is constructed.

The applicant has also shown curb extensions on Meyers Road at the intersection of High School Avenue. In order for the curb extensions to be acceptable, the applicant will need to show that bus traffic moving south on High School Avenue can make the right hand turn onto Meyers Road without impinging upon the center turn lane.

High School Avenue - High School Avenue would be classified as a collector street in an industrial designation. High School Avenue will be required to be dedicated as a public street as part of this application in order to meet the requirements of the Transportation System Plan. Apart from the horizontal design, final design and construction of the public street is not required at this time as the extension of Loder Road has not been constructed yet. The final design and construction shall be completed within five years of the notice of decision of this staff report, or as defined a development agreement between the City and the applicant. This condition shall be superseded by any development agreement for the design and construction of Loder Road entered into by the City of Oregon City and the applicant.

The horizontal design of the street will need to be done concurrently with the other street improvements required for the development such that the right-of-way dedication can be made.

Staff finds that only two travel lanes are required. It is also reasonable to make the sidewalk curb tight due to the nature of the land use on either side of the street. It is also reasonable delete the parking lane on the west side of the street for two reasons. First, the proposed facility will be adding parking that may be utilized by the public. Second, it is preferable from a safety standpoint as it eliminates pedestrians crossing mid-block to get to the school grounds. There is also a mixed use trail required along Loder Road. The applicant has requested that the sidewalk on the west side of the street be placed in an easement. Street trees would be located behind the sidewalk.

Therefore the street would include a ROW dedication of 54 foot. The location shall be based upon the horizontal design, but shall be generally located where the street is now. This is sufficient room to provide two travel lanes, parking on one side and pedestrian travel. The final street section shall be determined by the City when the final design is begun.

Where the road alignment curves at the north end of the property, the parking lane on the east side of the street can be deleted should the applicant wish.

It is likely that the pavement on the existing private portion of High School Avenue to be dedicated as public ROW does not meet City standards regarding material and section requirements. The pavement section will need to be reconstructed.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 2, 3, 4, 22, 23, 25, 28, 31, 33 and 34.

12.04.185 Street Design--Access Control.
A. A street which is dedicated to end at the boundary of the development or in the case of half-streets dedicated along a boundary shall have an access control granted to the City as a City controlled plat restriction for the purposes of controlling ingress and egress to the property adjacent to the end of the dedicated street. The access control restriction shall exist until such time as a public street is created, by dedication and accepted, extending the street to the adjacent property.
B. The City may grant a permit for the adjoining owner to access through the access control.
C. The plat shall contain the following access control language or similar on the face of the map at the end of each street for which access control is required: "Access Control (See plat restrictions)."

D. Said plats shall also contain the following plat restriction note(s): "Access to (name of street or tract) from adjoining tracts (name of deed document number[s]) shall be controlled by the City of Oregon City by the recording of this plat, as shown. These access controls shall be automatically terminated upon the acceptance of a public road dedication or the recording of a plat extending the street to adjacent property that would access through those Access Controls."

Finding: Complies with conditions. The proposed improvements include a half street along Meyers Road. The applicant shall provide access control to the City for ingress and egress to the adjacent property. The applicant shall include access control language on the construction plans.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 21.

12.04.190 Street Design--Alignment.
The centerline of streets shall be:
A. Aligned with existing streets by continuation of the centerlines; or
B. Offset from the centerline by no more than five (5) feet, provided appropriate mitigation, in the judgment of the City Engineer, is provided to ensure that the offset intersection will not pose a safety hazard.

Finding: Complies with conditions. The applicant has proposed that the extension of Meyers Road connect at the existing intersection with High School Avenue, and that the centerline match the existing centerline.

High School Avenue will be required to be dedicated as a public street as part of this application in order to meet the requirements of the Transportation System Plan. The reconstruction and dedication of High School Avenue should be aligned with the centerline of the existing public portion of High School Avenue at the intersection With a maximum of a 5-foot offset. The west curb line of High School Avenue shall be 12-feet from the centerline.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 24 and 29.

12.04.194 Traffic Sight Obstructions
All new streets shall comply with the Traffic Sight Obstructions in Chapter 10.32.

Finding: Applies as proposed.

12.04.195 Spacing Standards.
12.04.195.A. All new streets shall be designed as local streets unless otherwise designated as arterials and collectors in Figure 8 in the Transportation System Plan. The maximum block spacing between streets is 530 feet and the minimum block spacing between streets is 150 feet as measured between the right-of-way centerlines. If the maximum block size is exceeded, pedestrian accessways must be provided every 330 feet. The spacing standards within this section do not apply to alleys.

Finding: Complies as proposed. The proposed length of the Meyers Road extension is approximately 520 feet which is slightly less than the maximum block length.

12.04.195.B. All new development and redevelopment shall meet the minimum driveway spacing standards identified in Table 12.04.195.B.

Table 12.04.195.B Minimum Driveway Spacing Standards

Table 12.04.195.B Minimum Driveway Spacing Standards		
Street Functional Classification	***Minimum Driveway Spacing Standards***	***Distance***
Major Arterial Street	*Minimum distance from a street corner to a driveway for all uses and* *Minimum distance between driveways for uses other*	*175 ft.*

Table 12.04.195.B Minimum Driveway Spacing Standards		
Street Functional Classification	***Minimum Driveway Spacing Standards***	***Distance***
	than single and two-family dwellings	
Minor Arterial Street	*Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings*	*175 ft.*
Collector Street	*Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings*	*100 ft.*
Local Street	*Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings*	*25 ft.*
The distance from a street corner to a driveway is measured along the right-of-way from the edge of the intersection right-of-way to the nearest portion of the driveway and the distance between driveways is measured at the nearest portions of the driveway at the right-of-way.		

Finding: Complies as proposed. The distances between drives and between the intersection and the first driveway on Meyers Road both exceed 175 feet. The distances between drives and between the intersection and the first driveway on High School Avenue both exceed 100 feet.

12.04.199 Pedestrian and Bicycle Accessways

Pedestrian/bicycle accessways are intended to provide direct, safe and convenient connections between residential areas, retail and office areas, institutional facilities, industrial parks, transit streets, neighborhood activity centers, rights-of-way, and pedestrian/bicycle accessways which minimize out-of-direction travel, and transit-orientated developments where public street connections for automobiles, bicycles and pedestrians are unavailable. Pedestrian/bicycle accessways are appropriate in areas where public street options are unavailable, impractical or inappropriate. Pedestrian and bicycle accessways are required through private property or as right-of-way connecting development to the right-of-way at intervals not exceeding three-hundred-and-thirty feet of frontage; or where the lack of street continuity creates inconvenient or out of direction travel patterns for local pedestrian or bicycle trips.

Finding: There are no existing accessways on site. Refer to 17.62.050.A.9 for more findings and conditions.

12.04.205 Mobility Standards.

Development shall demonstrate compliance with intersection mobility standards. When evaluating the performance of the transportation system, the City of Oregon City requires all intersections, except for the facilities identified in subsection D below, to be maintained at or below the following mobility standards during the two-hour peak operating conditions. The first hour has the highest weekday traffic volumes and the second hour is the next highest hour before or after the first hour. Except as provided otherwise below, this may require the installation of mobility improvements as set forth in the Transportation System Plan or as otherwise identified by the City Transportation Engineer.

A. For intersections within the Regional Center, the following mobility standards apply:

1. *During the first hour, a maximum v/c ratio of 1.10 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
2. *During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*

3. Intersections located on the Regional Center boundary shall be considered within the Regional Center.

B. For intersections outside of the Regional Center but designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:

1. *During the first hour, a maximum v/c ratio of 0.99 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*
2. *During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.*

C. For intersections outside the boundaries of the Regional Center and not designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:

1. *For signalized intersections:*

a. *During the first hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.*

b. *During the second hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.*

2. *For unsignalized intersections outside of the boundaries of the Regional Center:*

a. *For unsignalized intersections, during the peak hour, all movements serving more than 20 vehicles shall be maintained at LOS "E" or better. LOS "F" will be tolerated at movements serving no more than 20 vehicles during the peak hour.*

D. Until the City adopts new performance measures that identify alternative mobility targets, the City shall exempt proposed development that is permitted, either conditionally, outright, or through detailed development master plan approval, from compliance with the above-referenced mobility standards for the following state-owned facilities:

I-205 / OR 99E Interchange
I-205 / OR 213 Interchange
OR 213 / Beavercreek Road
State intersections located within or on the Regional Center Boundaries

1. *In the case of conceptual development approval for a master plan that impacts the above references intersections:*

a. *The form of mitigation will be determined at the time of the detailed development plan review for subsequent phases utilizing the Code in place at the time the detailed development plan is submitted; and*

b. *Only those trips approved by a detailed development plan review are vested.*

2. *Development which does not comply with the mobility standards for the intersections identified in 12.04.205.D shall provide for the improvements identified in the Transportation System Plan (TSP) in an effort to improve intersection mobility as necessary to offset the impact caused by development. Where required by other provisions of the Code, the applicant shall provide a traffic impact study that includes an assessment of the development's impact on the intersections identified in this exemption and shall construct the intersection improvements listed in the TSP or required by the Code.*

Finding: Complies with Condition. The applicant submitted a traffic impact analysis (TIA) dated February 23, 2015 from Lancaster Engineering (Exhibit 4). The TIA found that no intersection operations are significantly impacted by the proposed expansion of the library. The TIA states:

Based on the operational analysis, the study area intersections currently operate acceptably and are projected to continue operating acceptably under year 2016 and year 2020 traffic conditions either with or without the addition of site trips from the proposed transportation maintenance facility. No operational mitigations are necessary or recommended in conjunction with the proposed development.

The TIA was reviewed by the City's transportation engineering consultant, John Replinger of Replinger and Associates. His review letter (Exhibit 5) states:

The TIS indicates that maintenance facility will cause only minor increases in traffic during the AM and PM peak hours. During these key periods, the effect of the additional traffic is minimal. The operational analysis indicates the mobility standards will be met at all locations with the development in year 2016 and year 2020. I concur that no off-site mitigation is required.

Some items normally addressed in a TIS were lacking and should be provided. These consist of: recent AM and PM peak hour traffic counts at the intersections of High School Avenue/Meyers Road and High School Avenue/Glen Oak Road; an operational analysis of these two intersections under current conditions; and estimates of AM and PM peak period traffic forecast at each proposed site access.

The applicant shall provide these counts and studies prior to issuance of building permits. If these studies result in recommended safety improvements, the applicant shall make these improvements prior to a Certificate of Occupancy for the transportation facility.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 63.

12.04.210 Street design--Intersection Angles.
Except where topography requires a lesser angle, streets shall be laid out to intersect at angles as near as possible to right angles. In no case shall the acute angles be less than eighty degrees unless there is a special intersection design. An arterial or collector street intersecting with another street shall have at least one hundred feet of tangent adjacent to the intersection unless topography requires a lesser distance. Other streets, except alleys, shall have at least fifty feet of tangent adjacent to the intersection unless topography requires a lesser distance. All street intersections shall be provided with a minimum curb return radius of twenty-five feet for local streets. Larger radii shall be required for higher street classifications as determined by the city engineer. Additional right-of-way shall be required to accommodate curb returns and sidewalks at intersections. Ordinarily, intersections should not have more than two streets at any one point.

Finding: Complies with conditions. The proposed extension of Meyers Road is shown at 90-degrees. In order to address geometry requirements for the curves, the intersection angle can be reduced to 84-degrees. The reconstructed portion of High School Avenue should connect to the intersection at 90-degrees.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 24 and 29.

12.04.215 Street design--Off-Site Street Improvements.
During consideration of the preliminary plan for a development, the decision maker shall determine whether existing streets impacted by, adjacent to, or abutting the development meet the city's applicable planned minimum design or dimensional requirements. Where such streets fail to meet these requirements, the decision-maker shall require the applicant to make proportional improvements sufficient to achieve conformance with minimum applicable design standards required to serve the proposed development.

Finding: Complies with conditions. See section 12.04.180 for a discussion.

12.04.220 Street Design--Half Street.
Half streets, while generally not acceptable, may be approved where essential to the development, when in conformance with all other applicable requirements, and where it will not create a safety hazard. When approving half streets, the decision maker must first determine that it will be practical to require the dedication of the other half of the street when the adjoining property is divided or developed. Where the decision maker approves a half street, the applicant must construct an additional ten feet of pavement width so as to make the half street safe and usable until such time as the other half is constructed. Whenever a half street is adjacent to property capable of being divided or developed, the other half of the street shall be provided and improved when that adjacent property divides or develops. Access Control may be required to preserve the objectives of half streets.
When the remainder of an existing half-street improvement is made it shall include the following items: dedication of required right-of-way, construction of the remaining portion of the street including pavement, curb and gutter,

landscape strip, sidewalk, street trees, lighting and other improvements as required for that particular street. It shall also include at a minimum the pavement replacement to the centerline of the street. Any damage to the existing street shall be repaired in accordance with the City's "Moratorium Pavement Cut Standard" or as approved by the City Engineer.

Finding: Complies with conditions. The extension of Meyers Road is proposed to be a half street. See section 12.04.180 for a discussion.

12.04.225 Street Design--Cul-de-sacs and Dead-End Streets.
The city discourages the use of cul-de-sacs and permanent dead-end streets except where construction of a through street is found by the decision maker to be impracticable due to topography or some significant physical constraint such as geologic hazards, wetland, natural or historic resource areas, dedicated open space, existing development patterns, arterial access restrictions or similar situation as determined by the Community Development Director. When permitted, access from new cul-de-sacs and permanent dead-end streets shall be limited to a maximum of 25 dwelling units and a maximum street length of two hundred feet, as measured from the right-of-way line of the nearest intersecting street to the back of the cul-de-sac curb face. In addition, cul-de-sacs and dead end roads shall include pedestrian/bicycle accessways as required in this Chapter. This section is not intended to preclude the use of curvilinear eyebrow widening of a street where needed.
Where approved, cul-de-sacs shall have sufficient radius to provide adequate turn-around for emergency vehicles in accordance with Fire District and City adopted street standards. Permanent dead-end streets other than cul-de-sacs shall provide public street right-of-way / easements sufficient to provide turn-around space with appropriate no-parking signs or markings for waste disposal, sweepers, and other long vehicles in the form of a hammerhead or other design to be approved by the decision maker. Driveways shall be encouraged off the turnaround to provide for additional on-street parking space.

Finding: NA. There are no cul-de-sacs or permanent dead-ends proposed.

12.04.230 Street Design--Street Names.
Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street. Street names shall conform to the established standards in the City and shall be subject to the approval of the City.

Finding: Not applicable. No new streets are proposed.

12.04.235 Street Design--Grades and Curves.
Grades and center line radii shall conform to the standards in the City's street design standards and specifications.

Finding: Complies with conditions. The Meyers Road extension will have curves and the speed limit will be 30 mph. The intersection of Meyers Road and High School way will be "stop" controlled which slows traffic down upon approaching and moving through the curves. Therefore, a modification to the industry standards for urban streets per AASHTO as shown in the policy on Geometric Design of Highways and Street will be acceptable. The curve radius shall be 400 feet or more.

The northern end of High School Avenue that is to be dedicated and reconstructed as a public street has multiple curves that do not appear to meet standard design. When reconstructed these curves shall meet industry standard per AASHTO as shown in the policy on Geometric Design of Highways and Street. The street may be realigned to delete some of the curves.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 31.

12.04.240 Street Design--Development Abutting Arterial or Collector Street.
Where development abuts or contains an existing or proposed arterial or collector street, the decision maker may require: access control; screen planting or wall contained in an easement or otherwise protected by a restrictive covenant in a form acceptable to the decision maker along the rear or side property line; or such other treatment it deems necessary to adequately protect residential properties or afford separation of through and local traffic. Reverse frontage lots with suitable depth may also be considered an option for residential property that has

arterial frontage. Where access for development abuts and connects for vehicular access to another jurisdiction's facility then authorization by that jurisdiction may be required.

Finding: Complies as proposed. The development does abut an arterial street, however there are no residential properties to protect.

12.04.245 Street Design--Pedestrian and Bicycle Safety.

Where deemed necessary to ensure public safety, reduce traffic hazards and promote the welfare of pedestrians, bicyclists and residents of the subject area, the decision maker may require that local streets be so designed as to discourage their use by nonlocal automobile traffic.

All crosswalks shall include a large vegetative or sidewalk area which extends into the street pavement as far as practicable to provide safer pedestrian crossing opportunities. These curb extensions can increase the visibility of pedestrians and provide a shorter crosswalk distance as well as encourage motorists to drive slower. The decision maker may approve an alternative design that achieves the same standard for constrained sites or where deemed unnecessary by the City Engineer.

Finding: Complies as Proposed. There streets, as described in 12.04.180, provide for safe bicycle and pedestrian crossing and meet this standard. The final design of the intersection of Meyers Rad and future Loder Road will be determined through the design and construction plan review process.

12.04.255 Street design--Alleys.

Public alleys shall be provided in the following districts R-5, R-3.5, R-2, MUC-1, MUC-2 and NC zones unless other permanent provisions for private access to off-street parking and loading facilities are approved by the decision maker. The corners of alley intersections shall have a radius of not less than ten feet.

Finding: NA. There are no alleys proposed.

12.04.260 Street Design--Transit.

Streets shall be designed and laid out in a manner that promotes pedestrian and bicycle circulation. The applicant shall coordinate with transit agencies where the application impacts transit streets as identified in 17.04.1310. Pedestrian/bicycle access ways shall be provided as necessary in Chapter 12.04 to minimize the travel distance to transit streets and stops and neighborhood activity centers. The decision maker may require provisions, including easements, for transit facilities along transit streets where a need for bus stops, bus pullouts or other transit facilities within or adjacent to the development has been identified.

Finding: NA. There are no transit facilities along the proposed extension of Meyers Road.

12.04.265 Street design--Planter Strips.

All development shall include vegetative planter strips that are five feet in width or larger and located adjacent to the curb. This requirement may be waived or modified if the decision maker finds it is not practicable. The decision maker may permit constrained sites to place street trees on the abutting private property within 10 feet of the public right-of-way if a covenant is recorded on the title of the property identifying the tree as a city street tree which is maintained by the property owner. Development proposed along a collector, minor arterial, or major arterial street may use tree wells with root barriers located near the curb within a wider sidewalk in lieu of a planter strip, in which case each tree shall have a protected area to ensure proper root growth and reduce potential damage to sidewalks, curbs and gutters.

To promote and maintain the community tree canopy adjacent to public streets, trees shall be selected and planted in planter strips in accordance with Chapter 12.08, Street Trees. Individual abutting lot owners shall be legally responsible for maintaining healthy and attractive trees and vegetation in the planter strip. If a homeowners' association is created as part of the development, the association may assume the maintenance obligation through a legally binding mechanism, e.g., deed restrictions, maintenance agreement, etc., which shall be reviewed and approved by the city attorney. Failure to properly maintain trees and vegetation in a planter strip shall be a violation of this code and enforceable as a civil infraction.

Finding: Complies with conditions. The applicant has proposed planter strip with standard widths. The applicant has also proposed to use the planter strip along the extension of Meyers Road for storm water detention and treatment. Trees planted in the planter strip will need to be selected such that they are appropriate for a storm water facility.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1 and 26.

12.04.270 Standard Construction Specifications.
The workmanship and materials for any work performed under permits issued per this chapter shall be in accordance with the edition of the "Standard Specifications for Public Works Construction," as prepared by the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the city, in effect at the time of application. The exception to this requirement is where this chapter and the Public Works Street Design Drawings provide other design details, in which case the requirements of this chapter and the Public Works Street Design Drawings shall be complied with. In the case of work within ODOT or Clackamas County rights-of-way, work shall be in conformance with their respective construction standards.
Finding: Acknowledged.

12.04.280 Violation--Penalty.
Any act or omission in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of Chapters 1.16, 1.20 and 1.24.
Finding: Acknowledged

CHAPTER 13.12 STORMWATER CONVEYANCE, QUANTITY AND QUALITY

13.12.050 *Pursuant to each of the subsections below, proposed activities may be required to meet the performance standards for stormwater conveyance, stormwater quantity or stormwater quality.*
13.12.050.A. Stormwater Conveyance. The stormwater conveyance requirements of this chapter shall apply to all stormwater systems constructed with any development activity, except as follows:

1. *The conveyance facilities are located entirely on one privately owned parcel;*
2. *The conveyance facilities are privately maintained; and*
3. *The conveyance facilities receive no stormwater runoff from outside the parcel's property limits.*

Those facilities exempted from the stormwater conveyance requirements by the above subsection will remain subject to the requirements of the Oregon Uniform Plumbing Code. Those exempted facilities shall be reviewed by the building official.
Finding: Applicable. There will be storm water collection in the public right of way.

13.12.050.B. Stormwater Quantity Control. The stormwater quantity control requirements of this chapter shall apply to the following proposed activities, uses or developments:

1. *Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven-year period;*
2. *Activities that create more than two thousand square feet of impervious surface, cumulated over any given seven year period; or*
3. *Redevelopment of a commercial or industrial land use that will disturb more than five thousand square feet of existing impervious surface. This five thousand square foot measurement cumulates over any given seven year period;*
4. *An exemption to the stormwater quantity control requirements of this chapter will be granted in the following circumstances:*
    a. *The development site discharges to a stormwater quantity control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater, or,*
    b. *The development site discharges to one of the following receiving bodies of water: Willamette River, Clackamas River or Abernethy Creek; and either lies within the one hundred year floodplain or is up to ten feet above the design flood elevation as defined in Chapter 17.42*

Finding: Applicable. There will be more than 2,000 square feet of new impervious area.

13.12.050.C. Stormwater Quality Control. The stormwater quality control requirements of this chapter shall apply to the following proposed activities, uses or developments:

1. *Category A. Activities subject to general water quality requirements of this chapter:*
   a. The construction of four or more single-family residences;
   b. Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven year period; or
   c. Activities that create more than eight thousand square feet of new impervious surface for other than a single-family residential development. This eight thousand square foot measurement will be considered cumulative for any given seven year period;
   d. An exemption to the stormwater quantity control requirements of this subsection will be granted if the development site discharges to a stormwater quality control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater.
2. *Category B. Uses Requiring Additional Management Practices. In addition to any other applicable requirements of this chapter, the following uses are subject to additional management practices as contained in the Public Works Stormwater and Grading Design Standards:*
   a. Fuel dispensing facilities;
   b. Bulk petroleum storage in multiple stationary tanks;
   c. Solid waste storage areas for commercial, industrial or multi-family uses;
   d. Loading and unloading docks for commercial or industrial uses; or
   e. Covered vehicle parking for commercial or industrial uses.
3. *Category C. Clackamas River Watershed. In addition to any other applicable requirements of this chapter, any development that creates new waste discharges and whose stormwater runoff may directly or indirectly flow into the Clackamas River is subject to additional requirements associated with Oregon Administrative Rules (OAR) 340-41-470 (Thee Basin Rule).*

Finding: Applicable. There will be more than 8,000 square feet of new impervious area.

13.12.090 Approval criteria for engineered drainage plans and drainage report.
An engineered drainage plan and/or drainage report shall be approved only upon making the following findings:

A. The plan and report demonstrate how the proposed development and stormwater management facilities will accomplish the purpose statements of this chapter;
B. The plan and report meet the requirements of the Public Works Stormwater and Grading Design Standards adopted by resolution under Section 13.12.020
C. Unless otherwise exempted by Section 13.12.050(B), the plan and report includes adequate stormwater quantity control facilities, so that when the proposed land development activity takes place, peak rates and volumes of runoff:
1. Do not exceed the capacity of receiving drainage conveyance facilities;
2. Do not increase the potential for streambank erosion; and
3. Do not add volume to an off-site closed depression without providing for mitigation.
D. Unless otherwise exempted by Section 13.12.050(C), the proposed development includes:
1. Adequate stormwater quality control facilities, so that when the proposed land development activity takes place, the temperature and overall pollution level of stormwater runoff is no greater than the water entering. When no water enters a project, then stormwater runoff shall be compared to rain samples; and
2. Stormwater quality control facilities which:
a. Are in compliance with applicable National Pollutant Discharge Elimination System (NPDES) requirements;
b. Minimize the deterioration of existing watercourses, culverts, bridges, dams and other structures; and
c. Minimize any increase in nonpoint source pollution.
E. The storm drainage design within the proposed development includes provisions to adequately control runoff from all public and private streets and roof, footing, and area drains and ensures future extension of the current drainage system.
F. Streambank erosion protection is provided where stormwater, directly or indirectly, discharges to open channels or streams. The postdevelopment peak stormwater discharge rate from a development site for the

two year, twenty-four hour duration storm event shall not exceed fifty percent of the two year, twenty-four hour predevelopment peak runoff rate.

G. Specific operation and maintenance measures are proposed that ensure that the proposed stormwater quantity control facilities will be properly operated and maintained.

Finding: Complies with conditions. See section 17.62.050A6 of this report for a discussion.

CHAPTER 12.08 PUBLIC AND STREET TREES

12.08.015 Street tree planting and maintenance requirements.
All new construction or major redevelopment shall provide street trees adjacent to all street frontages. Species of trees shall be selected based upon vision clearance requirements, but shall in all cases be selected from the Oregon City Street Tree List or be approved by a certified arborist. If a setback sidewalk has already been constructed or the Development Services determines that the forthcoming street design shall include a setback sidewalk, then all street trees shall be installed with a planting strip. If existing street design includes a curb-tight sidewalk, then all street trees shall be placed within the front yard setback, exclusive of any utility easement.

Finding: Complies with Condition. The street tree variety proposed is Cadastris lutea, or Yellow Wood. The species is not on the Oregon City Street Tree list. The applicant shall provide evidence that a neighboring jurisdiction's City's street tree list that includes the proposed street tree is species, or choose a different species from the City's adopted list. Trees on Loder Road will be placed behind the sidewalk; trees on Meyers will be placed in the 10-foot planter strip. **The applicant can meet this standard through condition of approval 64.**

12.08.015.A. One street tree shall be planted for every thirty-five feet of property frontage. The tree spacing shall be evenly distributed throughout the total development frontage. The community development director may approve an alternative street tree plan if site or other constraints prevent meeting the placement of one street tree per thirty-five feet of property frontage.

Finding: Complies with Condition. The applicant has proposed 13 trees along Meyers Rd, evenly spaced. The applicant shall provide the frontage length of Meyers and ensure that the final street tree plan includes one for every 35 feet on frontage.

The applicant will dedicate right of way for Loder Road, and the City intends that the street trees will be placed behind the sidewalk or curb, if no sidewalk is provided. The trees will be on private property but will serve as street trees on the west side of future Loder Road. A total of 23 trees are proposed along the Loder Road frontage. These trees also meet the applicant's screening requirements and perimeter parking lot landscaping requirements. The applicant shall provide the frontage length along Loder Rd. and ensure that the final street tree plan includes one for every 35 feet on frontage. **The applicant can meet this standard through condition of approval 65.**

12.08.015.B. The following clearance distances shall be maintained when planting trees:
1. Fifteen feet from streetlights;
2. Five feet from fire hydrants;
3. Twenty feet from intersections;
4. A minimum of five feet (at mature height) below power lines.

Finding: The final placement shall be reviewed prior to issuance of building permits.

12.08.015.C. All trees shall be a minimum of two inches in caliper at six inches above the root crown and installed to city specifications.

Finding: Complies as Proposed. The street trees are proposed at 2" caliper measured at six inches about the root crown.

12.08.015.D. All established trees shall be pruned tight to the trunk to a height that provides adequate clearance for street cleaning equipment and ensures ADA complaint clearance for pedestrians.
12.08.025 General tree maintenance.
Abutting property owners shall be responsible for the maintenance of street trees and planting strips. Topping of trees is permitted only under recommendation of a certified arborist, or other qualified professional, if required by

city staff. Trees shall be trimmed appropriately. Maintenance shall include trimming to remove dead branches, dangerous limbs and to maintain a minimum seven-foot clearance above all sidewalks and ten-foot clearance above the street. Planter strips shall be kept clear of weeds, obstructing vegetation and trash.

Finding: Complies as Proposed. The property owner agrees to the requirements of this chapter and to include the maintenance of the planting strips and the street trees.

12.08.035 Public tree removal.

Finding: No public trees are proposed for removal.

12.08.040 Heritage Trees and Groves.

Finding: No heritage trees are existing or proposed on site.

CHAPTER 15.48 GRADING, FILLING AND EXCAVATING

15.48.030 Applicability—Grading permit required.

A. A city-issued grading permit shall be required before the commencement of any of the following filling or grading activities:

1. Grading activities in excess of ten cubic yards of earth;

2. Grading activities which may result in the diversion of existing drainage courses, both natural and man-made, from their natural point of entry or exit from the grading site;

3. Grading and paving activities resulting in the creation of impervious surfaces greater than two thousand square feet or more in area;

4. Any excavation beyond the limits of a basement or footing excavation, having an unsupported soil height greater than five feet after the completion of such a structure; or

5. Grading activities involving the clearing or disturbance of one-half acres (twenty-one thousand seven hundred eighty square feet) or more of land.

Finding: Complies with conditions. Grading activities will entail more than 10 cy of earth. Therefore, a grading permit is required and is part of the overall construction plan package for public improvements and site grading.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3 and 4.

15.48.090 Submittal requirements.

An engineered grading plan or an abbreviated grading plan shall be prepared in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards whenever a city approved grading permit is required. In addition, a geotechnical engineering report and/or residential lot grading plan may be required pursuant to the criteria listed below.

A. Abbreviated Grading Plan. The city shall allow the applicant to submit an abbreviated grading plan in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards if the following criteria are met:

1. No portion of the proposed site is within the flood management area overlay district pursuant to Chapter 17.42*, the unstable soils and hillside constraints overlay district pursuant to* Chapter 17.44*, or a water quality resource area pursuant to* Chapter 17.49*; and*

2. The proposed filling or grading activity does not involve more than fifty cubic yards of earth.

B. Engineered Grading Plan. The city shall require an engineered grading plan in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer if the proposed activities do not qualify for abbreviated grading plan.

C. Geotechnical Engineering Report. The city shall require a geotechnical engineering report in compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer who specializes in geotechnical work when any of the following site conditions may exist in the development area:

1. When any publicly maintained facility (structure, street, pond, utility, park, etc.) will be supported by any engineered fill;
2. When an embankment for a stormwater pond is created by the placement of fill;
3. When, by excavation, the soils remaining in place are greater than three feet high and less than twenty feet wide.
D .Residential Lot Grading Plan. The city shall require a residential lot grading plan in compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer for all land divisions creating new residential building lots or where a public improvement project is required to provide access to an existing residential lot.
Finding: Complies with conditions. It appears that the grading will entail more than 50 cubic yards of earth. Therefore, an engineered grading plan will be required.

The plans show that there will be a retaining wall that is potentially up to 6' tall. It will be located approximately 5' behind the sidewalk along Jefferson Street. The wall could potentially affect the sidewalk. Therefore, a geotechnical report shall be prepared for the project.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3 and 4.

CHAPTER 17.47 EROSION AND SEDIMENT CONTROL

17.47.070 Erosion and sediment control plans.
A. An application for an erosion and sediment control permit shall include an erosion and sediment control plan, which contains methods and interim measures to be used during and following construction to prevent or control erosion prepared in compliance with City of Oregon City public works standards for erosion and sediment control. These standards are incorporated herein and made a part of this title and are on file in the office of the city recorder.
Finding: Complies with conditions. There will be substantial grading done on the site. Therefore, an erosion and sediment control plan is required, and the applicant is required to obtain and erosion and sediment control permit.

Staff has determined that it is possible, likely and reasonable that the Applicant can meet this standard through Conditions of Approval 1, 3 and 4.

CHAPTER 17.41 TREE PROTECTION STANDARDS

17.41.020 Tree Protection – Applicability.
1. Applications for development subject to Chapter 16.08 or 16.12 (Subdivision or Minor Partition) or Chapter 17.62 (Site Plan and Design Review) shall demonstrate compliance with these standards as part of the review proceedings for those developments.
2. For public capital improvement projects, the City Engineer shall demonstrate compliance with these standards pursuant to a Type II process.
3. Tree canopy removal greater than 25% on sites greater than 25% percent slope, unless exempted under section 17.41.040, shall be subject to these standards.
4. A heritage tree or grove which has been designated pursuant to the procedures of Chapter 12.08.050 shall be subject to the standards of this section.
Finding: Applicable. The application is for Site Plan and Design Review, therefore this section applies.

17.41.030 – Tree Protection - Conflicting Code Provisions.

Except as otherwise specified in this section, where these standards conflict with adopted City development codes or policies, the provision which provides the greater protection for regulated trees or groves, as defined in section 17.04, shall govern.

Finding: Applicable. The trees within the boundaries of the property are regulated under this section of code and do not fall under any other protections within the City's development codes.

17.41.040 – Tree Protection – Exemptions.

These regulations are not intended to regulate normal cutting, pruning and maintenance of trees on private property except where trees are located on lots that are undergoing development review or are otherwise protected within the Natural Resource Overlay District (NROD) of section 17.49. These standards are not intended to regulate farm and forest practices as those practices are defined under ORS 30.930.

Farm or forest resources. An applicant for development may claim exemption from compliance with these standards if the development site containing the regulated grove or trees was a designated farm or forest use, tree farm, Christmas tree plantation, or other approved timber use within one year prior to development application. "Forest practices" and "forestlands" as used in this subsection shall have the meaning as set out in ORS 30.930. The Community Development Director has the authority to modify or waive compliance in this case.

Finding: Not applicable. The project is not exempt.

17.41.050 - Tree Protection – Compliance Options.

Applicants for review shall comply with these requirements through one or a combination of the following procedures:

- *A. Option 1 - Mitigation. Retention and removal of trees, with subsequent mitigation by replanting pursuant to section 17.41.060 or 17.41.070. All replanted and saved trees shall be protected by a permanent restrictive covenant or easement approved in form by the city.*
- *B. Option 2 – Dedicated Tract. Protection of trees or groves by placement in a tract within a new subdivision or partition plat pursuant to sections 17.41.080-100; or*
- *C. Option 3 – Restrictive Covenant. Protection of trees or groves by recordation of a permanent restrictive covenant pursuant to section 17.41.110-120.; or*
- *D. Option 4 - Cash-in-lieu of planting pursuant to Section 17.41.130.*

A regulated tree that has been designated for protection pursuant to this section must be retained or permanently protected unless it has been determined by a certified arborist to be diseased or hazardous, pursuant to the following applicable provisions.

The Community Development Director, pursuant to a Type II procedure, may allow a property owner to cut a specific number of trees within a regulated grove if preserving those trees would:

- *(1) Preclude achieving 80% of minimum density with reduction of lot size; or*
- *(2) Preclude meeting minimum connectivity requirements for subdivisions.*

Finding: Complies as Proposed. The applicant has proposed to mitigate for trees removed through a combination of planting on-site and off-site through Option 1 and Option 4.

17.41.060 - Tree Removal and Replanting - Mitigation (Option 1).

17.41.060.A. Applicants for development who select this option shall ensure that all healthy trees shall be preserved outside the construction area as defined in Chapter 17.04 to the extent practicable. Compliance with these standards shall be demonstrated in a tree mitigation plan report prepared by a certified arborist, horticulturalist or forester or other environmental professional with experience and academic credentials in forestry or arborculture. At the applicant's expense, the City may require the report to be reviewed by a consulting arborist. The number of replacement trees required on a development site shall be calculated separately from, and in addition to, any public or street trees in the public right-of-way required under section 12.08 – Community Forest and Street Trees.

Finding: Complies with Condition. The construction area is defined as right-of-way, public utility easements, and within the building footprint of a building site for any mixed-use, commercial or industrial development. This application is different from the typical development because it is not just a building and parking lot. The major use of the site is bus storage, which is not a building. The Oregon City Municipal Code does not contain a definition for building footprint, building, or building site. Staff has identified two ways for the Planning Commission to interpret the definition of construction area. The Commission may consider the outdoor storage area as the construction area

of the site, in addition to the building footprint. Alternatively, the Commission may interpret the bus storage area to be outside of the construction area.
The staff parking lot and all landscaped areas are not considered part of the construction area. The parking lot is placed in an area of the site that contains no existing trees. The applicant's submittal stated that all trees that are being removed are within the construction area, however, there are many trees that are in landscaped areas along the edge of the site that are not construction areas. The applicant has not indicated that that trees outside of the construction area are preserved to the extent practicable. The applicant shall provide a revised tree removal plan that separates trees in construction area from trees outside of the area, and preserves all trees outside of the construction area to the extent practicable. The applicant's staff parking lot is proposed to be larger than the minimum required. The applicant shall make an attempt to reduce the size of the parking lot and modify the overall site layout to preserve trees. **The applicant can meet this standard through condition of approval 66.**

17.41.060.B. The applicant shall determine the number of trees to be mitigated on the site by counting all of the trees 6" DBH (minimum 4.5 feet from the ground) or larger on the entire site and either:
(1) Trees that are removed outside of the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2; or
(2) Diseased or hazardous trees, when the condition is verified by a certified arborist to be consistent with the definition in Section 17.04.1360, may be removed from the tree replacement calculation. Regulated healthy trees that are removed outside of the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Regulated healthy trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2.

Table 17.41.060-1
Tree Replacement Requirements
All replacement trees shall be either:
2 inch caliper deciduous, or
6 foot high conifer

Size of tree removed (DBH)	*Column 1 Number of trees to be planted. (If removed Outside of construction area)*	*Column 2 Number of trees to be planted. (If removed Within the construction area)*
6 to 12"	*3*	*1*
13 to 18"	*6*	*2*
19 to 24"	*9*	*3*
25 to 30"	*12*	*4*
31 and over"	*15*	*5*

Finding: Finding: Complies with Condition.
The site contains 655 trees. The applicant provided an arborist report that assessed the health of each tree and identified trees that are dead, dying, diseased, and hazardous. Of the total 655 trees, 218 are in poor health, dead, dying, diseased, or hazardous and are not required to be mitigated. Of the remaining 437 trees, the applicant has proposed to remove 358 trees and preserve 79 trees. All proposed tree preservation is within the 50 foot buffer of the wetland area. The tree mitigation calculation provided by the applicant is based on the assumption that the entire site is considered a construction area. Thus, the applicant shall re-calculate the required mitigation planting after submitted a revised tree removal plan with the construction area properly defined.

It appears that additional tree preservation may be possible especially if site design is modified. The applicant shall submit a revised tree mitigation plan with the final calculations. **The applicant can meet this standard through condition of approval 66.**

17.41.070 – Planting Area Priority for Mitigation (Option 1).
Development applications which opt for removal of trees with subsequent replanting pursuant to section 17.41.050(A) shall be required to mitigate for tree cutting by complying with the following priority for replanting standards below:

A. *First Priority. Replanting on the development site.*
B. *Second Priority. Off-site Replacement Tree Planting Locations. If the Community Development Director determines that it is not practicable to plant the total number of replacement trees on-site, a suitable off-site planting location for the remainder of the trees may be approved that will reasonably satisfy the objectives of this section. Such locations may include either publicly owned or private land and must be approved by the Community Development Director.*

Finding: Complies with Conditions. Under the current tree removal proposal, 791 trees are required as mitigation, or 1582" inches. The applicant proposes to plant 273 trees at the subject site. An additional 124 trees are proposed elsewhere on the High school campus. Holcomb Elementary, an OCSD school in the Park Place neighborhood, is proposed to receive 113 new trees as mitigation. The school district planted 24 trees at Eastham campus as part of the City's Arbor Day celebration.
The remaining mitigation trees are proposed to be planted at the future City park across the street. However, there is no schedule for the construction of this park, so the timing of planting is unknown. The applicant may utilize the park as a mitigation tree planting area only if a written and signed agreement is made with the City Parks and Recreation Department that specifies the contribution of the school district. Prior to issuance of the certificate of occupancy, the school district shall finalize the tree mitigation requirements and shall submit a final tree mitigation plan. **The applicant can meet this standard through conditions of approval 67 and 68.**

17.41.080. Tree Preservation within Subdivisions and Partitions – Dedicated Tract (Option 2).
17.41.090. Incentive for Tree Protection Tracts (Option 2).
17.41.100. Permitted Modifications to Dimensional Standards (Option 2 Only).
Finding: Not applicable. The applicant has not chosen Option 2.

17.41.110. Tree Protection by Restrictive Covenant (Option 3).
Any regulated tree or grove which cannot be protected in a tract pursuant to Section 17.41.080 above shall be protected with a restrictive covenant in a format to be approved by the Community Development Director. Such covenant shall be recorded against the property deed and shall contain provisions to permanently protect the regulated tree or grove unless such tree or grove, as determined by a certified arborist and approved by the Community Development Director, are determined to be diseased or hazardous.
Finding: Complies with Condition. The applicant shall record a covenant to protect all preserved trees and all mitigation trees with a restrictive covenant. **The applicant can meet this standard through condition of approval 69.**

17.41.120. Permitted Adjustments (Option 3 Only).
A. The Community Development Director, pursuant to a Type II procedure, may grant an adjustment to the side, front and rear yard setback standards by up to 50 percent (50%) if necessary to retain a Regulated Tree or Grove through a restrictive covenant pursuant to this section. In no case may the side yard setback be reduce less than 3 feet. The adjustment shall be the minimum necessary to accomplish preservation of trees on the lot and shall not conflict with other conditions imposed on the property.
B. The Community Development Director, pursuant to a Type II procedure, may grant an adjustment to street standards, pursuant to adopted public works standards, in order to preserve a tree. This may include flexibility to redesign sidewalk and planter strip sizes and locations and allow placement of sidewalks and planter strips in an easement within private lots.
C. The Community Development Director, pursuant to a Type II procedure, may allow other adjustments in order to preserve any healthy tree that cannot be moved due to its size, but will contribute to the landscape character of the area and will not present a foreseeable hazard if retained.
Finding: Not applicable. The applicant has not requested adjustments.

17.41.130 - Cash-in-lieu of Planting (Tree Bank/Fund) (Option 4)

The applicant may choose this option in-lieu-of or in addition to Compliance Options 1 through 3. In this case, the Community Development Director may approve the payment of cash-in-lieu into a dedicated fund for the remainder of trees that cannot be replanted in the manner described above.

A. The cash-in-lieu payment per tree shall be as listed on the adopted fee schedule and shall be adjusted annually based on the Consumer Price Index (Index). The price shall include the cost of materials, transportation and planting.

B. The amount of the cash-in-lieu payment into the tree bank shall be calculated as the difference between the value of the total number of trees an applicant is required to plant, including cost of installation and adjusted for Consumer Price Index, minus the value of the trees actually planted. The value of the trees shall be based on the adopted fee schedule.

Finding: Complies with Condition. The applicant shall pay fee in lieu for all trees that are unable to be planted on or off site through Option 1. **The applicant can meet this standard through condition of approval 70.**

17.41.130. Regulated Tree Protection Procedures During Construction.

A. No permit for any grading or construction of public or private improvements may be released prior to verification by the Community Development Director that regulated trees designated for protection or conservation have been protected according to the following standards. No trees designated for removal shall be removed without prior written approval from the Community Development Director.

B. Tree protection shall be as recommended by a qualified arborist or, as a minimum, to include the following protective measures:

1. *Except as otherwise determined by the Community Development Director, all required tree protection measures set forth in this section shall be instituted prior to any development activities, including, but not limited to clearing, grading, excavation or demolition work, and such measures shall be removed only after completion of all construction activity, including necessary landscaping and irrigation installation, and any required plat, tract, conservation easement or restrictive covenant has been recorded.*
2. *Approved construction fencing, a minimum of 4 feet tall with steel posts placed no farther than ten feet apart, shall be installed at the edge of the tree protection zone or dripline, whichever is greater. An alternative may be used with the approval of the Community Development Director.*
3. *Approved signs shall be attached to the fencing stating that inside the fencing is a tree protection zone, not to be disturbed unless prior approval has been obtained from the Community Development Director.*
4. *No construction activity shall occur within the tree protection zone, including, but not limited to; dumping or storage of materials such as building supplies, soil, waste items; nor passage or parking of vehicles or equipment.*
5. *The tree protection zone shall remain free of chemically injurious materials and liquids such as paints, thinners, cleaning solutions, petroleum products, and concrete or dry wall excess, construction debris, or run-off.*
6. *No excavation, trenching, grading, root pruning or other activity shall occur within the tree protection zone unless directed by an arborist present on site and approved by the Community Development Director.*
7. *No machinery repair or cleaning shall be performed within 10 feet of the dripline of any trees identified for protection.*
8. *Digging a trench for placement of public or private utilities or other structure within the critical root zone of a tree to be protected is prohibited. Boring under or through the tree protection zone may be permitted if approved by the Community Development Director and pursuant to the approved written recommendations and on-site guidance and supervision of a Certified Arborist.*
9. *The City may require that a Certified Arborist be present during any construction or grading activities that may affect the dripline of trees to be protected.*
10. *The Community Development Director may impose conditions to avoid disturbance to tree roots from grading activities and to protect trees and other significant vegetation identified for retention from harm. Such conditions may include, if necessary, the advisory expertise of a qualified consulting arborist or horticulturist both during and after site preparation, and a special maintenance/management program to provide protection to the resource as recommended by the arborist or horticulturist.*

C. Changes in soil hydrology due to soil compaction and site drainage within tree protection areas shall be avoided. Drainage and grading plans shall include provision to ensure that drainage of the site does not conflict with the standards of this section. Excessive site run-off shall be directed to appropriate storm drainage facilities and away from trees designated for conservation or protection.

Finding: Complies with Condition. The applicant shall retain a Project Arborist to sign off on the tree protection plan and methods, and shall follow all measures required in 17.41.130. **The applicant can meet this standard though condition of approval 71.**

CHAPTER 17.49 NATURAL RESOURCE OVERLAY DISTRICT

17.49.040 NROD Permit
An NROD permit is required for those uses regulated under Section 17.49.90, Uses Allowed under Prescribed Conditions. An NROD permit shall be processed under the Type II development permit procedure, unless an adjustment of standards pursuant to Section 17.49.200 is requested or the application is being processed in conjunction with a concurrent application or action requiring a Type III or Type IV development permit. Applications for development on properties affected by the NROD shall delineate or verify the exact location of the NROD as part of a Type I or II development review process unless exempted pursuant to section 17.40.080.
Finding: Complies as Proposed. The applicant submitted an NROD application to meet the requirements of this chapter. The report was completed by Pacific Habitat Services, and reviewed by David Evans Associates, the City's natural resource consultants (Exhibit 8). Because the project could not avoid removing a portion of the forest canopy, the applicant has requested an adjustment from standards in section 17.49.155 and addressed the standards of 17.49.200; therefore the application is a Type III review.

17.49.050 Emergencies
Finding: Not Applicable. This is not an emergency.

17.49.060 Consistency and Relationship to Other Regulations
A. Where the provisions of the NROD are less restrictive or conflict with comparable provisions of the Oregon City Municipal Code, other City requirements, regional, state or federal law, the provisions that provides the greater protection of the resource shall govern.
B. Compliance with Federal and State Requirements.
a. If the proposed development requires the approval of any other governmental agency, such as the Division of State Lands or the U.S. Army Corps of Engineers, the applicant shall make application for such approval prior to or simultaneously with the submittal of its development application to the City. The planning division shall coordinate City approvals with those of other agencies to the extent necessary and feasible. Any permit issued by the City pursuant to this chapter shall not become valid until other agency approvals have been obtained or those agencies indicate that such approvals are not required.
b. The requirements of this chapter apply only to areas within the NROD and to locally significant wetlands that may be added to the boundary during the course of development review pursuant to Section 17.49.035. If, in the course of a development review, evidence suggests that a property outside the NROD may contain a wetland or other protected water resource, the provisions of this chapter shall not be applied to that development review. However, the omission shall not excuse the applicant from satisfying any state and federal wetland requirements which are otherwise applicable. Those requirements apply in addition to, and apart from the requirements of the City's comprehensive plan and this code.
Finding: Complies as Proposed. The applicant submitted a wetland delineation, finding that the wetland is approximately 44,906 square feet (1.03 acre) within the study area.
The DSL concurred with the findings of the wetland delineation in December 2014. No jurisdictional wetland would be affected as part of the proposed project. The applicant will submit the DEQ 1200-C NPDES Stormwater Discharge Permit once the City provides Conditions of Approval for the Land Use application.

17.49.[0]80 –Uses allowed outright (Exempted).
Finding: Complies with Condition. The applicant proposes to remove invasive plants, which is allowed outright. David Evans Associates recommends that the applicant provide a weed/invasive species removal plan and ensure that Personnel hired to remove invasive species must be licensed and trained to use herbicides in the vicinity of water bodies, if such chemicals are to be used. The applicant shall follow these recommendations and submit documentation to demonstrate

compliance to the City before plant removal begins. **The applicant can meet this standard through Condition of Approval 72.**

17.49.090 Uses Allowed Under Prescribed Conditions
The following uses within the NROD are subject to the applicable standards listed in Sections 17.49.100 through 17.49.190 pursuant to a Type II process:
A. Alteration to existing structures within the NROD when not exempted by Section 17.49.080, subject to Section 17.49.130.
B. A residence on a highly constrained vacant lot of record that has less than 3,000 square feet of buildable area, with minimum dimensions of 50 feet by 50 feet, remaining outside the NROD portion of the property, subject to the maximum disturbance allowance prescribed in subsection 17.49.120.A.
C. A land division that would create a new lot for an existing residence currently within the NROD, subject to Section 17.49.160.
D. Land divisions when not exempted by Section 17.49.080, subject to the applicable standards of Section 17.49.160.
E. Trails/pedestrian paths when not exempted by Section 17.49.080, subject to Section 17.49.170 (for trails) or Section 17.49.150 (for paved pedestrian paths).
F. New roadways, bridges/creek crossings, utilities or alterations to such facilities when not exempted by Section 17.49.080,
G. Roads, bridges/creek crossings Subject to Section 17.49.150 --
H. Utility lines subject toSection 17.49.140 (
Stormwater detention or pre-treatment facilities subject to Section 17.49.155 ().
J. Institutional, Industrial or Commercial development on a vacant lot of record situated in an area designated for such use that has more than 75% of its area covered by the NROD, subject to subsection 17.49.120(B).
K City, county and state capital improvement projects, including sanitary sewer, water and storm water facilities, water stations, and parks and recreation projects.
Finding: Complies as Proposed. The proposed project is categorized as a stormwater facility (I.) and therefore is subject to Section 17.49.155.

17.49.100 General Development Standards
The following standards apply to all Uses Allowed under Prescribed Conditions within the NROD with the exception of rights of ways (subject to Section 17.49.150), trails (subject to Section 17.49.170), utility lines (subject to Section 17.49.140), land divisions (subject to Section 17.49.160), and mitigation projects (subject to Section 17.49.180 or 17.49.190):
A. Native trees may be removed only if they occur within 10 feet of any proposed structures or within 5 feet of new driveways or if deemed not wind-safe by a certified arborist. Trees listed on the Oregon City Nuisance Plant List or Prohibited Plant List are exempt from this standard and may be removed. A protective covenant shall be required for any native trees that remain;
Finding: Complies as Proposed. The proposed project complies with the general development standards. Native trees are only being removed when they are within 10 feet of the stormwater facility.

B. The Community Development Director may allow the landscaping requirements of the base zone, other than landscaping required for parking lots, to be met by preserving, restoring and permanently protecting habitat on development sites in the Natural Resource Overlay District.
Finding: Complies as Proposed. The overall landscaping calculation includes the NROD portion of the site.

C. All vegetation planted in the NROD shall be native and listed on the Oregon City Native Plant List;
Finding: Complies as Proposed. All vegetation planting identified in the mitigation plan are on the Oregon City Native Plant List except for slender rye (which is also not on the Metro and City of Portland native plant lists). However, a DEA licensed landscape architect has agreed that it is native to the area and a good addition to the identified seed mix.

The applicant's NROD report states that the vegetated corridor adjacent to the wetland has a good combination of trees, shrubs, and ground cover as well as good tree canopy coverage. However, coverage of English hawthorn, sweet cherry (*Prunus avium*), Himalayan blackberry, and English holly is greater than 10 percent, which degrades the otherwise good condition corridor to *marginal* corridor condition overall.

D. Grading is subject to installation of erosion control measures required by the City of Oregon;
Finding: Complies as Proposed. A grading plan has been provided for review as required.

E. The minimum front, street, or garage setbacks of the base zone may be reduced to any distance between the base zone minimum and zero in order to minimize the disturbance area within the NROD portion of the lot;
F. Any maximum required setback in any zone, such as for multi-family, commercial or institutional development, may be increased to any distance between the maximum and the distance necessary to minimize the disturbance area within the NROD portion of the lot;
Finding: Not Applicable. The applicant is requesting neither a reduction nor an increase in setbacks.

G. Fences are allowed only within the disturbance area;
Finding: Complies as Proposed. A fence will be installed along the edge of the stormwater facility both inside and along the edge of the disturbance, but will not further encroach on the NROD.

H. Incandescent lights exceeding 200 watts (or other light types exceeding the brightness of a 200 watt incandescent light) shall be placed or shielded so that they do not shine directly into resource areas;
Finding: Complies as Proposed. No lighting is proposed near the NROD area.

I. If development will occur within the 100 yr. floodplain, the FEMA floodplain standards of Chapter 17.42 shall be met; and
Finding: Not Applicable. There is no 100-year floodplain on site.

J. Mitigation of impacts to the regulated buffer is required, subject to Section 17.49.180 or 17.49.190.
Finding: Complies as Proposed. A mitigation plan has been provided for impacts to the regulated buffer.

17.49.110 – Width of Vegetated Corridor.
Calculation of Vegetated Corridor Width within City Limits. The NROD consists of a vegetated corridor measured from the top of bank or edge of a protected habitat or water feature. The minimum required width is the amount of buffer required on each side of a stream, or on all sides of a feature if non-linear. The width of the vegetated corridor necessary to adequately protect the habitat or water feature is specified in Table 17.49.110.
Finding: Complies as Proposed. The slope adjacent to the wetland was determined by Pacific Habitat Services, Inc. (PHS) to be less than 25 percent, resulting in a 50-foot wide vegetated corridor according to Table 17.49.110 of the Oregon City NROD code. This was confirmed by a DEA ecologist on April 23, 2015.

17.49.155 Standards for Stormwater Facilities
Approved facilities that infiltrate stormwater on-site in accordance with Public Works Low-Impact Development standards, including but not limited to; vegetated swales, rain gardens, vegetated filter strips, and vegetated infiltration basins, and their associated piping, may be placed within the NROD boundary pursuant to the following standards:
A. The forest canopy within the driplines of existing trees shall not be disturbed.
B. Only vegetation from the Oregon City Native Plant List shall be planted within these facilities.
C. Mitigation is required, subject to Section 17.49.180 or 17.49.190.
D. The storm water facility may encroach up to1/2 the distance of the NROD corridor.
E. The stormwater facility shall not impact more than 1,000 square feet of the NROD. Impacts greater than 1,000 square feet shall be process as a Type III application.

F.. The Community Development Director may allow landscaping requirements of the base zone, other than landscaping required for parking lots, to be met by preserving, restoring and permanently protecting habitat on development sites within the Natural Resource Overlay District.

Finding: Complies as Proposed. Grading for the western detention pond, the installation of sub-surface storm facility piping, and the installation of a stormwater outfall with scour protection/rip rap will result in disturbance of the forest canopy within the dripline of existing trees. An adjustment to standards is requested for this reason. Two new detention ponds are proposed along the southern edge of the NROD. The ponds will treat stormwater from the proposed development, reducing the pre-developed 2-year event by 50 percent. Grading associated with the western pond encroaches into the NROD, impacting an area of approximately 27 square feet and removing four Oregon white oak trees. Although the fill slope from the detention ponds will be re-vegetated the ground surface will be permanently altered.

A 10-inch, subsurface storm drainpipe will be installed between the eastern pond and the stormwater outfall to the west. The installation of this pipe will temporarily disturb approximately 273 square feet of NROD but will not result in the removal of any trees. The width of the disturbance area within the NROD will be ten feet or less. The ground surface will be restored to pre-construction grade and re-vegetated following pipe installation.

The stormwater outfall consists of a rip-rap pad that provides scour protection from stormwater discharge that will be piped from both detention ponds. It is located partially within the NROD and is situated in the lowest area north of the western pond. This permanent feature impacts 25 square feet of NROD and results in the removal of one Oregon white oak tree. The area will not be re-vegetated as the rip-rap substrate precludes plant establishment.

There will be 325 square feet of permanent and temporary impacts, and the proposed stormwater facility will not encroach greater than one-half the distance of the NROD corridor. A mitigation plan has been submitted and is reviewed in more detail in the response to Section 17.49.180.

17.49.180 Mitigation Standards

The following standards (or the alternative standards of Section 17.49.190) apply to required mitigation:

A. Mitigation shall occur at a 2:1 ratio of mitigation area to proposed NROD disturbance area. Mitigation of the removal or encroachment of a wetland or stream shall not be part of this chapter and will be reviewed by the Division of State Lands or the Army Corp of Engineers during a separate review process;

B. Mitigation shall occur on the site where the disturbance occurs, except as follows:

1. The mitigation is required for disturbance associated with a right-of-way or utility in the right-of-way;

2. The mitigation shall occur first on the same stream tributary, secondly in the Abernethy, Newell or Livesay Creek or a tributary thereof, or thirdly as close to the impact area as possible within the NROD; and

3. An easement that allows access to the mitigation site for monitoring and maintenance shall be provided as part of the mitigation plan.

C. Mitigation shall occur within the NROD area of a site unless it is demonstrated that this is not feasible because of a lack of available and appropriate area. In such cases, the proposed mitigation area shall be contiguous to the existing NROD area so the NROD boundary can be easily extended in the future to include the new resource site.

D. Invasive and nuisance vegetation shall be removed within the mitigation area;

E. Required Mitigation Planting. An applicant shall meet Mitigation Planting Option 1 or 2 below, whichever option results in more tree plantings, except that where the disturbance area is one acre or more, Mitigation Option 2 shall be required. All trees, shrubs and ground cover shall be selected from the Oregon City Native Plant List.

Mitigation Planting Option 1.

Option 1 - Planting Quantity. This option requires mitigation planting based on the number and size of trees that are removed from the site pursuant to Table 17.49.180(E)(1)(a). Conifers shall be replaced with conifers. Bare ground shall be planted or seeded with native grasses and ground cover species.

Table 17.49.180(E)(1)(a) – Required Planting Option 1

Size of Tree to be Removed (DBH)	***Number of Trees and Shrubs to be Replanted***
6 to 12"	*2 trees and 3 shrubs*
13 to 18"	*3 trees and 6 shrubs*

19 to 24"	*5 trees and 12 shrubs*
25 to 30"	*7 trees and 18 shrubs*
Over 30"	*rees and 30 shrubs*

Option 1 - Plant Size. Replacement trees shall be at least one-half inch in caliper on average, measured at 6 inches above the ground level for field grown trees or above the soil line for container grown trees. Oak, madrone, ash or alder may be one gallon size. Conifers shall be a minimum of six (6') in height. Shrubs must be in at least 1-gallon container size or the equivalent in ball and burlap, and shall be at least 12 inches in height at the time of planting. All other species shall be a minimum of four-inch pots;
Option 1 - Plant Spacing. Except for the outer edges of mitigation areas, trees and shrubs shall be planted in a non-linear fashion. Plant spacing for new species shall be measured from the driplines of existing trees when present. Trees shall be planted on average between 8 and 12 feet on center, and shrubs shall be planted on average between 4 and 5 feet on center, or clustered in single species groups of no more than four (4) plants, with each cluster planted on average between 8 and 10 feet on center.
Option 1 - Mulching and Irrigation. Mulch new plantings a minimum of three inches in depth and 18 inches in diamters. Water new plantings one inch per week from June 30th to September 15th, for the three years following planting.
Option 1 – Plant Diversity. Shrubs shall consist of at least two (2) different species. If 10 trees or more are planted, no more than one-half of the trees may be of the same genus.

Finding: Complies as Proposed. The proposed disturbance area is 325 square feet. The area is heavily vegetated. Therefore, the total proposed mitigation planting area is 43,964 square feet because the plantings will be infilled into existing canopy openings. The areas that will be planted are expected to cumulatively exceed the required two-to-one planting ratio in the NROD area the site.

Option 1 was used to determine mitigation plantings because it resulted in the greatest number of trees and shrubs to be planted: Sixteen (16) replacement trees and thirty (30) replacement shrubs will be planted according to size, spacing, and diversity standards in the NROD area. The plants and shrubs are on the Oregon City Native Plant List. Invasive species will be removed to the maximum extent practicable and bare ground will be planted or seeded with native grasses and ground cover species.

F. Monitoring and Maintenance. The mitigation plan shall provide for a 5-year monitoring and maintenance plan with annual reports in a form approved by the Director of Community Development. Monitoring of the mitigation site is the on-going responsibility of the property owner, assign, or designee, who shall submit said annual report to the City's Planning Division, documenting plant survival rates of shrubs and trees on the mitigation site. Photographs shall accompany the report that indicate the progress of the mitigation. A minimum of 80% survival of trees and shrubs of those species planted is required at the end of the 5-year maintenance and monitoring period. Any invasive species shall be removed and plants that die shall be replaced in kind. Bare spots and areas of invasive vegetation larger than ten (10) square feet that remain at the end the 5 year monitoring period shall be replanted or reseeded with native grasses and ground cover species.
G. Covenant or Conservation Easement. Applicant shall record a restrictive covenant or conservation easement, in a form provided by the City, requiring the owners and assigns of properties subject to this section to comply with the applicable mitigation requirements of this section. Said covenant shall run with the land, and permit the City to complete mitigation work in the event of default by the responsible party. Costs borne by the City for such mitigation shall be borne by the owner.
H. Financial Guarantee. A financial guarantee for establishment of the mitigation area, in a form approved by the City, shall be submitted before development within the NROD disturbance area commences. The City will release the guarantee at the end of the five-year monitoring period, or before, upon it's determination that the mitigation plan has been satisfactorily implemented pursuant to this section.

Finding: Complies with Condition. The mitigation plan includes a 5-year maintenance and monitoring plan that includes annual progress reports including survival rates and remedial actions if necessary, submitted to the City's planning division. The applicant shall record a restrictive covenant or conservation easement for the NROD mitigation plantings including a financial guarantee in the form provided by the city, that will require owners and assigns of the property to

comply with the applicable mitigation. **The applicant can meet this standard though condition of approval 73.**

17.49.200 Adjustment from Standards
If a regulated NROD use cannot meet one or more of the applicable NROD standards then an adjustment may be issued if all of the following criteria are met. Compliance with these criteria shall be demonstrated by the applicant in a written report prepared by an environmental professional with experience and academic credentials in one or more natural resource areas such as ecology, wildlife biology, botany, hydrology or forestry. At the applicant's expense, the City may require the report to be reviewed by an environmental consultant. Such requests shall be processed under the Type III development permit procedure. The applicant shall demonstrate:
A. There are no feasible alternatives for the proposed use or activity to be located outside the NROD area or to be located inside the NROD area and to be designed in a way that will meet all of the applicable NROD development standards;
B. The proposal has fewer adverse impacts on significant resources and resource functions found in the local NROD area than actions that would meet the applicable environmental development standards;
C. The proposed use or activity proposes the minimum intrusion into the NROD area that is necessary to meet development objectives;
D. Fish and wildlife passage will not be impeded;
E. With the exception of the standard(s) subject to the adjustment request, all other applicable NROD standards can be met; and
F. The applicant has proposed adequate mitigation to offset the impact of the adjustment.
Finding: Complies with Condition. The proposed detention pond grading, storm drainpipe, and stormwater outfall impact areas within the NROD have been minimized to the greatest extent possible while still providing adequate capacity for the stormwater facility. The proposed project largely avoids adverse impacts to NROD resources and their functions within the parcel by minimizing impacts within the NROD. As the affected NROD has dense canopy coverage, completely avoiding forest canopy impacts was not possible. Clearing of vegetation (trees and shrubs) within the NROD shall occur outside of the nesting season in accordance with the Migratory Bird Treaty Act.

The wetland complex/tributary to Caufield Creek that flows through the project area is not mapped as providing habitat for migratory fish (StreamNet 20151). ODFW field verified that fish do not occur in the wetland complex/tributary (ODFW-ODF 19942).

All other NROD standards can be met, and an adequate mitigation plan has been submitted for the project.

The trees that the applicant specified to be planted are large and would require frequent watering during establishment. The reviewing landscape architect and ecologist concur that this size of tree is rarely successfully established because of the intensive watering needs. Instead, the proposed project should include an adjustment from the tree size to plant smaller, and less demanding trees that are more likely to establish successfully. The applicant shall submit a final planting plan that specifies smaller trees than in the original application and includes a temporary irrigation plan prior to the grading permit and ensure frequent watering during establishment. **The applicant can meet this standard though conditions of approval 74 and 75.**

David Evans Associates also recommends the applicant ensure the following measures are taken for the stormwater pond:
1. Provide a detailed stormwater detention pond plan that shows and labels:
    a. The permanent and temporary features designed for the flow between the pond outfall and the wetland.

b. The method of accommodating the flow.
c. The flow control measures in the vegetated corridor.
d. Contour lines between the outfall and the wetland.
e. The trees downslope of the outfall.
f. A planting plan for the detention pond side slopes, outside of the berm, and the pond bottoms.

The stormwater plan must ensure that:

a. The discharge from the outfall into the wetlands occurs at multiple points to slowly recharge
the groundwater.
b. The oak trees will not be negatively affected by increased hydrology at their roots.

2. All undisturbed areas, including remaining trees and their root systems, should be identified and protected from grading and vehicle damage by flags, fencing, or a combination of both.
3. If additional trees are removed additional mitigation will be required in accordance with section 17.49.180.
4. Submit the DEQ 1200-C NPDES Stormwater Discharge Permit prior to grading permit.

CHAPTER 17.58: NONCONFORMING USES, STRUCTURES, AND LOTS

17.58.015 Applicability.
The regulations of this chapter apply only to those nonconforming situations that were lawfully established or that were approved through a land use decision. All nonconforming structures, uses or lots shall have been maintained over time. These situations have lawful nonconforming status. Nonconforming situations that were not allowed when established or have not been maintained over time have no lawful right to continue.
Finding: Applicable: The High school campus is a nonconforming site due to parking requirements.

17.58.040 Lawful Nonconforming Structure.
A structure that was lawfully established but no longer conforms to all development standards of this land use code (such as setbacks) shall be considered a lawful nonconforming structure. Notwithstanding development standard requirements in this code, minor repairs and routing maintenance of a lawful nonconforming structure are permitted. The continuation of a lawful nonconforming structure is subject to the following:
Accidental Destruction. When a nonconforming structure is damaged by fire or other causes, the structure may be rebuilt using the same structure footprint.
Intentional Destruction. When a nonconforming structure is removed or intentionally damaged by fire or other causes within the control of the owner, the replacement structure shall comply with the development standards of this title.
Expansion. An expansion of a lawful nonconforming structure may be approved, conditionally approved or denied in accordance with the standards and procedures of this section.
Finding: Applicable. An expansion of the site and the use is proposed.

1. In making a determination on such applications, the decision maker shall weigh the proposal's positive and negative features and the public convenience or necessity to be served against any adverse conditions that would result from authorizing the particular development at the location proposed, and, to approve such expansion, it must be found that the criteria identified in section 17.58.060 have either been met, can be met by observance of conditions, or are not applicable.
2. An expansion of a nonconforming structure with alterations that exceed the threshold of Subparagraph C.2.a below shall comply with the development standards listed in Subparagraph C.2.b. The value of the alterations and improvements is based on the entire project and not individual building permits.
Thresholds triggering compliance. The standards of Subparagraph C.2.b below shall be met when the value of the proposed exterior alterations or additions to the site, as determined by the Community Development Director, is more then $75,000. The following alterations and improvements shall not be included in the threshold calculation:
Proposed alterations to meet approved fire and life safety agreements;

Alterations related to the removal of existing architectural barriers, as required by the Americans with Disabilities Act, or as specified in Section 1113 of the Oregon Structural Specialty Code;
Alterations required to meet Seismic Design Requirements; and
Improvements to on-site stormwater management facilities in conformance with Oregon City Stormwater Design Standards.

Finding: Complies with Condition. The applicant did not provide the value; it appears it exceeds the $75,000 threshold. Prior to issuance of permits, the applicant shall submit documentation that demonstrates the value of the proposed exterior alterations or additions to the site. **The applicant can meet this standard through condition of approval 76.**

Standards that shall be met. Developments not complying with the development standards listed below shall be brought into conformance.
Pedestrian circulation systems, as set out in the pedestrian standards that apply to the sites;
Minimum perimeter parking lot landscaping;
Minimum interior parking lot landscaping;
Minimum site landscaping requirements;
Bicycle parking by upgrading existing racks and providing additional spaces in order to comply with 17.52 Off-Street Parking and Loading;
Screening; and
Paving of surface parking and exterior storage and display areas.

Finding: The pedestrian circulation system, the interior parking lot landscaping, and bicycle parking do not comply with current standards.

Area of required improvements.
(1) Generally. Except as provided in C.2.c(2) below, required improvements shall be made for the entire site. Exception for sites with ground leases. Required improvements may be limited to a smaller area if there is a ground lease for the portion of the site where the alterations are proposed. If all of the following are met, the area of the ground lease will be considered as a separate site for purposes of required improvements. The applicant shall meet the following:
The signed ground lease – or excerpts from the lease document satisfactory to the City Attorney – shall be submitted to the Community Development Director. The portions of the lease shall include the following:

- *The term of the lease. In all cases, there must be at least one year remaining on the ground lease; and*
- *A legal description of the boundaries of the lease.*

The boundaries of the ground lease shall be shown on the site plan submitted with the application. The area of the lease shall include all existing and any proposed development that is required for, or is used exclusively by, those uses within the area of the lease; and
iii. Screening shall not be required along the boundaries of ground leases that are interior to the site.
Timing and cost of required improvements. The applicant may choose one of the two following options for making the required improvements:
(1) Option 1. Required improvements may be made as part of the alteration that triggers the required improvements. The cost of the standards that shall be met, identified in Subparagraph C.2.b above, is limited to 10% of the value of the proposed alterations. It is the responsibility of the applicant to document to the Community Development Director the value of the required improvements. Additional costs may be required to comply with other applicable requirements associated with the proposal. When all required improvements are not being made, the priority for the improvements shall be as listed in Subparagraph C.2.b above.
(2) Option 2. Required improvements may be made over several years, based on the compliance period identified in Table 17.58 – 1 below. However, by the end of the compliance period, the site shall be brought fully into compliance with the standards listed in Subparagraph C.2.b. Where this option is chosen, the following must be met:
Before a building permit is issued, the applicant shall submit the following to the Community Development Director:

- *A Nonconforming Development Assessment, which identifies in writing and on a site plan, all development that does not meet the standards listed in Subparagraph C.2.b.*
- *A covenant, in a form approved by the City Attorney, executed by the property owner that meets the requirements of 17.50.150. The covenant shall identify development on the site that does not meet the standards listed in Subparagraph C.2.b, and require the owner to bring that development fully into compliance with this*

Title. The covenant shall also specify the date by which the owner will be in conformance. The date must be within the compliance periods set out in Table 17.58 – 1.
The nonconforming development identified in the Nonconforming Development Assessment shall be brought into full compliance with the requirements of this Title within the following compliance periods. The compliance period begins when a building permit is issued for alterations to the site of more than $75,000. The compliance periods are based on the size of the site (see Table 17.58 – 1 below).
By the end of the compliance period, the applicant or owner shall request that the site by certified by the Community Development Director as in compliance. If the request is not received within that time, or if the site is not fully in conformance, no additional building permits will be issued.
If the regulations referred to by Subparagraph C.2.b are amended after the Nonconforming Development Assessment is received by the Community Development Director, and those amendments result in development on the site that was not addressed by the Assessment becoming nonconforming, the applicant shall address the new nonconforming development using Option 1 or 2. If the applicant chooses Option 2, a separate Nonconforming Development Assessment, covenant and compliance period will be required for the new nonconforming development.

Table 17.58 – 1 *Compliance Periods for Option 2*	
Square footage of site	*Compliance Period*
Less than 150,000 sq. ft.	*2 years*
150,000 sq. ft. or more, up to 300,000 sq. ft.	*3 years*
300,000 sq. ft. or more, up to 500,000 sq. ft.	*4 years*
More than 500,000 sq. ft.	*5 years*

Finding: Complies with Condition. . The applicant has proposed to phase is bicycle parking upgrades as needed and add interior landscaping islands in future phases of the master plan. The applicant shall propose a final nonconforming upgrade plan that meets the requirements of this Chapter. **The applicant can meet this standard through condition of approval 77.**

CHAPTER 17.50 ADMINISTRATION AND PROCEDURES

17.50.050 Preapplication Conference
A Preapplication Conference. Prior to submitting an application for any form of permit, the applicant shall schedule and attend a preapplication conference with City staff to discuss the proposal. To schedule a preapplication conference, the applicant shall contact the Planning Division, submit the required materials, and pay the appropriate conference fee. At a minimum, an applicant should submit a short narrative describing the proposal and a proposed site plan, drawn to a scale acceptable to the City, which identifies the proposed land uses, traffic circulation, and public rights-of-way and all other required plans. The purpose of the preapplication conference is to provide an opportunity for staff to provide the applicant with information on the likely impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal. The Planning Division shall provide the applicant(s) with the identity and contact persons for all affected neighborhood associations as well as a written summary of the preapplication conference. Notwithstanding any representations by City staff at a preapplication conference, staff is not authorized to waive any requirements of this code, and any omission or failure by staff to recite to an applicant all relevant applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.
B. A preapplication conference shall be valid for a period of six months from the date it is held. If no application is filed within six months of the conference or meeting, the applicant must schedule and attend another conference before the City will accept a permit application. The Community Development Director may waive the preapplication requirement if, in the Director's opinion, the development does not warrant this step. In no case shall a preapplication conference be valid for more than one year.
Finding: Complies as Proposed. A Pre-Application conference was held on **October 9, 2014** with City Staff.

17.50.055 Neighborhood Association Meeting

Finding: Complies as Proposed. The applicant's representatives attended the Two Rivers Neighborhood general membership meeting in February 2015 to present conceptual plans for the proposed office development.

17.50.060 Application Requirements.
Finding: Complies as Proposed. All application materials required are submitted with this narrative.

17.50.070 Completeness Review and 120-day Rule.
Finding: Complies as Proposed. The current 120-day deadline for this application is July 21, 2015 The application was deemed sufficiently complete to process on March 24, 2015.

17.50.080 Complete Application--Required Information.
Finding: Complies as Proposed. The application was submitted on December 23, 2014, deemed sufficiently complete to process on March 24, 2015.

17.50.090 Public Notices.
Finding: Complies as Proposed. Staff provided public notice within 300' of the site via regular mail. The site was posted with a Land Use Notice. Staff provided email transmittal or the application and notice to affected agencies and to the Neighborhood Association requesting comment.

17.50.100 Notice Posting Requirements.
Finding: Complies as Proposed. The applicant signed an affidavit stating site was posted with a sign more than 20 days prior to the public hearing.

CONCLUSION AND RECOMMENDATION:

Based on the analysis and findings as described above, Staff recommends that the proposed Site Plan and Design Review for a site identified as Clackamas County Clackamas County Map 3-2E-09D- Lots 1200, 1300, 1380, and 1400, can meet the requirements as described in the Oregon City Municipal Code by complying with the Conditions of Approval provided in this report. Staff recommends approval of file CP 14-03, DP 14-04, and NR 14-10 with conditions, based upon the findings and exhibits contained in this staff report.

GSB:7071891.1

OREGON CITY

Community Development – Planning

221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)	Type II (OCMC 17.50.030.B)	Type III / IV (OCMC 17.50.030.C)
☐ Compatibility Review	☐ Extension	☐ Annexation
☐ Lot Line Adjustment	☐ Detailed Development Review	☐ Code Interpretation / Similar Use
☐ Non-Conforming Use Review	☐ Geotechnical Hazards	☐ Concept Development Plan
☐ Natural Resource (NROD) Verification	☐ Minor Partition (<4 lots)	☐ Conditional Use
☒ MASTER PLAN	☐ Minor Site Plan & Design Review	☐ Comprehensive Plan Amendment (Text/Map)
	☐ Non-Conforming Use Review	☐ Detailed Development Plan
	☐ Site Plan and Design Review	☐ Historic Review
	☐ Subdivision (4+ lots)	☐ Municipal Code Amendment
	☐ Minor Variance	☐ Variance
	☐ Natural Resource (NROD) Review	☐ Zone Change

File Number(s): _____

Proposed Land Use or Activity: MASTER PLAN – OREGON CITY HIGH SCHOOL & NEW TRANSPORTATION MAINTENANCE FACILITY

Project Name: OREGON CITY HIGH SCHOOL & TRANSPORTATION MAINTENANCE FAC. MASTER PLAN Number of Lots Proposed (If Applicable): _____

Physical Address of Site: _____

Clackamas County Map and Tax Lot Number(s): 3-2E-09D - LOTS 1100, 1200, 1300, 1301, 1302, 1380 & 1400

Applicant(s):

Applicant(s) Signature: _____

Applicant(s) Name Printed: NATHAN ROEDEL, CHIEF FINANCIAL OFFICER OREGON CITY SCHOOL DISTRICT 62 Date: 22 DEC. 2014

Mailing Address: P.O. BOX 2110, OREGON CITY, OREGON 97045

Phone: 503.785.8424 Fax: 503.657.2518 Email: nathan.roedel@orecity.k12.or.us

Property Owner(s):

Property Owner(s) Signature: _____

Property Owner(s) Name Printed: NATHAN ROEDEL, CHIEF FINANCIAL OFFICER OREGON CITY SCHOOL DISTRICT 62 Date: 22 DEC. 2014

Mailing Address: P.O. BOX 2110, OREGON CITY, OREGON 97045

Phone: 503.785.8424 Fax: 503.657.2518 Email: nathan.roedel@orecity.k12.or.us

Representative(s):

Representative(s) Signature: _____

Representative (s) Name Printed: RONALD R. LEE, BBL ARCHITECTS Date: 22 DEC. 2014

Mailing Address: 200 NORTH STATE STREET, STE. 200, LAKE OSWEGO, OREGON 97034

Phone: 503.635.4425 Fax: 503.639.3581 Email: ron@bblarchitects.com

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Project Site

The Oregon City High School and Transportation Maintenance Campus consists of the following properties:

Oregon City High School and Associated Playfields (Existing)
Clackamas County Tax Assessor Map 3 2E 09D
Tax Lots 1100, 1200, 1300, 1301, 1302, and 1380
Transportation Maintenance Facility (Proposed)
Clackamas County Tax Assessor Map 3 2E 09D
Tax Lot 1400

(Title Reports with Property Descriptions are found in Exhibit A at end of this Narrative.)

17.65.050 General Development Plan

A. Existing Conditions Submittal Requirements; 1. Narrative Statement

a. Current uses of and development on the site, including programs or services

A portion of the site (east of High School Avenue) includes the existing Oregon City High School and associated site improvements, including parking and playfields, fenced tennis courts, and minor support buildings including a greenhouse, 1 playfield concession stand, a pump house, announcer's shed, portable bleachers, backstops and dugouts at baseball and softball fields. A house, garage and barn located at the south soccer fields are planned for future demolition.

The vacant 10.5 acre portion of the site (located west of High School Avenue) is proposed to accommodate the School District's Transportation and Maintenance Facility and associated parking areas for buses, vans, maintenance vehicles (e.g. lawn mowers), and Transportation and Maintenance Staff (and visitor) parking.

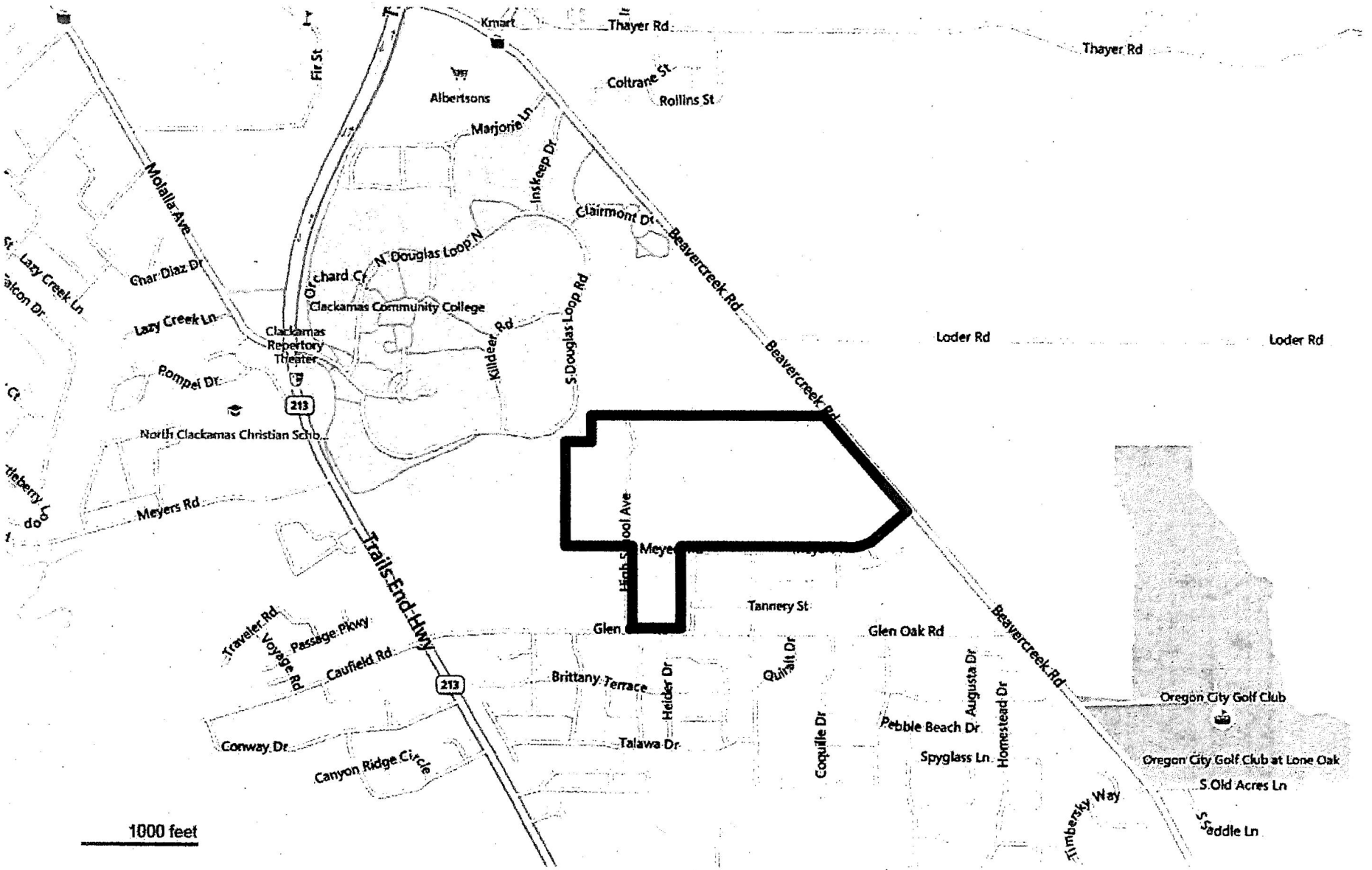
b. History or background information about the mission and operational characteristics of the institution that may be helpful in the evaluation of the general development plan

The current Oregon City High School Campus was originally designed and built in 1976 as a Junior High School and converted to Ninth grade use with minimal physical change. Prior to construction build-out of the high school campus in 2001 and 2002 the students were generally bused into the campus from the Jackson Campus. The High School build-out project renovated existing building systems and infrastructure that were aging. The project also replaced most of the obsolete mechanical and electrical systems with new energy efficient ones and structural systems were supplemented to comply with current earthquake code at the time. The High School Build-Out included demolishing some portions of current buildings and remodeling the remainder as well as some significant square footage additions.

The School District also owns Tax Lot 1400 located west of High School Avenue. Its intended use is for a new Transportation Maintenance Facility to replace existing facilities currently located at 14268 Maple Lane Court.

c. A vicinity map showing the location of the General Development Plan boundary relative to the larger community, along with affected major transportation routes, transit, and parking facilities. At least one copy of the vicinity map must be eight and one-half inches × eleven inches in size, and black and white reproducible.

See Vicinity Map and Aerial on the following pages.



VICINITY MAP



AERIAL PHOTO

200 0 250

d. Non-institutional uses that surround the development site. May also reference submitted maps, diagrams or photographs.

The site is bounded on the north by the Clackamas Community College Campus, on the east by private mostly farm land zoned County FU10, some C1 and MUC-1 zoned properties, on the south by housing and a future City park currently being master planned by the City Parks Department, and on the west by undeveloped property zoned Campus Industrial.

e. Previous land use approvals within the General Development Plan boundary and related conditions of approval.

A Conditional Use Permit was approved in 2001 by the City for the portion of the site occupied by the High School and it associated playfields. A copy of the draft of the Conditional Use Application is attached as Exhibit A.

f. Existing utilization of the site. May also reference submitted maps, diagrams or photographs.

As noted earlier, the Oregon City High School is the only current occupant of the existing site. See attached Sheet LUA0.1 – Existing Conditions Site Plan.

g. Site description, including the following items. May also reference submitted maps, diagrams or photographs.

1) Physical characteristics

The site terrain gently slopes from its east side downward to the west. A wetland has been identified and delineated at the northern portion of Tax Lot 1400 located west of High School Avenue. See attached Survey for Wetlands Delineation.

2) Ownership patterns

The site is owned by the Oregon City School District.

3) Building inventory

The site currently includes the following structures:

- ***Oregon City High School***
- ***Pump house***
- ***Greenhouse***
- ***2 Playfield concessions buildings***
- ***Announcers shed***
- ***Baseball/Softball backstops and dugouts***
- ***Portable Bleachers***
- ***Tennis courts and fencing***
- ***House, garage and barn at south soccer fields (to be demolished in future)***
- ***Existing shed/pole building to be removed at Transportation Maintenance portion of site***

Refer to attached LUA0.1 – Existing Conditions Site Plan for locations/footprints of buildings and structures.

4) Vehicle/bicycle parking

Currently, there is a total of 1,038 vehicle parking spaces of which 25 are ADA compliant accessible spaces at the High School and associated Playfields.

At the High School, there are parking spaces for a total of 96 bicycles; none of these spaces are currently covered. Because of the underutilization of these bicycle parking spaces by students and staff, the provision of additional spaces is not proposed. Furthermore, Applicant proposes to not cover any spaces.

5) Landscaping/usable open space

Associated open space adjacent to the High School is either landscaped areas or grassy play fields or wetlands including portions of the 10.5 acre proposed development east of High School Avenue. Play fields include 4 baseball/softball fields, 3 soccer fields, and one football field.

See attached LUA0.1 – Existing Conditions Site Plan for locations of landscaping and play fields.

Note: Landscaping at parking lot interior (islands) generally conforms to zoning requirements at the existing High School except at 2 non-conforming locations:
North Portion of parking lot besides Baseball fields
Southwestern portion of main parking lot by Gymnasium
Installation of new planting islands at these two parking lots will occur in future phase of work.

6) FAR/lot coverage

Proposed HS Building Areas

Building 1: Main High School Building	*218,321 SF*
Building 2: Existing ROTC/Shop	*9,280 SF*
Building 3: Announcer Shed	*100 SF*
Building 4: Greenhouse (Phase 4 Removal)	*1,420 SF*
Building 5: Baseball Hitting Facility	*12,800 SF*
Building 6: Concessions #1	*288 SF*
Building 7: Shed Near Hitting Facility	*120 SF*
Building 8: Irrigation Pump House	*154 SF*
Building 9: Pole Barn (Phase 1 Removal)	*1,300 SF*
Building 10: House (Phase 4 Removal)	*947 SF*
Building 11: Garage (Phase 4 Removal)	*225 SF*
Building 12: Barn (Phase 4 Removal)	*1,029 SF*
Proposed Building 13: Transportation Maintenance Facility (Phase 1)	*25,691 SF*
Proposed Building 14: Softball Hitting Facility (Phase 2)	*12,800 SF*
Total Phase 1 Floor Area	*270,941 SF*
Total Phase 4 Floor Area	*279,554 SF*

Existing HS Site Areas

Site 1 (3-2E-09D-01300): Main High School	*2,032,945 SF (46.7 Acres)*
Site 2 (3-2E-09D-01380): Athletic "Sliver"	*13,939 SF (0.3 Acres)*
Site 3 (3-2E-09D-01200): West Athletic Area	*635,540 SF (14.6 Acres)*
Site 4 (3-2E-09D-01400): Transportation Maintenance	*441,785 SF (10.1 Acres)*
Total	*3,141,667 SF (72.1 Acres)*

Total Site FAR

Phase 1: ***270,375 SF / 3,124, 209 SF = 8.65%***
Phase 2: ***279,554 SF / 3,124,209 SF = 8.95%***
(No FAR Requirements for CI Zone)

7) Natural resources that appear on the City's adopted Goal 5 inventory

The City's Goal 5 inventory identifies a Natural Resource Overlay that is partially located on the very north end of the portion of the High School Campus located west of High School Avenue. This area is completely within the delineated wetlands area and will not be impacted by any proposed development.

See attached map of Natural Resources Overlay Zone (Exhibit D) at the end of this narrative document.

See Adddendum A - NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 for additional information.

8) Cultural/historic resources that appear on the City's adopted Goal 5 inventory

None identified by City as of the date of this Application.

9) Location of existing trees six inches in diameter or greater when measured four feet above the ground. The location of single trees shall be shown. Trees within groves may be clustered together rather than shown individually.

Refer to attached Drawings (Sheets LUA0.1 – Existing Conditions Site Plan and LUA0.2 – Proposed Campus Site Plan) of High School Portion of Site. No tree removal is proposed at this portion of the Site.

Refer to attached Site Survey of portion of site west of High School Avenue A great many trees will be removed to allow for construction of the proposed Transportation Maintenance Facility and it associated parking and bus/van storage areas. Refer to attached Arborist Report/Tree Inventory for species, sizes and conditions of existing trees. See concurrent Site and Design Review Application for mitigation requirements and measures.

h. Existing transportation analysis, including the following items. May also reference submitted maps, diagrams or photographs

1) Existing transportation facilities, including highways, local streets and street classifications, and pedestrian and bicycle access points and ways

2) Transit routes, facilities and availability

3) Alternative modes utilization, including shuttle buses and carpool programs

4) Baseline parking demand and supply study (may be appended to application or waived if not applicable).

Refer to Exhibit C – Traffic Impact Study prepared by Lancaster Engineering (dated November 10, 2014). Note: Exhibit C has been replaced with new Exhibit C – Final Traffic Impact Study (Addendum D) prepared by Lancaster Engineering (dated xx February 2015).

i. Infrastructure facilities and capacity, including the following items.

1) Water

A 16 inch water main exists in Beavercreek Road, an 8 inch main exists in Meyers Road and 8 and 12 inch water mains loop around the High School building itself. The 8 inch main in Meyers is well looped to the 16 inch main in Glen Oak Road via 8 inch lines in High School Lane, Quaking Aspen Avenue and Coast Redwood Avenue. There is good capacity in the system in vicinity of the High School site.

2) Sanitary sewer

There is no sanitary sewer at the present time in Beavercreek Road near the High School. There is a short section of 8 inch sanitary sewer in Meyers Road near the High School Building and some sewer extensions up Coast Redwood Avenue and Quaking Aspen Avenue. The main sewer truck line in the area exists in Glen Oak Road to the south. We expect for the proposed Transportation Facility, that either a sewer extension to the site or pumping the new facilities waste to the existing sewer line or a combination of both will be needed.

3) Storm water management

There are storm drainage facilities existing on the High School campus and storm drain facilities in adjoining streets. However, all existing facilities are likely to high in elevation to be able to be put to use in for the proposed Transportation facility and therefore new storm water facilities will be necessary for the Transportation facility. Fortunately the northerly portion of the site is crossed by a wetland and drainage way and the Transportation facility will be directed towards the existing wetland and drainage way with water quality and detention facilities incorporated into the site improvements upstream of drainage way outlet.

The storm water management for the Meyers Road extension and if the Loder Road extension to High School Lane were required, could be more problematic. The Meyers Road extension should have a single facility for all of the extension that still is to be constructed east of the unnamed tributary that crosses the Meyers Road extension, but as the most logical location facility would be on a parcel beyond the boundaries of the School or City parcels in the area, some form of temporary facility may be necessary. A Loder extension to High School Lane would compound problems by not only needing additional storm water management problems but also cutting through existing storm water management facilities on the High School site.

4) Easements

See Exhibit A – Title Reports:

At Tax Lot 1100:

Portland General Electric Company – recorded June 10, 1958, Fee No. 8426, Deed Records

Pacific Northwest Pipeline Corporation – recorded October 27, 1959, Fee No. 19705, Deed Records (Corrected August 10, 1960, Fee No. 14286, Deed Records)

At Tax Lot 1200:

W.V.S. Railroad Right of Way (affects Parcel V)

Clackamas Southern Railway Company, an Oregon Corporation – recorded March 16, 1914, Book 134, Page 389 for Railroad (affects Parcel IV)

Portland General Electric Company – recorded May 1, 1956, Book 510, Page 206 for electric power lines and poles and appurtenant equipment (affects Parcel III)

Portland General Electric Company – recorded June 2, 1958, Book 540, Page 673 for electric power transmission lines (affects Parcel IV)

Portland General Electric Company – recorded May 26, 1958, Book 541, Page 268 for electric transmission lines and appurtenances (affects Parcel VIII)

Portland General Electric Company – recorded July 3, 1958, Book 542, Page 292 to erect, maintain, repair, rebuild, operate and patrol electric power transmission lines, structures and appurtenant signal lines (affects Parcel III)

Portland General Electric Company – recorded March 6, 1959, Book 552, Page 133 (affects Parcels V, VI and VII)

Pacific Northwest Pipeline Corporation (El Paso Natural Gas Company, successor) – recorded October 15, 1959, Book 563, Page 54 – for Right-of-Way [Corrected by Agreement recorded August 10, 1960, Book 575, Page 275] (affects Parcel VIII)

Portland General Electric Company – recorded June 30, 1975, Recorder's Fee No. 75 21417 for underground electric power lines and appurtenances (affects Parcel VIII)

Waiver of Remonstrance – recorded June 17, 1993, Recorder's Fee No. 93 41874 (affects Parcel VI)

Boundary Line Agreement – recorded April 22, 1994, Recorder's Fee No. 94-050084 and by Instrument recorded June 17, 1994, Recorder's Fee No. 94-050228 between Oregon City School District No. 62; Pearl R. Hunt, Trustee of the Hunt Family Revocable Living Trust under instrument dated September 27, 1993; Edgar L. Hunt and Pearl Hunt; and James C. Ventura and Dyan L. Ventura (affects Parcel VIII and others)

City of Oregon City – recorded November 28, 1994, Recorder's Fee No. 94091440, slope easement (affects northerly of and adjacent to the centerlineof relocated Glenn Oaks Road Variable in width of Parcel IV)

At Tax Lot 1300:

Portland General Electric Company – recorded March 6, 1959; Book 552, page 133, Fee No. 3742, Deed Records

W.V.S Railroad Right of Way

At Tax Lot 1301:

Portland General Electric Company – recorded March 6, 1959; Book 552, page 133, Fee No. 3743, Deed Records

At Tax Lot 1302:

Portland General Electric Company – recorded March 6, 1959; Book 552, page 133, Deed Records

At Tax Lot 1380:

Portland General Electric Company – recorded September 2, 1950; Book 436, page 503 for erection, construction, maintenance, operation, and electric transmission line or lines

Portland General Electric Company – recorded May 1, 1956; Book 510, page 206 for electric power lines and poles and appurtenant equipment

Portland General Electric Company – recorded July 3, 1958
To erect, maintain, repair, rebuild, operate and patrol electrical power transmission lines, structures, and appurtenant signal lines

At Tax Lot 1400:

City of Oregon City – October 06, 2003; Fee No. 2003-134815 for "slope"

City of Oregon City – December 15, 2006; Fee No. 2006-115524 for permanent traffic barricade

Note: Potential utility easement through the City's future park site to the south of the proposed Transportation Maintenance Facility is currently being discussed with City of Oregon City Parks Department.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Existing Conditions Submittal Requirements; 2. Maps and Plans:

a. Existing conditions site plan. Drawn at a minimum scale of one-inch equals one hundred feet (one inch=one hundred feet) that shows the following items. At least one copy must be eight and on-half inches × eleven inches in size, and black and white reproducible.

1) Date, north point, and scale of drawing.

2) Identification of the drawing as an existing conditions site plan

3) Proposed development boundary

4) All parking, circulation, loading and service areas, including locations of all carpool, vanpool and bicycle parking spaces as required in Chapter 52 of this title.

At Existing High School: Only 96 bicycle spaces currently exist at the High School Campus. None are covered. Because of the underutilization of these bicycle parking spaces, the Applicant is requesting a relaxation of the bicycle parking requirements at this facility. Furthermore, the required 43 vanpool parking areas are not marked; Applicant proposes marking in a future phase of development.

At Proposed New Transportation Maintenance Facility: See attached Site Plans for compliance with Chapter 52. Note that, in calculating required bicycle parking at the proposed new Transportation Maintenance Facility, we have exempted the spaces for school district vehicles, since trips with these vehicles cannot be converted to bicycle trips. Only the staff/visitor parking area (150 cars) has been used to calculate bicycle parking at the Transportation Maintenance portion of the Site.

Refer also to Exhibit I – Vehicular Circulation Routes.

5) Contour lines at two-foot contour intervals for grades zero to ten percent, and five-foot intervals for grades over ten percent.

See attached Site Plans.

6) A site plan or plans, to scale, for the General Development Plan site and surrounding properties containing the required information identified in:

a) Chapter 17.62.040.A(1), (2), (3), (4), (5), (6), (7), (9), (11), (12), (13), (14), and (15)

See attached Site Plans:

LU0.1 – Existing Conditions Site Plan
LU0.2 – Proposed Campus Site Plan
LU0.3 – Detail Development Site Plan
C1.2 - Existing Conditions
C2.1 - On Site Wateline & Sanitary Sewer Plan
C2.2 - Public Waterline Plan
C2.3 - Public Sanitary Sewer Plan
C3.1 - On Site Storm Drain Plan
C4.1 - On Site Parking Lot Grading & Erosion Control Plan
C5.1 - Public Street & Storm Drain Plan
C5.2 - Public Street & Storm Drain Plan
C7.3 - Late Construction Erosion & Sediment Control Plan

b) Chapter 17.62.040.B

See attached Sheets LUL1.0 – Planting Schedule and Notes and LUL1.1 – Planting Plan.

See attached Sheet L1.2 - Tree Mitigation Plan – High School Site for proposed planting of trees at the High School as partial mitigation for trees being remove at Transportation Maintenance Facility Site.

See attached L1.3 - Tree Mitigation Plan – Holcomb Elementary Site for proposed planting of trees at the High School as partial mitigation for trees being remove at Transportation Maintenance Facility Site.

c) Chapter 17.62.040.F

Legal Descriptions; High School & Associated Playfields:

Tax Lot # 1100 - Tax Assessor Map Number: 3-2E-09D-01100:

In the County of Clackamas and State of Oregon

Parcel A: Part of the Andrew Hood D. L. C. in T. 3 S., R. 2 E., of the W.M., described as follows:

Beginning at a point North 7.09 chains from a point North 89^{O} 24' West 8.89 chains from the common corner of Sections 9, 10, 15, and 16, T. 3 S., R. 2 E., of the W.M.; thence North 275.22 feet to the South boundary of that certain tract conveyed by Thomas Blackburn and wife, to Charles A. Baxter and wife, by deed recorded in Book 224, page 304, Deed Records; thence tracing the South line of said Gilbert tract South 89^{O} 24' East a distance of 1092.3 feet to the center of the County Road; thence tracing the center of the County Road South 40^{O} 45' East 130.54 feet; thence North 89^{O} 24' West 321.26 feet; thence South 175 feet to the South Boundary of that certain tract described in Deed from Charles Derrick and wife, to Raymond Rilance and wife by deed recorded in Book 242, page 302, Deed Records; thence tracing said South boundary of the Rilance tract North 89^{O} 24' West a distance of 836.82 feet to the place of beginning.

EXCEPT that part lying within the boundary of the County Roads.

ALSO EXCEPT a tract of land conveyed to William F. Essig, et us, by deed recorded March 16, 1955, in Clackamas County Deed Book 493, page 184.

Parcel B: A part of the D.L.C. of Andrew Hood and wife, in T. 3 S., R. 2 E., of the W.M., described as follows:

Beginning at the Southwest corner of a certain 5 acre tract of land deeded by Christian Muralt and Erma Muralt, his wife, to E. W. Hornshuh on March 4, 1908 and which deed is recorded in Book 102, page 516, Deed Records of Clackamas County, Oregon, running thence South 6/34 chains; thence East 34.31 chains to the middle of the County Road known as the Oregon City and Ringo Road; thence Northwesterly along the center or the said road 8.37 chains to the Southeast corner of the above tract of land; thence West 28.95 chains to the place of beginning.

EXCEPT that parcel described in deed from Thomas Blackburn and wife to Clackamas Southern Railway Company recorded in Book 134, page 394, Deed Records.

ALSO EXCEPT a tract of land conveyed to William F. Essig, et ux, by deed recorded March 16, 1955 in Clackamas County Deed Book 493, page 184.

FURTHER EXCEPTING THEREFROM that portion in County Road.

Tax Lot # 1200 - Tax Assessor Map Number: 3-2E-09D-01200:

Parcel I:

A tract of land situated in the Andrew Hood Donation Land Claim, in Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at the Southeast corner of Section 9, Township 3 South, Range 2 East, of the Willamette Meridian; thence South 89^{O} 45' 45" West along the South line of said Section9, a distance of 1773.94 feet to a point; thence North 0^{O} 50' 15" West a distance of 1164.10 feet to the Southwest corner of a certain 5 acre tract of land deeded to E.W. Hornshuh on March 4, 1908 in Book 102, Page 516 Deed Records; thence North 89^{O} 45' 45" East along the South line of said Hornshuh Tract, a distance of 1572.97 feet to the Southwest corner of that certain tract of land conveyed to Lanora L. Parker on June 3, 1964 and recorded in Book 33, Page 657, Miscellaneous Records; thence North 0^{O} 50' 15" West along the West line of said Parker Tract a distance of 16.5 feet to the most Southerly corner of that certain tract of land conveyed to James C. Lee and Helen M. Lee, husband and wife, on July 12, 1966, recorded in Book 676, Page 538, Deed Records; thence South 46^{O} 53' 00" West along the Southwesterly extension of the Southeasterly line of said Lee Tract 11.00 feet to an existing fence line and the most Westerly corner of that tract of land described in document recorded November 3, 1975 as Recorder's Fee No. 75-32201, Film Records, and the true point of beginning of the tract of land herein to be described; thence South 42^{O} 32' East along the existing fence line 6.39 feet, more or less, to an iron pipe at a fence corner; thence North 46^{O} 45' East along an existing fence 203.00 feet, more or less, to the Southwesterly right of way line of Beavercreek Road, also known as Market Road No. 11, passing over an iron pipe 0.49 fee back; thence South 46^{O} 45' East 30.00 feet to the center of Beavercreek Road; thence North 40^{O} 45' West along said road 236.00 feet to the most Northerly corner of the Lee Tract; thence South 49^{O} 00' West along the Northwesterly boundary of the Lee Tract 233.00 feet to an iron pipe as disclosed by land surveys filed with the County Surveyor as Nos. 218 and 12168, being the most Westerly corner of the Lee Tract and the most Northerly corner of that tract of land described in document recorded November 3, 1975 as Recorder's Fee No. 75-32200, Film Records; thence South 42^{O} 32' 20" East 228.78 feet to a point that bears South 46^{O} 53' West 0.50 feet from the true point of beginning; thence North 46^{O} 53' East 0.50 feet to the true point of beginning.

Parcel II:

A part of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Commencing at a stone, scribed with an "X", marking the section corner common to Sections 9, 10, 15 and 16, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon; thence along the line common to said Section 9 and 16, North 89^{O} 52' 19" West, 1758.90 feet to a point; thence leaving said line, North 00^{O} 26' 02" West, 744.10 feet to 1-1/4 inch iron pipe; thence North 89^{O} 49' 28" East, 110.16 feet to a 1-1/4 inch iron pipe; thence running along the exiting chain link fence line North 89^{O} 59' 28" East, 1076.76 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "Mason"; thence running along a wire fence line the following 2 courses: South 89^{O} 41' 43" East 457.08 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "Compass Corp."; thence North 49^{O} 27' 44" East, 412.18 feet to a 5/8" iron rod with yellow plastic cap stamped "Compass Corp" (on the Southwesterly right-of-way of Beavercreek Road (Market Road No. 11, 30 feet from centerline), from which a ½ inch diameter iron pipe at Station 108+74.97 bears South 40^{O} 27' 34" East, 588.32 feet; thence along said right-of-way North 40^{o} 27' 34" West, 182.59 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "Compass Corp.", and being the point of beginning of Boundary Line Agreement recorded June 17, 1994, Fee No.94-050227 and the point of beginning of the herein described premises; thence running along the existing chain link fence line South 88^{O} 48' 00" West, 259.09 feet to a 5/8 inch iron rod with yellow plastic cap stamped "Compass Corp."; thence North 41^{O} 12' 32" West, 28.89 feet to a ¼ inch iron pipe at the most Southerly corner of that tract of land described in Deed to Kyle R. Kaser and Stella M. Kaser, recorded in Deed Fee No. 75-32201, Clackamas County Deed Records, and also being the terminus of said Boundary Agreement Line; thence Northeasterly along the Southeasterly line of said Kaser tract 203 feet, more or less, the Southwesterly right-of-way line of Beavercreek Road; thence Southeasterly along said Southwesterly right-of-way of Beavercreek Road to the place of beginning.

Parcel III:

A part of A. Hood Donation Land Claim, situated in Sections 9 and 10, Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon:

Beginning at the Northwest corner of a tract of land deeded by C. Muralt and wife to E.W. Honshuh, on March 4, 1908, which deed is recorded in Book 102, Page 516 of records of Clackamas County, Oregon; running thence South 442.2 fee; thence East 2161.5 feet to center of Oregon City and Ringo County Road; thence Northwesterly along center of said County Road to Northeast corner of above Hornshuh Tract of land; thence West 1787.28 feet to the place of beginning.

The strip of land intended to be conveyed is more particularly described as follows:

Beginning at the Southwest corner of the above mentioned property; thence North along West boundary of said property a distance of 166.8 fee, more or less; thence Southeasterly and 30 feet parallel with the center line of said Railway as the same is now surveyed, located and marked with stakes, over, upon and across said land a distance of 181.2 fee, more or less, to a point in the South line of said property; thence along South boundary of said property a distance of 70.6 feet, more or less , to point of beginning.

Parcel IV:

That portion of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a stone on the line between Sections 9 and 16 in Township 3 South, Range 2 East, of the Willamette Meridian, 5.67 chains East of the one-quarter corner between said Sections; said point being the Southeast corner of that tract conveyed to John T. Russell by Deed Recorded April 24, 1906 in Book 95, Page 396, Deed Records; Thence North 89^{O} 45' East along the Section line 8 chains to a stone 13.67 chains East along the Section line from the one-quarter corner between said Sections 9 and 16; thence North, parallel with the West boundary of the Andrew Hood Donation Land Claim No.44, a distance of 25 chains to a stone, thence South 89^{O} 45' West parallel with the Section line 8 chains to a stone; said point being the Northeast corner of the aforementioned Russell Tract; thence South along the East line of said Russell Tract 25 chains to the point of beginning;

EXCEPTING THEREFROM that portion lying North and East of the Easterly right-of-way conveyed to Clackamas Southern Railway Company by Deed Recorded March 6, 1914 in Book 134, page 389, Deed Records.

Parcel V:

Part of the Andrew hood and wife Donation Land Claim in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as:

Beginning at a point of the one-quarter section line of Section 9, said Township and Range, 10.70 chains South of the North line of said Hood Donation Land Claim, running thence South 3.24 chains; thence South 89^{O} 24' East 628.10 feet, more or less, to the Easterly line of the Willamette Valley Southern Railway Company right of way; running thence South 24^{O} 36' East along said Easterly line a distance of 712.94 feet, more or less, to an iron pipe 155.8 feet South of the Southwest corner of that tract of land conveyed to E. W. Hornshuh by Deed Recorded March 4, 1908, in Deed Book 102, Page 156, Deed Records of Clackamas County; running thence North 155.8 feet to the Southwest corner of E.W. Hornshuh Tract; running thence South 89^{O} 24' East along the South line of said Hornshuh Tract 1599.00 feet, more or less, to the Southwest corner of that tract conveyed to George Coleman and Irma Coleman, husband and wife, by Deed Recorded July 23, 1938 in Deed Book 249, page 11; said Records; running thence North 1 rod; running thence North 44^{O} 15' West a distance of 235.00 feet to an iron pipe; running thence North 49^{O}30' East 233.00 feet to the center of the County Road; running thence North 40^{O} 45' West along the center of the

County Road a distance of 494.7 feet, more or less, to the Northeast corner of that tract of land conveyed to E.W. Hornshuh by Deed Recorded January 7, 1910, in Deed Book 114, Page 12; running thence North 89^{O}24' West along the North line of the last mentioned Hornshuh Tract, a distance of 33.15 chains, more or less, to the point of beginning.

EXCEPTING THEREFROM part of the Andrew Hood Donation Land Claim No. 44, in Section 9. Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at a point on the Easterly line of the Willamette Valley Southern Railway Companys right of way, being South 89^{O} 24' East 628.10 feet and South 920.04 feet from the Northwest corner of said claim; thence South 23^{O} 23' 20" East 712.94 feet to an iron pipe South 0^{O} 50' 15" East 155.8 feet from the Southwest corner of that tract of land conveyed to E.W. Hornshuh by Deed Recorded March 14, 1908, in Book 102, Page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0^{O} 50' 15" West 155.8 feet to the Southwest corner of said Hornshuh Tract; thence North 89^{O} 45' 45" East along the South line of said Hornshuh Tract 1572.97 feet to a point South 0^{O} 50' 15" East 16.5 feet from the most Southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by Deed Recorded October 30, 1970, Fee No. 70-24574; thence North 0^{O} 50' 15" West 16.5 feet to the most Southerly corner of said Kaser Tract; thence North 45^{O} 25' 10" West along the Westerly line of said Kaser Tract 235.00 feet to the Northwest corner thereof; thence North 49^{O} 03' 30" East along the Northerly line of said Kaser Tract 34.09 feet to a point; thence South 89^{O} 45' 45" West parallel with the South line of said Hornshuh Tract 1586.00 feet to the Easterly line of the Willamette Valley Southern Railway Companys right of way; thence South 23^{O} 23' 20" East along said right of way line to the true point of beginning.

AND FURTHER EXCEPTING part of the Andrew Hood Donation Land Claim, in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a point on the North-South one-quarter section line of said Section 9, a distance of 706.2 feet South of the North line of said Hood Donation Land Claim; thence South 89^{O} 24' East to the Southwesterly right of way line of Market Road No. 11, said point being on the South line of that tract of land conveyed to Virgil D. Webb, et ux, by Deed Recorded August 9, 1965, in Book 661, Page 216, Fee No. 13239, Deed Records; said point further being the true pace of beginning of that tract herein; thence Southeasterly along the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to a point; thence North 89^{O} 24' West, parallel with the South line of said Webb Tract, a distance of 670 feet to a point; thence Northwesterly parallel with the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the South line of said Web Tract; thence South 89^{O} 24' East along said South line a distance of 670 fee to the true place of beginning.

Parcel VI:

Part of the Andrew Hood Donation Land Claim in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a point on the North-South one-quarter section line of said Section 9, a distance of 706.2 feet South of the North line of said Hood Donation Land Claim; thence South 89^{O} 24' East to the Southwesterly right of way line of Market Road No. 11, said point being on the South line of that tract of land conveyed to Virgil D. Webb, et ux, by Deed Recorded August 9, 1965, Book 661, Page 216, Fee No. 13239, Deed Records; said point further being the true place of beginning of the tract herein; thence Southeasterly along the Southwesterly right of way of Market Road No.11, a distance of 220 feet to a point; thence North 89^{O} 24' West, parallel with the South line of said Webb Tract, a distance of 670 feet to a point; thence Northwesterly parallel with the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the South line of said Webb Tract; thence South 89^{O} 24' East along the South line a distance 670 feet to the true point of beginning.

Parcel VII:

Part of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at a point on the Easterly line of the Willamette Valley Southern Railway Companys right of way, being South 89^{O} 24' East 628.10 feet and South 920.04 feet from the Northwest corner of said claim; thence South 23^{O} 23' 20' East 712.94 feet to an iron pipe South 0^{O} 50' 15" East 155.8 feet from the Southwest corner of that tract of land conveyed to E. W. Hornshuh by Deed Recorded March 14, 1908, Book 102, Page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0^{O} 50' 15" West 155.8 feet to the Southwest corner ;of said Hornshuh Tract; thence North 89^{O} 45' 45" East along the South line of said Hornshuh Tract 1572.97 feet to a point South 0^{O} 50' 15" East 16.5 feet from the most Southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by Deed Recorded October 30, 1970, Fee No. 70-24574; thence North 0^{O} 50' 15" West 16.5 feet to the most Southerly corner of said Kaser Tract; thence North 45^{O} 25' 10" West along the Westerly line of said Kaser Tract 235.00 feet to the Northwest corner thereof; thence North 49^{O} 03' 30" East along the Northerly line of said Kaser Tract 34.09 feet to a point; thence South 89^{O} 45' 45" West parallel with the South line of said Hornshuh Tract 1586.99 feet to the Easterly line of the Willamette Valley Southern Railway Companys right of way; thence South 23^{O} 23' 20" East along said right of way line to the true point of beginning.

Tract VIII:

A part of the Donation Land Claim of Andrew Hood and wife, in Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at the Southwest corner of a certain 5 acre tract of land deeded by Christian Muralt and Erma Muralt, his wife, to E.W. Hornshuh on March 4, 1908 and which deed is recorded in Book 102, page 516, Deed Records of Clackamas County, Oregon, running thence South 6.34 chains; thence East 34.31 chains to the middle of the County Road known as the Oregon City and Ringo Road; thence Northwesterly along the center of said road 8.37 chains to the Southeast corner of the above tract of land; thence West 28.82 chains to the place of beginning.

EXCEPT that parcel described in Deed from Thomas Blackburn and wife to Clackamas Southern Railway Company Recorded in Book 134, Page 394, Deed Records.

ALSO EXCEPT a tract of land conveyed to William F. Essig et ux, by Deed Recorded March 16, 1955 in Clackamas County Deed Book 493, Page 184.

ALSO EXPEPTING THERFROM:

A Tract of land in Sections 9 and 10, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at the Northwest corner of GLEN OAKS CREST ADDITION NO. 2, a duly recorded town plat in Clackamas County; thence South 89^{O} 47' 03" East tracing the North line of said plat, 598.04 feet to a 5/8 inch x 30 inch iron rod; thence North 2^{O} 17' 20" East 177.93 feet to the Southwest corner of that tract conveyed to Milton O. Essig and O. Natalie Essig, husband and wife, by Deed recorded in Book 493, Page 184, Deed Records; thence continuing North 2^{O} 17' 20" East 72.89 feet (called North 2^{O} 08' East 73.00 feet in Deed to Essig) to a ¾ inch pinched pipe; thence North 49^{O} 24'20" East deflecting 47^{O} 07' right from the previous course (as called in the Deed to Essig) and running a distance of 159.83 feet to the Southwest right-of-way line of Beavercreek Road; thence tracing said right-of-way line North 40^{O} 30' 40" West 250.00 feet to a 5/8 inch x 30 inch iron rod; thence South 49^{O} 24' 20" West 412.18 feet to a 5/8 inch x 30 inch iron rod; thence North 89^{O} 47' 03" West 437.08 feet to a 5/8 inch x 30 inch iron rod; thence South 00^{O} 38' East 275.22 feet to a 5/8 inch x 30 inch rod in the Westerly projection of the North line of GLEN OAKS CREST ADDITION NO.2; thence South 89^{O} 47' 03" East along the Westerly projection of said North line 200.00 feet to the Northwest corner of GLEN OAKS CREST ADDITION NO. 2, and the place of beginning.

Tax Lot # 1300 - Tax Assessor Map Number: 3-2E-09D-01300:

In the County of Clackamas and State of Oregon

Part of the Andrew Hood and wife D. L. C. in Section 9, Township 3 South, Range 2 East, of the W.M., described as:

Beginning at a point on the one-quarter section line of Section 9, said Township and Range, 10.70 chains south of the north line of said Hood D. L. C., running thence South 3.24 chains; thence South 89^{O} 24' East 628.10 feet, more or less, to the easterly line of the Willamette Valley Southern Railway Company right of way; running thence South 24^{O} 36' East along said easterly line a distance of 712.94 feet, more or less, to an iron pipe 155.8 feet south of the southwest corner of that tract of land conveyed to E.W. Hornshuh by Deed recorded March 14, 1908, in Deed Book 102, page 156, Deed Records of Clackamas County, Oregon; running thence North 155.8 feet to the southwest corner of E. W. Hornshuh tract; running thence South 89^{O} 24' along the south line of said Hornshuh tract 1599.00 feet, more or less, to the southwest corner of that tract conveyed to George Coleman and Irma Coleman, husband and wife, by Deed recorded July 23, 1938 in Deed Book 249, page 11; said Records; running thence North 1 rod; running thence North 44^{O} 45' West a distance of 235.00 feet to an iron pipe; running thence North 49^{O} 30' East 233.00 feet to the center of the County Road;

running thence North 40^{O} 45' West along the center of the County Road a distance of 494.7 feet, more or less, to the northeast corner of that tract of land conveyed to E. W. Hornshuh by Deed recorded January 7, 1910, in Deed Book 114, page 12; running thence North 89^{O} 24' West along the north line of the last mentioned Hornshuh tract, a distance of 33.15 chains, more or less, to the point of beginning.

EXCEPTING THEREFROM part of the Andrew Hood D.L.C. No. 44, in Section 9, Township 3 South, Range 2 East, of the W.M., described as follows:

Beginning at a point on the easterly line of the Willamette Valley Southern Railway Company's right of way, being 89^{O} 24' East 628.10 feet and South 920.04 feet from the northwest corner of said claim; thence South 23^{O} 23' 20" East 712.94 feet to an iron pipe South 0^{O} 50' 15" East 155.8 feet from the southwest corner of that tract of land conveyed to E. W. Hornshuh by Deed recorded March 14, 1908, in Book 102, page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0^{o} 50' 15" West 155.8 feet to the southwest corner of said Hornshuh tract; thence 89^{O} 45' 45" East along the south line of said Hornshuh tract 1572.97 feet to a point South 0^{O} 50' 15" East 16.5 feet from the most southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by Deed recorded October 30, 1970, Fee No. 70 24574; thence North 0^{O} 50' 15" West 16.5 feet to the most southerly corner of said Kaser tract; thence North 45^{O} 25' 10" West along the westerly line of said Kaser tract 235.00 feet to the northwest corner thereof; thence North 49^{O} 03' 30" East along the northerly line of said Kaser tract 34.09 feet to a point; thence South 89^{O} 45' 45" West parallel with the south line of said Hornshuh tract 1586.00 feet to the easterly line of the Willamette Valley Southern Railway's right of way; thence South 23^{O} 23' 20" East along said right of way line to the true point of beginning.
AND FURTHER EXCPEPTING part of the Andrew Hood D.L.C. in Section 9, Township 3 South, Range 2 East, of the W.M., more particularly described as follows:

Beginning at a point on the north-south one-quarter section line of said Section 9, a distance of 706.2 feet south of the north line of said Hood D.L.C.; thence South 89^{O} 24' East to the southwesterly right of way line of Market Road No. 11, said point being on the south line of that tract of land conveyed to Virgil D. Webb, et ux, by Deed recorded August 9, 1965, in Book 661, page 216, Fee No. 13239; Deed Records; said point further being the true place of beginning of the tract herein; thence Southwesterly along the southwesterly right of way line of Market Road No. 11, a distance of 220 feet to a point; thence North 89^{O} 24' West, parallel with the South line of said Webb tract, a distance of 670 feet to a point; thence Northwesterly parallel with the southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the south line of said Webb tract; thence South 89^{O} 24' East along said south line a distance of 670 feet to the true place of beginning.

Tax Lot # 1301 Tax Assessor Map Number: 3-2E-09D-01301:

In the County of Clackamas and State of Oregon:

Part of the Andrew Hood and wife D. L. C. in Section 9, Township 3 South, Range 2 East, of the W.M., described as:

Beginning at a point on the easterly line of the Willamette Valley Southern Railway Company's right of way, being 89^{O} 24' East 628.10 feet and South 920.04 feet from the northwest corner of said claim; thence South 23^{O} 23' 20" East 712.94 feet to an iron

pipe South 0^{O} 50' 15" East 155.8 feet from the southwest corner of that tract of land conveyed to E. W. Hornshuh by Deed recorded March 14, 1908, in Book 102, page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0^{o} 50' 15" West 155.8 feet to the southwest corner of said Hornshuh tract; thence 89^{O} 45' 45" East along the south line of said Hornshuh tract 1572.97 feet to a point South 0^{O} 50' 15" East 16.5 feet from the most southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by Deed recorded October 30, 1970, Fee No. 70 24574; thence North 0^{O} 50' 15" West 16.5 feet to the most southerly corner of said Kaser tract; thence North 45^{O} 25' 10" West along the westerly line of said Kaser tract 235.00 feet to the northwest corner thereof; thence North 49^{O} 03' 30" East along the northerly line of said Kaser tract 34.09 feet to a point; thence South 89^{O} 45' 45" West parallel with the south line of said Hornshuh tract 1586.00 feet to the easterly line of the Willamette Valley Southern Railway's right of way; thence South 23^{O} 23' 20" East along said right of way line to the true point of beginning.

Tax Lot # 1302 - Tax Assessor Map Number: 3-2E-09D-01302:

Part of the Andrew Hood D.L.C in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a point on the North-south one-quarter section line of said Section 9, a distance of 706.2 feet South of the North line of said Hood D.L.C.; thence South 89^{O}24' East to the Southwesterly right of way line of Market Road No. 11, said point being on the South line of that tract of land conveyed to Virgil D. Webb, et ux, by deed recorded August 9, 1965, Book 661, Page 216, Fee No. 13239, Deed Records; said point further being the true place of beginning of the tract herein; thence Southeasterly along the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to a point to a point; thence North 89^{O}24' West, parallel with the South line of said Webb tract, a distance of 670 feet to a point; thence Northwesterly parallel with the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the South Line of said Webb tract; thence South 89^{O}24' East along said South line a distance of 670 feet to the true point of beginning.

Tax Lot # 1380 (40 Foot Strip Including Triangle – Hunt Property – Between Tax Lots 900 and 1300):

A tract of land situated in the Southeast one-quarter of Section 9, Township 3 South, Range 2 East, Western Meridian, Clackamas County, Oregon, being more particularly described as follows:

Commencing at a 3-1/4" brass disc stamped "Land Dev Consultants" at the Southeast corner of said Section 9; thence along the south line thereof, North *89^{O} 52' 19" West, 578.00 feet; thence North 00^{O} 32' 00" West, 706.93 feet to the true point-of-beginning; thence running 40.00 feet South of and parallel with that line described in a Boundary Line Agreement recorded in Fee No. 94-050228, Clackamas County Records, South 89^{O} 59' 28" West, 1179.65 feet to the west line of that tract of land described as Parcel I to Pearl R. Hunt, Trustee of the Hunt Family Revocable Living Trust, recorded October 16, 1997, Clackamas County Recorders Fee No. 97-081187; thence along said West line, North 00^{O} 26' 02" West, 40.00 feet to a 1-1/4 inch iron pipe; thence North 00^{O} 31' 40" West, 264.20 feet to a ¼-inch iron pipe on the Southwesterly line of that

tract of land described in Deed to the Oregon City School District, recorded in Fee No. 73-19139, Clackamas County Deed Records; thence along said line, South 23^{O} 05' 05" East, 287.17 feet to a 1-1/4 inch iron pipe on that line described in the aforementioned Boundary Line Agreement (Fee No. 94-050228); thence along said line, North 89^{O} 59' 28" East, 1069.42 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "Compass Engineering"; thence South 00^{O} 32' 00" East, 40.00 feet to the point-of-beginning, containing 61,737 square feet (1.42 acres) more or less.

Legal Description; Recently Acquired Property for Proposed New Transportation Maintenance Facility:
Tax Assessor Map Number: 3-2E-09D-01400 (No street address assigned)

Legal Description of subject property- Tax Lot 1400:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF CLACKAMAS, STATE OF OR, AND IS DESCRIBED AS FOLLOWS:

A TRACT OF LAND IN THE SOUTHEAST AND SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 3 SOUTH, RANGE 2 EAST OF THE WILLAMETTE MERIDIAN, IN THE CITY OF OREGON CITY, IN THE COUNTY OF CLACKAMAS AND STATE OF OREGON. BEING ALL OF PARCEL I AND II OF THAT PROPERTY DESCRIBED IN DOCUMENT NO. 2000-009206, CLACKAMAS COUNTY DEED RECORDS TO JOSEPH F. AND PENNEY J. SPAZIANI AND TIMOTHY J. KOTZ,

EXCEPT THEREFROM THE FOLLOWING DESCRIBED PORTION:

BEGINNING AT THE SOUTHEAST CORNER OF SAID TRACT OF LAND, A POINT ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 9, 374.22 FEET EASTERLY OF THE SOUTH ¼ CORNER THEROF; THENCE NORTH 00^{O}26'46" WEST ALONG THE EAST LINE OF SAID SPAZIANI PROPERTY A DISTANCE OF 627.81 FEET TO THE CENTER LINE OF MEYERS ROAD; THENCE, SOUTH 89^{0}59'09" WEST ALONG THE WESTERLY EXTENSION OF SAID CENTER LINE A DISTANCE OF 64.00 FEET; THENCE, NORTH 00^{0}26'46" WEST A DISTANCE OF 49.00 FEET; THENCE SOUTH 89^{O}59'09" WEST A DISTANCE OF 199.90 FEET TO THE SOUTHERLY WEST LINE OF SAID SPAZIANI TRACT; THENCE, SOUTH 00^{O}26'19" EAST ALONG SAID LINE 726.15 FEET TO THE SOUTHWEST CORNER OF SAID SPAZIANI TRACT ON THE SOUTH LINE OF THE SOUTHWEST ¼ OF SAID SECTION 9; THENCE, 89^{O}52'19" EAST ALONG SAID LINE 264.00 FEET TO THE POINT OF BEGINNING.

****Note: This legal description was created prior to January 1, 2008.***

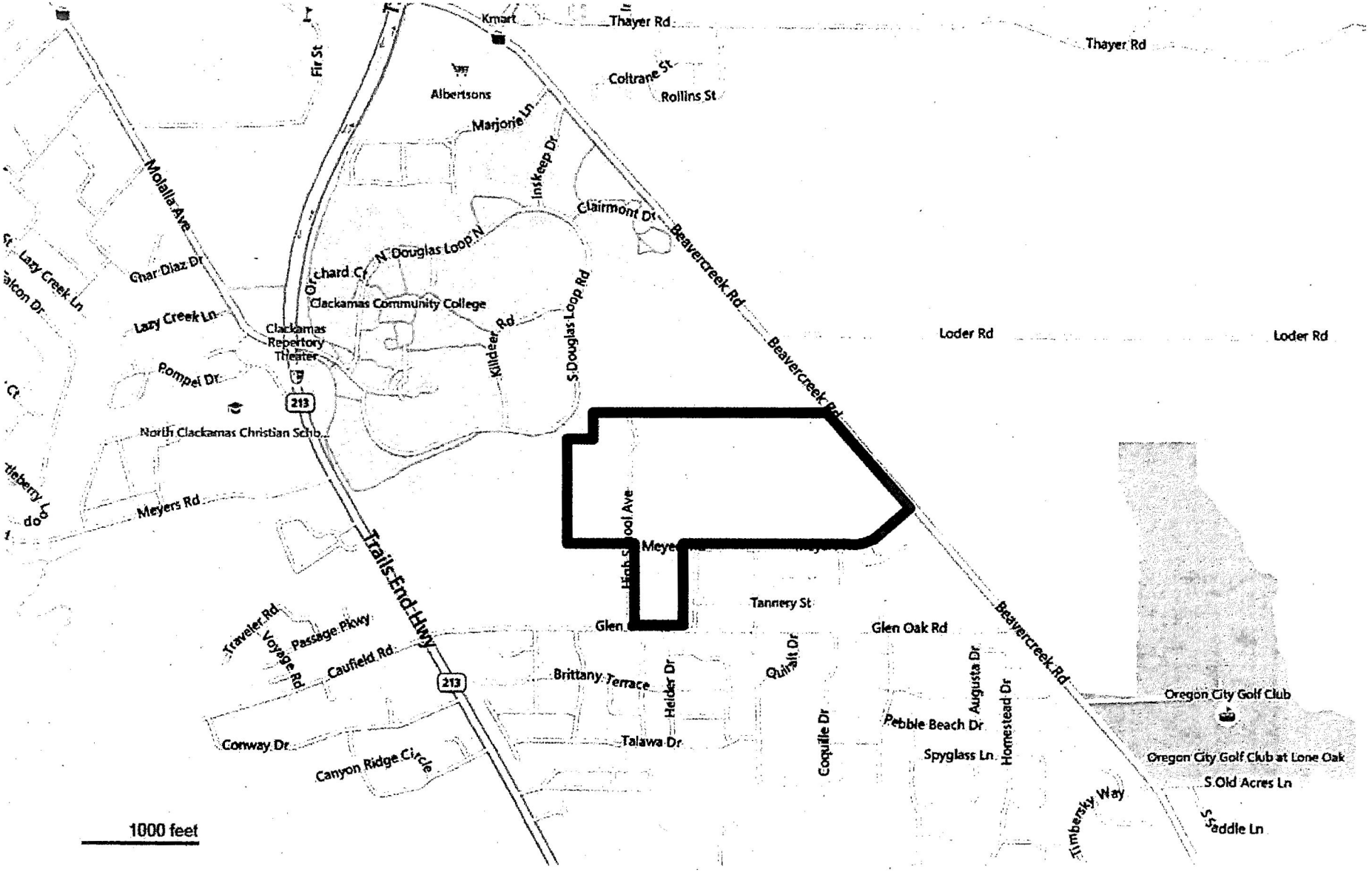
d) Chapter 17.62.040.G.

Existing High School – No changes to existing campus lighting are anticipated.

Proposed New Transportation Maintenance Facility - See attached Site Lighting Plans:
EL0.2 - Site Plan – Lighting
LU ELO.2P - Site Plan – Lighting Photometrics

b. Vicinity map. Depicting the location of the site sufficient to define its location, including identification of nearest cross streets. At least one copy of the vicinity map must be eight and one-half inches × eleven inches in size, and black and white reproducible.

See attached Vicinity Map on next page.



VICINITY MAP

c. Aerial photo. Depicting the subject site and property within two hundred fifty feet of the proposed development boundaries. At least one copy of the aerial photo must be eight and one-half inches × eleven in size, and black and white reproducible.

See attached Aerial Photo on next page.



AERIAL PHOTO

200 0 250

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

B. Proposed Development Submittal Requirements; 1. Narrative Statement

a. The proposed duration of the general development plan.

10 years.

b. The proposed development boundary. May also reference submitted maps or diagrams.

Northern Boundary: As shown on attached Sheet LUA0.2 – Proposed Campus Site Plan.
Eastern Boundaries: As shown on attached Sheet LUA0.2 – Proposed Campus Site Plan.
Southern Boundary: As shown on attached Sheet LUA0.2 – Proposed Campus Site Plan.
Western Boundary: As shown on attached Sheet LUA0.2 – Proposed Campus Site Plan.

c. A description, approximate location, and timing of each proposed phase of development, and a statement specifying the phase or phases for which approval is sought under the current application. May also reference submitted maps or diagrams.

First Phase of New Development (Phase 1): Transportation Maintenance Facility and associated site work on currently vacant portion of the site located west of High School Avenue. Anticipated Completion Date of Construction: June 2016. See Drawings for Site Layout, Building Floor Plans, and Elevations.

Future Additional Phases of Development:

Phase 2: Corrective actions to bring non-conforming conditions at High School into compliance: 3 years

- ***Landscaping at parking lot interior (islands) generally conforms to zoning requirements at the existing High School except at 2 non-conforming locations:***
  North Portion of parking lot besides Baseball fields
  Southwestern portion of main parking lot by Gymnasium
  (Installation of new planting islands at these two parking lots will occur in future phase of work.)
- ***Additional bicycle parking spaces; cover 50% of the spaces (if City rejects request to relax requirements given underutilization of existing spaces)***
- ***Screening at electrical transformers and gas meters if//as required by City.***
- ***Designate carpool/vanpool parking spaces at High School (43 required; only one currently designated)***

Phase 3: Softball hitting facility construction: 3 years

Phase 4: Demolition of old house, garage and barn demolition of existing greenhouse near soccer fields: 3 to 5 years

Phase 5: Tenant improvements to unfinished areas at 2nd floor of new Transportation Maintenance Facility: 5 to 10 years

d. An explanation of how the proposed development is consistent with the purposes of Section 17.65, the institutional zone, and any applicable overlay district.

The Existing High School and Associated Playfields

Construction of the existing High School after the City's approval of a Conditional Use Permit in 2001.

No Master Plan was required at that time.

Proposed New Transportation Maintenance Facility

The District's desire to construct a new Transportation Maintenance Facility on an adjoining parcel of property to the west of High School Avenue has triggered the preparation of this Master Plan.

The 10.5 acre site, zoned Campus Industrial (CI) with natural resource overlay due to existing wetland at north portion of the site. Proposed building is considered to be an ancillary educational facility/institutional or industrial use and is a permitted use per Section 17.37.020.

Existing wetland with 50'-0" buffer is to be retained in its existing condition. Site water detention and fencing will be provided per Civil Drawings.

e. A statement describing the impacts of the proposed development on inventoried Goal 5 natural, historic or cultural resources within the development boundary or within two hundred fifty feet of the proposed development boundary.

The only known inventoried Goal 5 resource is the Natural Resources Overlay Zone that runs along the west and north sides of the portion of the High School Campus located west of High School Avenue. (See attached mapping of the Natural Resources Overlay Zone.) The proposed development of a new Transportation Maintenance Facility on that portion of the site should have no impact on the Natural Resource Overlay Zone since all development is located outside the Zone's boundaries. No work is envisioned to "trespass" into the wetlands on the north end of the site (which are a part of the Overlay Zone.)

See Addendum A - NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 for additional information.

f. An analysis of the impacts of the proposed development on the surrounding community and neighborhood, including:

1) Transportation impacts as prescribed in subsection g. below

See Subsection g below.

2) Internal parking and circulation impacts and connectivity to sites adjacent to the development boundary and public right-of-ways within two hundred fifty feet of the development boundary

See Exhibit C – Final Traffic Impact Study Addendum D).

Refer also too Exhibit H- Pedestrian and Bicycle Circulation Routes and Exhibit I – Vehicular Circulation Routes.

3) Public facilities impacts (sanitary sewer, water and storm water management) both within the development boundary and on city-wide systems

Water system extensions will follow to the public street extensions that may be required. A sanitary sewer extension across the park parcel may be one option to serve the Transportation facility or a sewer extension of the sewer line at Quaking Aspen Avenue across Meyers Road may be the more likely scenario. Storm water management facilities will be limited to those to serve public street extensions, and some coordination between the School District, City Parks and City Public Works will be needed to finalize City facilities.

4) Neighborhood livability impacts

The proposed new Transportation Maintenance Facility will generate some noise, but the site is located with significant separation to neighboring residential areas. (The proposed facility is bounded on the north by the in situ wetland, on the east by High School playfields, on the south by a future City park, and on the west by vacant land zoned Campus Industrial (CI).

The attached Traffic Impact Study indicates no adverse impact due to the proposed new Transportation Maintenance Facility:

> ***"Based on the detailed review of crash history at the study area intersections, no significant safety hazards were identified and no specific mitigations are recommended."***
> ***"Based on the detailed review of crash history at the study area intersections, no significant safety hazards were identified and no specific mitigations are recommended."***

As designed, a benefit of the proposed new Transportation Maintenance Facility to the neighborhood will be the reduction in demand for on street parking. The staff/visitor parking lot being provided at the southeast corner of the Transportation Maintenance Facility portion of the High School Campus will be available for after-hours use by the public using both the High School playfields and the future City Park.

5) Natural, cultural and historical resource impacts within the development boundary and within two hundred fifty feet of the development boundary.

The wetlands on the northern area of the Transportation Maintenance Facility portion of the site has been delineated and no construction is planned within 50 foot buffer surrounding the wetlands.

Natural Resource Overlay Zone: As indicated on attached Map a Natural Resource Overlay Zone abuts the west edge of the property where the new Transportation Maintenance Facility is to be located and the zone overlaps into the northern wetland area of the site. No development will occur in the Overlay Zone.

See Addendum A - NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 for additional information.

g. A summary statement describing the anticipated transportation impacts of the proposed development. This summary shall include a general description of the impact of the entire development on the local street and road network, and shall specify the maximum projected average daily trips, projected AM and PM peak hour traffic and the maximum parking demand associated with build-out each phase of the master plan.

Refer to attached Traffic Impact Study prepared by Lancaster Engineering.

h. In addition to the summary statement of anticipated transportation impacts, an applicant shall provide a traffic impact study as specified by city requirements. The transportation impact study shall either:

1) Address the impacts of the development of the site consistent with all phases of the general development plan; or

See attached Traffic Impact Study prepared by Lancaster Engineering.

2) Address the impacts of specific phases if the city engineer determines that the traffic impacts of the full development can be adequately evaluated without specifically addressing subsequent phases.

See attached Traffic Impact Study prepared by Lancaster Engineering regarding proposed new Transportation Maintenance Facility.

3) If an applicant chooses to pursue option 2, the applicant may choose among three options for implementing required transportation capacity and safety improvements:

a) The General Development Plan may include a phasing plan for the proposed interior circulation system and for all on-site and off-site transportation capacity and safety improvements required on the existing street system as a result of fully implementing the plan. If this option is selected, the transportation phasing plan shall be binding on the applicant.

b) The applicant may choose to immediately implement all required transportation safety and capacity improvements associated with the fully executed general development plan. If this option is selected, no further transportation improvements will be required from the applicant. However, if a general development plan is later amended in a manner so as to cause the projected average daily trips, the projected AM or PM peak hour trips, or the peak parking demand of the development to increase over original projections, an additional transportation impact report shall be required to be submitted during the detailed development plan review process for all future phases of the development project and additional improvements may be required.

Traffic Impact Study does not identify any needed capacity and/or safety improvements.

i. The applicant may defer implementation of any and all capacity and safety improvements required for any phase until that phase of the development reaches the detailed development plan stage. If this option is selected, the applicant shall submit a table linking required transportation improvements to vehicle trip thresholds for each development phase.

Not Applicable

j. The applicant or city staff may propose objective development standards to address identified impacts that will apply within the proposed development on land that is controlled by the institution. Upon approval of the general development plan, these standards will supersede corresponding development standards found in this code. Development standards shall address at least the following:

1) Pedestrian, bicycle and vehicle circulation and connectivity;

Proposed extension of Meyers Road along south boundary of site shall include sidewalks and bicycle lanes per City Street Standards. See discussions within this narrative re: width of Meyers Road extension.

2) Internal vehicle and bicycle parking;

High School Vehicle Parking: 1,038 parking spaces exist on site; 25 of which are ADA accessible spaces. Exceeds parking required by Zoning Code.

High School Bicycle Parking: 96 bicycle parking spaces exist; due to underutilization of these bicycle parking spaces, applicant proposes providing no additional bicycle parking spaces.

Proposed New Transportation Maintenance Facility Vehicle Parking: 138 parking spaces are proposed for staff and visitors. (5 of the spaces would be ADA compliant accessible spaces.)

Proposed New Transportation Maintenance Facility Bicycle Parking: 8 spaces are proposed. 4 spaces to be covered at exterior of building, adjacent to Drivers Break 119.

See Exhibit H- Pedestrian and Bicycle Circulation Routes and Exhibit I – Vehicular Circulation Routes for routing of pedestrians, bicycles and vehicle traffic on the campus.

3) Building setbacks, landscaping and buffering;

Setbacks of existing and proposed buildings are indicated on attached Sheets LUA0.2 – Proposed Campus Site Plan and LUA0.3 – Detail Development Site Plan.

See attached Sheets* LUL1.0 – Planting Schedule and Notes and LUL1.1 – Planting Plan *for landscaping and buffering.

4) Building design, including pedestrian orientation, height, bulk, materials, ground floor windows and other standards of Chapter 17.62; and

To illustrate intended conformance with standards of Chapter 17.62, we have attached the following pertinent Drawings:

Overall High School Campus
LUA0.1 – Existing Conditions Site Plan
LUA0.2 – Proposed Campus Site Plan

Proposed New Transportation Maintenance Facility
LUA0.3 – Detail Development Site Plan
LUA1.1 – First Floor Plan
LUA1.2 – Second Floor Plan
LUA2.1 – Exterior Elevations

C1.2 - Existing Conditions
C2.1 - On Site Wateline & Sanitary Sewer Plan
C2.2 - Public Waterline Plan
C2.3 - Public Sanitary Sewer Plan
C3.1 - On Site Storm Drain Plan
C4.1 - On Site Parking Lot Grading & Erosion Control Plan
C5.1 - Public Street & Storm Drain Plan
C5.2 - Public Street & Storm Drain Plan
C7.3 - Late Construction Erosion & Sediment Control Plan

Meyers Road Extension
Exhibit G - Preliminary Meyers Road Improvements and Related Utility Extensions

Conformance with 17.62.050 Standards

Landscaping; Conformance with 17.62.050 Standards 1 a, b, c, d, e, and f: As illustrated on accompanying Site Plans of the Campus and Sheets LUL1.0 – Planting Schedule and Notes and LUL1.1 – Planting Plan (for the proposed new Transportation Maintenance Facility); landscaped areas and open playfields occupy a large percentage of the overall High School Campus.

Vehicular Access and Connectivity; Conformance with 17.62.050 Standards 2a, b, c, d, e, f, g, h, i, j, k, l and m:

See Drawings for vehicular access, parking, etc.
Sheet LUA0.1 – Existing Conditions Site Plan
Sheet LUA0.2 – Proposed Campus Site Plan
Sheet LUA0.3 – Detail Development Site Plan

Building Structures; Conformance with 17.62.050 Standard 3: Existing buildings on the High School Campus conform to this standard. The new proposed Transportation and Maintenance Facility is complementary in appearance and employs a variety of exterior materials to provide an attractive and welcoming look. A combination of painted concrete, smooth and textured colored concrete masonry, metal siding in 3 surface profiles, aluminum framed storefronts and windows, and glazed overhead doors (at shop areas) will be used to provide an engaging composition and a finished appearance.

Grading; Conformance with 17.62.050 Standard 4: Compliance with Chapter 15.48 and the Public Works Stormwater and Grading Design Standards. See attached Civil Drawings and attached Exhibit G - Preliminary Storm Drain Detention & Water Quality Calculations.

Geological Hazard Overlay District; Conformance with 17.62.050 Standard 5: This property is not known to be within the Geological Hazard Overlay District.

Drainage; Conformance with 17.62.050 Standard 6: Compliance with City's Drainage Master Plan (Chapter 13.12) and the Public Works Stormwater and Grading Design Standards. Civil Drawings and attached Exhibit G - Preliminary Storm Drain Detention & Water Quality Calculations.

Parking; Conformance with 17.62.050 Standard 7; Parking areas are designed to comply with City's Off-Street Parking Standards (Chapter 17.52). See Sheet LUA0.3 – Detail Development Site Plan.

Sidewalks and Curbs; Conformance with 17.62.050 Standard 8: Refer to Sheets LUA0.2 – Proposed Campus Site Plan and LUA0.3 – Detail Development Site Plan.

***On-Site Pedestrian Circulation System; Conformance with 17.62.050 Standards 9 a, b, c, d, e, and f: Refer to Sheets LUA0.2 – Proposed Campus Site Plan and LUA0.3 – Detail Development Site Plan for pedestrian circulation routes. (See also* Exhibit H- Pedestrian and Bicycle Circulation Routes.)**

Maintenance and Replacement; Conformance with 17.62.050 Standard 10: The Oregon City School District is committed to on-going maintenance and replacement of all elements of their property. Locating the District's Maintenance Facility in the new proposed Transportation Maintenance Facility on the High School Campus can only enhance their attention to the Campus facilities.

Tree Protection; Conformance with 17.62.050 Standard 11: Chapter 17.41: The function of the proposed new Transportation Maintenance Facility requires sufficient open space to accommodate bus, van and other vehicle parking areas free of obstructions. As a result, tree removal on the site will be extensive. 818 trees with a caliper size of 6" or greater will be removed within the construction area. New trees will be planted (Mitigation Option 1 per 17.41.060):

> ***190 trees at new staff/visitor parking lot. (See Sheets LUL1.0 – Planting Schedule and Notes and LUL1.1 – Planting Plan).***
> ***A maximum of 104 trees along east property line to buffer the adjoining residential area from the south soccer fields. (See Sheets LUL1.0 – Planting Schedule and Notes and LUL1.1 – Planting Plan.)***
> ***Offsite tree replacement planting locations will be explored (including perhaps some trees at the future City Park located to the south of the site).***
>
> ***Cash-in-lieu of planting trees (tree bank/fund) (Option 4) per 17.41.1[25] will need to be employed to meet City requirements.***

Protection of Water Resources and Habitat Conservation; Conformance with 17.62.050 Standard 12; Chapter 17.49 addresses Natural Resources Overlay Zone: No construction will occur within the boundaries of the Natural Resources Overlay Zone.

See Addendum A - NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 for additional information.

Standards and Regulations; Conformance with 17.62.050 Standard 13: Development shall comply with Standard 13.

Public Water and Sewer Facilities; Conformance with 17.62.050 Standard 14: Refer to earlier discussion re: Infrastructure facilities and capacity (Water, Sanitary Sewer, and Stormwater Management). Refer also to the following:

> ***Attached Civil Drawings***
> ***Exhibit G - Preliminary Storm Drain Detention & Water Quality Calculations***

Conformance with 17.62.050 Standard 15: See Civil Drawings for Meyers Road Improvements and Related Utility Extensions:

Conformance with 17.62.050 Standard 16: Not applicable; property owner is not a transit agency.

Underground Utility Lines; Conformance with 17.62.050 Standard 17: All utility lines will be placed underground.

Access for Physically Handicapped People; Conformance with 17.62.050 Standard 18: Existing facilities were designed to meet ADA accessibility standards. New proposed facilities will also be designed in compliance with ADA Guidelines.

Residential Development; Conformance with 17.62.050 Standard 19: Not applicable; a single residence on the Campus (adjacent to the south soccer fields) is slated for future demolition.

Screening of Mechanical Equipment; Conformance with 17.62.050 Standards 20 a, b, c and d: Proposed new Transportation Maintenance Facility will employ roof top units screened by building wall parapets. An emergency generator will be screened from view from Meyers Road by fencing and landscaping.

Building Materials; Conformance with 17.62.050 Standards 21 a, b, and c:

21 a. ***High quality, durable building materials have been used in the construction of the existing High School. The proposed new Transportation Maintenance Facility will employ a combination of exterior building materials including painted tilt-up concrete, colored concrete masonry (in a composition of split faced and ground faced textures), pre-finished flat and patterned metal panels.***

21 b. ***Prohibited materials listed will not be used except for the inclusion of black vinyl coated chain link fencing required for security of the bus/van/equipment vehicle storage area.***

21 c. ***Concrete masonry, as noted above will be a combination of split faced and ground faced colored units. At the front façade (facing Meyers Road) the building exterior is a combination of 2 patterns of pre-finished metal siding and aluminum storefront. No EIFS is being used at the new Transportation Maintenance Facility.***

Conditions of Approval; Conformance with 17.62.050 Standard 22: Conditions of approval to be addressed once identified.

Conformance with 17.62.055 Institutional and Commercial Building Standards Requirements; Conformance with 17.62.055 Standards C 1, 2, 3, 4 and 5:

C1. ***Building design shall contribute to the uniqueness of the underlying zoning district by applying appropriate materials, elements, features, color range and activity areas tailored specifically to the site and its context.***

High School: The existing high school building design was previously approved by the City of Oregon City.

Transportation Maintenance Facility: The proposed Transportation Maintenance Facility is located on property with underlying Campus Industrial (CI) zoning. Its design is in keeping with the industrial nature of the zone. It will be constructed of a combination of durable materials often found on industrial campuses, including tilt-up concrete, concreter masonry, and metal siding (in 3 patterns). These materials are compatible with building materials used at the existing High School portion of the Site. See accompanying Materials Board for material/color selections.

C2. ***A standardized prototype or franchise design shall be modified if necessary to meet the provisions of this section.***

Not applicable. Both the High School and the Transportation Maintenance Facility are unique facilities, specifically designed for the site.

C3. ***In the case of a multiple building development, each individual building shall include predominant characteristics, architectural vocabulary and massing shared by all buildings in the development so that the development forms a cohesive place within the underlying zoning district or community.***

Because the function of the existing High School facility and the function of the proposed new Transportation Maintenance Facility differ and because the two facilities are not in close proximity, the characteristics, architectural vocabulary and massing are not completely shared. Each is designed to suitably reflect its function. Both the High School and the proposed Transportation Maintenance Facility do employ certain shared elements:

Split faced colored concrete masonry (albeit different colors)
Aluminum storefront systems
Metal siding panels

C4. ***With the exception of standards for building orientation and building front setbacks, in the event of a conflict between a design standard in this section and a standard or requirement contained in the underlying zoning district, the standard in the zoning district shall prevail.***

Refer to proposed modifications to building front setbacks below.

C5. ***On sites with one hundred feet or more of frontage at least sixty percent of the site frontage width shall be occupied by buildings placed within five feet of the property line, unless a greater setback is accepted under the provisions of Section 17.62.055D. For sites with less than one hundred feet of street frontage, at least fifty percent of the site frontage width shall be occupied by buildings placed within five feet of the property line unless a greater setback is accepted under the provisions of Section 17.62.055D.***

As a part of the Site and Design Review application, the applicant proposes exemption from this standard given the non-institutional use of the Transportation Maintenance Facility. The facility is not a predominately pedestrian destination. Functionally, a staff/visitor parking lot is required to be positioned outside the secured vehicle compound at the entry side of the facility. (See below.)

Relationship of Buildings to Streets and Parking; Conformance with 17.62.055 Standards D 1, 2, 3, 4 and 5:

D1. ***Buildings shall be placed no farther than five feet from the front property line. A larger front yard setback may be approved through site plan and design review if the setback area incorporates at least one element from the following list for every five feet of increased setback requested:***

a. ***Tables, benches or other approved seating area.***

b. ***Cobbled, patterned or paved stone or enhanced concrete.***

c. Pedestrian scale lighting.

d. Sculpture/public art.

e. Fountains/Water feature.

f. At least twenty square feet of landscaping or planter boxes for each tenant facade fronting on the activity area.

g. Outdoor café.

h. Enhanced landscaping or additional landscaping.

i. Other elements, as approved by the community development director, which can meet the intent of this section.

The proposed new Transportation Maintenance Facility is located with a front setback of approximately 262 feet in order to respond to the need to separate public (staff and visitor) parking areas from the secured bus/van and maintenance equipment compound. To offset the City's setback requirements and to provide enhancements of value to the City, the applicant proposes to:

1) Provide enhanced landscaping within the setback area.

2) Offer public access to the staff/visitor parking lot for after-hour use as public parking for City Park visitor/users. This enhanced parking area will reduce on-street parking demand and will reduce the Park's on-site parking needs.

***D2. The front most architecturally significant facade shall be oriented toward the street and shall be accessed from a public sidewalk. Primary building entrances shall be clearly defined and recessed or framed by a sheltering element such as an* awning, arcade or portico in order to provide shelter from the summer sun and winter weather.**

The main public entrance to the proposed new Transportation Maintenance Facility faces Meyers Road. Formal and nearly symmetrical, the entrance is highly visible, clearly defined, and marked by a vertical expansion of glass storefront running the full height of the facility.

D3. Entryways. The primary entranceway for each commercial or retail establishment shall face the major street. The entrance may be recessed behind the property line a maximum of five feet unless a larger setback is approved pursuant to Section 17.62.055.D.1 and shall be accessed from a public sidewalk. Primary building entrances shall be clearly defined, highly visible and recessed or framed by a sheltering element including at least four of the following elements, listed below.

a. Canopies or porticos;

b. Overhangs;

c. Recesses/projections;

d. Arcades;

e. Raised corniced parapets over the door;

f. Peaked roof forms;

g. Arches;

h. Outdoor patios;

i. Display windows;

j. ***Architectural details such as tile work and moldings which are integrated into the building structure and design;***

k. ***Integral planters or wing walls that incorporate landscaped areas and/or places for sitting.***

l. ***Planter boxes and street furniture placed in the right-of-way shall be approved for use according to materials, scale and type.***

The primary entranceway is clearly defined and framed by a sheltering element and:

1) ***Is glazed full height to offer full view into the entry lobby.***

2) ***Is taller than other portions of the building.***

3) ***Is comprised of a tower-like element with its glass storefront recessed below sheltering roof element.***

4) ***Is flanked by high quality planting beds at each side of sidewalk leading to the entrance doors.***

D4. ***Where additional stores will be located in the large retail establishment, each such store shall have at least one exterior customer entrance, which shall conform to the same requirements. (Ord. 01-1002 §2, 2001)***

Not applicable to this facility.

D5. ***Trellises, canopies and fabric awnings may project up to five feet into front setbacks and public rights-of-way, provided that the base is not less than eight feet at the lowest point and no higher than ten feet above the sidewalk. Awnings shall be no longer than a single storefront.***

Not applicable. No trellises, canopies and fabric awnings will project into the setback.

Corner Lots; Conformance with 17.62.055 Standards E 1 and 2:

E. ***For buildings located at the corner of intersections, the primary entrance of the building shall be located at the corner of the building or within twenty-five feet of the corner of the building. Additionally, one of the following treatments shall be required:***

The proposed new Transportation Maintenance Facility fronts along Meyers Road. While the project is bounded by High School Avenue, this is currently a private drive, not a public street.

E1. ***Incorporate prominent architectural elements, such as increased building height or massing, cupola, turrets, or pitched roof, at the corner of the building or within twenty-five feet of the corner of the building.***

Not applicable; Site is not a corner lot.

E2. ***Chamfer the corner of the building (i.e. cut the corner at a forty-five-degree angle and a minimum of ten feet from the corner) and incorporate extended weather protection (arcade or awning), special paving materials, street furnishings, or plantings in the chamfered area.***

Not applicable; Site is not a corner lot.

Commercial First Floor Frontage; Conformance with 17.62.055 Standard F:

Not applicable; no commercial use envisioned to occur at this site.

Variation in Massing; Conformance with 17.62.055 Standards G 1, 2 and 3:

G1. ***A single, large, dominant building mass shall be avoided in new buildings and, to the extent reasonably feasible, in development projects involving changes to the mass of existing buildings.***

The existing High School employs varying massing shapes in its design.

See Floor Plans and Building Elevations for the proposed new Transportation Maintenance Facility which illustrates its massing variations which are reflect the needs and useage of the spaces being enclosed.

G2. ***Horizontal masses shall not exceed a height: width ratio of one-to-three without substantial variation in massing that includes a change in height and projecting or recessed elements.***

The longest horizontal mass of the proposed new Transportation Maintenance Facility is at the East and West Elevations (concrete tilt-up walls) and conforms to the height:width ratio (24'-6" high x 70 feet wide; less than 1:3).

G3. ***Changes in mass shall be related to entrances, the integral structure and/or the organization of interior spaces and activities and not merely for cosmetic effect.***

Massing variations at the proposed new Transportation Maintenance Facility are the product of differentiation between office and meeting uses at the south end of the building versus the shop activities to the north. The main entrance at the south end of the building effectively dominates the façade by virtue of its fully glazed tower-like presence.

Minimum Wall Articulation; Conformance with 17.62.055 Standard H 1, 2, 3, 4, 5, and 6:

H1. ***Facades shall add architectural interest and variety and avoid the effect of a single, long or massive wall with no relation to human size. No wall that faces a street or connecting walkway shall have a blank, uninterrupted length exceeding thirty feet without including, but not be limited to, at least two of the following:***

- ***i. Change in plane,***
- ***ii. Change in texture or masonry pattern or color,***
- ***iii. Windows, treillage with landscaping appropriate for establishment on a trellis.***
- ***iv. An equivalent element that subdivides the wall into human scale proportions.***

Existing High School: See Photos of High School which illustrate its Architectural character.

Proposed New Transportation Maintenance Facility: See attached Building Elevations for building appearance. While building massing changes do occur, the differing exterior building materials and windows/storefront provide the major visual interest and variation.

H2. Facades greater than one hundred feet in length, measured horizontally, shall incorporate wall plane projections or recesses having a depth of at least three percent of the length of the facade and extending at least twenty percent of the length of the facade. No uninterrupted length of any facade shall exceed one hundred horizontal feet.

Existing High School: Refer to Photos of existing High School.

Proposed New Transportation Maintenance Facility: The east and west facades are greater than 100 feet in length, but exhibit variations in treatment and changes in plane. Visual interest is enhanced by the variation in wall materials and by the inclusion of canopies sheltering shop doors.

H3. Ground floor facades that face public streets shall have arcades, display windows, entry areas, awnings or other such features along no less than sixty percent of their horizontal length.

Existing High School: Refer to photos of existing High School.

Proposed New Transportation Maintenance Facility: Sunshades at the south (Meyers Road frontage) are employed over upper and lower windows. Length of sunshades on <u>each</u> floor level equals 61% of the façade length. The main entrance is fully glazed tower-like element.

H4. Building facades must include a repeating pattern that includes any one or more of the following elements:

- ***a. Color change;***
- ***b. Texture change;***
- ***c. Material module change.***

Existing High School: Refer to Photos of existing High School.

Proposed New Transportation Maintenance Facility: Building facades will employ a variety of colors and textures (including flat and patterned metal panels, smooth painted tilt-up concrete, and ground faced and split faced concrete masonry). See Materials Board.

H5. Facades shall have an expression of architectural or structural bays through a change in plane no less than twelve inches in width, such as an offset, reveal or projecting rib.

Existing High School: Refer to photos of building.

Proposed New Transportation Maintenance Facility: Glazed aluminum sectional overhead doors reflect the regularity of shop bays within the building. Vertical glazing treatment further identifies shop bays at east and west facades.

H6. Facades shall have at least one of elements subsections H.4. or H.5. of this section repeat horizontally. All elements shall repeat at intervals of no more than thirty feet, either horizontally or vertically.

Existing High School: Refer to photos of existing High School.

Proposed New Transportation Maintenance Facility: Color, texture and material changes occur horizontally along the facades; see Building Elevations (Sheet LUA2.1 – Exterior Elevations).

Façade Transparency; Conformance with 17.62.055 Standards I 1 and 2:

I1. Transparent windows or doors facing the street are required. The main front elevation shall provide at least sixty percent windows or transparency at the pedestrian level. Facades on corner lots shall provide at least sixty percent windows or transparency on all corner-side facades. All other side elevations shall provide at least thirty percent transparency. The transparency is measured in lineal fashion. For example, a one hundred-foot long building elevation shall have at least sixty feet (sixty percent of one hundred feet) of transparency in length. Reflective, glazed, mirrored or tinted glass is limited to ten percent of the lineal footage of windows on the street facing facade. Highly reflective or glare-producing glass with a reflective factor of one-quarter or greater is prohibited on all building facades. Any glazing materials shall have a maximum fifteen percent outside visual light reflectivity value. No exception shall be made for reflective glass styles that appear transparent when internally illuminated.

Only the south façade of the proposed new Transportation and Maintenance Facility faces a public street (an extension of Meyers Road). 61% of the bottom floor façade is comprised of windows and storefront assemblies, thus meeting the 60% requirement.

I2. Side or rear walls that face walkways may include false windows and door openings only when actual doors and windows are not feasible because of the nature of the use of the interior use of the building. False windows located within twenty feet of a right-of-way shall be utilized as display windows with a minimum display depth of thirty-six inches.

Existing High School: Not required or applicable; refer to photos of existing High School.

The proposed new Transportation Maintenance Facility No false window or door openings are required or proposed at side or rear elevations facing walkways.

Roof Treatments; Conformance with 17.62.055 Standard J 1, 2 and 3:

J1. All facades shall have a recognizable "top" consisting of, but not limited to:

- ***a. Cornice treatments, other than just colored "stripes" or "bands," with integrally textured materials such as stone or other masonry or differently colored materials; or***
- ***b. Sloping roof with overhangs and brackets; or***

c. Stepped parapets;

d. Special architectural features, such as bay windows, decorative roofs and entry features may project up to three feet into street rights-of-way, provided that they are not less than nine feet above the sidewalk.

Existing High School: Refer to existing photos of High School.

Proposed New Transportation Maintenance Facility: As shown on accompanying Building Elevations, a variety of features are proposed including sunshades at south, east and west office windows. Coping height at the main entry to the building is raised to make entrance more prominent.

J2. Mixed use buildings: For flat roofs or facades with a horizontal eave, fascia, or parapet, the minimum vertical dimension of roofline modulation is the greater of two feet or 0.1 multiplied by the wall height (finish grade to top of wall). The maximum length of any continuous roofline shall be seventy-five feet.

Existing High School: This is an educational facility – not mixed use.

Proposed new Transportation Maintenance Facility: This facility provides shops for maintenance and associated support storage, office and meeting space. No mixed uses occupied by the public.

J3. Other roof forms consistent with the design standards herein may satisfy this standard if the individual segments of the roof with no change in slope or discontinuity are less than forty feet in width (measured horizontally).

Drive-Through Facilities; Conformance with 17.62.055 Standard K 1 and 2: No drive-through facilities are proposed.

5) Other standards that address identified development impacts:

None identified.

B. Proposed Development Submittal Requirements; 2. Maps and diagrams

a. A preliminary site circulation plan showing the approximate location of proposed vehicular, bicycle, and pedestrian access points and circulation patterns, parking and loading areas or, in the alternative, proposed criteria for the location of such facilities to be determined during detailed development plan review.

See attached Sheet LUA0.2 – Proposed Campus Site Plan. (See also attached Exhibit H-Pedestrian and Bicycle Circulation Routes and Exhibit I – Vehicular Circulation Routes.)

b. The approximate location of all proposed streets, alleys, other public ways, sidewalks, bicycle and pedestrian access ways and other bicycle and pedestrian ways, transit streets and facilities, neighborhood activity centers and easements on and within two hundred fifty feet of the site. The map shall identify existing subdivisions and development and un-subdivided or unpartitioned land ownerships adjacent to the proposed development site and show how existing streets, alleys, sidewalks, bike routes, pedestrian/bicycle access ways and utilities within two hundred fifty feet may be extended to and/or through the proposed development.

See attached Sheet LUA0.2 – Proposed Campus Site Plan.

c. **The approximate location of all public facilities to serve the proposed development, including water, sanitary sewer, stormwater management facilities.**

See attached Civil Plans.

d. **The approximate projected location, footprint and building square footage of each phase of proposed development.**

See attached Sheet LUA0.2 – Proposed Campus Site Plan.

e. **The approximate locations of proposed parks, playgrounds or other outdoor play areas; outdoor common areas and usable open spaces; and natural, historic and cultural resource areas or features proposed for preservation. This information shall include identification of areas proposed to be dedicated or otherwise preserved for public use and those open areas to be maintained and controlled by the owners of the property and their successors in interest for private use.**

See attached Site Plans for play fields and other outdoor recreational areas, preserved wetland area, and location of future neighboring City Park.

17.65.60 Detailed development plan

A. Submittal Requirements

1. **A transportation impact study documenting the on- and off-site transportation impacts, as specified in Section 17.65.050.B.1.h(1). If such an analysis was submitted as part of the general development plan process, the scope of the report may be limited to any changes which have occurred during the interim and any information listed below which was not a part of the initial study.**

See Exhibit C – Final Traffic Impact Study (Adddendum D).

The on-site portion of the analysis shall include the location, dimensions and names of all proposed streets, alleys, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle access ways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site. The map shall identify existing subdivisions and development and un-subdivided or unpartitioned land ownerships adjacent to the proposed development site and show how existing streets, alleys, sidewalks, bike routes, pedestrian/bicycle access ways and utilities within two hundred fifty feet may be extended to and/or through the proposed development.

A partial westward extension of Meyers Road between the south edge of the Transportation Maintenance Facility portion of the site and the north edge of the City's future park is proposed to provide appropriate access and egress of buses and vans.

2. **The location within the development and in the adjoining streets of existing and proposed sewers, water mains, culverts, drain pipes, underground electric, cable television and telephone distribution lines, gas lines, and the location of existing aerial electric, telephone and television cable lines, if any, to be relocated within the development.**

Only those franchise utilities located at the present end of Meyers Road could possibly be need to be relocated, although since ever since Meyers Road was originally constructed is was known that it would be extended and it appears that the franchise utility providers have taken that into account. If Loder Road is to be extended through to High School Lane that will create disruption to a number of existing private facilities that presently exist in that alignment.

3.. **A site plan or plans, to scale, containing the required information identified in:**

a. **Chapter 17.62.040.A.(8), (10), (11), (12), (13), (14), and (15);**

See attached Drawings:
LU0.1 – Existing Conditions Site Plan
LU0.2 – Proposed Campus Site Plan
LU0.3 – Detail Development Site Plan
Preliminary Utility Plan (Sewer, Domestic Water and Fire Water)
Preliminary Meyers Road Improvements and Related Utility Extensions

b. **Chapter 17.62.040.B;**

See the following attached Sheets:

Transportation Maintenance Portion of the Site:
L1.0 PLANTING SCHEDULE AND NOTES
L1.1 PLANTING PLAN

High School Portion of the Site:
L1.2 TREE MITIGATION PLAN – HIGH SCHOOL SITE

Off-Site Tree Mitigation at Holcomb Elementary Site:
L1.3 TREE MITIGATION PLAN – HOLCOMB ELEMENTARY SITE

c. **Chapter 17.62.040.C;**

See attached Drawings for proposed new Transportation Maintenance Facility:

LU1.1 – First Floor Plan
LU1.2 – Second Floor Plan
LU2.1 – Exterior Elevations

d. **Chapter 17.62.040.D;**

A Materials Board for the proposed new Transportation Maintenance Facility accompanies this Master Plan submittal.

e. **Chapter 17.62.040.E;**

See attached Civil Drawings and attached Exhibit G - Preliminary Storm Drain Detention & Water Quality Calculations.

f. **Chapter 17.62.040.G;**

See attached Site Lighting Plans for the proposed new Transportation Maintenance Facility:

EL0.2 - Site Plan – Lighting
LU ELO.2P - Site Plan – Lighting Photometrics

g. **Chapter 17.62.040.H; and**

The Oregon State Historic Preservation Office Archeological Division recommends on-site archeological monitoring.

h. **Chapter 17.62.040.J.**

No waivers or requirements for additional information have been identified or requested to date.

4. **Any other information the community development director deems necessary to show that the proposed development will comply with all of the applicable Chapter 17 requirements.**

The community development director has not notified the School District or its consultants of any required additional information to comply with Chapter 17.

17.65.070 Adjustments to development standards.

A. **Purpose. In order to implement the purpose of the city's master plan process, which is to foster the growth of major institutions and other large-scale development, while identifying and mitigating their impacts on surrounding properties and public infrastructure, an applicant may request one or more adjustments to the applicable development regulations as part of the master planning process. These include, but are not limited to, items such as: dimensional standards of the underlying zone, site plan and design review criteria, residential design standards, and standards for land division approval.**

Adjustments to the Development Standards are being requested/proposed by the School District; they include the following:

1) ***Allow installation of 30 foot high light poles in bus storage area in order to provide sufficient lighting with minimal shading between buses.***

2) ***Allow use of modified (vinyl coated) chain link fencing at north, east and west perimeters of the developed Site area. Consider modified chain link fencing fronting Meyers Road with suitable landscape screening.***

3) ***Allow building to be set back from Street frontage/Meyers Road as shown on accompanying site plan.***

Code requires 5 foot maximum setback per 17.62.050 D. 1. The existing High School was constructed with greater setbacks and is a pre-existing condition. The proposed new Transportation Maintenance Facility requires secure separation of staff/visitor parking from bus and van parking areas. This requires locating the building and its 2 distinct parking areas on the site in a manner that precludes locating the building this close to Meyers Road. Furthermore, the transportation and maintenance shops enfronting High School Avenue (a private driveway) require sufficient maneuvering space far exceeding a 5 foot setback. It should be noted that although this facility is part of an educational facility, its usage is more closely aligned to those more typically found in a Campus Industrial zone than it is commercial or institutional. Being in a Campus Industrial (CI) zone means that most of its future neighbors will not be considered "commercial or institutional" and will not be required to meet this setback requirement.

Required setback within typical CI zone is 20'-0" minimum per 17.37.040.c.

4) ***Due to shop functions, relax any building façade transparency requirements to frontage along Meyers Road only.***

While compliance with building transparency requirements at the south façade of the proposed Transportation Maintenance Facility is envisioned, and is currently 61%, the transparency along High School Avenue (currently a private drive) is limited due to the shop use of that portion of the building.

5) ***Allow one bus entrances/exit and one bus exit only off Meyers Road as illustrated on accompanying Site Plan. See attached Site Plans for bus traffic patterns.***

6) ***Meyers Road Extension to match existing Meyers Road ROW width.***

7) ***Given underutilization of the existing bicycle parking spaces at the High School, do not require provision of additional spaces to meet Zoning Code requirements.***

8) ***Allow maximizing number of vehicle parking spaces to better satisfy parking demand at the Site(s). See Addendum G – NEIGHBORHOOD ASSOCIATION CONCERNS/SIGN-IN SHEET.***

9) ***Permit adjustment to Section 17.49.155. as discussed in Addendum A - NROD APPLICATION AND RESPONSES TO CHAPTER 17.49.***

OREGON CITY SCHOOL DISTRICT

SITE PLAN AND DESIGN REVIEW

PROPOSED TRANSPORTATION MAINTENANCE FACILITY

17.50.080 Complete application—Required information

A. One copy of a completed city application form that includes the following information:

1. An accurate legal description, tax account number(s), map and location of all properties that are the subject of the application;

2. Name, address, telephone number and authorization signature of all record property owners or contract owners, and the name, address and telephone number of the applicant, if different from the property owner(s)

Application Form is attached.

Legal Description of subject property:

Tax Assessor Map Number: 3-2E-09D-01400 (No street address assigned)
(See attached Exhibit A – Title Report.)

Property Owner:

Oregon City School District 62
P.O. Box 2110
Oregon City, Oregon 97045
(503) 785-8000

Applicant:

BBL Architects
200 North State Street
Lake Oswego, Oregon 97034
(503) 635-4425

B. A complete list of the permit approvals sought by the applicant:

1) Oregon City High School Campus Master Plan Approval (see concurrent application)
2) Site Plan and Design Review Approvals
3) Proposed/Requested Modifications of Zoning Standards as identified herein and in concurrent Master Plan Submission, including:

--Allow 30 foot high light poles in bus storage area to minimize shading between buses
--Use of 8 foot high black vinyl coated cyclone fences and gates to secure bus/van/equipment storage area
--Setbacks consistent with Campus Industrial (CI) Zoning in lieu of setback requirements for Institutional facilities
-- Relax any building façade transparency requirements (as discussed in Master Plan Submission
-- Allow one bus entrances/exit and one bus exit only off Meyers Road as illustrated
-- Approve Meyers Road Extension to match existing Meyers Road ROW width
-- Do not require provision of additional bicycle spaces at the existing High School to meet Zoning Code requirements.

C. A current preliminary title report for the subject property:

See attached Exhibit A - Title Report.

OREGON CITY SCHOOL DISTRICT

SITE PLAN AND DESIGN REVIEW

PROPOSED TRANSPORTATION MAINTENANCE FACILITY

D. A complete and detailed narrative description of the proposed development that describes existing site conditions, existing buildings, public facilities and services, presence of wetlands, steep slopes and other natural features, a discussion of the approval criteria for all permits required for approval of the development proposal that explains how the criteria are or can be met, and any other information indicated by staff at the pre-application conference as being required

Proposed Development:

Construction of a new Transportation Maintenance Facility and associated vehicle parking and sitework is being proposed on the site. As a public educational facility, this is a permitted use in the Campus Industrial (CI) zone.

Project includes new offices, shop areas and support facilities for the School District's Transportation and Maintenance Departments. The building footprint is approximately 21,730 s.f. (plus covered bus wash area at north end); the total area of the second floor/mezzanine will total approximately 8,795 s.f. (Total Building area equals 30,525 s.f.)

Refer to attached Summary of spaces and area (Exhibit H). Refer also to accompanying Site Plan, Floor Plan, and Building Elevations.

Site Improvements will include:

Parking for Staff and Visitors: 138 spaces including 5 accessible spaces will be provided.

Larger and Mid-Size Bus Parking: 96 spaces for standard size buses will be provided.

Small Buses, Vans and Miscellaneous Maintenance Vehicles: 96 (plus 6 after hour driver) spaces for small buses, vans and other maintenance vehicles (mowers, etc.) will be provided.

No fueling station is anticipated at this time.

Fencing: The bus/van/equipment storage compound area (illustrated on accompanying Site Plan) shall be fenced for security purposes. Proposed fencing is 8 feet high to provide effective security and Applicant requests allowance of the use of black vinyl coated cyclone fencing and gates. (Cyclone fencing currently is used around the perimeter of the adjacent Oregon City High School Site.)

Off-Site Improvements in the Public Right-of-Way: A partial extension of Meyers Road is proposed as indicated on the attached Site Plans. Configuration of the extension will be coordinated with the City Parks Department which owns the neighboring property to the south. Lot line adjustments at the south end of the site will be required to create the public right-of-way for this extension. See attached Exhibit D entitled "Meyers Road Extension" regarding Chapter 12.04 – Streets, Sidewalks and Public Places; 12.04.007 - Modifications.

Existing Site Conditions:

The existing 10.5 acre site is located northwest of the intersection of Meyers Road and High School Avenue in Oregon City. Site terrain is generally flat (low slope) and includes a great many trees throughout the site. A wetland area has been surveyed and delineated at the north portion of the site. A 50 foot buffer zone between the developed site and the wetland will be provided. (See attached Site Plans and Survey for site dimensions, existing trees and wetland boundary.)

OREGON CITY SCHOOL DISTRICT

SITE PLAN AND DESIGN REVIEW

PROPOSED TRANSPORTATION MAINTENANCE FACILITY

Existing Buildings:

A small existing metal storage shed/pole barn is slated for removal.

Public Facilities and Services:

Refer to Master Plan Submission Narrative and Exhibits for information regarding public utilities.

Wetlands:

As noted above wetland on the northern portion of the site has been surveyed and delineated. Proposed development ends before encountering the wetland or its 50 foot buffer. See attached Exhibit G – Wetlands Delineation Report and Addendum A - NROD APPLICATION AND RESPONSES TO CHAPTER 17.49.

Steep Slopes and Other Natural Features:

Slopes are gentle within a range of 1% to 5%. See attached Survey.

Approval Criteria for Permits:

Refer to Master Plan Narrative for discussion of permit criteria.

REFER TO MASTER PLAN SUBMISSION NARRATIVE AND EXHIBITS FOR ADDITIONAL INFORMATION.

E. Up to twenty-one legible copies of all reports, plans, site plans and other documents required by the section of this code corresponding to the specific approval(s) sought

See attached Reports:

Title Report (Exhibit A)
Final Traffic Impact Study (Exhibit C) (Addendum D)
Meyers Road Extension Discussion (Exhibit D)
Arborist Report/Tree Inventory (Exhibit E)
Phase 1 Environmental Site Assessment (Exhibit F)
Wetlands Delineation Report (Exhibit G)

See attached Drawings:

Survey of Proposed New Transportation Maintenance Facility Portion of Site

Civil Drawings of Proposed New Transportation Maintenance Facility Portion of Site
LUC1.1 – Site Utility Plan
LUC1.2 – Grading and Erosion Control Plan

Landscape Plans of Proposed New Transportation Maintenance Portion of Site
LUL1.0 – Planting Schedule and Notes
LUL1.1 – Planting Plan

Architectural Drawings of Proposed New Transportation Maintenance Facility
Sheet LUA0.1 Existing Conditions Site Plan
Sheet LUA0.2 Proposed Campus Site Plan
Sheet LUA0.3 Detail Development Site Plan
Sheet LUA1.1 First Floor Plan
Sheet LUA1.2 Second Floor Plan
Sheet LUA2.1 Exterior Elevations

Electrical Drawings of Proposed Lighting at Proposed New Transportation Maintenance Facility Portion of the Site

Sheet EL0.2 Site Plan – Lighting
Sheet LUELO.2P Site Plan – Lighting Photometrics

See attached Exterior Materials Board for Proposed New Transportation Maintenance Facility

Other Information:

REFER TO MASTER PLAN SUBMISSION NARRATIVE FOR ADDITIONAL INFORMATION AND EXHIBITS.

F. At least one copy of the site plan and all related drawings shall be in a readable/legible eight and one-half by eleven-inch format for inclusion into the city's bound record of the application

8 ½ x 11 inch copies of the following are attached:

Survey Plan of Proposed New Transportation Maintenance Facility Portion of Site

Civil Drawings of Proposed New Transportation Maintenance Facility Portion of Site
LUC1.1 – Site Utility Plan
LUC1.2 – Grading and Erosion Control Plan

Landscape Plans of Proposed New Transportation Maintenance Portion of Site
L1.0 Planting Schedule and Notes
L1.1 Planting Plan
Tree Mitigation Plans at Other Sites
L1.2 Tree Mitigation Plan – High School Site
L1.3 Tree Mitigation Plan – Holcomb Elementary Site

Architectural Drawings of Proposed New Transportation Maintenance Facility
Sheet LU0.1 Existing Conditions Site Plan
Sheet LU0.2 Proposed Campus Site Plan
Sheet LU0.3 Detail Development Site Plan
Sheet LU1.1 First Floor Plan
Sheet LU1.2 Second Floor Plan
Sheet LU2.1 Exterior Elevations

Electrical Drawings of Proposed New Transportation Maintenance Facility
Sheet EL0.2 Site Plan – Lighting
Sheet LUELO.2P Site Plan – Lighting Photometrics

G. Mailing labels for notice to all parties entitled under Section 17.50.090 to receive mailed notice of the application. The applicant shall use the names and addresses of property owners within the notice area indicated on the most recent property tax rolls

Applicant will pay City fee to have City produce mailing labels.

H. All required application fees

The following application fees have been paid with the submission of the concurrent Master Plan and the Site and Design Review packages:

Master Plan (Concept Plan):	***$***	***6,737.00***
Site Plan and Design Review:	***$***	***11,454.00***
Plus .003 x $8,500,000.00=	***$***	***25,500.00***
Natural Resource Review:	***$***	***1,915.00***
Traffic Impact Review:	***$***	***2,668.00***
Plus Master Plan Review:	***$***	***2,000.00***
Plus Large Study Area Fee:	***$***	***666.00***
Mailing Labels:	***$***	***15.00***
Total Fees:	***$***	***50,955.00***

I. Annexation agreements (if applicable)

Not applicable; property is within City of Oregon City limits.

J. Additional documentation as needed by the community development director.

None identified

17.62.040 Plans Required

A. A site plan or plans, to scale, containing the following:

1. Vicinity information showing streets and access points, pedestrian and bicycle pathways, transit stops and utility locations;

See attached Drawings:
Sheet LUA0.1 – Existing Conditions Site Plan
Sheet LUA0.2 – Proposed Campus Site Plan
Sheet LUA0.3 – Detail Development Site Plan
Sheet LUC1.1 – Site Utility Plan
Sheet LUC1.2 – Grading and Erosion Control Plan

2. The site size, dimensions, and zoning, including dimensions and gross area of each lot or parcel and tax lot and assessor map designations for the proposed site and immediately adjoining properties;

See attached Sheet LUA0.2 – Proposed Campus Site Plan.

3. Contour lines at two-foot contour intervals for grades zero to ten percent, and five-foot intervals for grades over ten percent;

See attached Site Survey and Sheet LUC1.2 Grading and Erosion Control Plan.

4. The location of natural hazard areas on and within one hundred feet of the boundaries of the site, including:

a. Areas indicated on floodplain maps as being within the one hundred-year floodplain

Not applicable.

b. Unstable slopes, as defined in Section 17.44.020

None identified.

c. Areas identified on the seismic conditions map in the comprehensive plan as subject to earthquake and seismic conditions

Not applicable.

5. The location of natural resource areas on and within one hundred feet of the boundaries of the site, including fish and wildlife habitat, existing trees (six inches or greater in caliper measured four feet above ground level), wetlands, streams, natural areas, wooded areas, areas of significant trees or vegetation, and areas designated as being within the natural resources overlay district;

The City's Natural Resources Overlay District abuts the west and north sides of the project site; refer to the attached Mapping of Overlay District. As noted above, a wetlands area at the northern portion of the site has been identified, surveyed and delineated. See attached Drawing Oregon City Natural Resources Overlay Zone Map for its location.

Existing trees within the Construction Area will be removed to provide required development of this project. Requirements for the mitigation of removal of trees with DBH 6" or greater that are identified in the attached Arborist Report/Tree Inventory (Exhibit E) as being in good or moderate condition (and not an invasive species) have been calculated:

Number of Trees Removed	*Number of Trees to be Planted*
111 trees (6-12" DBH)	*1 x 93 = 93 trees*
114 trees (13-18" DBH)	*2 x 111 = 222 trees*
73 trees (19-24" DBH)	*3 x 72 = 216 trees*
40 trees (25-30" BDH)	*4 x 40 = 160 trees*
20 trees (31" and over BDH)	*5 x 20 = 100 trees*
	791 trees required

See Addendum E – TREE MITIGATION TABLE for additional detail.

Mitigation shall include providing:

190 trees at new staff/visitor parking lot. (See Sheets L1.0 – Planting Schedule and Notes and L1.1 – Planting Plan).

124 trees on the High School Site. (See Sheet L1.2 – Tree Mitigation Plan – High School for planting plan, tree species and sizes.)

113 trees will be planted at Holcomb Elementary School. (See Sheet L1.3 - Tree Mitigation Plan – Holcomb Elementary Site for planting plan, tree species and sizes.)

25 trees (1 ½" caliper) will be donated to Eastham Arbor Day Event.

Other offsite tree replacement planting locations will be explored (including the donation of trees at the future City Park located to the south of the site). (See Addendum F – ZONING CODE RESPONSES for further, updated information.)

Cash-in-lieu of planting trees (tree bank/fund) (Option 4) per 17.41.1[25] will need to be employed to fully meet City requirements.

6. The location of inventoried historic or cultural resources on and within one hundred feet of the boundaries of the site

City has not, to our knowledge, identified any historic or cultural resources on or near the site.

7. The location, dimensions, and setback distances of all existing permanent structures, improvements and utilities on or within twenty-five feet of the site, and the current or proposed uses of the structures;

See attached Site Survey and Sheet LUA0.1– Existing Conditions Site Plan

8. The location, dimensions, square footage, building orientation and setback distances of proposed structures, improvements and utilities, and the proposed uses of the structures by square footage;

See attached Sheets LUA0.2 – Proposed Campus Site Plan and LUA0.3 – Detail Development Site Plan. See also Sheet LUC1.1 – Site Utility Plan.

9. The location, dimension and names, as appropriate, of all existing and platted streets, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle accessways and other pedestrian and bicycle ways, transit street and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site;

See attached Sheet LUA0.1– Existing Conditions Site Plan

10. The location, dimension and names, as appropriate, of all proposed streets, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle accessways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site;

See attached Sheet LUA0.2 – Proposed Campus Site Plan.

11. All parking, circulation, loading and servicing areas, including the locations of all carpool, vanpool and bicycle parking spaces as required in Chapter 52 of this title

See the following attached Sheet LUA0.3 – Detail Development Site Plan for parking layouts, circulation, loading and servicing areas, carpool, vanpool and bicylcle (covered and uncovered) parking spaces.

12. Site access points for automobiles, pedestrians, bicycles and transit

Staff/Visitor parking will enter from and exit onto High School Avenue. Bus traffic will enter from and exit onto proposed extension of Meyers Road.

See attached Drawing Sheet LUA0.3 – Detail Development Site Plan.

13. **On-site pedestrian and bicycle circulation;**

See attached Sheet LUA0.3 – Detail Development Site Plan for locations of sidewalks and bicycle circulation.

14. **Outdoor common areas proposed as open space;**

West Courtyard area for staff use is proposed at west side of building. See attached Sheets LUA0.3 – Detail Development Site Plan and LUA1.1 – **First Floor Plan** ***for location.***

See Sheet LUA0.3 for open spaces including locations of storm detention areas, delineated wetlands, and 50 foot wetlands buffer area.

15. **Total impervious surface created (including buildings and hard ground surfaces).**

See attached Sheets LUA0.1– Existing Conditions Site Plan and LUA0.2 – Proposed Campus Site Plan.

Impervious area of building roofs and canopies at proposed new Transportation Maintenance Facility equals 25,691 s.f.

Impervious area of staff/visitor parking equals 48,816 s.f.

Impervious parking areas for buses, vans, and other equipment (within secured fenced area) and sidewalks equals 185,749 s.f.

16. **The proposed location, dimensions and materials of fences and walls.**

See attached Sheet LUA0.3 – Detail Development Site Plan for location of fences.

An 8 foot high fence is proposed to secure the bus/van/equipment storage compound. Fencing and gates are proposed to be black vinyl coated cyclone fencing.

B. **A landscaping plan, drawn to scale, showing the location and types of existing trees (six inches or greater in caliper measured four feet above ground level) and vegetation proposed to be removed and to be retained on the site, the location and design of landscaped areas, the varieties, sizes and spacings of trees and plant materials to be planted on the site, other pertinent landscape features, and irrigation systems required to maintain plant materials.**

Refer to attached Landscape Plans (L1.0 – Planting Schedule and Notes, L1.1 – Planting Plan) and Arborist Report/Tree Inventory.

Refer to attached Sheet L1.2 Tree Mitigation Plan – High School Site for additional trees being planted at various locations on the site.

Refer to attached Sheet L1.3 Tree Mitigation Plan – Holcomb Elementary School Site for additional trees being planted at this remote School District site.

C. Architectural drawings or sketches, drawn to scale and showing floor plans, elevations accurately reflected to grade, and exterior materials of all proposed structures and other improvements as they will appear on completion of construction.

See attached Drawings:

Sheet LU0.3	***Detail Development Site Plan***
Sheet LU1.1	***First Floor Plan***
Sheet LU1.2	***Second Floor Plan***
Sheet LU2.1	***Exterior Elevations***

D. A materials board, no larger size than eleven inches by seventeen inches clearly depicting all building materials with specifications as to type, color and texture of exterior materials of proposed structures. An electronic version may be accepted as an alternative if approved by the community development director.

See Materials Board accompanying this application.

Exterior Materials Listing

Exterior Wall Materials:

Painted Tilt-up Concrete Panels:
Color to match Miller Paint Company 0573 "Chintz"

Ground Face Colored Concrete Masonry:
Color to match Mutual Materials "Castle White"

Split Face Colored Concrete Masonry:
Color to match Mutual Materials "Castle White"

Pre-finished Metal Wall Panels Type 1:
Match AEP Span "Nu-Wave" pattern; color to match DuraTech mx "Cool Zaclique II"

Pre-finished Metal Panels Type 2 (Window Recess Infill Panels):
Match AEP Span "Cascade Series"; color to match DuraTech mx "Metallic Silver"

Pre-finished Metal Panels Type 3 (Flush Panels):
Color: Anodized Aluminum.

Pre-finished Metal Flashing and Trim:
Color to match DuraTech mx "Cool Zaclique II"

Aluminum Storefront, Entrances, Windows and Sun Shades:
Clear anodized aluminum

Aluminum Sectional Overhead Doors:
Clear anodized aluminum

Louvers & Steel Canopies:
Color to match DuraTech mx "Cool Zaclique II"

Painted Hollow Metal Doors:
Paint to match anodized aluminum color

Painted Bollards:
Paint Safety Yellow

E. **An erosion/sedimentation control plan, in accordance with the requirements of Chapter 17.47 and the Public Works Erosion and Sediment Control Standards, and a drainage plan developed in accordance with city drainage master plan requirements, Chapter 13.12 and the Public Works Stormwater and Grading Design Standards. The drainage plan shall identify the location of drainage patterns and drainage courses on and within one hundred feet of the boundaries of the site. Where development is proposed within an identified hazard area, these plans shall reflect concerns identified in the hydrological/geological/geotechnical development impact statement.**

Refer to attached Civil Drawings:
Sheet LUC1.1 – Site Utility Plan
Sheet LUC1.2 – Grading and Erosion Control Plan

Refer also to attached Exhibit I - Preliminary Storm Drain Detention & Water Quality Calculations.

F. **The legal description of the site.**

Tax Assessor Map Number: 3-2E-09D-01400 (No street address assigned)

Legal Description of subject property:

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF CLACKAMAS, STATE OF OR, AND IS DESCRIBED AS FOLLOWS:

A TRACT OF LAND IN THE SOUTHEAST AND SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 3 SOUTH, RANGE 2 EAST OF THE WILLAMETTE MERIDIAN, IN THE CITY OF OREGON CITY, IN THE COUNTY OF CLACKAMAS AND STATE OF OREGON. BEING ALL OF PARCEL I AND II OF THAT PROPERTY DESCRIBED IN DOCUMENT NO. 2000-009206, CLACKAMAS COUNTY DEED RECORDS TO JOSEPH F. AND PENNEY J. SPAZIANI AND TIMOTHY J. KOTZ,

EXCEPT THEREFROM THE FOLLOWING DESCRIBED PORTION:

BEGINNING AT THE SOUTHEAST CORNER OF SAID TRACT OF LAND, A POINT ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 9, 374.22 FEET EASTERLY OF THE SOUTH ¼ CORNER THEROF; THENCE NORTH 00^{O}26'46" WEST ALONG THE EAST LINE OF SAID SPAZIANI PROPERTY A DISTANCE OF 627.81 FEET TO THE CENTER LINE OF MEYERS ROAD; THENCE, SOUTH 89^{0}59'09" WEST ALONG THE WESTERLY EXTENSION OF SAID CENTER LINE A DISTANCE OF 64.00 FEET; THENCE, NORTH 00^{0}26'46" WEST A DISTANCE OF 49.00 FEET; THENCE SOUTH 89^{O}59'09" WEST A DISTANCE OF 199.90 FEET TO THE SOUTHERLY WEST LINE OF SAID SPAZIANI TRACT; THENCE, SOUTH 00^{O}26'19" EAST ALONG SAID LINE 726.15 FEET TO THE SOUTHWEST CORNER OF SAID SPAZIANI TRACT ON THE SOUTH LINE OF THE SOUTHWEST ¼ OF SAID SECTION 9; THENCE, 89^{O}52'19" EAST ALONG SAID LINE 264.00 FEET TO THE POINT OF BEGINNING.

****Note: This legal description was created prior to January 1, 2008.***

G. An exterior lighting plan, drawn to scale, showing type, height, and area of illumination.

See attached Drawings:
Sheet EL0.2 Site Plan – Lighting
Sheet LU ELO.2P Site Plan – Lighting Photometrics

H. Archeological Monitoring Recommendation. For all projects that will involve ground disturbance, the applicant shall provide:

1. A letter or email from the Oregon State Historic Preservation Office Archaeological Division indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the Oregon State Historic Preservation Office and that the Oregon State Historic Preservation Office had not commented within forty-five days of notification by the applicant; and

On-site archeological monitoring recommended by SHPO.

2. A letter or email from the applicable tribal cultural resource representative of the Confederated Tribes of the Grand Ronde, Confederated Tribes of the Siletz, Confederated Tribes of the Umatilla, Confederated Tribes of the Warm Springs and the Confederated Tribes of the Yakama Nation indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the applicable tribal cultural resource representative and that the applicable tribal cultural resource representative had not commented within forty-five days of notification by the applicant.

On-site archeological monitoring to be performed if/as recommended by tribal resource representative. Recommendations to be forwarded to applicant from City.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM F – ZONING CODE RESPONSES

Responses to Zoning Code Chapters as Itemized in "Determination of Application Incompleteness" dated 1/13/2015

CHAPTER 17.65 MASTER PLANS

17.65.050.C.6. The proposed general development plan is consistent with the Oregon City Comprehensive Plan and its ancillary documents.
See the following responses:

Policy 1.2.1
Encourage citizens to participate in appropriate government functions and land-use planning.
The School District met with the Caulfield Neighborhood Association on Tuesday, January 27, 2015 to present the proposed new Transportation Maintenance Facility and to garner input re: its design and community impact. In addition, the District solicited input from the Neighborhood Association regarding the existing High School's presence in the area. A summary of the Neighborhood Association's input follows:

1) ***Neighborhood Association attendees expressed concerns re: bus traffic during peak hours of the day. Mike Ard (Lancaster Engineering) shared that during peak hour there would be very few transportation vehicles in the area.***

2) ***Attendees were adamantly concerned about the lack of adequate parking at the High School and the resulting on-street spillover of parked vehicles. The District shared that part of the master planning was to look at non-conforming existing uses and that the City of Oregon City has not only a minimum standard but a maximum limit. We assured the neighborhood association that the District easily meets the minimum and if required to remove parking that parking far away from the houses on Meyers Road would be taken offline. The District has scheduled a meeting with the Meyers Road neighbors to examine the situation first hand, discuss possible solutions, and then meet with City of Oregon City staff to find agreeable actions.***

3) ***Attendees expressed concerns re: young drivers' sometimes careless entry onto Meyers Road. The District has scheduled a meeting with the Meyers Road neighbors to examine the situation first hand, discuss possible solutions, and then meet with City of Oregon City staff to find agreeable actions.***

Refer to the letter from the Neighborhood Chair regarding the Neighborhood Association's position re: the proposed Master Plan and new Transportation Maintenance Facility design. (A copy is included in Addendum C - NEIGHBORHOOD ASSOCIATION CONCERNS/SIGN IN SHEET.)

Goal 1.4 Community Involvement
Provide complete information for individuals, groups, and communities to participate in public policy planning and implementation of policies.
School District (Applicant) has held an informational meeting with the affected Caufield Neighborhood Association (on Tuesday, January 27, 2015).

Policy 1.4.1
Notify citizens about community involvement opportunities when they occur.

School Board meetings are broadcast on the community access cable channel and each month a project update is given keeping viewers current regarding the project. Also, the district will continue to use its social media presence to communicate information concerning the project.

As noted above, the affected neighborhood association has also been contacted. In addition, the Construction Manager/General Contractor for the new Transportation Maintenance Facility has an effective plan for encouraging local subcontractors and suppliers to participate in the construction process.

See Construction Manager/General Contractor's "Buy Local" plan on the following pages.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY



Buy Local Program

Objective: Apply the intent of "Buy Local" when bidding the Oregon City SD TMF14 (TMF14) and Oregon City Public Library Renovation and Expansion (OCPL) projects.

What is Local? P&C defines a "Buy Local" business as a business that uses real property for a commercially useful function, pays City taxes, fees, and utility charges within Clackamas County, with a focus on Oregon City, Oregon.



STRATEGY:

• Increase local vendor's awareness of the bid opportunity	• Collect information about the capabilities & capacity of local vendors	• Encourage all bidders to team up with local vendors & suppliers	• Keep prices down by increasing local & overall bid participation

Key Actions:

- ✓ Contact businesses in the "Buy Local" areas and inform them about the bid opportunity
- ✓ Inform all potential vendors about the goal to use local contractors & suppliers
- ✓ Collect information about prospective bidders' capability and their capacity
- ✓ Encourage teaming between subcontractors & local subcontractors and/or suppliers
- ✓ Keep prospective bidders up-to-date & interested in the bid opportunity
- ✓ Divide scope of work into "smaller" bid packages to allow small to mid-size firms to participate
- ✓ Become an active member in the Oregon City Chamber of Commerce and promote project participation to applicable chamber members

Five Steps to "Buy Local" Success:

Step 1: INCREASE AWARENESS



TARGETED EMAIL CAMPAIGNS: Compile a list of "Buy Local" businesses. Approximately 30 days before P&C official request for bids, P&C will call and send emails broadcasting the "we want local" message to encourage local involvement.

COORDINATION WITH TRADITIONAL MEDIA & STAKEHOLDERS: A notice of the upcoming projects and request for local subcontractors and suppliers and the scope of work will be advertised in the Daily Journal of Commerce, trade publications, plan centers, local publications.

OUTREACH & PREBID MEETINGS: P&C will hold multiple subcontractor and supplier meet and greets in Oregon City to introduce P&C and our local awareness program to all interested firms. City officials, School District Representatives, and P&C Project Managers will emphasize the City and School District's commitment to local participation. We will have a set of preliminary design documents available at the meetings to review as needed.

DESIGNATE STAFF TO ANSWER QUESTIONS: P&C's Beverly (Bev) Ray will provide technical assistance to any subcontractor or supplier interested in bidding on the project. Technical assistance will include, but is not limited to, explaining State of Oregon bonding and licensing requirements for public projects, outlining P&C's insurance requirements, reviewing P&C's billing procedures, and discussing payment and performance bonding procedures that may be required by P&C. In addition, P&C's Chief estimator, Les Jacobson, will be available at all times during the subcontractor bidding timeline to answer any bidding or estimating technical questions.

Step 2: COLLECT INFORMATION FROM INTERESTED BIDDERS

METHOD TO STORE AND COLLECT DATA: Firm name, email address, and scope of capabilities will be collected through emails from responses to ads and sign-in sheets at "meet and greets".

Step 3: KEEP POTENTIAL BIDDERS UPDATED

AUTOMATIC PROJECT UPDATES: Businesses added to our database will be emailed and called to inform them of project meetings, where to get bid documents, and other important information. Each email update will encourage local businesses to bid the project.

Step 4: ENCOURAGE LOCAL CONTENT AND COLLECT BID INFORMATION

SUBMATCH TEAMING PROGRAM: P&C will call and email registered businesses asking if they either (1) are a local business interested in bidding to other businesses or (2) a business interested in getting bids FROM local businesses. Bidders that are not located in the "Buy Local" area sometimes hire local vendors or buy material from local suppliers.

Step 5: COMMUNICATE RESULTS TO OREGON CITY SD AND THE CITY

PRESENT RESULTS: P&C will deliver a report presenting the number of bids awarded to Local and non-Local firms and their dollar amounts.

3D Electric- Oregon City

A-Absolute Comfort Heating & Cooling, Inc. - Oregon City

Adventure Trucking- Oregon City

Affinity Steel- Oregon City

American Welding Services Inc- Oregon City

Arrieta's Concrete, Inc. - Oregon City

Beko Mechanical Insulation- Oregon City

Bell Heating, LLC- Oregon City

Bill Erickson Heavy Construction- Oregon City

Bourke Construction Inc. - Oregon City

Cindy's Concrete LLC- Oregon City

Clapa Mechanical LLC- Oregon City

Coffman Excavation- Oregon City

Collins Mechanical Inc. - Oregon City

Darin Brooks Greenhouse Construction- Oregon City

Diversified Installations, Inc. - Oregon City

Eagle Plumbing- Oregon City

Eagle's View Construction II, LLC- Oregon City

Floorcovering Specialist- Oregon City

Life Rax Co- Oregon City

Mike Patterson Plumbing- Oregon City

Oregon City Garage Door- Oregon City

Oregon Rebar- Oregon City

Oregon Scenic & Lighting- Oregon City

Pacific Northwest Rebar- Oregon City

Pacwest Drywall- Oregon City

Parker Northwest Paving Co- Oregon City

Parkin Electric- Oregon City

Performance Electric- Oregon City

Portland Electric- Oregon City

Precision Roof Truss- Oregon City

Quality Building Services- Oregon City

River City Glass- Oregon City

Service Master Clean- Oregon City

SI Contracting, Inc. - Oregon City

T&L Manufacturing- Oregon City

Thermo Industries- Oregon City

Western Sign- Oregon City

Western States Fire Protection Company- Oregon City

Goal 2.1 Efficient Use of Land
Ensure that property planned for residential, commercial, office, and industrial uses is used efficiently and that land is developed following principles of sustainable development.
The available site area is being maximized in its use while avoiding intrusion into the wetlands located at the northern portion of the Transportation Maintenance Facility site area. The overall School District Site concentrates building and parking areas in order to free up much of the property for use as open play fields.

In addition photovoltaic solar panels are included at both the current high school facility and the new transportation and maintenance facility.

Goal 2.4 Neighborhood Livability
Provide a sense of place and identity for residents and visitors by protecting and maintaining neighborhoods as the basic unit of community life in Oregon City while implementing the goals and policies of the other sections of the Comprehensive Plan.

The existing High School, by its very nature, provides a sense of place as a focal educational destination for many residents of Oregon City. This sense of place is further enhanced by the various play fields which are heavily used by the community.

The new proposed Transportation Maintenance Facility is designed to serve as a flagship for future development (by others) in the Campus Industrial area to the west. Constructed of quality materials, this attractive facility could serve as a standard of quality for future industrial facilities to meet.

Goal 2.6 Industrial Land Development
Ensure an adequate supply of land for major industrial employers with family wage jobs.
At the time of its opening, the proposed new Transportation Maintenance Facility will employ an estimated 65 bus drivers, 3 bus mechanics, 2 dispatchers, 4 Transportation staff, and 10 Maintenance staff.

Policy 2.6.2
Ensure that land zoned or planned for industrial use is used for industrial purposes, and that exceptions are allowed only where some other use supports industrial development. New non-industrial uses should especially be restricted in already developed, active industrial sites.
The portion of the District's property zoned Campus-Industrial will be the site of the new proposed Transportation Maintenance Facility. While not industrial in use, this educational support facility does share many similarities with potential industrial uses that are expected to develop in the area. These include:

- ***Securely fenced vehicle storage areas***
- ***Staff parking area***
- ***A building housing maintenance and repair activities***

Policy 2.6.3
Protect the city's supply of undeveloped and underdeveloped land zoned for industrial uses by limiting non-industrial community uses, such as schools, parks, and churches on such properties and by limiting larger commercial uses within those areas.
The Campus-Industrial zoned site area will not be used for community uses or for any commercial (or retail) enterprises.

Policy 5.4.3
Identify, initiate and cooperate in partnerships with other jurisdictions, businesses, neighborhoods, schools and organizations to conserve and restore natural resources within and adjacent to Oregon City.
Required tree mitigation (triggered by the removal of trees on the new Transportation Maintenance Facility) is proposed to occur at the Oregon City High School Site and at Holcomb Elementary School. The District is also discussing how it can assist Oregon City Parks with the planting of future trees at the proposed city park located directly south (across from the proposed Meyers Road extension). In addition twenty-five (1 ½" caliper) trees will be donated to the Eastham Arbor Day Event.

Policy 5.4.5
Ensure that riparian corridors along streams and rivers are conserved and restored to provide maximum ecological value to aquatic and terrestrial species. This could include an aggressive tree and vegetation planting program to stabilize slopes, reduce erosion, and mitigate against invasive species and stream impacts where appropriate.
Refer to ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 (prepared by Pacific Habitat).

Policy 5.4.6
Support and promote public education, interpretation, and awareness of the city's ecological resources.
The existing wetlands are being preserved at the north end of the Transportation Maintenance Facility site. Because of its close proximity to the High School, science programs can take advantage of the wetlands as a "laboratory" to educate students and encourage sound ecological management.

Policy 5.4.8
Conserve natural resources that have significant functions and values related to flood protection, sediment and erosion control, water quality, groundwater recharge and discharge, education, vegetation and fish, and wildlife habitat.
Refer to ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 (prepared by Pacific Habitat).

Policy 5.4.11
Maintain and enhance the function and quality of natural wetlands and create, where appropriate, wetlands or swales to moderate the quantity and velocity of water runoff entering streams during storm events and to reduce the amount of pollutants carried into streams.
As noted elsewhere, the existing wetlands are being preserved and buffered from planned construction on the site.

Policy 6.4.1
Provide for noise abatement features such as sound-walls, soil berms, vegetation, and setbacks, to buffer neighborhoods from vehicular noise and industrial uses.
Due to its location, the new Transportation Maintenance Facility is isolated from local neighborhoods by a substantial distance.

Policy 9.8.4
Promote "shared parking" and transportation demand management techniques such as transit vouchers, car or van pooling, and flexible schedules and telecommuting options to reduce peak hour trips.
A primary purpose of the new proposed Transportation Maintenance Facility is to support the transportation of students to and from school and other school related activities, thus reducing the need for other means of student transport to and from school. Employees of the facility are scheduled to arrive and to depart the facility at non-peak hours. Refer to Addendum D – Final Traffic Impact Report (Revised Exhibit C) prepared by Lancaster Engineering.

The staff/visitor parking lot is envisioned to be available to pubic park goers on off-hours. The District is in discussion with the City Parks Department to develop an agreement to formalize this arrangement. The District encourages its employees to carpool whenever possible.

Policy 12.1.1
Maintain and enhance citywide transportation functionality by emphasizing multi-modal travel options for all types of land uses.
The new proposed Transportation Maintenance Facility supports the School District's student transportation system including buses and smaller van transports.

Policy 12.6.1
Provide a transportation system that serves existing and projected travel demand.
The goal of the new Transportation Maintenance Facility is to meet the needs of current and future projected bus routes.

Policy 12.6.4
Identify and prioritize improved connectivity throughout the city street system.
Meyers Road will be extended westward.

Goal 13.1 Energy Sources
Conserve energy in all forms through efficient land-use patterns, public transportation, building siting and construction standards, and city programs, facilities, and activities.
The proposed new Transportation Maintenance Facility will be designed to meet or exceed current Oregon Energy Codes. In addition, photovoltaic solar panels will be included.

17.65.070.D. Approval Criteria. A request for an adjustment to one or more applicable development regulations under this section shall be approved if the review body finds that the applicant has shown the following criteria to be met.
As noted elsewhere, the following adjustments are requested:

Adjustment 1) ***Allow installation of 30 foot high light poles in bus storage area in order to provide sufficient lighting with minimal shading between buses.***

Adjustment 2) ***Allow use of modified (vinyl coated) chain link fencing at north, east and west perimeters of the developed Site area. Consider modified chain link fencing fronting Meyers Road with suitable landscape screening.***

Adjustment 3) ***Allow building to be set back from Street frontage/Meyers Road as shown on accompanying site plan.***

Adjustment 4) *Due to shop functions, relax any building façade transparency requirements along High School Avenue (should it become the Loder Road extension); limit transparency requirements to frontage along Meyers Road only.*

Adjustment 5) *Allow one bus entrances/exit and one bus exit only off Meyers Road as illustrated on accompanying Site Plan. See attached Site Plans for bus traffic patterns.*

Adjustment 6) *Meyers Road Extension to match existing Meyers Road ROW width.*

Adjustment 7) *Bicycle ridership at the High School has, since its construction, been low, due perhaps to both Oregon City's rainy climate and its students' general disinterest in this mode of transportation.*

Given the historic underutilization of the existing bicycle parking spaces at the High School, applicant requests that the City not require additional spaces to meet the existing non-conforming Zoning Code requirements at this time.

Applicant proposes a phased approach to increasing bicycle parking spaces as popularity of this option of travel increases and bicycle parking demand is demonstrated.

Adjustment 8) *Maximize the quantity of vehicle parking spaces in order to better satisfy parking demand at the Site(s) and address Neighborhood complaints/concerns.*

Adjustment 9) *Permit adjustment to Section 17.49.155 as described in ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49*

1. Granting the adjustment will equally or better meet the purpose of the regulation to be modified;

Adjustment 1) *Allowing installation of 30 foot high light poles in bus storage area will improve security and not impose negative light pollution. Fewer fixtures will be required with the increased pole height and thus reduce energy use.*

Adjustment 2) *Allowing use of modified (vinyl coated) chain link fencing at north, east and west perimeters of the developed Site area can be mixed with decorative elements to provide an attractive character comparative to other decorative fencing alternatives.*

Enhanced landscaping along perimeter fencing (at East, South and West) will include shrubbery to further mute the appearance of the fencing.

Adjustment 3) *Allowing the building to be set back from Street frontage/Meyers Road is necessitated in order to:*

a. *Isolate secured bus/vehicle storage areas from the public staff parking.*
b. *Provide dual sided ingress/egress of vehicles at shop areas.*
c. *Provide public domain with staff parking and front entrance to office areas at south portion of the site. Also, relieve parking congestion on High School Avenue due to simultaneous sporting events on the High School sports fields. Special events parking could be available to the City Parks Department during non-employee use.*

The geometry of the site precludes a solution that positions the building at a closer setback.

Adjustment 4) ***Relaxation of building façade transparency requirements to frontage along Meyers Road only does not affect public perception of the building since High School Avenue is not a public right-of-way at this time.***

Adjustment 5) ***Allowing one bus entrances/exit and one bus exit only off Meyers Road as illustrated on accompanying Site Plan does not constitute any negative impact. The time of exiting of buses versus the time of entry differ. Although the 2 driveways are closer together, only one driveway is being used at any given time, and, thus, traffic conflicts are not anticipated.***

Adjustment 6) ***Meyers Road Extension to match existing Meyers Road ROW width will provide consistent character of the street.***

Adjustment 7) ***The existing bicycle parking spaces at the High School are (and always have been) sufficient in number and very underutilized. Other transportation options have been more acceptable to students. Providing additional bicycle parking spaces at the High School will not effectively encourage more bicycle use. Applicant proposes phasing the addition of more bicycle parking spaces as the need for them is demonstrated.***

Adjustment 8) ***Maintaining the existing parking on the High School Site will avoid increasing neighborhood concerns regarding on-street parking demands on streets neighboring the High School. Provision of new parking at the Transportation Maintenance Facility Site will alleviate parking demands generated by High School Play Field events and potential parking needs for future City Park events/activities.***

Adjustment 9) ***See ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49***

2. If more than one adjustment is being requested, the cumulative effect of the adjustments results in a project that is still consistent with the overall purpose of the zone;
The proposed Transportation Maintenance Facility will be compatible with the neighboring Campus Industrial development to the west and is well buffered to the north. The staff/visitor parking at the facility is easily accessed by the public off-hours from the east and will aid in alleviating parking demand by visitors to events on the High School play fields. A future City Park is planned for development to the south of the Transportation Maintenance Facility (across the Meyers Road extension) and park visitors too can use the facilty's staff/visitor parking on off-hours. The staff/visitor parking is located at the intersection of Meyers Road and High School Avenue in order to be easily visible and accessbile to would-be users. Finally, with the staff/visitor parking nearest to Meyers Road, users of that end of the future Glen Oak Park will have more visual openness as they look in that direction versus the view of an industrial building directly across from the park.

3. City-designated Goal 5 resources are protected to the extent otherwise required by Title 17
Open space at the High School will be preserved.

No work will impact the delineated wetland at the north end of the Transportation Maintenance Facility site. The Natural Resource Overlay Zone areas will not be impacted.

4. Any impacts resulting from the adjustment are mitigated; and
Adjustment 1) ***Increase in pole height is offset by reduced number of poles required.***

Adjustment 2) ***Visibility of black vinyl fencing material is diminished by enhanced landscaping (shrubbery) placed in front of fence.***

Adjustment 3) *Increased building setback is mitigated by enhanced landscaping and public use of the Transportation Maintenance Facility's staff/visitor parking lot.*

Adjustment 4) *Glass sectional doors are being used at shop bay openings in order to maximize transparency facade facing along High School Avenue even though High School Avenue is a private driveway.*

Adjustment 5) *Timing of bus arrivals and departures effectively make the use of these two driveways independent of each other.*

Adjustment 6) *Meyers Road width will be consistent with existing road to the east.*

Adjustment 7) *The demonstrated demand for bicycle parking spaces is far less than the number of spaces already provided. (The availability of the existing parking spaces has not proven to encourage more bicycle usage.) Providing additional bicycle parking would be phased if and when parking demand increases.*

Adjustment 8) *Maximizing off-street parking will help mitigate current parking demand and Neighborhood Association's concerns regarding current parking shortages.*

Adjustment 9) *See ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49.*

5. If an environmental zone, the proposal has as few significant detrimental environmental impacts on the resource and resource values as is practicable. (Ord. 03-1014, Att. B3 (part), 2003)
The proposal has as few significant detrimental environmental impacts on the resource and resource values as is practicable. The proposed construction of the Transportation Maintenance Facility will not encroach into the delineated wetland or its 50 foot buffer. Impact on areas of the site within the Natural Resource Overlay Zone are minimized.

See attached ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 prepared by Pacific Habitat) for additional information.

6. The proposed adjustment is consistent with the Oregon City Comprehensive Plan and ancillary documents.

17.65.090 - Regulations that apply. An applicant is entitled to rely on land use regulations in effect on the date its general development plan application was initially submitted, pursuant to ORS 227.178(3), as that statute may be amended from time to time. After a general development plan is approved, and so long as that General Development Plan is in effect, an applicant is entitled to rely on the land use regulations in effect on the date its general development plan application was initially submitted, as provided above, when seeking approval of detailed development plans that implement an approved general development plan. At its option, an applicant may request that a detailed development plan be subject to the land use regulations in effect on the date its detailed development plan is initially submitted.
The construction of the Oregon City High School and its associated site development (parking, landscaping, play fields, etc.) were in compliance with the zoning codes and Conditional Use approvals at the time.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

CHAPTER 17.37 (CI) CAMPUS INDUSTRIAL DISTRICT

17.37.020 Permitted Uses.
The following uses may occupy up to one hundred percent of the total floor area of the development, unless otherwise described:

A. Experimental or testing laboratories;
B. Industrial uses limited to the design, light manufacturing, processing, assembly, packaging, fabrication and treatment of products made from previously prepared or semi-finished materials
C. Public and/or Private educational or training facilities
D. Corporate or government headquarters or regional offices with fifty or more employees.
E. Computer component assembly plants
F. Information and Data processing centers
G. Software and Hardware development
H. Engineering, architectural and surveying services
I. Non-commercial, educational, scientific and research organizations
J. Research and development activities
K. Industrial and professional equipment and supply stores, which may include service and repair of the same
L. Retail sales and services, including eating establishments for employees (I.E. a café or sandwich shop), located in a single building or in multiple buildings that are part of the same development shall be limited to a maximum of 20,000 square feet or 5% of the building square footage, whichever is less, and the retail sales and services shall not occupy more than 10% of the net developable portion of all contiguous Industrial Lands.
M. Financial, insurance, real estate, or other professional offices, as an accessory use to a permitted use, located in the same building as the permitted use and limited to ten percent of the total floor area of the development. Financial institutions shall primarily serve the needs of businesses and employees within the development, and drive-through features are prohibited.
N. Utilities: basic and linear facilities, such as water, sewer, power, telephone, cable, electrical and natural gas lines, not including major facilities such as sewage and water treatment plants, pump stations, water tanks, telephone exchanges and cell towers.
O. Transportation facilities

The use of the proposed Transportation Maintenance Facility conforms to Permitted Use C above (Public and/or Private educational or training facilities).

17.37.040 Dimensional Standards.
Dimensional standards in the CI district are:

A. Minimum lot area: no minimum required.
The 10+ acere lot area is acceptable per CI District dimensional standards.

B. Maximum building height: except as otherwise provided in subsection B (1) of this section building height shall not exceed forty-five feet.
Proposed building height equals 28 feet.

C. Minimum required setbacks:
1. Front yard: twenty feet minimum setback;
2. Interior side yard: no minimum setback;
3. Corner side yard: twenty feet minimum setback;
4. Rear yard: ten feet minimum setback.

Proposed setbacks for the new Transportation Maintenance Facility greatly exceed the required setback listed above:

1) Front Yard (South): 275'-0".
2) Interior Side Yards: 96'-0" (East); 309'-6" (West)
3) Corner Side Yard: Not applicable.
4) Rear Yard: 443'- 0" (North):

D. Buffer zone: If a use in this zone abuts or faces a residential use, a yard of at least twenty-five feet shall be required on the side abutting or facing the adjacent residential or commercial zone in order to provide a buffer area, and landscaping thereof shall be subject to site plan review
Proposed new Transportation Maintenance Facility does not abut a residential use.

E. If the height of the building exceeds forty-five feet, as provided in subsection B (1) of this section for every additional story built above forty-five feet, an additional twenty-five foot buffer shall be provided.
The building height does not exceed forty-five fee and the project does not abut a residential use.

17.37.050 Development Standards.
All development within the CI district is subject to the review procedures and application requirements under Chapter 17.50, and the development standards under Chapter 17.62. Multiple building developments are exempt from the setback requirements of Chapter 17.62.055. In addition, the following specific standards, requirements and objectives shall apply to all development in this district. Where requirements conflict, the more restrictive provision shall govern:

A. Landscaping. A minimum of fifteen percent of the developed site area shall be used for landscaping. The design and development of landscaping in this district shall:
1. Enhance the appearance of the site internally and from a distance;
2. Include street trees and street side landscaping;
3. Provide an integrated open space and pedestrian system within the development with appropriate connections to surrounding properties;
4. Include, as appropriate, a bikeway, pedestrian walkway or jogging trail;
5. Provide buffering or transitions between uses;
6. Encourage outdoor eating areas conveniently located for use by employees;
7. Encourage outdoor recreation areas appropriate to serve all the uses within the development.
62.75 % of the Oregon City School District overall property is landscaped and/or open playfields. 41.1 % of the new Transportation Maintenance Facility site (bounded by Meyers Road extension on south and High School Avenue on the east) is landscaped. This includes the delinieated wetland, the buffer to the wetland, and the site adjacent to parking areas. Refer to accompanying Landscape Drawings.

1) The new landscaping enhances the site by providing a variety of tree and shrub types.

2) Street trees and street side landscaping is provided along Meyers Road extension and a portion of High School Avenue. (See Sheet L1.2 – Tree Mitigation Plan – High School Site.)

3) Refer to Site Plans for routing of pedestrian pathways on the High School Campus which connects the High School facility to adjoining playfields and sidewalks along Meyers Road.

4) Refer to Site Plans for routing of pedestrian pathways on the High School Campus which connects the High School facility to adjoining playfields and sidewalks along Meyers Road.

5) Landscaping at the proposed new Transportation Maintenance Facility provides appropriate and suitable buffering and transitions between uses. To the North, trees in the wetland provide a dense buffer and separation between the bus/vehicle storage area and the neighboring Clackamas Community College. To the South, significant new plantings of trees and shrubs block view of the bus/vehicle storage area and appropriate landscaping is proposed at the staff/visitor parking lot perimeter (both at the South and at the East). New trees and shrubs are proposed at the east perimeter of the site to buffer views from High School Avenue and the High School play fields of the Transportation Maintenance Facility. At the West side of the site, a single row of evenly spaced trees is planted as a buffer between this site and the CI-Zoned neighboring property. Refer to Landscape Drawings, Sheets L1.0 – Planting Schedule and Notes and Sheet L1.1 – Planting Plan.

6) An outdoor patio at the west side of the building provides a convenient outdoor staff eating area directly accessible from the Drivers' Break Room.

7) The outdoor patio serves as an outdoor recreational area for employees' use.

C. Parking. No parking areas or driveways, except access driveways, shall be constructed within the *front setback of any building site or within the buffer areas without approved screening and landscaping.*
Staff/Visitor Parking lot is screened within the front setback and the buffer areas with appropriate landscaping. See Landscape Drawings, Sheets L1.0 – Planting Schedule and Notes and Sheet L1.1 – Planting Plan.

D. Fences. Periphery fences shall not be allowed within this district. Decorative fences or walls may be used to screen service and loading areas, private patios or courts. Fences may be used to enclose playgrounds, tennis courts, or to secure sensitive areas or uses, including but not limited to, vehicle storage areas, drainage detention facilities, or to separate the development from adjacent properties not within the district. Fences shall not be located where they impede pedestrian or bicycle circulation or between site areas.
Fencing is proposed to secure vehicle storage areas as permitted by this article.

E. Signs. One ground-mounted sign may be provided for a development. Other signage shall be regulated by Title 15.
One ground mounted monument sign is proposed at the corner of Meyers Road and High School Avenue to identify the new Transportation Maintenance Facility.

Other signage will be conform to Title 15 requirements.

F. Outdoor Storage and Refuse/Recycling Collection Areas.
Refer to information below.

1. **No materials, supplies or equipment, including company owned or operated trucks or motor vehicles, shall be stored in any area on a lot except inside a closed building, or behind a visual barrier screening such areas so that they are not visible from the neighboring properties or streets. No storage areas shall be maintained between a street and the front of the structure nearest the street;**
   Materials, supplies, equipment, buses and other vehicles will be stored within the fenced compound. An emergency generator and its back-up fuel storage take will also be located within the fenced area.

2. **All outdoor refuse/recycling collection areas shall be visibly screened so as not to be visible from streets and neighboring property. No refuse/recycling collection areas shall be maintained between a street and the front of the structure nearest the street.**
   Refuse/recycling collection areas are also located within the fenced compound.

CHAPTER 17.62 – SITE PLAN AND DESIGN REVIEW

17.62.050 STANDARDS.
A. All development shall comply with the following standards:
1. Landscaping, A minimum of fifteen percent of the lot shall be landscaped. Existing native vegetation shall be retained to the maximum extent practicable. All plants listed on the Oregon City Nuisance Plant List shall be removed from the site prior to issuance of a final occupancy permit for the building.
Area of Landscaping far exceeds the 15% minimum.
Landscaped Area at High School: 57%. (including play fields).

Landscaped Area at Transportation Maintenance Site: ***The landscape area at the Transportation Maintenance Faciity site is 41.1% of the total site SF.***
Overall Site: 441,785SF
Landscape Area (excluding parking islands): 181,529SF
Percent of Site that is landscaped: 41.1%
Existing native vegetation within the wetland and within the 50 ft. wetland buffer will be retained. New native wetland appropriate trees will be added to the wetland buffer. All nuisance plants noted on the Oregon City Nuisance Plant list will be removed from the site. (See Addendum A - NROD APPLICATION AND RESPONSES TO CHAPTER 17.49.)

a. **Except as allowed elsewhere in the Zoning and Land Division Chapters of this code, all areas to be credited towards landscaping must be installed with growing plant materials. A reduction of up to 25% of the overall required landscaping may be approved by the Community Development Director if the same or greater amount of pervious material is incorporated in the non-parking lot portion of the site plan (pervious material within parking lots are regulated in OCMC 17.52.070) .**
Reduction of landscaped areas is not being requested.

b. **The landscaping plan shall be prepared by a registered landscape architect and include a mix of vertical (trees and shrubs) and horizontal elements (grass, groundcover, etc.) that within 3 years will cover 100% of the Landscape area. No mulch, bark chips, or similar materials shall be allowed at the time of landscape installation except under the canopy of shrubs and within two feet of the base of trees. The Community Development Department shall maintain a list of trees, shrubs and vegetation acceptable for landscaping.**
The landscaping plans have been prepared by an Oregon State registered landscape architect (Walker Macy). The landscape will comprise a mix of trees, shrubs and groundcovers. (Refer to Sheets L1.0 – Planting Schedule and Notes and Sheet L1.1 – Planting Plan for listing of plantings and locations.)

As a partial mitigation of trees being removed, additional trees will also be planted at the High School (see attached Drawing L1.2 – Tree Mitigation Plan – High School) and at Holcomb Elementary School (see attached Drawing L1.3 – Tree Mitigation Plan – Holcomb Elementary School).

Within 3 years from final completion of the project, 100% of the landscape area will be covered by growing plant material. No mulch will be used on the project unless it is under the canopy of shrubs or within two feet of a trees trunk. All plants shall be selected from the Oregon City approved plant material list.

c. Landscaping shall be visible from public thoroughfares to the extent practicable.
Landscaping at the High School Portion of the Site is visible from Beavercreek Road and Meyers Road.

Landscaping at the Transportation Maintenance Site will be visible along the Meyers Road extension. (Landscaping will also be visible from the High School playfields and High School Avenue.) Landscaping along the western perimeter will be visible from properties owned by others to the west.

d. Interior parking lot landscaping shall not be counted toward the fifteen percent minimum, unless otherwise permitted by the dimensional standards of the underlying zone district.
Landscaping area calculations do not include interior parking lot landscaping.

2. Vehicular Access and Connectivity.

a. Parking areas shall be located behind buildings, below buildings, or on one or both sides of buildings.
Staff/visitor parking is located at front of building to provide required separation from bus traffic and to provide convenient usage by athletic field spectators (to the east) and by users of the City Park being developed to the south.

b. Ingress and egress locations on public thoroughfares shall be located in the interest of public safety. Access for emergency services (fire and police) shall be provided.
One-way ingress & one-way egress of buses and emergency vehicles occurs on south end of the Site (at Meyers Road Extension). This ingress/egress couplet is separated by 160 feet. Although less than the usually prescribed 175 feet, it must be noted that vehicle traffic in and out of the site is typically scheduled at discrete different times.

Ingress/egress of staff/visitor parking occurs off the less trafficked private drive portion of High School Avenue.

Gated entries along the private drive portion of High School Avenue provide occasional access to Maintenance Department and delivery vehicles and are not intended for public access.

d. On corner lots, the driveway(s) shall be located off of the side street (unless the side street is an arterial) and away from the street intersection.
Driveway to staff/visitor parking is located off High School Avenue, thus avoiding entry on/off of the new Meyers Road extension.

g. Development of large sites (more than two acres) shall be required to provide existing or future connections to adjacent sites through the use of a vehicular and pedestrian access easements where applicable.
. Adjacent sites are not currently developed nor has the City's Transportation Systems Plan been amended to reflect public right of ways in the surrounding area to the south and west.

No access easements are proposed. Access is made available with construction of extension of Meyers Road which provides access for vehicles, bicycles and pedestrians

9. A well-marked, continuous and protected on-site pedestrian circulation system meeting the following standards shall be provided:
a. Pathways between all building entrances and the street are required. Pathways between the street and buildings fronting on the street shall be direct. Exceptions may be allowed by the director where steep slopes or protected natural resources prevent a direct connection or where an indirect route would enhance the design and/or use of a common open space.
Sidewalks are provided to link the main building entrance to both Meyers Road and High School Avenue. See Site Plans for locations.

b. The pedestrian circulation system shall connect all main entrances on the site. For buildings fronting on the street, the sidewalk may be used to meet this standard. Pedestrian connections to other areas of the site, such as parking areas, recreational areas, common outdoor areas, and any pedestrian amenities shall be required.
Sidewalks are provided to link the main building entrance to both Meyers Road and High School Avenue. See Site Plans for locations.

f. On-site pedestrian walkways shall be hard surfaced, well drained and at least five feet wide. Surface material shall contrast visually to adjoining surfaces. When bordering parking spaces other than spaces for parallel parking, pedestrian walkways shall be a minimum of seven feet in width unless curb stops are provided. When the pedestrian circulation system is parallel and adjacent to an auto travel lane, the walkway shall be raised or separated from the auto travel lane by a raised curb, bollards, landscaping or other physical barrier. If a raised walkway is used, the ends of the raised portions shall be equipped with curb ramps for each direction of travel. Pedestrian walkways that cross drive isles or other vehicular circulation areas shall utilize a change in textual material or height to alert the driver of the pedestrian crossing area.
Sidewalks connecting the main entry to Meyers Road and High School Avenue are 6 feet wide and have curbs bordering the staff/visitor parking area. Curb ramps are provided to access ADA accessible parking spaces' side aisles.

17.62.065 - Outdoor lighting.
2. Lighting Plan Requirement
All commercial, industrial, mixed-use, cottage housing and multi-family developments shall submit a proposed exterior lighting plan. The plan must be submitted concurrently with the site plan. The exterior lighting plan shall include plans and specifications for streetlights, parking lot lights, and exterior building lights. The specifications shall include details of the pole, fixture height and design, lamp type, wattage, and spacing of lights.
See Sheet LUEL0.2 – Site Plan Lighting for Site Lighting Plan and light fixture information. Refer to Sheet LUEL0.2P for Lighting Photometrics.

3. Excepted Lighting
The following types of lighting are excepted from the requirements of this Section.

- **a. Residential lighting for single-family attached and detached homes, and duplexes.**
  Residential lighting not applicable
- **b. Public street and right-of-way lighting.**
  Public street lighting at Meyers Road Right of Way to be City Standard.
- **c. Temporary decorative seasonal lighting provided that individual lamps have a light output of 60 watts or less.**
  Decorative seasonal lighting will have light output of 60 watts or less.

d. Temporary lighting for emergency or nighttime work and construction.
The need for temporary lighting for emergency or nighttime work and construction to be determined.

e. Temporary lighting for theatrical, television, and performance areas, or for special public events.
Temporary lighting for theatrical, television, and performance areas, or for special public events not anticipated at the Transportation Maintenance Facility.

f. Lighting for a special district, street, or building that, according to an adopted municipal plan or ordinance, is determined to require special lighting aesthetics as part of its physical character.
Not applicable.

g. Lighting required and regulated by the Federal Aviation Administration.
Not applicable.

C. General Review Standard. If installed, all exterior lighting shall meet the functional security needs of the proposed land use without adversely affecting adjacent properties or the community. For purposes of this Section, properties that comply with the design standards of Subsection D below shall be deemed to not adversely affect adjacent properties or the community.

See Photometrics of Site Lighting. Site lighting designed to avoid spill-over onto adjacent properties and not exceed 0.5FC at the site perimeter as required by Oregon City Outdoor Code 17.62.065 section D number 1.

D. Design and Illumination Standards
General Outdoor Lighting Standard and Glare Prohibition

1. **Outdoor lighting, if provided, shall be provided in a manner that enhances security, is appropriate for the use, avoids adverse impacts on surrounding properties, and the night sky through appropriate shielding as defined in this section. Glare shall not cause illumination on other properties in excess of a measurement of 0.5 foot-candles of light as measured at the property line. In no case shall exterior lighting add more than 0.5 foot candle to illumination levels at any point off-site. Exterior lighting is not required except for purposes of public safety. However, if installed, all exterior lighting shall meet the following design standards:**
Outdoor lighting is primarily provided to enhance security. Lighting design and selection of light fixtures follows the requirement itemized above regarding impacts on surrounding properties, proper shielding, glare potential, etc.

2. **Any light source or lamp that emits more than 900 lumens (13 watt compact fluorescent or 60 watt incandescent) shall be concealed or shielded with a full cut-off style fixture in order to minimize the potential for glare and unnecessary diffusion on adjacent property. All fixtures shall utilize one of the following bulb types: metal halide, induction lamp, compact fluorescent, incandescent (including tungsten-halogen), or high pressure sodium with a color rendering index above 70.**
See attached pole cut sheet and BUG ratings verifying compliance at end of this Addendum.

3. **The maximum height of any lighting pole serving a multi-family residential use shall be 20 feet. The maximum height serving any other type of use shall be 25 feet, except in parking lots larger than five acres, the maximum height shall be 35 feet if the pole is located at least 100 feet from any residential use.**
See luminaire schedule for height information verifying compliance and adjustment #1 as previously described.

Lighting levels ***See photometric plan (Sheet LU ELO.2P - Site Plan – Lighting Photometrics).***

Table 1-17.62.065. Foot-candle Levels

Location	Min	Max	Avg
Pedestrian Walkways	0.5	7:1 max/min ratio	1.5
Pedestrian Walkways in Parking Lots		10:1 max/min ratio	0.5
Pedestrian Accessways	0.5	7:1 max/min ratio	1.5
Building Entrances	3		
Bicycle Parking Areas	3		
Abutting property	N/A	.05	

4. **Parking lots and other background spaces shall be illuminated as unobtrusively as possible while meeting the functional needs of safe circulation and protection of people and property. Foreground spaces, such as building entrances and outside seating areas, shall utilize pedestrian scale lighting that defines the space without glare.**
   See photometric plan (Sheet LU ELO.2P - Site Plan – Lighting Photometrics).

5. **Any on-site pedestrian circulation system shall be lighted to enhance pedestrian safety and allow employees, residents, customers or the public to use the walkways at night. Pedestrian walkway lighting through parking lots shall be lighted to light the walkway and enhance pedestrian safety pursuant to Table 1.**
   See photometric plan (Sheet LU ELO.2P - Site Plan – Lighting Photometrics).

6. **Pedestrian Accessways. To enhance pedestrian and bicycle safety, pedestrian accessways required pursuant to OCMC 12.28 shall be lighted with pedestrian-scale lighting. Accessway lighting shall be to a minimum level of one-half foot-candles, a one and one-half foot-candle average, and a maximum to minimum ratio of seven-to-one and shall be oriented not to shine upon adjacent properties. Street lighting shall be provided at both entrances. Lamps shall include a high-pressure sodium bulb with an unbreakable lens.**
   See photometric plan (Sheet LU ELO.2P - Site Plan – Lighting Photometrics).

   Because public street connections for automobiles, bicycles and pedestrians are available, no pedestrian and bicycle accesways are proposed. These existing connections will be extended isofar as the Meyers Road Extension included a sidewalk on the north side of Meyers Road and bike lanes as shown on the Meyers Road Typical Section shown on Drawing LU C1.2.

7. **Floodlights shall not be utilized to light all or any portion of a building facade between 10:00 pm and 6:00 am.**
   No floodlights are being used in the project.

8. **Lighting on automobile service station, convenience store, and other outdoor canopies shall be fully recessed into the canopy and shall not protrude downward beyond the ceiling of the canopy.**
   The lamp is fully concealed in fixture (therefore not protruding downward beyond the ceiling of the canopy), but the fixture itself is surface mounted on the underside of the canopies.

9. **The style of light standards and fixtures shall be consistent with the style and character of architecture proposed on the site.**
   See cutsheets accompanying this Submission.

10. **In no case shall exterior lighting add more than 1 foot-candle to illumination levels at any point off-site.**
    See photometric plan (Sheet LU ELO.2P - Site Plan – Lighting Photometrics).

11. **All outdoor light not necessary for security purposes shall be reduced, activated by motion sensor detectors, or turned off during non-operating hours.**
    A timeclock for the site will be used to reduce fixture output after hours. If the client wants, the parking lots can go completely dark at night. The parking lots can go completely dark at night if needed.

12. **Light fixtures used to illuminate flags, statues, or any other objects mounted on a pole, pedestal, or platform shall use a narrow cone beam of light that will not extend beyond the illuminated object.**
    Not applicable.
13. **For upward-directed architectural, landscape, and decorative lighting, direct light emissions shall not be visible above the building roofline.**
    Not applicable.

15. **No flickering or flashing lights shall be permitted, except for temporary decorative seasonal lighting.**
    No flickering or flashing lights are being proposed.

16. **Wireless Sites. Unless required by the Federal Aviation Administration or the Oregon Aeronautics Division, artificial lighting of wireless communication towers and antennas shall be prohibited. Strobe lighting of Wireless Communication facilities is prohibited unless required by the Federal Aviation Administration. Security lighting for equipment shelters or cabinets and other on-the-ground auxiliary equipment on Wireless Communication Facilities shall be initiated by motion detecting lighting.**
    Not applicable.

17. **Lighting for outdoor recreational uses such as ball fields, playing fields, tennis courts, and similar uses, provided that such uses comply with the following standards:**
    i. Maximum permitted light post height: 80 feet.
    ii. Maximum permitted illumination at the property line: 0.5 foot-candles.
    Not applicable.

17.62.085: Refuse and Recycling Standards For Commercial, Industrial, and Multi-family Developments
The purpose and intent of these provisions is to provide an efficient, safe and convenient refuse and recycling enclosure for the public as well as the local collection firm. All new development, change in property use, expansions or exterior alterations to uses other than single-family or duplex residences shall include a refuse and recycling enclosure. The area(s) shall be:

A. Sized appropriately to meet the needs of current and expected tenants, including an expansion area if necessary;

Refuse/recycling area will be large enough to contain 1 large bin for refuse and 1 small bin for recycling sized to meet the owner's needs. If needed, space to the east of proposed area is available for future expansion and landscape screening would need to be extended to match/conform to item C below.

B. Designed with sturdy materials, which are compatible to the primary structure(s);

Per Section 17.37.050.C, fencing may be used, "…to screen sensitive areas or uses, including but not limited to, vehicle storage areas". The refuse/recycling area will be located adjacent to the southeast corner of the building behind the fenced compound/vehicle storage area and additional landscape screening to prevent visibility from Meyers Road will be provided.

C. Fully enclosed and visually screened;
Landscape screening is proposed to screen view of trash area from Meyers Road/Public Right-of-way to the south.

D. Located in a manner easily and safely accessible by collection vehicles;
Collection vehicle will access the refuse/recycling area through 1 of 2 access driveways off High School Ave (Private Road). Refuse/Recycling area will be located at the east side of the facility between the building and covered storage area as noted on LUA0.3.

E. Located in a manner so as not to hinder travel lanes, walkways, streets or adjacent properties;
Refuse/recycling will not hinder travel lanes, walkways, streets, or adjacent properties.

F. On a level, hard surface designed to discharge surface water runoff and avoid ponding;
Refuse/Recycling Area will be on concrete or asphalt paved surface sloped at approximately 2% to allow surface water runoff while, at the same time, preventing the wheeled refuse and recycling containers from rolling.

G. Maintained by the property owner;
As noted above refuse/recycling area will be located within the fenced compound and maintained by the property owner.

H. Used only for purposes of storing solid waste and recyclable materials;
Refuse/recycling bin will be only used for storing solid waste or recyclable materials.

I. Designed in accordance with applicable sections of the Oregon City Municipal Code (including Chapter 8.20-Solid Waste Collection and Disposal) and City adopted policies.
All conditions will be met.

CHAPTER 17.52 OFF STREET PARKING

17.52.020 Number of Automobile Spaces Required.

A. The number of parking spaces shall comply with the minimum and maximum standards listed in Table 17.52.020. The parking requirements are based on spaces per 1,000 square feet net leasable area unless otherwise stated.

Table 17.52.020 **Number of automobile spaces required.** **LAND USE**	**PARKING REQUIREMENTS**	
	MINIMUM	**MAXIMUM**
Multi-Family: Studio	**1.00 per unit**	**1.5 per unit**
Multi-Family: 1 bedroom	**1.25 per unit**	**2.00 per unit**
Multi-Family: 2 bedroom	**1.5 per unit**	**2.00 per unit**
Multi-Family: 3 bedroom	**1.75 per unit**	**2.50 per unit**
Hotel, Motel	**1.0 per guest room**	**1.25 per guest room**
Correctional Institution	**1 per 7 beds**	**1 per 5 beds**
Senior housing, including congregate care, residential care	**1 per 7 beds**	**1 per 5 beds**

and assisted living facilities; nursing homes and other types of group homes;		
Hospital	**2.00**	**4.00**
Preschool Nursery/ Kindergarten	**2.00**	**3.00**
Elementary/Middle School	**1 per classroom**	**1 per classroom + 1 per administrative employee + 0.25 per seat in auditorium/assembly room/stadium**
High School, College, Commercial School for Adults	**0.20 per # staff and students**	**0.30 per # staff and students**
Auditorium, Meeting Room, Stadium, Religious Assembly Building, Movie Theater	**.25 per seat**	**0.5 per seat**
Retail Store, Shopping Center, Restaurants	**4.10**	**5.00**
Office	**2.70**	**3.33**
Medical or Dental Clinic	**2.70**	**3.33**
Sports Club, Recreation Facilities	**Case Specific**	**5.40**
Storage Warehouse, Freight Terminal	**0.30**	**0.40**
Manufacturing, Wholesale Establishment	**1.60**	**1.67**
Light Industrial, Industrial Park	**1.3**	**1.60**

1.Multiple Uses. In the event several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements of the several uses computed separately.

2.Requirements for types of buildings and uses not specifically listed herein shall be determined by the community development director, based upon the requirements of comparable uses listed.

3.Where calculation in accordance with the above list results in a fractional space, any fraction less than one-half shall be disregarded and any fraction of one-half or more shall require one space.

4.The minimum required parking spaces shall be available for the parking of operable passenger automobiles of residents, customers, patrons and employees only, and shall not be used for storage of vehicles or materials or for the parking of vehicles used in conducting the business or use.

5.A Change in use within an existing building located in the MUD Design District is exempt from additional parking requirements. Additions to an existing building and new construction are required to meet the minimum parking requirements for the areas as specified in Table 17.52.020 for the increased square footage.

Parking stall counts comply with above dimensions highlighted in yellow.

See LUA0.1 and LUA0.2, below parking counts are calculated to be consistent with the approved 2003 High School Land Use documents, see Exhibit B, page 10. Additional parking over and above what is

required for the Transportation Maintenance Facility is being used to mitigate the existing High School's deficient parked condition.

B. Parking requirements can be met either onsite, or offsite by meeting the following conditions:

1.Mixed uses. If more than one type of land use occupies a single structure or parcel of land, the total requirements for off-street automobile parking shall be the sum of the requirements for all uses, unless it can be shown that the peak parking demands are actually less (e.g. the uses operate on different days or at different times of the day). In that case, the total requirements shall be reduced accordingly, up to a maximum reduction of 50%, as determined by the community development director.

Parking calculated as follows:

EXISTING HIGH SCHOOL:

EXISTING HIGH SCHOOL REQUIRED PARKING
(PER OREGON CITY PLANNING CODE SECTION 17.52.020)

MINIMUM PARKING REQUIREMENT FACTORS	
0.2 X SUM OF STAFF+STUDENTS (250 + 2,500 = 2,750)	***550 Spaces***
13.3 SPACES /ATHLETIC FIELD (5 TOTAL)*	***67 Spaces***
TOTAL REQUIRED PARKING (MINIMUM)	***617 Spaces***
MAXIMUM PARKING REQUIREMENT FACTORS	
0.3 X SUM OF STAFF+STUDENTS (250 + 2,500 = 2,750)	***825 Spaces***
60.5 SPACES / ATHLETIC FIELD (5 TOTAL)*	***303 Spaces***
TOTAL REQUIRED PARKING (MAXIMUM)	***1,128 Spaces***

****Assumes approximately 50% use of existing athletic fields/courts on Campus. Parking space factors are based on the minimum and maximum peak hour demand shown in the "Parking Generation, 4th Edition", published by the Institute of Transportation Engineers. For soccer/athletic fields, the 60.5 cars per field represents the 85th percentile of the observed peak period demand for sports field facilities which occurs between 3:00 and 4:00 p.m. This demand is expected to sometimes overlap with parking demands from the associated High School, resulting in higher total parking demands than either individual use would suggest.***

TRANSPORTATION MAINTENANCE FACILITY:

NEW T& M FACILITY REQUIRED PARKING
(PER OREGON CITY PLANNING CODE SECTION 17.52.020)

MINIMUM PARKING REQUIREMENT FACTORS	
S-1: STORAGE WAREHOUSE - LIGHT INDUSTRIAL - 19,981 SF	
1.30 SPACES PER 1,000 SF	***26 Spaces***
B: BUSINESS - OFFICE - 10,970 SF	
2.70 SPACES PER 1,000 SF	***30 Spaces***

VEHICLE STORAGE

0.5 SPACES / EMPLOYEEE/DRIVER (81 DRIVERS)* ***41 Spaces***

TOTAL T&M FACILITY REQUIRED PARKING (MINIMUM) ***97 Spaces***

MAXIMUM PARKING REQUIREMENT FACTORS
S-1: STORAGE WAREHOUSE - LIGHT INDUSTRIAL - 19,981 SF
1.60 SPACES PER 1,000 SF ***32 Spaces***

B: BUSINESS - 10,970 SF
3.33 SPACES PER 1,000 SF ***37 Spaces***

VEHICLE STORAGE
1.0 SPACES / EMPLOYEE/DRIVER (81 DRIVERS)** ***81 Spaces***

TOTAL T&M FACILITY REQUIRED PARKING (MAXIMUM) ***150 Spaces***

*****BASED ON CITY OF HILLSBORO COMMUNITY DEVELOPMENT CODE, TABLE12.50.329-3, VEHICLE STORAGE PARKING REQUIREMENTS.***

Table 12.50.320-3:
Required Vehicle Parking Spaces for Industrial Uses
(required spaces are per 1000 sq. ft. Net Floor Area (NFA)
or per student/employee on the largest shift, unless otherwise specified)

Use Type	Minimum	Maximum	
		Zone A	Zone B
Industrial Services			
All Uses	2	None	None
Manufacturing and Production			
All Uses	1.6	2.5	None
Solid Waste Treatment and Recycling			
All Uses	2	None	None
Vehicle Storage			
All Uses	0.5/employee	1.0/employee	None
Warehouse and Freight Movement			
All Uses	0.3	0.4	0.5
Wholesale sales			
All Uses	3	3	None

TOTAL CAMPUS PARKING:

MINIMUM PARKING REQUIRED FOR HIGH SCHOOL CAMPUS	
HIGH SCHOOL SITE(MINIMUM)	***617 Spaces***
NEW TRANSPORTATION & MAINTENANCE FACILITY (MINIMUM)	***97 Spaces***
TOTAL PARKING MINIMUM REQUIRED	***714 Spaces***
MAXIMUM PARKING REQUIRED FOR HIGH SCHOOL CAMPUS	
HIGH SCHOOL SITE	***1,128 Spaces***
NEW TRANSPORTATION & MAINTENANCE FACILITY	***150 Spaces***
TOTAL PARKING MAXIMUM REQUIRED	***1,278 Spaces***
TOTAL PARKING PROVIDED PHASE 1	
HIGH SCHOOL SITE	***1,038 Spaces***
NEW TRANSPORTATION & MAINTENANCE FACILITY	***138 Spaces***
PHASE 1 TOTAL PARKING	***1,176 Spaces***
TOTAL PARKING PROVIDED PHASE 2-4	
HIGH SCHOOL SITE	***983 Spaces***
NEW TRANSPORTATION & MAINTENANCE FACILITY	***138 Spaces***
PHASE 2-4 TOTAL PARKING	***1,121 Spaces***

Applicant requests maximizing on-site parking in order to address demands by both the High School and the neighborhood residents for sufficient off-street parking and to thereby reduce demand for limited on-street parking.

2.Shared parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlay (e.g., uses primarily of a daytime versus nighttime nature), that the shared parking facility is within 1,000 feet of the potential uses, and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument authorizing the joint use.

The School District is offering to allow public usage of Transportation Maintenance Facility staff/visitor parking after hours.

3. On-Street Parking. On-street parking may be counted toward the minimum standards when it is on the street face abutting the subject land use. An on-street parking space must not obstruct a required clear vision area and it shall not violate any law or street standard. On-street parking for commercial uses shall conform to the following standards:

a. Dimensions. The following constitutes one on-street parking space:

1. Parallel parking, each [22] feet of uninterrupted and available curb;

2. [45/60] degree diagonal, each with [15] feet of curb;

3. 90 degree (perpendicular) parking, each with [12] feet of curb.

4. Public Use Required for Credit. On-street parking spaces counted toward meeting the parking requirements of a specific use may not be used exclusively by that use, but shall be available for general public use at all times. Signs or other actions that limit general public use of on-street spaces are prohibited.

On-Street Parking not considered in parking counts.

17.52.030 Standards for Automobile Parking.

A. Access. Ingress and egress locations on public thoroughfares shall be located in the interests of public traffic safety. Groups of more than four parking spaces shall be so located and served by driveways so that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley. No driveway with a slope of greater than fifteen percent shall be permitted without approval of the city engineer.
Access for new parking is located along High School Avenue and will not require maneuvering in the street right-of-way. Driveways will conform to City standards.

B. Surfacing. Required off-street parking spaces and access aisles shall have paved surfaces adequately maintained. The use of pervious asphalt/concrete and alternative designs that reduce storm water runoff and improve water quality pursuant to the city's Stormwater and Low Impact Development Design Standards are encouraged.
Proposed paved surfaces will be concrete or asphalt paving, see LUC1.2 for pavement sections. Pervious asphalt/concrete is not being proposed.

C. Drainage. Drainage shall be designed in accordance with the requirements of Chapter 13.12 and the city public works stormwater and grading design standards.
Refer to Civil Drawings LUC1.1 and LUC1.2 for grading/drainage design.

D. Dimensional Standards.

1. **Requirements for parking developed at varying angles are according to the table included in this section. A parking space shall not be less than seven feet in height when within a building or structure, and shall have access by an all-weather surface to a street or alley. Parking stalls in compliance with the American with Disabilities Act may vary in size in order to comply with the Building Division requirements. Up to 35% of the minimum required parking may be compact, while the remaining required parking stalls are designed to standard dimensions. The Community Development Director may approve alternative dimensions for parking stalls in excess of the minimum requirement which comply with the intent of this chapter.**
New parking for staff and vistors of the Transportation Maintenance Facility are 90 degree standard sized spaces and are 9 feet wide x 19 feet long. Perimeter parking stalls are 17'-6" long with a 1'-6" overhang into the landscaped area/sidewalk. In addition required ADA accessible parking spaces are provided complying with ADA and Building Division dimensional requirements. Compact spaces are not provided. Aisle widths are 24 feet minimum.

2. **Alternative parking/ plan. Any applicant may propose an alternative parking plan. Such plans are often proposed to address physically constrained or smaller sites, however innovative designs for larger sites may also be considered. In such situations, the Community Development Director may approve an alternative parking lot plan with variations to parking dimensions of this section. The alternative shall be consistent with the intent of this chapter and shall create a safe space for automobiles and pedestrians while providing landscaping to the quantity and quality found within parking lot landscaping requirements.**

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

PARKING STANDARD
PARKING ANGLE SPACE DIMENSIONS

A Parking Angle		B Stall Width	C Stall to Curb	D Aisle Width	E Curb Length	F Overhang
0 degrees		8.5	9.0	12	20	0
30 degrees	Standard Compact	9' 8'	17.3' 14.9'	11' 11'	18' 16'	
45 degrees	Standard Compact	8.5 8.5	19.8' 17.0'	13' 13'	12.7' 11.3'	1.4
60 degrees	Standard Compact	9' 8'	21' 17.9'	18' 16'	10.4' 9.2'	1.7
90 degrees	Standard Compact	9' 8'	19.0' 16.0'	24' 22'	9' 8'	1.5

NOTE: Overhang dimensions are intended to indicate possible location from parking area edge for location of bumpers.
Parking lot dimensions comply with above dimensions highlighted in yellow.

E. Carpool and Vanpool Parking. New developments with seventy-five or more parking spaces, and new hospitals, government offices, group homes, nursing and retirement homes, schools and transit park-and-ride facilities with fifty or more parking spaces, shall identify the spaces available for employee, student and commuter parking and designate at least 5%, but not fewer than two, of those spaces for exclusive carpool and vanpool parking. Carpool and vanpool parking spaces shall be located closer to the main employee, student or commuter entrance than all other employee, student or commuter parking spaces with the exception of ADA accessible parking spaces. The carpool/vanpool spaces shall be clearly marked "Reserved - Carpool/Vanpool Only."
Carpool/vanpool spaces will be marked at the Staff/Visitor parking lot at the Transportation Maintenance Facility.

Carpool and Vanpool Parking calculated as follows:

HIGH SCHOOL SITE
5% OF SUM OF EMPLOYEES+STUDENTS+COMMUTERS
152 FACULTY + 700 STUDENTS = 852 x .05 = 42.6 — *43 Spaces*

PHASE 1 PROVIDED CARPOOL/VANPOOL PARKING — *1 Space*
PHASE 2-4 PROVIDED CARPOOL / VANPOOL PARKING — *43 Spaces*

TRANSPORTATION & MAINTENANCE FACILITY
5% OF SUM OF EMPLOYEES+STUDENTS+COMMUTERS
125 EMPLOYEES = 114 x .05 = 5.7

PROVIDED CARPOOL/VANPOOL PARKING — *6 Spaces*

A non-conforming condition exits at the High School parking lot due to the lack of carpool/vanpool marked spaces. This item has been identified in the Master Plan Narrative and will be brought up to conformance in Phase 2 of the proposed Master Plan.

17.52.040 Bicycle Parking Standards-

A. Purpose-Applicability. To encourage bicycle transportation to help reduce principal reliance on the automobile, and to ensure bicycle safety and security, bicycle parking shall be provided in conjunction with all uses other than single-family dwellings or duplexes.
8 bicycle parking spaces (7 required) shall be provided at the new Transportation Maintenance Facility. (4 will be covered.)

There are currently a total of 96 bicycle parking spaces at the High School. They are underutilized and do not appear to encourage bicycle ridership to any extent. The district proposes no immediate increase in spaces given there is clear evidence that there is no historic or current demand for them. The district offers to monitor bicycle ridership and to phase in additional spaces as demand increases to a level where more spaces are needed.

B. Number of Bicycle Spaces Required. For any use not specifically mentioned in Table A, the bicycle parking requirements shall be the same as the use which, as determined by the Community Development Director is most similar to the use not specifically mentioned. Calculation of the number of bicycle parking spaces required shall be determined in the manner established in Section 17.52.020 for determining automobile parking space requirements. Modifications to bicycle parking requirements may be made through the Site Plan and Design, Conditional Use, or Master Plan review process.

TABLE A Required Bicycle Parking Spaces*

Where two options for a requirement are provided, the option resulting in more bicycle parking applies. Where a calculation results in a fraction, the result is rounded up to the nearest whole number.

USE	MINIMUM BICYCLE PARKING	MINIMUM BICYCLE PARKING – COVERED – The following percentage of bicycle parking is required to be covered
Multi-family (three or more units)	1 per 10 units (minimum of 2)	50% (minimum of 1)
Institutional		
Correctional institution	1 per 15 auto spaces (minimum of 2)	30% (minimum of 1)
Nursing home or care facility	1 per 30 auto spaces (minimum of 2)	30% (minimum of 1)
Hospital	1 per 20 auto spaces (minimum of 2)	30% (minimum of 1)
Park-and-ride lot	1 per 5 auto spaces (minimum of 2)	50% (minimum of 1)
Transit center	1 per 5 auto spaces (minimum of 2)	50% (minimum of 1)
Parks and open space	1 per 10 auto spaces	0%

USE	MINIMUM BICYCLE PARKING	MINIMUM BICYCLE PARKING – COVERED – The following percentage of bicycle parking is required to be covered
	(minimum of 2)	
Public parking lots	1 per 10 auto spaces (minimum of 2)	50% (minimum of 1)
Automobile parking structures	1 per 10 auto spaces (minimum of 4)	80% (minimum of 2)
Religious institutions, movie theater, auditorium or meeting room	1 per 10 auto spaces (minimum of 2)	30% (minimum of 1)
Libraries, museums	1 per 5 auto spaces (minimum of 2)	30% (minimum of 1)
Preschool, nursery, kindergarten	2 per classroom (minimum of 2)	50% (minimum of 1)
Elementary	4 per classroom (minimum of 2)	50% (minimum of 1)
Junior high and High school	2 per classroom (minimum of 2)	50% (minimum of 2)
College, business/commercial schools	2 per classroom (minimum of 2)	50% (minimum of 1)
Swimming pools, gymnasiums, ball courts	1 per 10 auto spaces (minimum of 2)	30% (minimum of 1)
Retail stores and shopping centers	1 per 20 auto spaces (minimum of 2)	50% (minimum of 2)
Retail stores handling exclusively bulky merchandise such as automobile, boat or trailer sales or rental	1 per 40 auto spaces (minimum of 2)	0%
Bank, office	1 per 20 auto spaces (minimum of 2)	50% (minimum of 1)
Medical and dental clinic	1 per 20 auto spaces (minimum of 2)	50% (minimum of 1)
Eating and drinking establishment,	1 per 20 auto spaces (minimum of 2)	0%
Gasoline service station	1per 10 auto spaces (minimum of 2)	0%

***Covered bicycle parking is not required for developments with 2 or fewer stalls.**

Per the above, we propose providing 8 bicycle spaces at the new Transportation Maintenance Facility.

Due to the underutilization of the existing spaces at the High School, an adjustment to zoning requirements is being requested to not provide additional spaces at this time. A phased approach for adding spaces would be undertaken as bicycle ridership increases.

C. Security of Bicycle Parking

Bicycle parking facilities shall be secured. Acceptable secured bicycle parking area shall be in the form of a lockable enclosure onsite, secure room in a building onsite, a covered or uncovered rack onsite, bicycle parking within the adjacent right-of-way or another form of secure parking where the bicycle can be stored, as approved by the decision maker. All bicycle racks and lockers shall be securely anchored to the ground or to a structure. Bicycle racks shall be designed so that bicycles may be securely locked to them without undue inconvenience and, when in the right-of-way shall comply with clearance and ADA requirements.

2 stationary bicycle racks anchored to the ground will be provided at the Transportation Maintenance Facility to facilitate secure bicycle parking at that location for 8 bicycles. One rack for 4 bicycles will be provided in front of main entry at the south side of the building and one rack for 4 bicycles will be provided within the fenced compound area just outside the Drivers Break underneath a roof overhang at the west side of the building.

The bicycle racks at the High School, as noted above, provide secure parking for 96 bicycles and more than adequately meet the proven past and current demand. Refer to Exhibit E for photo documentation.

D. Bicycle parking facilities shall offer security in the form of either a lockable enclosure in which the bicycle can be stored or a stationary rack to which the bicycle can be locked. All bicycle racks and lockers shall be securely anchored to the ground or to a structure. Bicycle racks shall be designed so that bicycles may be securely locked to them without undue inconvenience.

See above information re: bicycle racks in Section C re: Security of Bicycle Parking.

Location of Bicycle Parking

1. **Bicycle parking shall be located on-site, in one or more convenient, secure and accessible location. The City Engineer and the Community Development Director may permit the bicycle parking to be provided within the right-of-way provided adequate clear zone and ADA requirements are met. If sites have more than one building, bicycle parking shall be distributed as appropriate to serve all buildings. If a building has two or more main building entrances, the review authority may require bicycle parking to be distributed to serve all main building entrances, as it deems appropriate.**

   Bicycle racks at the Transportation Maintenance Facility shall be located adjacent to the main entry on the south side of the building, as well as on the west side of the building outside Drivers Break Room underneath a roof overhang. Refer to Drawing Sheet LU0.3 Detail Development Plan for locations.

   The existing bicycle racks at the High School are located at 6 locations, 2 along the front of the High School entry to the east facing Beavercreek Road, 1 adjacent to the northwest entry, 1 adjacent to the ROTC/Shop Building, 1 adjacent to the tennis courts along parking lot #1 to the north, and 1 adjacent to the softball fields at the west end of the site along High School Ave. Refer to LU0.2 Proposed Campus Site Plan for locations.

2. **Bicycle parking areas shall be clearly marked or visible from on-site buildings or the street. If a bicycle parking area is not plainly visible from the street or main building entrance, a sign must be posted indicating the location of the bicycle parking area. Indoor bicycle parking areas shall not require stairs to access the space unless approved by the community development director.**

   Bicycle racks at the Transportation Maintenance Facility are clearly visible flanking the main building entrance and Drivers Break Room entry at the west side of the building. Refer to LU0.3 Detail Development Plan for locations.

   Existing bicycle racks at the High School are clearly visible either adjacent to a building entry, athletic facilities, or from the public right of way. Refer to LU0.2 Proposed Campus Site Plan for Locations.

3. **All bicycle parking areas shall be located to avoid conflicts with pedestrian and motor vehicle movement.**
   a. **Bicycle parking areas shall be separated from motor vehicle parking and maneuvering areas and from arterial streets by a barrier or a minimum of five feet.**

See Site Plan, LU0.3 Detail Development Plan, for locations of bicycle parking areas flanking the main entrance at the south side of the building and Drivers Break Entry at the west side of the building to the Transportation Maintenance Facility. Physical separation of the bicycle parking area from motor vehicle parking and maneuvering areas and from streets is in excess of 5 feet either by a sidewalk, landscaped area, or both.

High School bicycle parking areas are separated from motor vehicle parking and maneuvering areas and from streets by a minimum of 6'-0" wide sidewalk/landscaped area. Refer to LU0.2 Proposed Campus Site Plan for Locations.

   b. **Bicycle parking areas shall not obstruct pedestrian walkways; provided, however, that the review authority may allow bicycle parking in the right-of-way where this does not conflict with pedestrian accessibility.**

Bicycle parking areas at the Transportation Maintenance Facility flank the main building entrance and Driver's Break entrance and are located off the main sidewalk/pedestrian walkway and do not obstruct the pedestrian routes from the street sidewalks, parking lot area.

Bicycle parking areas at the High School are located as follows. (Refer to Sheet LU0.2 – Proposed Campus Site Plan.

Bike Rack #1: ***Located along the south perimeter of the main entry plaza, does not obstruct pedestrian walkways.***

Bike Rack #2: ***Located outside gymnasium between 2 sidewalks, one directly adjacent the building, the other along the bus loading/parking drive aisle, and does not obstruct pedestrian either pedestrian walkway.***

Bike Rack #3: ***Located adjacent to the northwest entrance plaza. The existing sidewalk was extended to accommodate the bike racks and does not obstruct the pedestrian walkway.***

Bike Rack #4: ***Located adjacent to the entrance to the ROTC/Shop Building. The existing sidewalk was extended to accommodate the bike racks and does not obstruct the pedestrian walkway.***

Bike Rack #5: ***Located adjacent to the existing tennis courts along parking lot #1. The existing sidewalk was extended to accommodate the bike racks and does not obstruct the pedestrian walkway.***

Bike Rack #6: ***Located on the existing approximately 10'-0" wide sidewalk between two softball fields at the west side of HS campus, this leaves at least 6'-0" for pedestrian access and does not obstruct pedestrian accessibility requirements.***

4. **Accessibility.**
   a. **Outdoor bicycle areas shall be connected to main building entrances by pedestrian accessible walkways.**

   Bicycle parking areas at the Transportation Maintenance Facility are located directly adjacent to building entrances to the south and west and will conform to accessibility walkway requirements.

   Existing High School bicycle parking areas are located on or along existing sidewalk/plaza areas and conform to accessibility requirements.

   b. Outdoor bicycle parking areas shall have direct access to a right-of-way.
   The Transportation Maintenance Facility will have direct access to the Meyers Road Extension R.O.W. as well High School Ave (Private Road) provided with a 7'-0" wide sidewalk.

   Existing bicycle parking areas at the High School site are located on or along existing access paths to surrounding Beavercreek Road, Meyers Road, and High School Ave (Private Road).

   c. Outdoor bicycle parking should be no farther from the main building entrance than the distance to the closest vehicle space, or 50 feet, whichever is less, unless otherwise determined by the community development director, city engineer, or planning commission.
   Bicycle parking areas are adjacent to the main building and drivers break entry doors at the Transportation Maintenance Facility.

   Bicycle parking areas at the High School are as follows:

   Bike Rack #1:
   Located approximately 125'-0" from main entry, closest vehicle parking stall is approximately 255'-0" from main entry.
   Bike Rack #2:
   Located within 50'-0" of gymnasium entry.
   Bike Rack #3:
   Located approximately 57'-0" from northwest entrance, closest vehicle parking stall is approximately 62'-0" from northwest entrance.
   Bike Rack #4:
   Located approximately 22'-0" from ROTC/Shop entrance, closest vehicle parking stall is approximately 10'-0" from entrance.
   Bike Rack #5:
   N/A, located adjacent to tennis court facility.
   Bike Rack #6:
   N/A, located adjacent to softball fields.

17.52.060 Parking Lot Landscaping.
Purpose. The purpose of this code section includes the following:

1. **To enhance and soften the appearance of parking lots;**
2. **To limit the visual impact of parking lots from sidewalks, streets and particularly from residential areas;**
3. **To shade and cool parking areas;**
4. **To reduce air and water pollution;**
5. **To reduce storm water impacts and improve water quality; and**
6. **To establish parking lots that are more inviting to pedestrians and bicyclists.**

Parking areas are landscaped to fulfill the above purposes at both the High School and the new proposed Transportation Maintenance Facility.

A. Development Standards

1. **The landscaping shall be located in defined landscaped areas that are uniformly distributed throughout the parking or loading area.**
   See Site Plan for landscaping at parking lots. The location and quantity of landscaped areas in the parking lot were in response to code requirements for one tree per every six parking spaces.

2. **All areas in a parking lot not used for parking, maneuvering, or circulation shall be landscaped.**
   All such areas are landscaped.

3. **Parking lot trees shall be a mix of deciduous shade trees and coniferous trees. The trees shall be evenly distributed throughout the parking lot as both interior and perimeter landscaping to provide shade.**
   The tree varieties selected for the parking lot include both deciduous and evergreen trees. The location of these trees is based on providing the optimal growing space for the tree within a parking lot designed to serve both the administrative parking and school buses. The tree variety chosen for the perimeter of the parking lot will provide screening of the parking lot and shade for perimeter areas of the project site.

4. **Required landscaping trees shall be of a minimum two-inch minimum caliper size (though it may not be standard for some tree types to be distinguished by caliper), planted according to American Nurseryman Standards, and selected from the Oregon City Street Tree List;**

   All trees are 2 inch minimum caliper size or 6-8 ft. in height for evergreen trees and will be planted according to American Nurseryman Standards. All specified trees are from the Oregon City Street Tree List and are identified on the accompanying Landscape Drawings (Sheet L1.0 – Planting Schedule and Notes and Sheet L1.1 Planting Plan).

5. **Landscaped areas shall include irrigation systems unless an alternate plan is submitted, and approved by the Community Development Director, that can demonstrate adequate maintenance**
   All landscaped areas will be irrigated by an automatically computer controlled irrigation system.

6. **All plant materials, including trees, shrubbery and ground cover should be selected for their appropriateness to the site, drought tolerance, year-round greenery and coverage and staggered flowering periods. Species found on the Oregon City Native Plant List are strongly encouraged and species found on the Oregon City Nuisance Plant List are prohibited.**
   All the plant varieties are horticulturally appropriate for this site and after a period of establishment, all plants would tolerate periods of drought. Other than the deciduous trees, all plants will provide year round greenery. Flowering plants have been avoided on this site since the litter from flowers or subsequent seed pods create litter that would increase the maintenance of the site.

7. **The landscaping in parking areas shall not obstruct lines of sight for safe traffic operation and shall comply with all requirements of Chapter 10.32, Traffic Sight Obstructions.**
   The trees in the parking areas will be branched at 6 ft. and have been off-set from streetlights, hydrants and intersection in response to the clearance distance parameters as noted in Ord. No. 08-1014,7-12009.

8. **Landscaping shall incorporate design standards in accordance with Chapter 13.12, Stormwater Management.**
   Landscaping shall incorporate the design standards in accordance with Chapter 13.12.

B. Perimeter Parking Lot Landscaping and Parking Lot Entryway/Right-of-Way Screening. Parking lots shall include a 5-foot wide landscaped buffer where the parking lot abuts the right-of-way and/or adjoining properties. In order to provide connectivity between non-single-family sites, the Community Development Director may approve an interruption in the perimeter parking lot landscaping for a single driveway where the parking lot abuts property designated as multi-family, commercial or industrial. Shared driveways and parking aisles that straddle a lot line do not need to meet perimeter landscaping requirements.

5 foot minimum landscaped buffers provided abutting the Meyers Road right-of-way and adjoin properties to the north and west.

1. The perimeter parking lot are shall include:

a. Trees spaced a maximum of thirty-five feet apart (minimum of one tree on either side of the entryway is required). When the parking lot is adjacent to a public right-of-way, the parking lot trees shall be offset from the street trees;

The street trees along public roads are spaced at 30 ft. on center and the trees along the property lines are spaced at 20 ft. on center.

b. Ground cover, such as wild flowers, spaced a maximum of 16-inches on center covering one hundred percent of the exposed ground within 3 years. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees; and

Groundcovers shall not be space more than 16 inches on center and shall cover 100% of the exposed ground within 3 years. No bark shall be used except under the canopy of shrubs or within two feet of the trees trunk.

c. An evergreen hedge screen of thirty to forty-two inches high or shrubs spaced no more than four feet apart on average. The hedge/shrubs shall be parallel to and not nearer than two feet from the right-of-way line. The required screening shall be designed to allow for free access to the site and sidewalk by pedestrians. Visual breaks, no more than five feet in width, shall be provided every thirty feet within evergreen hedges abutting public right-of-ways.

An evergreen hedge or shrubs shall be planted no less than 4 ft. on center along the interior right of way lines.

C. Parking Area/Building Buffer. Parking areas shall be separated from the exterior wall of a structure, exclusive of pedestrian entranceways or loading areas, by one of the following:

1. Minimum five-foot wide landscaped planter strip (excluding areas for pedestrian connection) abutting either side of a parking lot sidewalk with:
a. Trees spaced a maximum of thirty-five feet apart;
b. Ground cover such as wild flowers, spaced a maximum of 16-inches on center covering one hundred percent of the exposed ground within three years. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees; and
c. An evergreen hedge of thirty to forty-two inches or shrubs placed no more than four feet apart on average; or
2. Seven-foot sidewalks with shade trees spaced a maximum of thirty-five feet apart in three-foot by five-foot tree wells.

An 11'-6" wide landscaped planter will be provided between the building and the parking lot sidewalk to the south. All landscape conditions will be met as noted above.

D. Interior Parking Lot Landscaping. Surface parking lots shall have a minimum ten percent of the interior of the gross area of the parking lot devoted to landscaping to improve the water quality, reduce storm water runoff, and provide pavement shade. Interior parking lot landscaping shall not be counted toward the fifteen percent minimum total site landscaping required by Section 17.62.050(1) unless otherwise permitted by the dimensional standards of the underlying zone district. Pedestrian walkways or any impervious surface in the landscaped areas are not to be counted in the percentage. Interior parking lot landscaping shall include:

- **a. A minimum of one tree per six parking spaces.**
- **b. Ground cover, such as wild flowers, spaced a maximum of 16-inches on center covering one hundred percent of the exposed ground within three years. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees.**
- **c. Shrubs spaced no more than four feet apart on average.**
- **d. No more than eight contiguous parking spaces shall be created without providing an interior landscape strip between them. Landscape strips shall be provided between rows of parking shall be a minimum of six feet in width and a minimum of 10 feet in length.**
- **e. Pedestrian walkways shall have shade trees spaced a maximum of every thirty-five feet in a minimum three-foot by five-foot tree wells; or**
  Trees spaced every thirty-five feet, shrubs spaced no more than four feet apart on average, and ground cover covering one hundred percent of the exposed ground. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees.

All of the interior parking lot landscaping standards noted above will be met. Refer to LUA0.2 Proposed Campus Site Plan for interior parking lot landscape calculations.

E. Installation.

1. **All landscaping shall be installed according to accepted planting procedures, according to American Nurseryman Standards.**
2. **The site, soils and proposed irrigation systems shall be appropriate for the healthy and long-term maintenance of the proposed plant species.**
3. **Certificates of occupancy shall not be issued unless the landscaping requirements have been met or other arrangements have been made and approved by the city, such as the posting of a surety.**

All of the installation standards noted above will be met.

CHAPTER 17.41 TREE PROTECTION

17.41.050 - Tree Protection – Compliance Options.
Applicants for review shall comply with these requirements through one or a combination of the following procedures:

A. Option 1 - Mitigation. Retention and removal of trees, with subsequent mitigation by replanting pursuant to section 17.41.060 or 17.41.070. All replanted and saved trees shall be protected by a permanent restrictive covenant or easement approved in form by the city.
All trees that are to be removed will be mitigated for, either with replanting on this site or an alternate site or by Cash-in-lieu of planting.

B. Option 2 – Dedicated Tract. Protection of trees or groves by placement in a tract within a new subdivision or partition plat pursuant to sections 17.41.080-100; or

C. Option 3 – Restrictive Covenant. Protection of trees or groves by recordation of a permanent restrictive covenant pursuant to section 17.41.110-120.; or

D. Option 4 - Cash-in-lieu of planting pursuant to Section 17.41.130.

A regulated tree that has been designated for protection pursuant to this section must be retained or permanently protected unless it has been determined by a certified arborist to be diseased or hazardous, pursuant to the following applicable provisions.

The Community Development Director, pursuant to a Type II procedure, may allow a property owner to cut a specific number of trees within a regulated grove if preserving those trees would:

(1) Preclude achieving 80% of minimum density with reduction of lot size; or

(2) Preclude meeting minimum connectivity requirements for subdivisions.

17.41.060 - TREE REMOVAL AND REPLANTING - MITIGATION (OPTION 1).

A. Applicants for development who select this option shall ensure that all healthy trees shall be preserved outside the construction area as defined in Chapter 17.04 to the extent practicable. Compliance with these standards shall be demonstrated in a tree mitigation plan report prepared by a certified arborist, horticulturalist or forester or other environmental professional with experience and academic credentials in forestry or arborculture. At the applicant's expense, the City may require the report to be reviewed by a consulting arborist. The number of replacement trees required on a development site shall be calculated separately from, and in addition to, any public or street trees in the public right-of-way required under section 12.08 – Community Forest and Street Trees.

B. The applicant shall determine the number of trees to be mitigated on the site by counting all of the trees 6" DBH (minimum 4.5 feet from the ground) or larger on the entire site and either:

(1) Trees that are removed *outside* of the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Trees that are removed *within* the construction area shall be replanted with the number of replacement trees required in Column 2; or

No trees outside of the construction area will be removed.

(2) Diseased or hazardous trees, when the condition is verified by a certified arborist to be consistent with the definition in Section 17.04.1360, may be removed from the tree replacement calculation. Regulated healthy trees that are removed *outside of* the construction area, shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Regulated healthy trees that are removed *within* the construction area shall be replanted with the number of replacement trees required in Column 2.

A certified arborist has determined the condition of all existing trees noting if they are diseased or hazardous. (Refer to Exhibit F.) Mitigation trees will be planted in quantities as noted in the associated table.

Diseased and hazardous trees have been removed from the tree replacement calculation. No trees outside of the construction area will be removed. The quantity of replacement trees was calculated using the calculations noted in Column 2.

Table 17.41.060-1
Tree Replacement Requirements
All replacement trees shall be either:
2 inch caliper deciduous, or
6 foot high conifer

Size of tree removed (DBH)	Column 1 Number of trees to be planted. (If removed Outside of construction area)	Column 2 Number of trees to be planted. (If removed Within the construction area)
6 to 12"	3	1
13 to 18"	6	2
19 to 24"	9	3
25 to 30"	12	4
31 and over"	15	5

Steps for calculating the number of replacement trees:

1. **Count all trees measuring 6" DBH (minimum 4.5 feet from the ground) or larger on the entire development site.**
2. **Designate (in certified arborists report) the condition and size (DBH) of all trees pursuant to accepted industry standards.**
3. **Document any trees that are currently diseased or hazardous.**
4. **Subtract the number of diseased or hazardous trees in step (3) from the total number of trees on the development site in step (1). The remaining number is the number of healthy trees on the site. Use this number to determine the number of replacement trees in steps (5) through (8).**
5. **Define the construction area (as defined in Chapter 17.04)**
6. **Determine the number and diameter of trees to be removed within the construction area. Based on the size of each tree, use Column 2 to determine the number of replacement trees required.**
7. **Determine the number and diameter of trees to be removed outside of the construction area. Based on the size of each tree, use Column 1 to determine the number of replacement trees required.**
8. **Determine the total number of replacement trees from steps (6) and (7).**

See ADDENDUM E – TREE MITIGATION TABLE.

17.41.070 – Planting Area Priority for Mitigation (Option 1).
Development applications which opt for removal of trees with subsequent replanting pursuant to section 17.41.050(A) shall be required to mitigate for tree cutting by complying with the following priority for replanting standards below:

A. First Priority. Replanting on the development site.
New trees will be planted on the Transportation Maintenance Facility Site. See Drawing Sheets L1.0 – Planting Schedule and Notes and L1.1 – Planting Plan. 273 trees will be planted on this site.

B. Second Priority. Off-site Replacement Tree Planting Locations. If the Community Development Director determines that it is not practicable to plant the total number of replacement trees on-site, a suitable off-site planting location for the remainder of the trees may be approved that will reasonably satisfy the objectives of this section. Such locations may include either publicly owned or private land and must be approved by the Community Development Director.
Off-Site Planting Locations include the following; see attached Landscape Plans:

- ***a. On High School Site (See attached Sheet L1.2 - Tree Mitigation Plan – High School Site for tree planting plan, species, sizes and quantities.) 124 trees will be planted at this site.***
- ***b. At north, east and west perimeters of Holcomb Elementary School. (See attached Sheet L1.3 - Tree Mitigation Plan – Holcomb Elementary Site for tree planting plan, species, sizes and quantities.) 113 trees will be planted at this site.***

In addition, the School District is purchasing twenty-five (1 ½" caliper) trees for the Eastham Arbor Day Event and will fund the cost of trees at the new proposed City Park located across from the new Transportation Maintenance Facility.

17.41.110. Tree Protection by Restrictive Covenant (Option 3).

Any regulated tree or grove which cannot be protected in a tract pursuant to Section 17.41.080 above shall be protected with a restrictive covenant in a format to be approved by the Community Development Director. Such covenant shall be recorded against the property deed and shall contain provisions to permanently protect the regulated tree or grove unless such tree or grove, as determined by a certified arborist and approved by the Community Development Director, are determined to be diseased or hazardous.
No healthy trees within the wetland or the 50 wetland buffer are to be removed.

17.41.120. Permitted Adjustments (Option 3 Only).

A. The Community Development Director, pursuant to a Type II procedure, may grant an adjustment to the side, front and rear yard setback standards by up to 50 percent (50%) if necessary to retain a Regulated Tree or Grove through a restrictive covenant pursuant to this section. In no case may the side yard setback be reduce less than 3 feet. The adjustment shall be the minimum necessary to accomplish preservation of trees on the lot and shall not conflict with other conditions imposed on the property.
B. The Community Developmemt Director, pursuant to a Type II procedure, may grant an adjustment to street standards, pursuant to adopted public works standards, in order to preserve a tree. This may include flexibility to redesign sidewalk and planter strip sizes and locations and allow placement of sidewalks and planter strips in an easement within private lots.
C. The Community Developmemt Director, pursuant to a Type II procedure, may allow other adjustments in order to preserve any healthy tree that cannot be moved due to its size, but will contribute to the landscape character of the area and will not present a foreseeable hazard if retained.

17.41.130 - Cash-in-lieu of Planting (Tree Bank/Fund) (Option 4)
The applicant may choose this option in-lieu-of or in addition to Compliance Options 1 through 3. In this case, the Community Development Director may approve the payment of cash-in-lieu into a dedicated fund for the remainder of trees that cannot be replanted in the manner described above.
A. The cash-in-lieu payment per tree shall be as listed on the adopted fee schedule and shall be adjusted annually based on the Consumer Price Index (Index). The price shall include the cost of materials, transportation and planting.
B. The amount of the cash-in-lieu payment into the tree bank shall be calculated as the difference between the value of the total number of trees an applicant is required to plant, including cost of installation and adjusted for Consumer Price Index, minus the value of the trees actually planted. The value of the trees shall be based on the adopted fee schedule.
As noted earlier, trees being planted at various sites include:

At Transportation Maintenance Facility Site:	***273 trees***
At Oregon City High School Site:	***124 trees***
At Holcomb Elementary School Site:	***113 trees***
Plus at Eastham Arbor Day Event:	***31.5" total; equivalent to 15.5 trees***
Plus at Future City Park:	***Number of trees to be determined***
Other Potential Site Locations:	***Currently not identified***

Cash-in-lieu payments will be made for mitigation that cannot be made by planting new trees on and off-site or by funding/donating new trees (as described above).

17.41.130. Regulated Tree Protection Procedures During Construction.

A. No permit for any grading or construction of public or private improvements may be released prior to verification by the Community Development Director that regulated trees designated for protection or conservation have been protected according to the following standards. No trees designated for removal shall be removed without prior written approval from the Community Development Director.

B. Tree protection shall be as recommended by a qualified arborist or, as a minimum, to include the following protective measures:

1. **Except as otherwise determined by the Community Development Director, all required tree protection measures set forth in this section shall be instituted prior to any development activities, including, but not limited to clearing, grading, excavation or demolition work, and such measures shall be removed only after completion of all construction activity, including necessary landscaping and irrigation installation, and any required plat, tract, conservation easement or restrictive covenant has been recorded.**
2. **Approved construction fencing, a minimum of 4 feet tall with steel posts placed no farther than ten feet apart, shall be installed at the edge of the tree protection zone or dripline, whichever is greater. An alternative may be used with the approval of the Community Development Director.**
3. **Approved signs shall be attached to the fencing stating that inside the fencing is a tree protection zone, not to be disturbed unless prior approval has been obtained from the Community Development Director.**
4. **No construction activity shall occur within the tree protection zone, including, but not limited to; dumping or storage of materials such as building supplies, soil, waste items; nor passage or parking of vehicles or equipment.**
5. **The tree protection zone shall remain free of chemically injurious materials and liquids such as paints, thinners, cleaning solutions, petroleum products, and concrete or dry wall excess, construction debris, or run-off.**
6. **No excavation, trenching, grading, root pruning or other activity shall occur within the tree protection zone unless directed by an arborist present on site and approved by the Community Development Director.**
7. **No machinery repair or cleaning shall be performed within 10 feet of the dripline of any trees identified for protection.**
8. **Digging a trench for placement of public or private utilities or other structure within the critical root zone of a tree to be protected is prohibited. Boring under or through the tree protection zone may be permitted if approved by the Community Development Director and pursuant to the approved written recommendations and on-site guidance and supervision of a Certified Arborist.**
9. **The City may require that a Certified Arborist be present during any construction or grading activities that may affect the dripline of trees to be protected.**
10. **The Community Development Director may impose conditions to avoid disturbance to tree roots from grading activities and to protect trees and other significant vegetation identified for retention from harm. Such conditions may include, if necessary, the advisory expertise of a qualified consulting arborist or horticulturist both during and after site preparation, and a special maintenance/management program to provide protection to the resource as recommended by the arborist or horticulturist.**

Construction activities will be carefully regulated and monitored by the Construction Manager/General Contractor and the School District's Design team to assure compliance with the tree protection procedures and requirements listed above.

Refer to ADDENDUM A – NROD APPLICATION AND RESPONSES TO CHAPTER 17.49 (prepared by Pacific Habitat).

C. Changes in soil hydrology due to soil compaction and site drainage within tree protection areas shall be avoided. Drainage and grading plans shall include provision to ensure that drainage of the site does not conflict with the standards of this section. Excessive site run-off shall be directed to appropriate storm drainage facilities and away from trees designated for conservation or protection.

Drainage and grading plans include provisions to ensure that site drainage will not conflict with standards of this Section. Site run-off will be directed to appropriate storm drainage facilities and away from trees.

CHAPTER 12.04 STREETS

12.04.007 Modifications.

The review body may consider modification of this standard resulting from constitutional limitations restricting the City's ability to require the dedication of property or for any other reason, based upon the criteria listed below and other criteria identified in the standard to be modified. All modifications shall be processed through a Type II Land Use application and may require additional evidence from a transportation engineer or others to verify compliance. Compliance with the following criteria is required:

A. The modification meets the intent of the standard;

B. The modification provides safe and efficient movement of pedestrians, motor vehicles, bicyclists and freight;

C. The modification is consistent with an adopted plan; and

D. The modification is complementary with a surrounding street design; or, in the alternative,

E. If a modification is requested for constitutional reasons, the applicant shall demonstrate the constitutional provision or provisions to be avoided by the modification and propose a modification that complies with the state or federal constitution. The City shall be under no obligation to grant a modification in excess of that which is necessary to meet its constitutional obligations.

Finding: *This section contains five (5) criteria that must be suitably addressed in order for a modification of streets standards to be granted. The modification request in this regards is to allow the Meyers Road extension across the Oregon City School Transportation Facility frontage to largely match in terms of elements and width those frontage improvements that currently exist for Meyers Road along the remainder of the School's frontage. Specifically the following modifications to minor arterial street standard are requested: A reduced right-of-way width from the standard of 118 feet to 92 feet (46 foot half right-of-way width); pavement width from the standard of 86 feet to 60 feet (via having a 3 lane section rather than a 5 lane section); and reduce the width of the travel lanes to 11 feet to match the existing lane widths on the existing portion of Meyers. The criteria for modifications are noted below:*

A. *Modification meets the intent of the standard. The main adjustment to the standard (Industrial Minor Arterial) is the elimination of two travel lanes, reducing the number of travel lanes from 4 to 2. While this particular section of Meyers Road may be labeled as an Industrial Minor Arterial, that portion from Beavercreek Road to the current east line of Oregon City High School site, on the north side, and through the future Glen Oak Park, on the south side, is noted as a Residential Minor Arterial area according Figure 8 (Multi-Modal Street System) per the Oregon City Transportation Master Plan. As all of Meyers Road constructed thus far, from Beavercreek west to the east lines of the School District Transportation facility site and the future Glen Oak park site, is currently either 3 lane, or 2 lanes with a median, having 3 lanes across the frontage of the Transportation facility site better matches the existing section of Meyers Road and provides all the elements of the Minor Arterial Street less the two extra lanes noted for an Industrial Minor Arterial. The other adjustment would be to reduce the width of each travel lane by one foot.*

The existing section of Meyers Road along the High School frontage has three 11 foot wide travel and turn lanes, 5 foot wide bike lanes and 8 foot wide parallel parking stalls for a total of 59 feet. Per the new standard the parallel parking stalls would be reduced to 7 feet and the extra foot added to the bike lanes. The travel lanes would be 11 feet and the turn lane 12 feet wide. The intent would be from curb to curb to closely match the present width of Meyers Road along the High School ball fields where parallel parking on both sides of the street currently exists, although the new extension would be a foot wider.
The right-of-way for Meyers Road though will be significantly wider than exists along the ball fields, as street planter strip between the curb and sidewalk will be provided. The proposed modifications will meet the intent of the standard while better matching the existing Meyers Road improvements.

B. ***The modification provides safe and efficient movement of pedestrians, motor vehicles, bicyclist and freight. The modification will provide safe movement for all elements although the travel lanes would be one foot slimmer than the standard, but matching what presently exists along Meyers Road.***

C. ***The modification is consistent with an adopted plan; The Transportation Master Plan notes that this section of Meyers Road as being on the border between Residential and Industrial street types. While a section of the TSP notes that this section of street improvement as an Industrial Minor Street (per TM #11 Planned and Financially Constrained Transportation Systems – Table 1 Item D-46), Figure 8 (Multi-Modal Street System) of the TSP provides some argument that the Residential Minor Arterial street section is more appropriate. Other than the street being 3 lane rather than 5 lane and the travel lanes being a foot narrower all the elements of the street standards for a public street are to be installed and thus will be consistent the Transportation Master Plan.***

D. ***The modification is complementary with a surrounding street design. The reason of the modification in large part is make the street more complementary with the previously constructed portion of Meyers Road. To construct a 5 lane wide street section that would then reduce to a 3 lane section at High School Avenue would seem to work against the intent of Item B above with respect to safe movement of vehicles, as merging lanes would be necessary for traffic proceeding east on Meyers Road, if such a condition existed.***

E. ***If a modification is requested for constitutional reasons… A modification for constitutional reasons is not requested.***

The intent of the request is to have a street section more in fitting with the existing section of the Meyers Road to the east where the High School lies to the north and residential areas and ball fields lie to the south. This portion of Meyers Road will have a City Park to the south and the proposed School District Transportation Facility to the north, more in character with the existing section of Meyers Road than an Industrial use area.

We cannot predict what may eventually develop to the west of City Park and the proposed Transportation Facility but if a 5 lane wide street seems appropriate to for the future development between west boundaries of the City Park and School District site to Hwy 213 the City will have means to require it. However, in terms of impacts to the street system of the proposed use of this application, the future City Park improvements immediately to the south, and current uses to the east, it does not seem appropriate, nor safe, to have such a wide street section for this approximately 500 foot extension of Meyers Road.

12.04.025 - Street design—Driveway Curb Cuts.
12.04.025.A. One driveway shall be allowed per frontage. In no case shall more than two driveways be allowed on any single or two-family residential property with multiple frontages.
An access control strip will be provided to the City if such is requested, and not located on residential property.

12.04.180 Street Design.
All development regulated by this Chapter shall provide street improvements in compliance with the standards in Figure 12.04.180 depending on the street classification set forth in the Transportation System Plan and the Comprehensive Plan designation of the adjacent property, unless an alternative plan has been adopted. The standards provided below are maximum design standards and may be reduced with an alternative street design which may be approved based on the modification criteria in 12.04.007. The steps for reducing the maximum design below are found in the Transportation System Plan.
See Civil Drawings for Street Design of Meyers Road extension.

Table 12.04.180 Street Design
To read the table below, select the road classification as identified in the Transportation System Plan and the Comprehensive Plan designation of the adjacent properties to find the maximum design standards for the road cross section. If the Comprehensive Plan designation on either side of the street differs, the wider right-of-way standard shall apply.

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Major Arterial	Mixed Use, Commercial or Public/Quasi Public	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	Industrial	120 ft.	88 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	N/A	(5) 14 ft. Lanes	6 ft.
	Residential	126 ft.	94 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Minor Arterial	Mixed Use, Commercial or Public/Quasi Public	116 ft.	94 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(5) 12 ft. Lanes	6 ft.
	Industrial	118 ft.	86 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(5) 12 ft. Lanes	N/A
	Residential	100 ft.	68 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	6 ft.
Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Collector	Mixed Use, Commercial or Public/Quasi Public	86 ft.	64 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		6 ft.	8 ft.	(3) 12 ft. Lanes	N/A
	Industrial	88 ft.	62 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	N/A
	Residential	85 ft.	59 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 11 ft. Lanes	N/A
Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
Local	Mixed Use, Commercial or Public/Quasi Public	62 ft.	40 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft.x5 ft. tree wells		N/A	8 ft.	(2) 12 ft. Lanes	N/A

	Industrial	60 ft.	38 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 19 ft. Shared Space	N/A
	Residential	54 ft.	32 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 16 ft. Shared Space	N/A

1. Pavement width includes, bike lane, street parking, travel lanes and median.
2. Public access, sidewalks, landscape strips, bike lanes and on-street parking are required on both sides of the street in all designations. The right-of-way width and pavement widths identified above include the total street section.
3. A 0.5[2] foot curb is included in landscape strip or sidewalk width.
4. Travel lanes may be through lanes or turn lanes.
5. The 0.5[2] foot public access provides access to adjacent public improvements.
6. Alleys shall have a minimum right-of-way width of 20 feet and a minimum pavement width of 16 feet. If alleys are provided, garage access shall be provided from the alley.

12.04.185 Street Design--Access Control.

A. A street which is dedicated to end at the boundary of the development or in the case of half-streets dedicated along a boundary shall have an access control granted to the City as a City controlled plat restriction for the purposes of controlling ingress and egress to the property adjacent to the end of the dedicated street. The access control restriction shall exist until such time as a public street is created, by dedication and accepted, extending the street to the adjacent property.

B. The City may grant a permit for the adjoining owner to access through the access control.

C. The plat shall contain the following access control language or similar on the face of the map at the end of each street for which access control is required: "Access Control (See plat restrictions)."
Not applicable as a plat will not be required.

D. Said plats shall also contain the following plat restriction note(s): "Access to (name of street or tract) from adjoining tracts (name of deed document number[s]) shall be controlled by the City of Oregon City by the recording of this plat, as shown. These access controls shall be automatically terminated upon the acceptance of a public road dedication or the recording of a plat extending the street to adjacent property that would access through those Access Controls."
Not applicable as a plat will not be required.

12.04.190 Street Design--Alignment.
The centerline of streets shall be:

A. Aligned with existing streets by continuation of the centerlines; or
The proposed Meyers Road centerline will align with the existing Meyers Road centerline at Meyers Road and High School Avenue. There is however proposed a small angle deflection at the centerline-centerline intersection to accommodate the City Park's needs.

B. Offset from the centerline by no more than five (5) feet, provided appropriate mitigation, in the judgment of the City Engineer, is provided to ensure that the offset intersection will not pose a safety hazard.
No offset is proposed.

12.04.194 Traffic Sight Obstructions
All new streets shall comply with the Traffic Sight Obstructions in Chapter 10.32.
The new street will comply with the Traffic Sight Obstructions.

12.04.195 Spacing Standards.

A. All new streets shall be designed as local streets unless otherwise designated as arterials and collectors in Figure 8 in the Transportation System Plan. The maximum block spacing between streets is 530 feet and the minimum block spacing between streets is 150 feet as measured between the right-of-way centerlines. If the maximum block size is exceeded, pedestrian accessways must be provided every 330 feet. The spacing standards within this section do not apply to alleys.
Meyers Road is designated as an arterial.

B.* All new development and redevelopment shall meet the minimum driveway spacing standards identified in Table 12.04.195.B.** ***The minimum driveway spacing will be met.

Table 12.04.195.B Minimum Driveway Spacing Standards		
Street Functional Classification	**Minimum Driveway Spacing Standards**	**Distance**
Major Arterial Streets	**Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings**	**175 ft.**
Minor Arterial Streets	**Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings**	**175 ft.**
Collector Streets	**Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings**	**100 ft.**
Local Streets	**Minimum distance from a street corner to a driveway for all uses and Minimum distance between driveways for uses other than single and two-family dwellings**	**25 ft.**
The distance from a street corner to a driveway is measured along the right-of-way from the edge of the intersection right-of-way to the nearest portion of the driveway and the distance between driveways is measured at the nearest portions of the driveway at the right-of-way.		

12.04.199 Pedestrian and Bicycle Accessways

Pedestrian/bicycle accessways are intended to provide direct, safe and convenient connections between residential areas, retail and office areas, institutional facilities, industrial parks, transit streets, neighborhood activity centers, rights-of-way, and pedestrian/bicycle accessways which minimize out-of-direction travel, and transit-orientated developments where public street connections for automobiles, bicycles and pedestrians are unavailable. Pedestrian/bicycle accessways are appropriate in areas where public street options are unavailable, impractical or inappropriate. Pedestrian and bicycle accessways are required through private property or as right-of-way connecting development to the right-of-way at intervals not exceeding three-hundred-and-thirty feet of frontage; or where the lack of street continuity creates inconvenient or out of direction travel patterns for local pedestrian or bicycle trips.

A. Entry points shall align with pedestrian crossing points along adjacent streets and with adjacent street intersections.

B. Accessways shall be free of horizontal obstructions and have a nine-foot, six-inch high vertical clearance to accommodate bicyclists. To safely accommodate both pedestrians and bicycles, accessway right-of-way widths shall be as follows:

1. **Accessways shall have a fifteen-foot-wide right-of-way with a seven-foot wide paved surface between a five foot planter strip and a three foot planter strip.**
2. **If an accessway also provides secondary fire access, the right-of-way width shall be at least twenty-three feet wide with a fifteen-foot paved surface a five foot planter strip and a three foot planter strip.**

C. Accessways shall be direct with at least one end point of the accessway always visible from any point along the accessway. On-street parking shall be prohibited within fifteen feet of the intersection of the accessway with public streets to preserve safe sight distance and promote safety.

D. To enhance pedestrian and bicycle safety, accessways shall be lighted with pedestrian-scale lighting. Accessway lighting shall be to a minimum level of one-half foot-candles, a one and one-half foot-candle average, and a maximum to minimum ratio of seven-to-one and shall be oriented not to shine upon adjacent properties. Street lighting shall be provided at both entrances.

E. Accessways shall comply with Americans with Disabilities Act (ADA).

F. The planter strips on either side of the accessway shall be landscaped along adjacent property by installation of the following:

1. **Within the three foot planter strip, an evergreen hedge screen of thirty to forty-two inches high or shrubs spaced no more than four feet apart on average;**
2. **Ground cover covering one hundred percent of the exposed ground. No bark mulch shall be allowed except under the canopy of shrubs and within two feet of the base of trees;**
3. **Within the five foot planter strip, two-inch minimum caliper trees with a maximum of thirty-five feet of separation between the trees to increase the tree canopy over the accessway;**
4. **In satisfying the requirements of this section, evergreen plant materials that grow over forty-two inches in height shall be avoided. All plant materials shall be selected from the Oregon City Native Plant List.**

G. Accessways shall be designed to prohibit unauthorized motorized traffic. Curbs and removable, lockable bollards are suggested mechanisms to achieve this.

H. Accessway surfaces shall be paved with all-weather materials as approved by the city. Pervious materials are encouraged. Accessway surfaces shall be designed to drain stormwater runoff to the side or sides of the accessway. Minimum cross slope shall be two percent.

I. In parks, greenways or other natural resource areas, accessways may be approved with a five-foot wide gravel path with wooden, brick or concrete edgings .

J. The Community Development Director may approve an alternative accessway design due to existing site constraints through the modification process set forth in Section 12.04.007.

K. Ownership, liability and maintenance of accessways.

To ensure that all pedestrian/bicycle accessways will be adequately maintained over time, the hearings body shall require one of the following:

1 **Dedicate the accessways to the public as public right-of-way prior to the final approval of the development; or**
2 **The developer incorporates the accessway into a recorded easement or tract that specifically requires the property owner and future property owners to provide for the ownership, liability and maintenance of the accessway.**

Because public street connections for automobiles, bicycles and pedestrians are available, no Pedestrian and Bicycle Accessways are proposed. These existing connections will be extended insofar as the Meyers Road Extension includes a sidewalk on the north side of Meyers Road and bike lanes as shown on the Meyers Road Typical Section shown on Drawing LU C1.2.

12.04.205 Mobility Standards.

Development shall demonstrate compliance with intersection mobility standards. When evaluating the performance of the transportation system, the City of Oregon City requires all intersections, except for the facilities identified in subsection D below, to be maintained at or below the following mobility standards during the two-hour peak operating conditions. The first hour has the highest weekday traffic volumes and the second hour is the next highest hour before or after the first hour. Except as provided otherwise below, this may require the installation of mobility improvements as set forth in the Transportation System Plan or as otherwise identified by the City Transportation Engineer.

A. For intersections within the Regional Center, the following mobility standards apply:
   1. During the first hour, a maximum v/c ratio of 1.10 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.
   2. During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.
   3. Intersections located on the Regional Center boundary shall be considered within the Regional Center.

B. For intersections outside of the Regional Center but designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:
   1. During the first hour, a maximum v/c ratio of 0.99 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.
   2. During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.

C. For intersections outside the boundaries of the Regional Center and not designated on the Arterial and Throughway Network, as defined in the Regional Transportation Plan, the following mobility standards apply:
   1. For signalized intersections:
      a. During the first hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.
      b. During the second hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.
   2. For unsignalized intersections outside of the boundaries of the Regional Center:
      a. For unsignalized intersections, during the peak hour, all movements serving more than 20 vehicles shall be maintained at LOS "E" or better. LOS "F" will be tolerated at movements serving no more than 20 vehicles during the peak hour.

D. Until the City adopts new performance measures that identify alternative mobility targets, the City shall exempt proposed development that is permitted, either conditionally, outright, or through detailed development master plan approval, from compliance with the above-referenced mobility standards for the following state-owned facilities:
   I-205 / OR 99E Interchange
   I-205 / OR 213 Interchange

OR 213 / Beavercreek Road
State intersections located within or on the Regional Center Boundaries

1. **In the case of conceptual development approval for a master plan that impacts the above references intersections:**
   a. **The form of mitigation will be determined at the time of the detailed development plan review for subsequent phases utilizing the Code in place at the time the detailed development plan is submitted; and**
   b. **Only those trips approved by a detailed development plan review are vested.**
2. **Development which does not comply with the mobility standards for the intersections identified in 12.04.205.D shall provide for the improvements identified in the Transportation System Plan (TSP) in an effort to improve intersection mobility as necessary to offset the impact caused by development. Where required by other provisions of the Code, the applicant shall provide a traffic impact study that includes an assessment of the development's impact on the intersections identified in this exemption and shall construct the intersection improvements listed in the TSP or required by the Code.**
   Refer to Addendum D - Final Traffic Impact Study. The relevant standards are referenced in the report with results from the operational analysis showing that the performance standards are being met.

12.04.210 Street design--Intersection Angles. ***The acute angle of deflection at Meyers Road at High School Avenue will be greater than 80 degrees.***
Except where topography requires a lesser angle, streets shall be laid out to intersect at angles as near as possible to right angles. In no case shall the acute angles be less than eighty degrees unless there is a special intersection design. An arterial or collector street intersecting with another street shall have at least one hundred feet of tangent adjacent to the intersection unless topography requires a lesser distance. Other streets, except alleys, shall have at least fifty feet of tangent adjacent to the intersection unless topography requires a lesser distance. ***(One hundred feet of tangent will be provided.)*** **All street intersections shall be provided with a minimum curb return radius of twenty-five feet for local streets.** ***A curb radius of at least 25 feet will be provided.*** **Larger radii shall be required for higher street classifications as determined by the city engineer. Additional right-of-way shall be required to accommodate curb returns and sidewalks at intersections. Ordinarily, intersections should not have more than two streets at any one point.**
See above notes in red.

12.04.215 Street design--Off-Site Street Improvements.
During consideration of the preliminary plan for a development, the decision maker shall determine whether existing streets impacted by, adjacent to, or abutting the development meet the city's applicable planned minimum design or dimensional requirements. Where such streets fail to meet these requirements, the decision-maker shall require the applicant to make proportional improvements sufficient to achieve conformance with minimum applicable design standards required to serve the proposed development.

12.04.220 Street Design--Half Street.

Half streets, while generally not acceptable, may be approved where essential to the development, when in conformance with all other applicable requirements, and where it will not create a safety hazard. When approving half streets, the decision maker must first determine that it will be practical to require the dedication of the other half of the street when the adjoining property is divided or developed. Where the decision maker approves a half street, the applicant must construct an additional ten feet of pavement width so as to make the half street safe and usable until such time as the other half is constructed. Whenever a half street is adjacent to property capable of being divided or developed, the other half of the street shall be provided and improved when that adjacent property divides or develops. Access Control may be required to preserve the objectives of half streets.

When the remainder of an existing half-street improvement is made it shall include the following items: dedication of required right-of-way, construction of the remaining portion of the street including pavement, curb and gutter, landscape strip, sidewalk, street trees, lighting and other improvements as required for that particular street. It shall also include at a minimum the pavement replacement to the centerline of the street. Any damage to the existing street shall be repaired in accordance with the City's "Moratorium Pavement Cut Standard" or as approved by the City Engineer.
A half street + plus 10 feet of improvement is proposed for the Meyers Road frontage unless the City Parks Department is able to fund the completion of their half street improvement.

12.04.225 Street Design--Cul-de-sacs and Dead-End Streets. The city discourages the use of cul-de-sacs and permanent dead-end streets except where construction of a through street is found by the decision maker to be impracticable due to topography or some significant physical constraint such as geologic hazards, wetland, natural or historic resource areas, dedicated open space, existing development patterns, arterial access restrictions or similar situation as determined by the Community Development Director. When permitted, access from new cul-de-sacs and permanent dead-end streets shall be limited to a maximum of 25 dwelling units and a maximum street length of two hundred feet, as measured from the right-of-way line of the nearest intersecting street to the back of the cul-de-sac curb face. In addition, cul-de-sacs and dead end roads shall include pedestrian/bicycle accessways as required in this Chapter. This section is not intended to preclude the use of curvilinear eyebrow widening of a street where needed.
Where approved, cul-de-sacs shall have sufficient radius to provide adequate turn-around for emergency vehicles in accordance with Fire District and City adopted street standards. Permanent dead-end streets other than cul-de-sacs shall provide public street right-of-way / easements sufficient to provide turn-around space with appropriate no-parking signs or markings for waste disposal, sweepers, and other long vehicles in the form of a hammerhead or other design to be approved by the decision maker. Driveways shall be encouraged off the turnaround to provide for additional on-street parking space.
No cul-de-sac or permanent dead end street is proposed.

12.04.230 Street Design--Street Names.
Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street. Street names shall conform to the established standards in the City and shall be subject to the approval of the City.
No new street names are proposed.

12.04.235 Street Design--Grades and Curves.
Grades and center line radii shall conform to the standards in the City's street design standards and specifications.
Grades and Street will conform to City standards.

12.04.240 Street Design--Development Abutting Arterial or Collector Street.
Where development abuts or contains an existing or proposed arterial or collector street, the decision maker may require: access control; screen planting or wall contained in an easement or otherwise protected by a restrictive covenant in a form acceptable to the decision maker along the rear or side property line; or such other treatment it deems necessary to adequately protect residential properties or afford separation of through and local traffic. Reverse frontage lots with suitable depth may also be considered an option for residential property that has arterial frontage. Where access for development abuts and connects for vehicular access to another jurisdiction's facility then authorization by that jurisdiction may be required.

12.04.245 Street Design--Pedestrian and Bicycle Safety.
Where deemed necessary to ensure public safety, reduce traffic hazards and promote the welfare of pedestrians, bicyclists and residents of the subject area, the decision maker may require that local streets be so designed as to discourage their use by nonlocal automobile traffic.

All crosswalks shall include a large vegetative or sidewalk area which extends into the street pavement as far as practicable to provide safer pedestrian crossing opportunities. These curb extensions can increase the visibility of pedestrians and provide a shorter crosswalk distance as well as encourage motorists to drive slower. The decision maker may approve an alternative design that achieves the same standard for constrained sites or where deemed unnecessary by the City Engineer.
See Civil Drawings for design at intersection of High School Avenue and Meyers Road.

12.04.260 Street Design--Transit.

Streets shall be designed and laid out in a manner that promotes pedestrian and bicycle circulation. The applicant shall coordinate with transit agencies where the application impacts transit streets as identified in 17.04.1310. Pedestrian/bicycle access ways shall be provided as necessary in Chapter 12.04 to minimize the travel distance to transit streets and stops and neighborhood activity centers. The decision maker may require provisions, including easements, for transit facilities along transit streets where a need for bus stops, bus pullouts or other transit facilities within or adjacent to the development has been identified.
A bike lane is proposed to be a part of the Meyers Road extension.

12.04.265 Street design--Planter Strips. ***A 10 foot planter is proposed.***
All development shall include vegetative planter strips that are five feet in width or larger and located adjacent to the curb. This requirement may be waived or modified if the decision maker finds it is not practicable. The decision maker may permit constrained sites to place street trees on the abutting private property within 10 feet of the public right-of-way if a covenant is recorded on the title of the property identifying the tree as a city street tree which is maintained by the property owner. Development proposed along a collector, minor arterial, or major arterial street may use tree wells with root barriers located near the curb within a wider sidewalk in lieu of a planter strip, in which case each tree shall have a protected area to ensure proper root growth and reduce potential damage to sidewalks, curbs and gutters.

To promote and maintain the community tree canopy adjacent to public streets, trees shall be selected and planted in planter strips in accordance with Chapter 12.08, Street Trees. Individual abutting lot owners shall be legally responsible for maintaining healthy and attractive trees and vegetation in the planter strip. If a homeowners' association is created as part of the development, the association may assume the maintenance obligation through a legally binding mechanism, e.g., deed restrictions, maintenance agreement, etc., which shall be reviewed and approved by the city attorney. Failure to properly maintain trees and vegetation in a planter strip shall be a violation of this code and enforceable as a civil infraction.
A 10 foot planter is proposed.

CHAPTER 12.08 PUBLIC AND STREET TREES

12.08.015 Street Tree Planting and Maintenance Requirements.
All new construction or major redevelopment shall provide street trees adjacent to all street frontages. Species of trees shall be selected based upon vision clearance requirements, but shall in all cases be selected from the Oregon City Street Tree List or be approved by a certified arborist. If a setback sidewalk has already been constructed or the Development Services determines that the forthcoming street design shall include a setback sidewalk, then all street trees shall be installed with a planting strip. If existing street design includes a curb-tight sidewalk, then all street trees shall be placed within the front yard setback, exclusive of any utility easement.
The street tree variety was selected from the Oregon City Street Tree list. The species is Cadastris lutea, or Yellow Wood.

A. One street tree shall be planted for every thirty-five feet of property frontage. The tree spacing shall be evenly distributed throughout the total development frontage. The Community Development Director may approve an alternative street tree plan if site or other constraints prevent meeting the placement of one street tree per thirty-five feet of property frontage.
The street trees are placed evenly at 30 ft. on center spacing along the development frontage.

B. The following clearance distances shall be maintained when planting trees:
1. Fifteen feet from streetlights;
2. Five feet from fire hydrants;
3. Twenty feet from intersections;
4. A minimum of five feet (at mature height) below power lines.
All of the above clearances have been met with the street tree placement.

C. All trees shall be a minimum of two inches in caliper at six inches above the root crown and installed to city specifications.
The street trees are specified at 2" caliper measured at six inches about the root crown.

D. All established trees shall be pruned tight to the trunk to a height that provides adequate clearance for street cleaning equipment and ensures ADA compliant clearance for pedestrians.

12.08.020 Street Tree Species Selection.
The Community Development Director may specify the species of street trees required to be planted if there is an established planting scheme adjacent to a lot frontage, if there are obstructions in the planting strip, or if overhead power lines are present.

CHAPTER 13.12 STORMWATER

13.12.050 Applicability and exemptions.

A. Stormwater Conveyance. The stormwater conveyance requirements of this chapter shall apply to all stormwater systems constructed with any development activity, except as follows:
1. The conveyance facilities are located entirely on one privately owned parcel;
2. The conveyance facilities are privately maintained; and
3. The conveyance facilities receive no stormwater runoff from outside the parcel's property limits.
The storm drainage improvements for the extension of Meyers Road make this code section applicable.

Those facilities exempted from the stormwater conveyance requirements by the above subsection will remain subject to the requirements of the Oregon Uniform Plumbing Code. Those exempted facilities shall be reviewed by the building official.

B. Stormwater Quantity Control. The stormwater quantity control requirements of this chapter shall apply to the following proposed activities, uses or developments:

1. Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven-year period;

2. Activities that create more than two thousand square feet of impervious surface, cumulated over any given seven year period; or

3. Redevelopment of a commercial or industrial land use that will disturb more than five thousand square feet of existing impervious surface. This five thousand square foot measurement cumulates over any given seven year period;

4. An exemption to the stormwater quantity control requirements of this chapter will be granted in the following circumstances:

a. The development site discharges to a stormwater quantity control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater, or,

b. The development site discharges to one of the following receiving bodies of water: Willamette River, Clackamas River or Abernethy Creek; and either lies within the one hundred year floodplain or is up to ten feet above the design flood elevation as defined in Chapter 17.42

Applicant believes that #1 is applicable in this case assuming that the WQRA shown on the GIS mapping is applicable. Stormwater detention will be provided via private storm detention ponds to control runoff per City requirements.

C. Stormwater Quality Control. The stormwater quality control requirements of this chapter shall apply to the following proposed activities, uses or developments:

1. Category A. Activities subject to general water quality requirements of this chapter:

a. The construction of four or more single-family residences;

b. Activities located wholly or partially within water quality resource areas pursuant to Chapter 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the WQRA or will disturb more than one thousand square feet of existing impervious surface within the WQRA as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given seven year period; or

c. Activities that create more than eight thousand square feet of new impervious surface for other than a single-family residential development. This eight thousand square foot measurement will be considered cumulative for any given seven year period;

d. An exemption to the stormwater quantity control requirements of this subsection will be granted if the development site discharges to a stormwater quality control facility approved by the city engineer to receive the developed site runoff after verification that the facility is adequately sized to receive the additional stormwater.

This standard will be met as stormwater quality facilities will be provided between the onsite catchbasins and storm detention ponds via mechanical water quality manholes.

2. **Category B. Uses Requiring Additional Management Practices. In addition to any other applicable requirements of this chapter, the following uses are subject to additional management practices as contained in the Public Works Stormwater and Grading Design Standards:**
   a. **Fuel dispensing facilities;**
   b. **Bulk petroleum storage in multiple stationary tanks;**
   c. **Solid waste storage areas for commercial, industrial or multi-family uses;**
   d. **Loading and unloading docks for commercial or industrial uses; or**
   e. **Covered vehicle parking for commercial or industrial uses.**

   This section is not applicable.

3. **Category C. Clackamas River Watershed. In addition to any other applicable requirements of this chapter, any development that creates new waste discharges and whose stormwater runoff may directly or indirectly flow into the Clackamas River is subject to additional requirements associated with Oregon Administrative Rules (OAR) 340-41-470 (Thee Basin Rule).**

   This section is not applicable.

13.12.080 Submittal requirements.

A. Timing and Scope of Required Submittal.

1. **Applications subject to the stormwater conveyance requirements of this chapter shall include an engineered drainage plan and design flow calculation report submitted prior to, or contemporaneous with, submittal of an application for a building, land use or other city issued permit.**

   A preliminary storm water report is included as part of the application submittals.
   See Exhibit I - Preliminary Storm Drain Detention & Water Quality Calculations at end of Site and Design Review Submittal.

2. **Applications subject to the stormwater quantity and/or Category A quality requirements of this chapter shall include an engineered drainage plan and an engineered drainage report submitted prior to, or contemporaneous with, submittal of an application for a building, land use or other city issued permit.**

   A preliminary storm water report is included as part of the application submittals.
   See Exhibit I - Preliminary Storm Drain Detention & Water Quality Calculations at end of Site and Design Review Submittal.

3. **Applications subject to Category B water quality special management practices shall demonstrate compliance with the additional management practices for commercial, industrial and multi-unit dwelling land uses of the Public Works Stormwater and Grading Design Standards as part of the site plan and design review process.**

4. **Applications subject to Category C water quality requirements for the Clackamas River Watershed are subject to OAR 340-41-470 (Three Basin Rule). No new discharges will be approved until a copy of a current DEQ permit, or written statement from DEQ that none is required, is on file with the city.**

   Not applicable.

B. Required engineered drainage plans, drainage reports, and design flow calculation reports, which contain methods and proposed facilities to manage stormwater conveyance, quantity and/or quality, shall be prepared in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards.
Plans and reports are prepared in accordance with the submittal requirements.

C. Each project site, which may be composed of one or more contiguous parcels of land, shall have a separate valid city approved plan and report before proceeding with construction.

13.12.090 Approval criteria for engineered drainage plans and drainage report.

An engineered drainage plan and/or drainage report shall be approved only upon making the following findings:

A. The plan and report demonstrate how the proposed development and stormwater management facilities will accomplish the purpose statements of this chapter;
The plan and report indicate how the stormwater management facilities will accomplish the purpose statements.

B. The plan and report meet the requirements of the Public Works Stormwater and Grading Design Standards adopted by resolution under Section 13.12.020
The plan and report meet the requirements of the Public Works Stormwater and Grading Design Standards as required.

C. Unless otherwise exempted by Section 13.12.050(B), the plan and report includes adequate stormwater quantity control facilities, so that when the proposed land development activity takes place, peak rates and volumes of runoff:
1. Do not exceed the capacity of receiving drainage conveyance facilities;
2. Do not increase the potential for streambank erosion; and
3. Do not add volume to an off-site closed depression without providing for mitigation.
These standards will be met.

D. Unless otherwise exempted by Section 13.12.050(C), the proposed development includes:
1. Adequate stormwater quality control facilities, so that when the proposed land development activity takes place, the temperature and overall pollution level of stormwater runoff is no greater than the water entering. When no water enters a project, then stormwater runoff shall be compared to rain samples; and
This standard will be met.

2. Stormwater quality control facilities which:
a. Are in compliance with applicable National Pollutant Discharge Elimination System (NPDES) requirements;
This standard will be met.

b. Minimize the deterioration of existing watercourses, culverts, bridges, dams and other structures; and
This standard will be met.

c. Minimize any increase in nonpoint source pollution.
This standard will be met.

E. **The storm drainage design within the proposed development includes provisions to adequately control runoff from all public and private streets and roof, footing, and area drains and ensures future extension of the current drainage system.**
This standard will be met.

F. **Streambank erosion protection is provided where stormwater, directly or indirectly, discharges to open channels or streams. The postdevelopment peak stormwater discharge rate from a development site for the two year, twenty-four hour duration storm event shall not exceed fifty percent of the two year, twenty-four hour predevelopment peak runoff rate.**
This standard will be met.

G. **Specific operation and maintenance measures are proposed that ensure that the proposed stormwater quantity control facilities will be properly operated and maintained.**
O & M measures are proposed to meet the requirements for proper long term operation and maintenance.

13.12.100 Alternative materials, alternative design and methods of construction.

The provisions of this chapter are not intended to prevent the use of any material, alternate design or method of construction not specifically prescribed by this chapter or the Public Works Stormwater and Grading Design Standards, provided any alternate has been approved and its use authorized by the city engineer. The city engineer may approve any such alternate, provided that the city engineer finds that the proposed design is satisfactory and complies with the intent of this chapter and that the material, method, or work offered is, for the purpose intended, at least the equivalent of that prescribed by this chapter in effectiveness, suitability, strength, durability and safety. The city engineer shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. The details of any action granting approval of an alternate shall be recorded and entered in the city files.
Green street water quality and water quantity standards are proposed for Meyers Road runoff that are not currently adopted but are proposed and pending City review.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

POLE CUT SHEET AND BUG RATINGS

See attached.

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Choice of 16 patented, high-efficiency AccuLED Optics. The optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 6000K CCT and 3000K CCT. For the ultimate level of spill light control, an optional house side shield accessory can be field or factory installed. The house side shield is designed to seamlessly integrate with the SL2, SL3, SL4 or AFL optics.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Standard with 0-10V dimming. Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 530mA and 700mA drive currents.

Mounting
Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during assembly. Designed for pole or wall mounting. When mounting two or more luminaires at 90° or 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table on page 3. Round pole top adapter included. For wall mounting, specify wall mount bracket option. 3G vibration rated.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty
Five-year warranty.



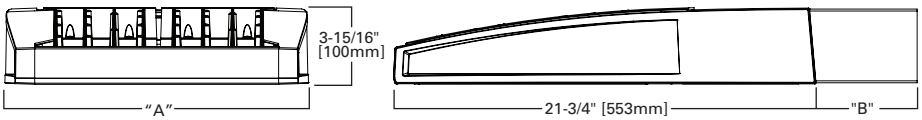
GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

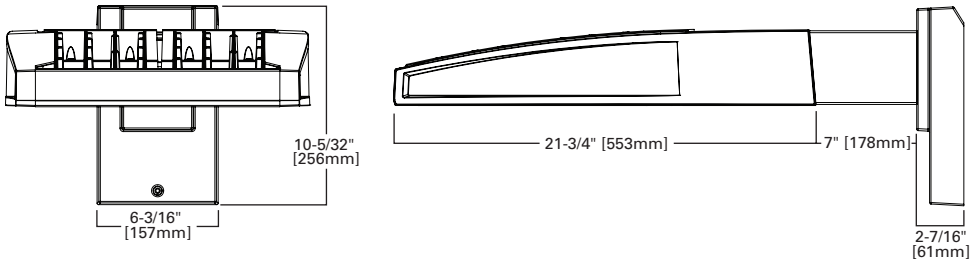
AREA/SITE LUMINAIRE

DIMENSIONS

POLE MOUNT



WALL MOUNT



DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

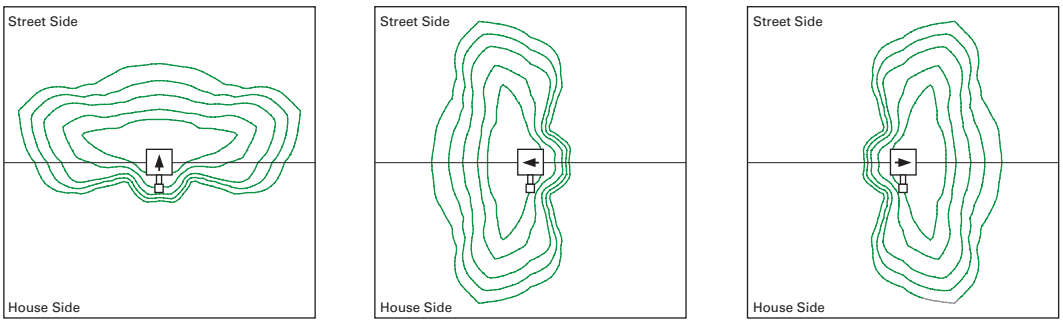
NOTES: 1 Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. **2** EPA calculated with optional arm length.

CERTIFICATION DATA
UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium® Qualified*

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

*www.designlights.org

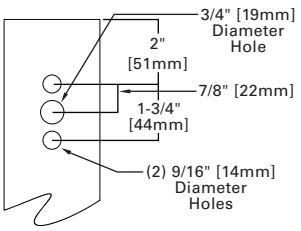
OPTIC ORIENTATION



Standard | **Optics Rotated Left @ 90°** [L90] | **Optics Rotated Right @ 90°** [R90]

DRILLING PATTERN

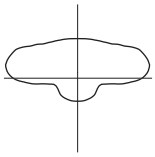
TYPE "N"



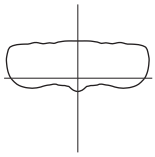
OPTICAL DISTRIBUTIONS

Asymmetric Area Distributions

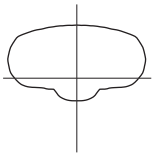
T2 (Type II)



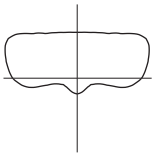
SL2 (Type II with Spill Control)



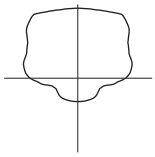
T3 (Type III)



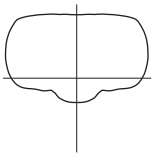
SL3 (Type III with Spill Control)



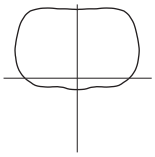
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

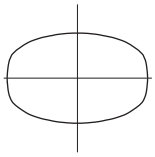


SL4 (Type IV with Spill Control)

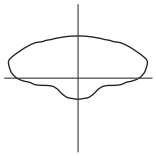


Asymmetric Roadway Distributions

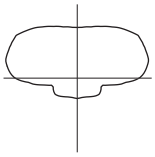
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

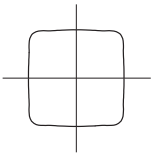


T3R (Type III Roadway)

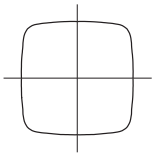


Symmertric Distributions

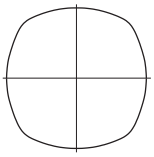
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

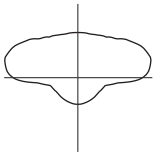


5WQ (Type V Square Wide)

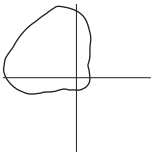


Specialized Distributions

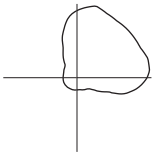
AFL (Automotive Frontline)



SLL (90° Spill Light Eliminator Left)



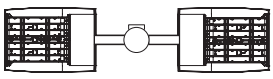
SLR (90° Spill Light Eliminator Right)



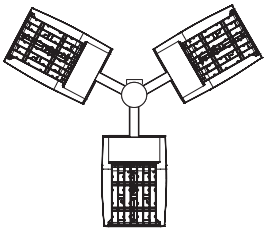
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AE-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AE-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AE-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AE-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AE-10	16" Extended Arm (Required)	16" Extended Arm (Required)

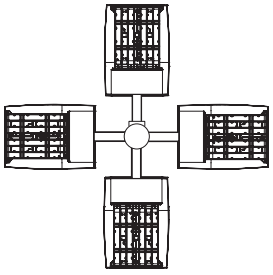
2 @ 180°



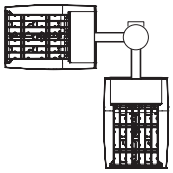
Triple[1]



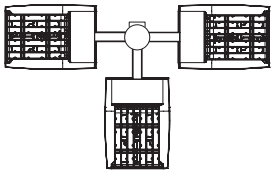
4 @ 90°



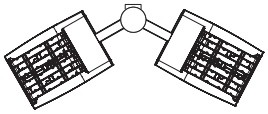
2 @ 90°



Triple[2]



2 @ 120°



NOMINAL POWER AND LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Drive Current		1A	1A	1A	1A	1A	1A	1A	1A	1A	1A
Nominal Power (Watts)		56	107	157	213	264	315	370	421	475	528
Input Current @ 120V (A)		0.47	0.90	1.31	1.79	2.21	2.64	3.09	3.51	3.96	4.41
Input Current @ 208V (A)		0.28	0.51	0.74	1.02	1.25	1.48	1.76	1.99	2.22	2.50
Input Current @ 240V (A)		0.25	0.45	0.65	0.90	1.10	1.30	1.55	1.75	1.95	2.20
Input Current @ 277V (A)		0.23	0.41	0.59	0.82	1.00	1.18	1.41	1.59	1.77	2.00
Optics											
T2	Lumens	5,272	10,303	15,373	20,313	25,168	30,118	35,618	40,357	45,018	49,842
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T2R	Lumens	5,597	10,938	16,321	21,565	26,719	31,974	37,813	42,844	47,792	52,914
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4	B4-U0-G5
T3	Lumens	5,374	10,501	15,669	20,704	25,652	30,697	36,303	41,134	45,884	50,802
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3R	Lumens	5,493	10,735	16,017	21,164	26,222	31,379	37,110	42,048	46,904	51,930
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	Lumens	5,405	10,562	15,760	20,824	25,801	30,875	36,514	41,372	46,150	51,096
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	Lumens	5,335	10,426	15,556	20,555	25,468	30,476	36,042	40,838	45,554	50,436
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	Lumens	5,263	10,285	15,347	20,278	25,124	30,066	35,556	40,288	44,940	49,756
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL3	Lumens	5,373	10,500	15,667	20,701	25,649	30,693	36,298	41,128	45,878	50,794
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	Lumens	5,105	9,976	14,886	19,669	24,370	29,163	34,488	39,078	43,591	48,262
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	Lumens	5,542	10,830	16,160	21,352	26,455	31,658	37,439	42,421	47,320	52,392
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
5MQ	Lumens	5,644	11,029	16,457	21,745	26,942	32,241	38,128	43,202	48,191	53,356
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
5WQ	Lumens	5,659	11,059	16,501	21,803	27,014	32,327	38,230	43,317	48,320	53,498
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,722	9,227	13,767	18,191	22,539	26,971	31,897	36,141	40,315	44,635
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	Lumens	5,492	10,732	16,014	21,159	26,216	31,372	37,101	42,038	46,893	51,918
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
AFL	Lumens	5,512	10,771	16,072	21,236	26,311	31,486	37,236	42,191	47,063	52,107
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4

* Nominal data for 4000K CCT.

NOMINAL POWER AND LUMENS (700MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Drive Current		700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA	700mA
Nominal Power (Watts)		38	72	105	138	176	210	243	276	314	348
Input Current @ 120V (A)		0.32	0.59	0.86	1.14	1.45	1.72	2	2.28	2.58	2.86
Input Current @ 208V (A)		0.21	0.36	0.51	0.67	0.87	1.02	1.18	1.34	1.53	1.69
Input Current @ 240V (A)		0.19	0.32	0.45	0.59	0.77	0.90	1.04	1.18	1.35	1.49
Input Current @ 277V (A)		0.20	0.29	0.40	0.51	0.69	0.80	0.91	1.02	1.20	1.31
Optics											
T2	Lumens	3,854	7,531	11,237	14,847	18,395	22,013	26,033	29,497	32,904	36,430
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	Lumens	4,091	7,995	11,929	15,762	19,529	23,370	27,638	31,316	34,932	38,676
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	Lumens	3,928	7,676	11,453	15,133	18,750	22,437	26,534	30,065	33,537	37,132
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3R	Lumens	4,015	7,846	11,707	15,469	19,166	22,936	27,124	30,733	34,283	37,957
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4FT	Lumens	3,951	7,720	11,519	15,221	18,858	22,567	26,688	30,240	33,732	37,347
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	Lumens	3,900	7,620	11,370	15,024	18,615	22,276	26,343	29,849	33,296	36,864
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL2	Lumens	3,847	7,518	11,217	14,821	18,364	21,975	25,988	29,447	32,847	36,368
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL3	Lumens	3,927	7,675	11,451	15,131	18,747	22,434	26,531	30,061	33,533	37,126
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL4	Lumens	3,731	7,292	10,880	14,376	17,812	21,315	25,208	28,562	31,861	35,275
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5
5NQ	Lumens	4,051	7,916	11,811	15,606	19,336	23,139	27,365	31,006	34,587	38,294
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	Lumens	4,125	8,062	12,029	15,894	19,692	23,565	27,869	31,577	35,224	38,999
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	4,136	8,083	12,061	15,936	19,745	23,628	27,943	31,661	35,318	39,103
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	Lumens	3,451	6,744	10,063	13,296	16,474	19,714	23,314	26,416	29,467	32,625
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	4,014	7,844	11,704	15,465	19,162	22,930	27,118	30,726	34,274	37,948
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
AFL	Lumens	4,029	7,873	11,747	15,522	19,231	23,014	27,216	30,838	34,399	38,086
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 4000K CCT.

NOMINAL POWER AND LUMENS (530MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Drive Current		530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA	530mA
Nominal Power (Watts)		30	54	80	105	130	159	184	209	234	259
Input Current @ 120V (A)		0.25	0.45	0.66	0.86	1.07	1.32	1.52	1.72	1.93	2.14
Input Current @ 208V (A)		0.17	0.28	0.39	0.51	0.63	0.78	0.9	1.02	1.14	1.26
Input Current @ 240V (A)		0.17	0.25	0.35	0.45	0.55	0.70	0.80	0.90	1.00	1.10
Input Current @ 277V (A)		0.19	0.24	0.32	0.40	0.49	0.64	0.72	0.80	0.89	0.98
Optics											
T2	Lumens	3,079	6,017	8,978	11,862	14,697	17,588	20,800	23,567	26,289	29,106
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
T2R	Lumens	3,269	6,388	9,531	12,593	15,603	18,672	22,082	25,020	27,909	30,900
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
T3	Lumens	3,138	6,133	9,150	12,091	14,980	17,926	21,200	24,021	26,795	29,667
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3R	Lumens	3,208	6,269	9,354	12,359	15,313	18,325	21,671	24,555	27,390	30,326
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T4FT	Lumens	3,156	6,168	9,203	12,161	15,067	18,030	21,323	24,160	26,950	29,839
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T4W	Lumens	3,116	6,088	9,084	12,004	14,872	17,797	21,047	23,848	26,602	29,453
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL2	Lumens	3,074	6,006	8,962	11,842	14,672	17,558	20,764	23,527	26,244	29,056
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	3,138	6,132	9,149	12,089	14,978	17,924	21,197	24,018	26,791	29,662
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	2,981	5,826	8,693	11,486	14,231	17,030	20,140	22,820	25,456	28,184
	BUG Rating	B0-U0-G1	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5
5NQ	Lumens	3,236	6,324	9,437	12,469	15,449	18,487	21,863	24,773	27,634	30,595
	BUG Rating	B1-U0-G0	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2
5MQ	Lumens	3,296	6,441	9,610	12,698	15,733	18,828	22,266	25,229	28,142	31,158
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	3,305	6,458	9,636	12,732	15,775	18,878	22,325	25,296	28,217	31,241
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
SLL/SLR	Lumens	2,757	5,388	8,040	10,623	13,162	15,751	18,627	21,105	23,543	26,066
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	3,207	6,267	9,351	12,356	15,309	18,320	21,666	24,549	27,384	30,319
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3
AFL	Lumens	3,219	6,290	9,385	12,401	15,365	18,387	21,745	24,638	27,484	30,429
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3

* Nominal data for 4000K CCT.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000
50°C	> 90%	> 170,000

ORDERING INFORMATION

Sample Number: GLEON-AE-04-LED-E1-T3-GM-700

Product Family [1]	Light Engine	Number of Light Squares [2]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	**AE**=1A Drive Current	**01**=1 **02**=2 **03**=3 **04**=4 **05**=5 **06**=6 **07**=7 **08**=8 **09**=9 **10**=10	**LED**=Solid State Light Emitting Diodes	**E1**=120-277V **347**=347V [3] **480**=480V [3, 4]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [5] **MA**=Mast Arm Adapter [6] **WM**=Wall Mount

Options (Add as Suffix)

2L=Two Circuits [7, 8]
7030=70 CRI 3000K [9]
7060=70 CRI 6000K [9]
530=Drive Current Factory Set to 530mA [10]
700=Drive Current Factory Set to 700mA [10]
F=Single Fuse (120, 277 or 347V. Must Specify Voltage)
FF=Double Fuse (208, 240 or 480V. Must Specify Voltage)
P=Button Type Photocontrol (120, 208, 240 or 277V)
PER7=NEMA 7-Pin Twistlock Photocontrol Receptacle
R=NEMA Twistlock Photocontrol Receptacle
HA=50°C High Ambient [8]
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [11, 12, 13, 14]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [11, 12, 13, 14]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [11, 12, 13, 14]
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height [11, 12, 13, 14, 15]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [11, 12, 13, 14, 15]
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height [11, 12, 13, 14, 15]
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [11, 12, 13, 14]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [11, 12, 13, 14]
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [11, 12, 13, 14]
DIMRF-LW=LumaWatt Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [16]
DIMRF-LN=LumaWatt Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [16]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
MT=Factory Installed Mesh Top
TH=Tool-less Door Hardware
LCF=Light Square Trim Plate Painted to Match Housing [17]
HSS=Factory Installed House Side Shield [18]

Accessories (Order Separately)

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [19]
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
LS/HSS=Field Installed House Side Shield [18, 20]

Notes:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Standard 4000K CCT and minimum 70 CRI.
3. Requires the use of a step down transformer when combined with MS/DIM, MS/X or DIMRF.
4. Not to be used with un-grounded systems.
5. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
6. Factory installed.
7. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AE-02 through AE-04 requires a larger housing, normally used for AE-05 or AE-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
8. Not available with LumaWatt wireless sensors.
9. Extended lead times apply. Use dedicated IES files for 3000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website.
10. 1 Amp standard. Use dedicated IES files for 530mA and 700mA when performing layouts. These files are published on the Galleon luminaire product page on the website.
11. Consult factory for more information.
12. Utilizes internal step down transformer when 347V or 480V is selected.
13. The FSIR-100 accessory is required to adjust parameters.
14. Not available with HA option.
15. Replace X with number of Light Squares operating in low output mode.
16. LumaWatt wireless sensors are factory installed only requiring network components RF-EM1, RF-GW1 and RF-ROUT1 in appropriate quantities. See www.cooperlighting.com for LumaWatt application information.
17. Not available with house side shield (HSS).
18. Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected.
19. This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your Eaton's Cooper Lighting business representative for additional details.
20. One required for each Light Square.

Cooper Lighting by EATON

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Eaton's Cooper Lighting Business
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

Specifications and dimensions subject to change without notice.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM G – CHAPTER 17.65 NARRATIVE

17.65.050.B1.f.3: Public facilities impacts (sanitary sewer, water and stormwater management) both within the development boundary and on city-wide systems;

Sanitary Sewer - There is no gravity public sanitary sewer that can be extended along existing rights-of-ways to that portion of Meyers Road that will be improved by development of the School's Transportation facility. For the Transportation facility itself it is proposed that the private pump station will pump the sewer effluent to the gravity sewer near the intersection of Meyers Road and Quaking Aspen Avenue. Public gravity sewer could be provided to this portion of Meyers from the Hwy 213 direction at some time in the future when extension of the Meyers Road is completed and as such a dry line will be provided to southwest corner of the Transportation facility site to allow the gravity connection from the proposed building at that time. There is no need however, to extend a dry public line across the Transportation facility's frontage on Meyers as there is no other parcel that would need service from such a line. (The park site could be served by the sewer in Glen Oak Road.)

Water - A 12 inch water main is proposed to be extended along the Meyers Road frontage improvement to provide connections not only for the Transportation facility but to allow the future extension as Meyers Road is extended westerly.

Stormwater – Public storm runoff from the proposed extension from Meyers Road will be handled in the following manner. The most easterly portion of the Meyers Road extension will drain back towards the intersection of Meyers Road and High School Avenue. Runoff from that easterly portion of the Meyers Road extension will be collected and directed to the public storm drain pipe system in High School Avenue and towards the storm detention facility in the northeast quadrant of High School Avenue and Glen Oak Road. The remainder of the Meyers Road extension will be drain westerly towards the west end of the street extension. As there is no public easements in which to drain to, westerly of the street extension, and as the wetland to the north on the School District property is too shallow to effectively drain the proposed street extension, a proposed 15 foot storm drain easement along the west line of the City park site (to the south of the Meyers Road extension) will be obtained and allow the public street to drain to Caulfield Creek which lies south of the proposed road extension. All water quality treatment and storm water detention for public street runoff of this portion of Meyers Road is proposed to be handled by "Green Street" methods, specifically a water quality planter between the Meyers Road curb and sidewalk.

17.65.060.A.1: Road Improvements

Meyers Road is proposed to be improved to the City's "half street" standard (half the street right-of-way plus 10 feet). Application plans show the full proposed build out width and configuration for clarity. However, unless some funding source is found to construct the City Park's portion of the improvement we expect that only the northerly 56 feet of right-of-way will be constructed to City Street Standards.

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17.65.060.A.3: A site plan or plans, to scale, containing the required information identified in:

Proposed site utility information is shown on Sheet C1.1 (Site Utility Plan). Public storm drain lines will be a minimum of 12 inches in diameter in accordance with City standards. (We note that "green street practices" will be used for water quality and although at the current time the City has no current standards for such, it is understood that the City is moving that direction and until such time as the City formally adopts such standards we will use City of Portland "green street" design criteria.) No sanitary sewer is proposed in the Meyers Road extension as no gravity sewer can be extended along existing public rights-of-way to serve this portion of Meyers Road. No dry sewer line is required because no parcel other than the School's site would be served by such a sewer as the Park's parcel to the south can be served from Glen Oak Road. The water main in Meyers Road is proposed to be extended. It appears from the City's Water Master Plan that a 12 inch water main in the Meyers Road extension maybe what is the intended size.

13.12.080.B: Required engineered drainage plans, drainage reports, and design flow calculation reports, which contain methods and proposed facilities to manage stormwater conveyance, quantity and/or quality, shall be prepared in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards.

Drainage from the proposed Meyers Road extension will flow two directions. The easterly one quarter or so of the Meyers Road extension would flow back towards its intersection with High School Avenue. Runoff from this portion of the street extension will collected and connected to the existing storm drain system in High School Avenue and directed to the storm drain facility in the Northeast quadrant of High School Avenue and Glen Oak Road. The remaining portion of Meyers Road will flow westerly and will be directed into street side swales for water quality and detention. Runoff collected by the street side swales will be directed across and adjacent to the west boundary of the City's "Glen Oak Road" park site to where it will drain into the main stem of Caulfield Creek. Caulfield Creek drains east to west across the park parcel approximately 600 feet south of the proposed Meyers Road extension.

17.62.040.A.8: The location, dimensions, square footage, building orientation and setback distances of proposed structures, improvements and utilities, and the proposed uses of the structures by square footage;

The location of proposed utilities is noted on the site plans for the development.

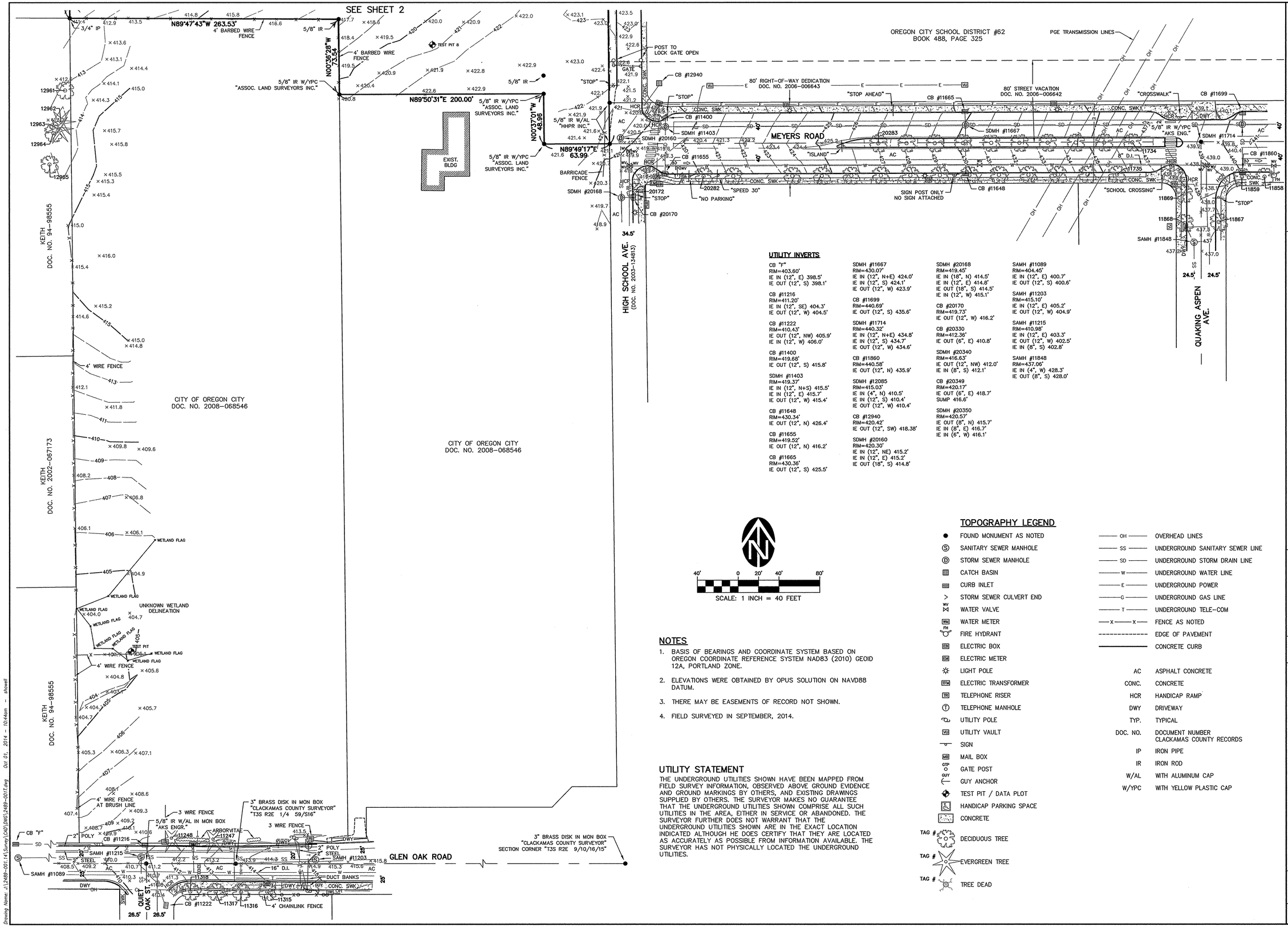
17.62.050.A.14: Adequate public water and sanitary sewer facilities sufficient to serve the proposed or permitted level of development shall be provided.

The public water main will be extended across the site's frontage within the proposed extension of Meyers Road. While the alignment of the water line may be outside the "half street + 10 feet" street improvements, required for the public street, the full right-of-way width will be dedicated by City Parks. The City's Water Master Plan would seem to indicate that the water main in extension in this portion of Meyers Road should be a 12 inch line. It could also be interpreted from the City's Water Master Plan a city water main should be extended northerly between the Oregon City High School site and the Transportation facility site. However, the Water Plan was prepared prior to the City's Transportation Master Plan and had it been prepared afterwards its plan would have likely been to follow the future extension and alignment of Loder Road, wherever that future street extension may be. As School District does not want the Loder Road extension to bisect their parcels and the Transportation Master Plan is less than clear exactly what the alignment of Loder Road is to be, we are not proposing to extend a water main across the school district property following a private school driveway.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

No gravity public sanitary sewer extension across the Meyers Road frontage for the School's Transportation facility is possible. No gravity sewer exists in High School Avenue or in Meyers Road west of Quaking Aspen Avenue. Therefore extension of the gravity sanitary sewer is not possible at this time. A dry sewer line is also not required to be installed along the Meyers Road frontage either as all parcels to the east are presently served by sewer, and the "Glen Oak Road" Park site to the south will be able to be served by the sewer line in Glen Oak Road. While the transportation facility itself will need to be pumped to the reach the gravity sewer at Meyers Road and Quaking Aspen Avenue, we do intend to provide a dry gravity line to the southwest corner of the transportation facility, that would allow the transportation facility building to connect to a future public gravity sewer line that would be extend from Hwy 213 via the future westerly extension of Meyers Road west of the Transportation facility site.



UTILITY INVERTS

CB "F"
RIM=403.60'
IE IN (12", E) 398.5'
IE OUT (12", S) 398.1'

CB #11216
RIM=411.20'
IE IN (12", SE) 404.3'
IE OUT (12", W) 404.5'

CB #11222
RIM=410.43'
IE OUT (12", NW) 405.9'
IE IN (12", W) 406.0'

CB #11400
RIM=419.68'
IE OUT (12", S) 415.8'

SDMH #11403
RIM=419.37'
IE IN (12", N+S) 415.5'
IE IN (12", E) 415.7'
IE OUT (12", W) 415.4'

CB #11648
RIM=430.34'
IE OUT (12", N) 426.4'

CB #11655
RIM=419.52'
IE OUT (12", N) 416.2'

CB #11665
RIM=430.36'
IE OUT (12", S) 425.5'

SDMH #11657
RIM=430.07'
IE IN (12", N+E) 424.0'
IE IN (12", S) 424.1'
IE OUT (12", W) 423.9'

CB #11699
RIM=440.69'
IE OUT (12", S) 435.6'

SDMH #11714
RIM=440.32'
IE IN (12", N+E) 434.8'
IE IN (12", S) 434.7'
IE OUT (12", W) 434.6'

CB #11860
RIM=440.58'
IE OUT (12", N) 435.9'

SDMH #12085
RIM=415.03'
IE IN (4", N) 410.5'
IE IN (12", S) 410.4'
IE OUT (12", W) 410.4'

CB #12940
RIM=420.42'
IE OUT (12", SW) 418.38'

SDMH #20160
RIM=420.30'
IE IN (12", NE) 415.2'
IE IN (12", E) 415.2'
IE OUT (18", S) 414.8'

SDMH #20168
RIM=419.45'
IE IN (18", N) 414.5'
IE IN (12", E) 414.8'
IE OUT (18", S) 414.5'
IE IN (12", W) 415.1'

CB #20170
RIM=419.73'
IE OUT (12", W) 416.2'

CB #20330
RIM=412.36'
IE OUT (6", E) 410.8'

SDMH #20340
RIM=416.63'
IE OUT (12", NW) 412.0'
IE IN (8", S) 412.1'

CB #20349
RIM=420.17'
IE OUT (6", E) 418.7'
SUMP 416.6'

SDMH #20350
RIM=420.57'
IE OUT (8", N) 415.7'
IE IN (8", E) 416.7'
IE IN (6", W) 416.1'

SAMH #11089
RIM=404.45'
IE IN (12", E) 400.7'
IE OUT (12", S) 400.6'

SAMH #11203
RIM=415.10'
IE IN (12", E) 405.2'
IE OUT (12", W) 404.9'

SAMH #11215
RIM=410.98'
IE IN (12", E) 403.3'
IE OUT (12", W) 402.5'
IE IN (8", S) 402.8'

SAMH #11848
RIM=437.06'
IE IN (4", W) 428.3'
IE OUT (8", S) 428.0'

NOTES

1. BASIS OF BEARINGS AND COORDINATE SYSTEM BASED ON OREGON COORDINATE REFERENCE SYSTEM NAD83 (2010) GEOID 12A, PORTLAND ZONE.
2. ELEVATIONS WERE OBTAINED BY OPUS SOLUTION ON NAVD88 DATUM.
3. THERE MAY BE EASEMENTS OF RECORD NOT SHOWN.
4. FIELD SURVEYED IN SEPTEMBER, 2014.

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN MAPPED FROM FIELD SURVEY INFORMATION, OBSERVED ABOVE GROUND EVIDENCE AND GROUND MARKINGS BY OTHERS, AND EXISTING DRAWINGS SUPPLIED BY OTHERS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

40' 0 20' 40' 80'

SCALE: 1 INCH = 40 FEET

TOPOGRAPHY LEGEND

- FOUND MONUMENT AS NOTED
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- CATCH BASIN
- CURB INLET
- STORM SEWER CULVERT END
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- ELECTRIC BOX
- ELECTRIC METER
- LIGHT POLE
- ELECTRIC TRANSFORMER
- TELEPHONE RISER
- TELEPHONE MANHOLE
- UTILITY POLE
- UTILITY VAULT
- SIGN
- MAIL BOX
- GATE POST
- GUY ANCHOR
- TEST PIT / DATA PLOT
- HANDICAP PARKING SPACE
- CONCRETE
- TAG # DECIDUOUS TREE
- TAG # EVERGREEN TREE
- TAG # TREE DEAD

- OH — OVERHEAD LINES
- SS — UNDERGROUND SANITARY SEWER LINE
- SD — UNDERGROUND STORM DRAIN LINE
- W — UNDERGROUND WATER LINE
- E — UNDERGROUND POWER
- G — UNDERGROUND GAS LINE
- T — UNDERGROUND TELE-COM
- X — X — FENCE AS NOTED
- EDGE OF PAVEMENT
- CONCRETE CURB

- AC ASPHALT CONCRETE
- CONC. CONCRETE
- HCR HANDICAP RAMP
- DWY DRIVEWAY
- TYP. TYPICAL
- DOC. NO. DOCUMENT NUMBER CLACKAMAS COUNTY RECORDS
- IP IRON PIPE
- IR IRON ROD
- W/AL WITH ALUMINUM CAP
- W/YPC WITH YELLOW PLASTIC CAP

WESTLAKE CONSULTANTS INC.
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TIGARD, OREGON 97224
(503) 684-0652
FAX (503) 624-0157

TOPOGRAPHIC SURVEY

OREGON CITY SCHOOL DISTRICT

SE 1/4 OF SECTION 9, T. 3 S., R. 2 E., W.M.
CLACKAMAS COUNTY, OREGON

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON JULY 13, 2004 TOBY G. BOLDEN 60377LS
RENEWS: 12-31-2015

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NO.	DATE	DESCRIPTION	DRAFT BY:	CHECK BY:
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REVISIONS

SHEET 1 OF 2

JOB NO. 2489-001

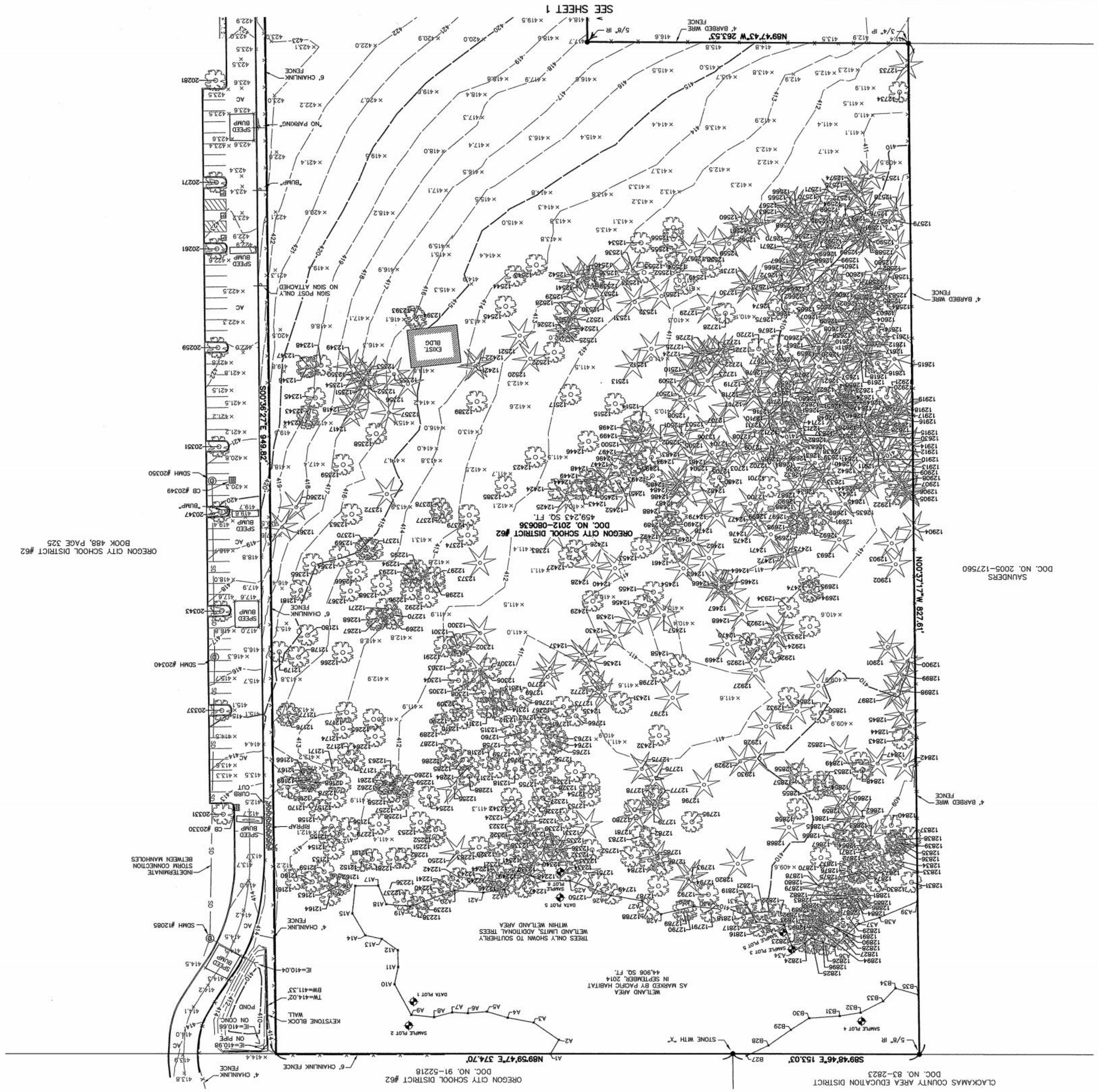
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TOPOGRAPHIC SURVEY

OREGON CITY SCHOOL DISTRICT

SE 1/4 OF SECTION 9, T. 3 S., R. 2 E., W.M.
CLACKAMAS COUNTY, OREGON



SCALE: 1 INCH = 40 FEET

0 20' 40' 80'

TOPOGRAPHY LEGEND

- ● FOUND MONUMENT AS NOTED
- Ⓢ SANITARY SEWER MANHOLE
- Ⓓ STORM SEWER MANHOLE
- CB CATCH BASIN
- CI CURB INLET
- ▽ STORM SEWER CULVERT END
- WV WATER VALVE
- WM WATER METER
- FH FIRE HYDRANT
- EB ELECTRIC BOX
- EM ELECTRIC METER
- LIGHT POLE
- ETM ELECTRIC TRANSFORMER
- TR TELEPHONE RISER
- Ⓣ TELEPHONE MANHOLE
- UTILITY POLE
- UV UTILITY VAULT
- SIGN
- MB MAIL BOX
- GUY GATE POST
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- G UNDERGROUND GAS LINE
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AC	ASPHALT CONCRETE
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NO.	DATE	DESCRIPTION	DRAFT BY:	CHECK BY:
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REVISIONS

SHEET 2 OF 2

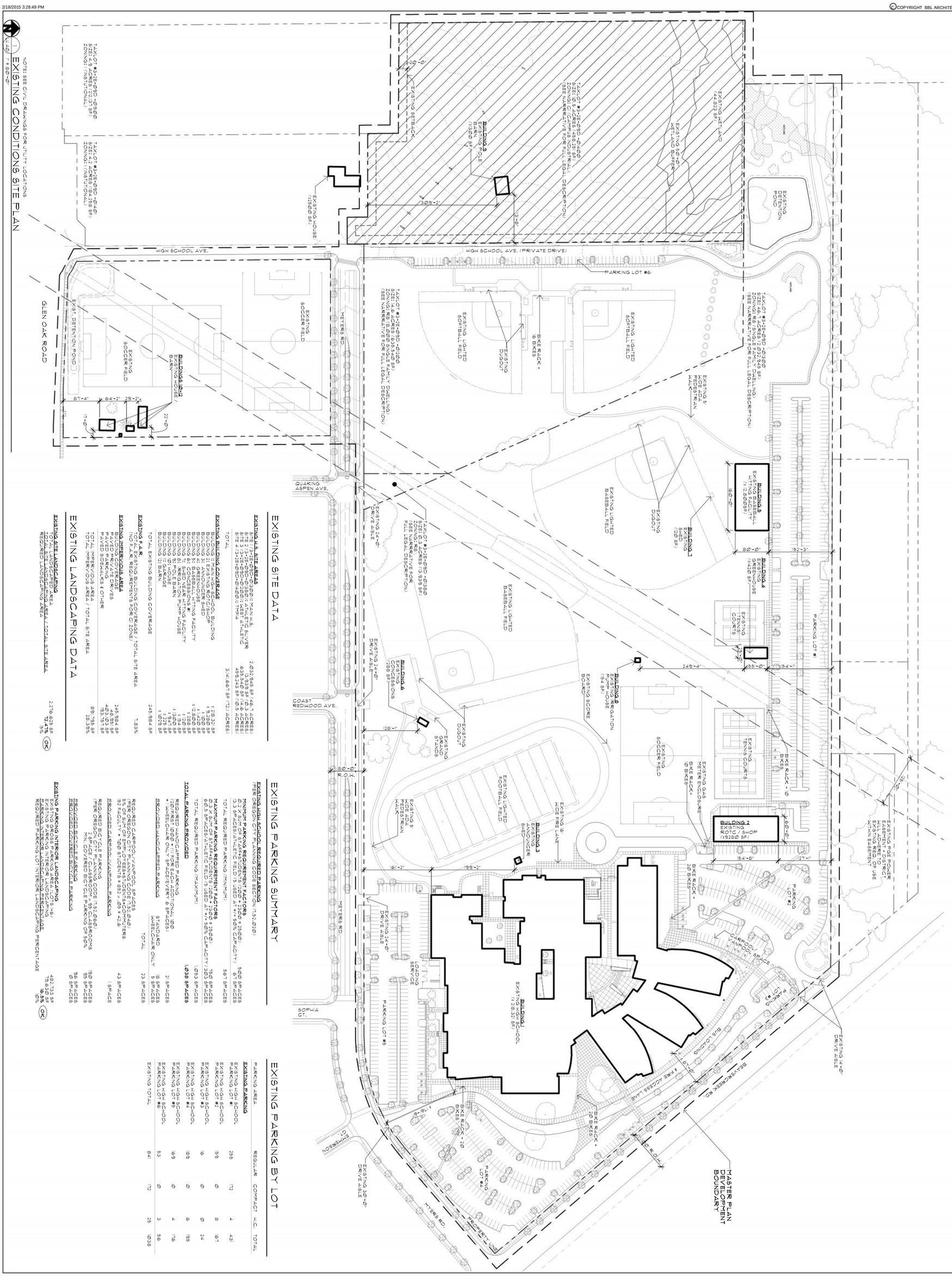
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EXISTING SITE DATA

EXISTING H.S. SITE AREA

SITE 1 (3-2E-09D-03800): MAIN H.S.	2,032,945 SF (46.7 ACRES)
SITE 2 (3-2E-09D-04000): ATHLETIC SLIVER	63,939 SF (1.5 ACRES)
SITE 4 (3-2E-09D-04200): TMP#4 ATHLETIC	459,243 SF (10.5 ACRES)
TOTAL	3,146,627 SF (72.2 ACRES)

EXISTING BUILDING COVERAGE

BUILDING 1: MAIN HIGH SCHOOL BUILDING	218,321 SF
BUILDING 2: EXISTING ROTC/SHOP	19,280 SF
BUILDING 3: GREENHOUSE	1,420 SF
BUILDING 4: BASEBALL HITTING FACILITY	1,360 SF
BUILDING 5: SHED NEAR HITTING FACILITY	120 SF
BUILDING 8: POLE BARN	1,200 SF
BUILDING 9: HOUSE	1,900 SF
BUILDING 10: BARN	1,941 SF
BUILDING 11: BARN	1,019 SF
TOTAL EXISTING BUILDING COVERAGE	245,984 SF
EXISTING F.A.R. (NO F.A.R. REQUIREMENTS FOR C1 ZONE)	7.82%

EXISTING IMPERVIOUS AREA

BUILDING COVERAGE	245,984 SF
PAVED PARKING	460,123 SF
PAVED SIDEWALKS / OTHER	193,191 SF
TOTAL IMPERVIOUS AREA	891,298 SF
TOTAL IMPERVIOUS AREA / TOTAL SITE AREA	28.39%

EXISTING LANDSCAPING DATA

EXISTING SITE LANDSCAPING

TOTAL SITE AREA	2,776,639 SF
TOTAL SITE LANDSCAPING AREA / TOTAL SITE AREA	12.41% (OK)
REQUIRED LANDSCAPING AREA	5%

EXISTING PARKING SUMMARY

EXISTING HIGH SCHOOL REQUIRED PARKING
(PER OREGON CITY PLANNING CODE SECTION 17.52.020)

MINIMUM PARKING REQUIREMENT FACTORS
(3.5 SPACES / ATHLETIC FIELD (1 USED AT 1,200 & 2 AT 2,300 SF CAPACITY) — 7.00 SPACES
TOTAL REQUIRED PARKING (MINIMUM) — 567 SPACES

MAXIMUM PARKING REQUIREMENT FACTORS
(1.0 SPACES / ATHLETIC FIELD (5 USED AT 2,300 SF CAPACITY) — 5.00 SPACES
60.8 SPACES / ATHLETIC FIELD (5 USED AT 2,300 SF CAPACITY) — 303 SPACES
TOTAL REQUIRED PARKING (MAXIMUM) — 1,033 SPACES

TOTAL PARKING PROVIDED — **1,038 SPACES**

REQUIRED HANDICAPPED PARKING (1 ADDITIONAL VAN ACCESSIBLE SPACE PER 6 SPACES)	STANDARD	21 SPACES
	WHEELCHAIR ONLY	18 SPACES
		5 SPACES
PROVIDED HANDICAPPED PARKING	TOTAL	23 SPACES

REQUIRED CARPOOL/VANPOOL SPACES
(PER OREGON CITY PLANNING CODE 17.52.040)
5% OF SUM OF EMPLOYEES+STUDENTS+COMMUTERS
(92 FACULTY + 1,100 STUDENTS + 882 + 109 = 42.6 — 43 SPACES

PROVIDED CARPOOL/VANPOOL PARKING — 19 SPACE

REQUIRED BICYCLE PARKING
(PER OREGON CITY PLANNING CODE 17.52.030)
2 SPACE / CLASSROOM = 2 x 85 CLASSROOMS — 190 SPACES
MIN. COVERED BICYCLE PARKING OF 50% — 95 SPACES

PROVIDED COVERED BICYCLE PARKING — 96 SPACES
PROVIDED BICYCLE PARKING — 96 SPACES

EXISTING PARKING INTERIOR LANDSCAPING

EXISTING PARKING INTERIOR LANDSCAPING	482,733 SF
EXISTING PARKING INTERIOR LANDSCAPING / TOTAL PARKING AREA	196,320 SF
REQUIRED PARKING LOT INTERIOR LANDSCAPING PERCENTAGE	15% (OK)
	15%

EXISTING PARKING BY LOT

PARKING AREA	REGULAR	COMPACT	H.C.	TOTAL
EXISTING PARKING				
EXISTING HIGH SCHOOL PARKING LOT #1	259	112	4	431
EXISTING HIGH SCHOOL PARKING LOT #2	159	0	8	167
EXISTING HIGH SCHOOL PARKING LOT #3	16	0	0	24
EXISTING HIGH SCHOOL PARKING LOT #4	199	0	6	195
EXISTING HIGH SCHOOL PARKING LOT #5	169	0	4	176
EXISTING HIGH SCHOOL PARKING LOT #6	53	0	3	56
EXISTING TOTAL	841	112	25	1038

EXISTING CONDITIONS SITE PLAN

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

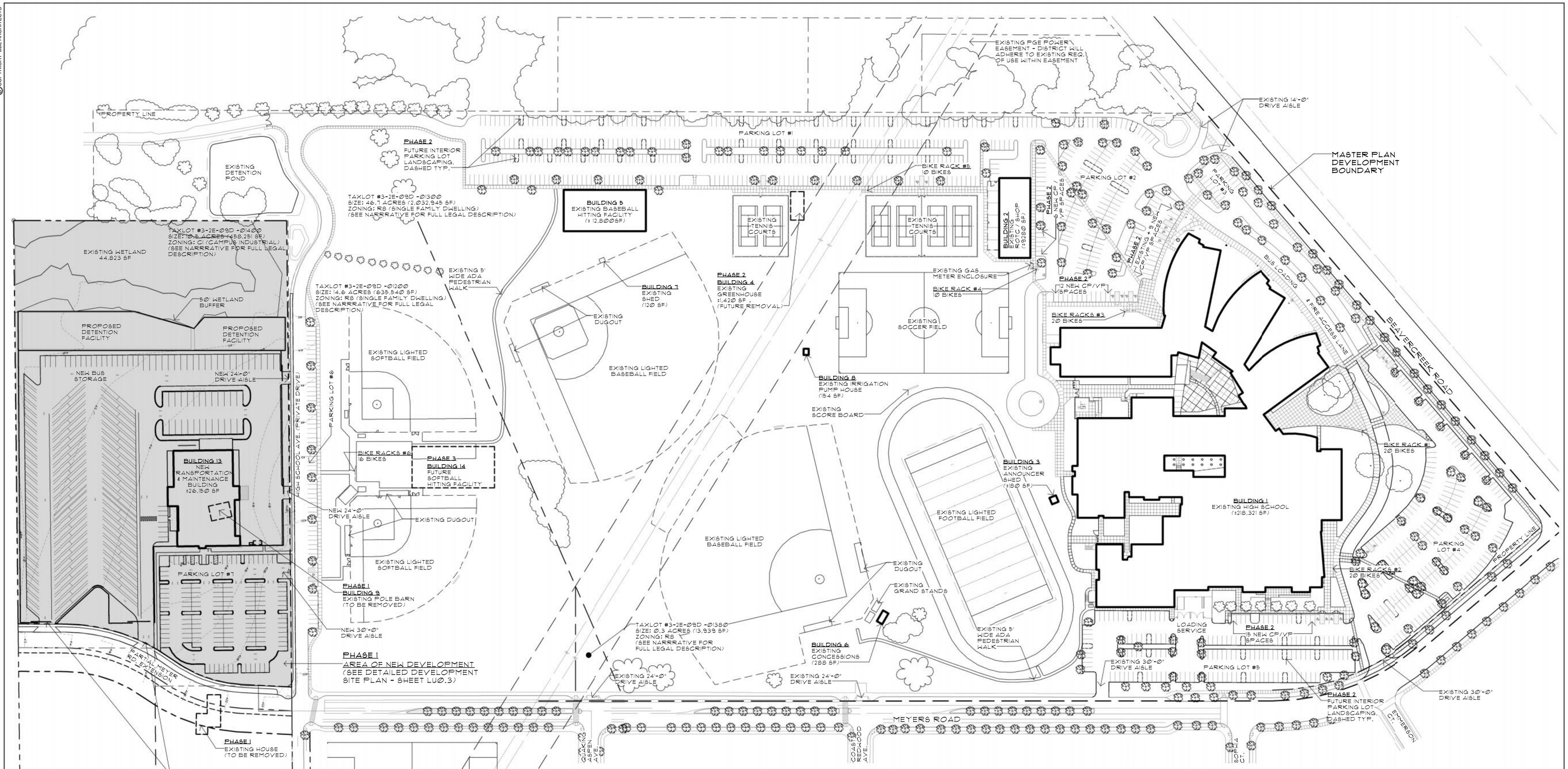
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NOTE: SEE CIVIL DRAWINGS FOR UTILITY LOCATIONS

PROPOSED CAMPUS SITE PLAN

LU A0.2 1" = 80'-0"

PROPOSED SITE DATA

H.S. SITE AREAS

SITE 1 (3-2E-09D-01300): MAIN H.S.	2,032,945 SF (46.7 ACRES)
SITE 2 (3-2E-09D-01380): ATHLETIC SLIVER	13,939 SF (0.3 ACRES)
SITE 3 (3-2E-09D-01200): WEST ATHLETIC	635,940 SF (14.6 ACRES)
SITE 4 (3-2E-09D-01400): TMP14	441,185 SF (10.1 ACRES)
TOTAL	3,124,209 SF (71.7 ACRES)

PROPOSED BUILDING COVERAGE

BUILDING 1: MAIN HIGH SCHOOL BUILDING	± 218,321 SF
BUILDING 2: EXISTING ROTC/SHOP	± 9,380 SF
BUILDING 3: ANNOUNCER SHED	± 100 SF
BUILDING 4: GREENHOUSE (PHASE 4 REMOVAL)	± 1,420 SF
BUILDING 5: BASEBALL HITTING	± 12,800 SF
BUILDING 6: CONCESSIONS #1	± 288 SF
BUILDING 7: SHED NEAR HITTING FACILITY	± 120 SF
BUILDING 8: IRRIGATION PUMP HOUSE	± 154 SF
BUILDING 9: POLE BARN (PHASE 1 REMOVAL)	± 1,920 SF
BUILDING 10: HOUSE (PHASE 4 REMOVAL)	± 941 SF
BUILDING 11: GARAGE (PHASE 4 REMOVAL)	± 225 SF
BUILDING 12: BARN (PHASE 4 REMOVAL)	± 1,078 SF
PROPOSED BUILDING 13: TMF 15 (PHASE 1)	25,691 SF
PROPOSED BUILDING 14: SOFTBALL HITTING (PHASE 3)	± 12,800 SF
TOTAL PROPOSED BUILDING COVERAGE (PHASE 1)	270,375 SF
TOTAL PROPOSED BUILDING COVERAGE (PHASE 4)	279,554 SF

SITE F.A.R. BY PHASE

PHASE 1: 270,375 SF / 3,124,209 SF = 0.0865	8.65%
PHASE 4: 279,554 SF / 3,124,209 SF = 0.0895	8.95%
(NO F.A.R. REQUIREMENTS FOR CI ZONE)	

PROPOSED IMPERVIOUS AREA

PHASE 1

BUILDING COVERAGE	270,375 SF
PAVED PRIVATE DRIVES	48,981 SF
PAVED PARKING	453,051 SF
PAVED SIDEWALKS & OTHER	382,296 SF
TOTAL IMPERVIOUS AREA PHASE 1	1,154,679 SF
TOTAL IMPERVIOUS AREA / TOTAL SITE AREA	36.95%

PHASE 4

BUILDING COVERAGE	279,554 SF
PAVED PRIVATE DRIVES	48,981 SF
PAVED PARKING	453,051 SF
PAVED SIDEWALKS & OTHER	382,296 SF
TOTAL IMPERVIOUS AREA, END OF PHASE 4	1,163,858 SF
TOTAL IMPERVIOUS AREA / TOTAL SITE AREA	37.25%

PROPOSED LANDSCAPING DATA

PROPOSED SITE LANDSCAPING

PHASE 1

TOTAL LANDSCAPED AREA	1,969,530 SF
TOTAL SITE LANDSCAPING AREA / TOTAL SITE AREA	63.05% (OK)
REQUIRED LANDSCAPING AREA	15%

PHASE 2-4

TOTAL LANDSCAPED AREA	1,960,381 SF
TOTAL SITE LANDSCAPING AREA / TOTAL SITE AREA	62.75% (OK)
REQUIRED LANDSCAPING AREA	15%

PROPOSED PARKING SUMMARY

EXISTING HIGH SCHOOL REQUIRED PARKING
(PER OREGON CITY PLANNING CODE SECTION 17.52.020)

MINIMUM PARKING REQUIREMENT FACTORS

0.2 X SUM OF STAFF+STUDENTS (250 + 2500 = 2750)	550 SPACES
13.3 SPACES/ATHLETIC FIELD (5 USED AT +/- 50% CAPACITY)	67 SPACES
TOTAL REQUIRED PARKING (MINIMUM)	617 SPACES

MAXIMUM PARKING REQUIREMENT FACTORS

0.3 X SUM OF STAFF+STUDENTS (250 + 2500 = 2750)	825 SPACES
60.5 SPACES/ATHLETIC FIELD (5 USED AT +/- 50% CAPACITY)	303 SPACES
TOTAL REQUIRED PARKING (MAXIMUM)	1,128 SPACES

NEW T4 M FACILITY REQUIRED PARKING
(PER OREGON CITY PLANNING CODE SECTION 17.52.020)

MINIMUM PARKING REQUIREMENT FACTORS

S-1: STORAGE WAREHOUSE - LIGHT INDUSTRIAL - 19,981 SF 1.30 SPACES PER 1,000 SF	26 SPACES
B: BUSINESS - OFFICE - 10,970 SF 2,710 SPACES PER 1,000 SF	30 SPACES
VEHICLE STORAGE 0.5 SPACES/EMPLOYEE/DRIVER (81 DRIVERS)	41 SPACES
TOTAL T4M FACILITY REQUIRED PARKING (MINIMUM)	97 SPACES

MAXIMUM PARKING REQUIREMENT FACTORS

S-1: STORAGE WAREHOUSE - LIGHT INDUSTRIAL - 19,981 SF 1.60 SPACES PER 1,000 SF	32 SPACES
B: BUSINESS - 10,970 SF 3.33 SPACES PER 1,000 SF	37 SPACES
VEHICLE STORAGE 1.0 SPACES/EMPLOYEE/DRIVER (81 DRIVERS)	81 SPACES
TOTAL T4M FACILITY REQUIRED PARKING (MAXIMUM)	150 SPACES

MINIMUM PARKING REQUIRED FOR CAMPUS

HIGH SCHOOL SITE	617 SPACES
NEW TRANSPORTATION & MAINTENANCE FACILITY	97 SPACES
TOTAL PARKING	**714 SPACES**

MAXIMUM PARKING REQUIRED FOR CAMPUS

HIGH SCHOOL SITE	1,128 SPACES
NEW TRANSPORTATION & MAINTENANCE FACILITY	150 SPACES
TOTAL PARKING	**1,278 SPACES**

TOTAL PARKING PROVIDED PHASE 1

HIGH SCHOOL SITE	1,038 SPACES
NEW TRANSPORTATION & MAINTENANCE FACILITY	138 SPACES
PHASE 1 TOTAL PARKING	**1,176 SPACES**

TOTAL PARKING PROVIDED PHASE 2-4

HIGH SCHOOL SITE	983 SPACES
NEW TRANSPORTATION & MAINTENANCE FACILITY	138 SPACES
PHASE 2-4 TOTAL PARKING	**1,121 SPACES**

PROPOSED PARKING SUMMARY (CONT.)

REQUIRED HANDICAPPED PARKING
(PER 2014 OSSC TABLE 1106.1)

HIGH SCHOOL SITE
(20/FIRST 1000 + (1) FOR EACH ADDITIONAL 100 + 1 WHEELCHAIR ONLY SPACE/EVERY 6 SPACES) 21 SPACES

PROVIDED HANDICAPPED PARKING	STANDARD	18 SPACES
	WHEELCHAIR ONLY	5 SPACES
	TOTAL	23 SPACES

TRANSPORTATION & MAINTENANCE FACILITY
(5/20-50 PARKING STALLS + 1 WHEELCHAIR ONLY)

PROVIDED HANDICAPPED PARKING	STANDARD	4 SPACES
	WHEELCHAIR ONLY	1 SPACES
	TOTAL	5 SPACES

REQUIRED CARPOOL/VANPOOL SPACES
(PER OREGON CITY PLANNING CODE 17.52.040)

HIGH SCHOOL SITE
5% OF SUM OF EMPLOYEES+STUDENTS+COMMUTERS
152 FACULTY + 1200 STUDENTS = 852 x .05 = 42.6 43 SPACES

PHASE 1 PROVIDED CARPOOL/VANPOOL PARKING 01 SPACE
PHASE 2-4 PROVIDED CARPOOL / VANPOOL PARKING 43 SPACES

TRANSPORTATION & MAINTENANCE FACILITY
5% OF SUM OF EMPLOYEES+STUDENTS+COMMUTERS
129 EMPLOYEES = 114 x .05 = 5.7
PROVIDED CARPOOL/VANPOOL PARKING 6 SPACES

REQUIRED BICYCLE PARKING
(PER OREGON CITY PLANNING CODE 17.52.060)

HIGH SCHOOL SITE
2 SPACE / CLASSROOM x 95 CLASSROOMS
PROVIDED BICYCLE PARKING 190 SPACES
REQUIRED COVERED BICYCLE PARKING (MIN. 50%) 95 SPACES

EXISTING BICYCLE PARKING 96 SPACES
EXISTING COVERED BICYCLE PARKING 0 SPACES

TRANSPORTATION & MAINTENANCE FACILITY
1 SPACE / 20 PARKING SPACES = 136/20 = 6.8
REQUIRED BICYCLE PARKING 7 SPACES
REQUIRED COVERED BICYCLE PARKING (MIN. 50%) 4 SPACES

PROVIDED BICYCLE PARKING 8 SPACES
PROVIDED COVERED BICYCLE PARKING 4 SPACES

PROPOSED PARKING INTERIOR LANDSCAPING

PHASE 1 GROSS PARKING AREA (LOT 1-7)	544,053 SF
PARKING INTERIOR LANDSCAPING	90,996 SF
PARKING INTERIOR LANDSCAPING PERCENTAGE	16.73% (OK)
REQUIRED PARKING LOT INTERIOR LANDSCAPING PERCENTAGE	10%
PHASE 2-4 GROSS PARKING AREA (LOT 1-7)	544,053 SF
PARKING INTERIOR LANDSCAPING	99,211 SF
PARKING INTERIOR LANDSCAPING PERCENTAGE	18.24% (OK)
REQUIRED PARKING LOT INTERIOR LANDSCAPING PERCENTAGE	10%

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TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
PROPOSED CAMPUS SITE PLAN

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DATE
REVISIONS

LU A0.2

LAND USE SUBMITTAL

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PROPOSED SITE DATA

TAX LOT #: 01400 32E09D

LEGAL DESCRIPTION: SEE NARRATIVE FOR FULL LEGAL DESCRIPTION

DEED DOCUMENT#: 2000-009206 PARCEL I

ZONING: CAMPUS INDUSTRIAL (CI)

PROPOSED SITE AREA:

PROPOSED BUILDABLE SITE AREA:	7.37 ACRES (321,386 SF)
PROPOSED WATER QUALITY FACILITIES:	0.74 ACRES (32,130 SF)
WETLAND AND BUFFER AREA:	2.03 ACRES (88,269 SF)
TOTAL SITE AREA	10.14 ACRES (441,785 SF)

PROPOSED BUILDING COVERAGE

PROPOSED T&M BUILDING GROSS FLOOR AREA	25,691 SF
PROPOSED F.A.R.	4.7%

PROPOSED IMPERVIOUS AREA

BUILDING COVERAGE	25,691 SF
PAVED PARKING	48,816 SF
PAVED SIDEWALKS & OTHER	185,749 SF
TOTAL IMPERVIOUS AREA PHASE I	260,256 SF
TOTAL IMPERVIOUS AREA / TOTAL SITE AREA	58.9%

PROPOSED LANDSCAPING DATA

PROPOSED SITE LANDSCAPING

PHASE I

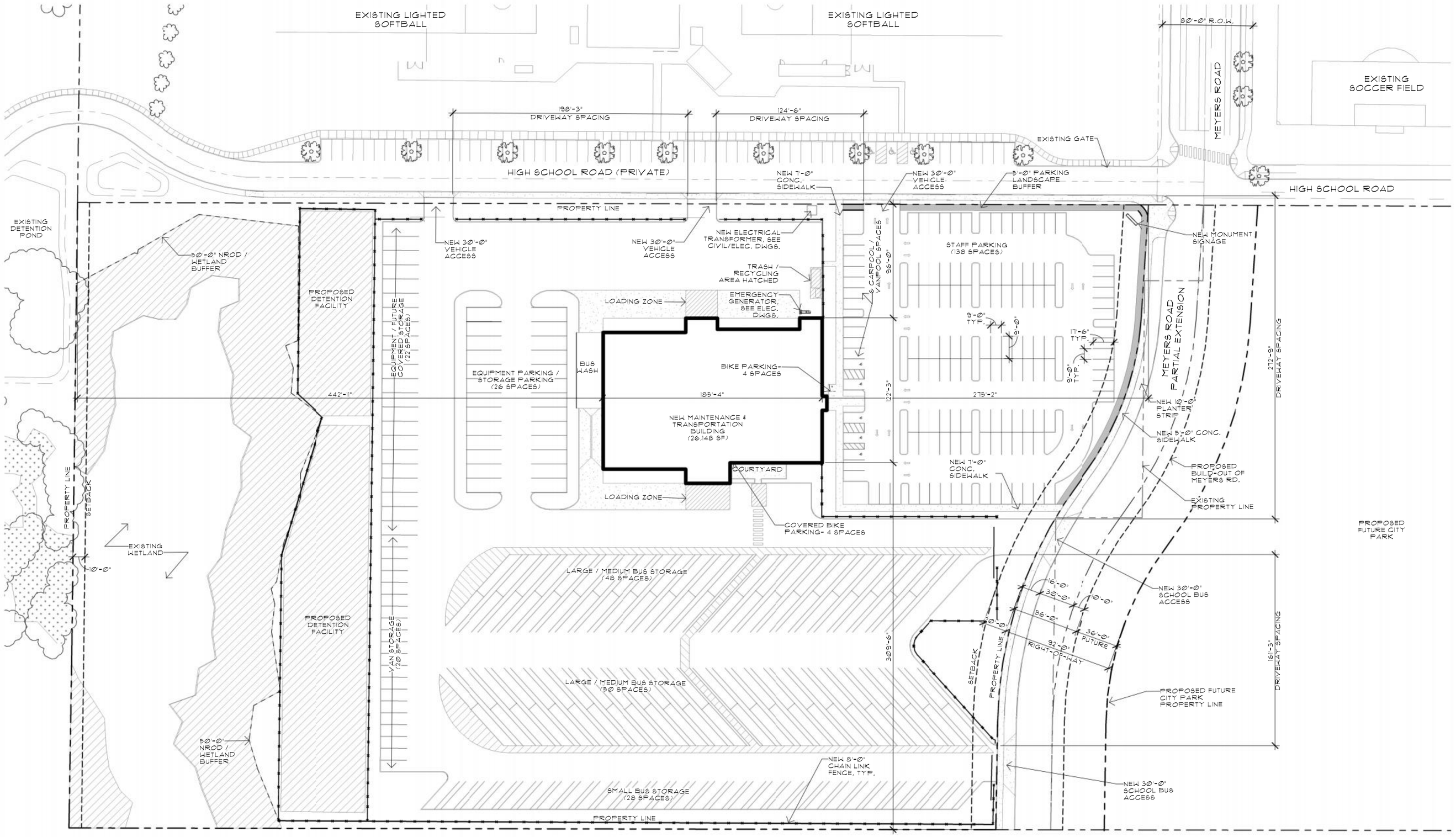
TOTAL LANDSCAPED AREA	181,529 SF
TOTAL SITE LANDSCAPING AREA / TOTAL SITE AREA	41.1% (OK)
REQUIRED LANDSCAPING AREA	15%

PROPOSED PARKING SUMMARY

NEW T& M FACILITY REQUIRED PARKING (SEE LU A0.3)

PROPOSED PARKING INTERIOR LANDSCAPING

GROSS PARKING AREA	57,667 SF
PARKING INTERIOR LANDSCAPING	8,851 SF
PARKING INTERIOR LANDSCAPING PERCENTAGE	15.3% (OK)
REQUIRED PARKING LOT INTERIOR LANDSCAPING PERCENTAGE	10%



1 DETAIL DEVELOPMENT SITE PLAN
LU A0.3 1" = 40'-0"

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TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
DETAIL DEVELOPMENT PLAN

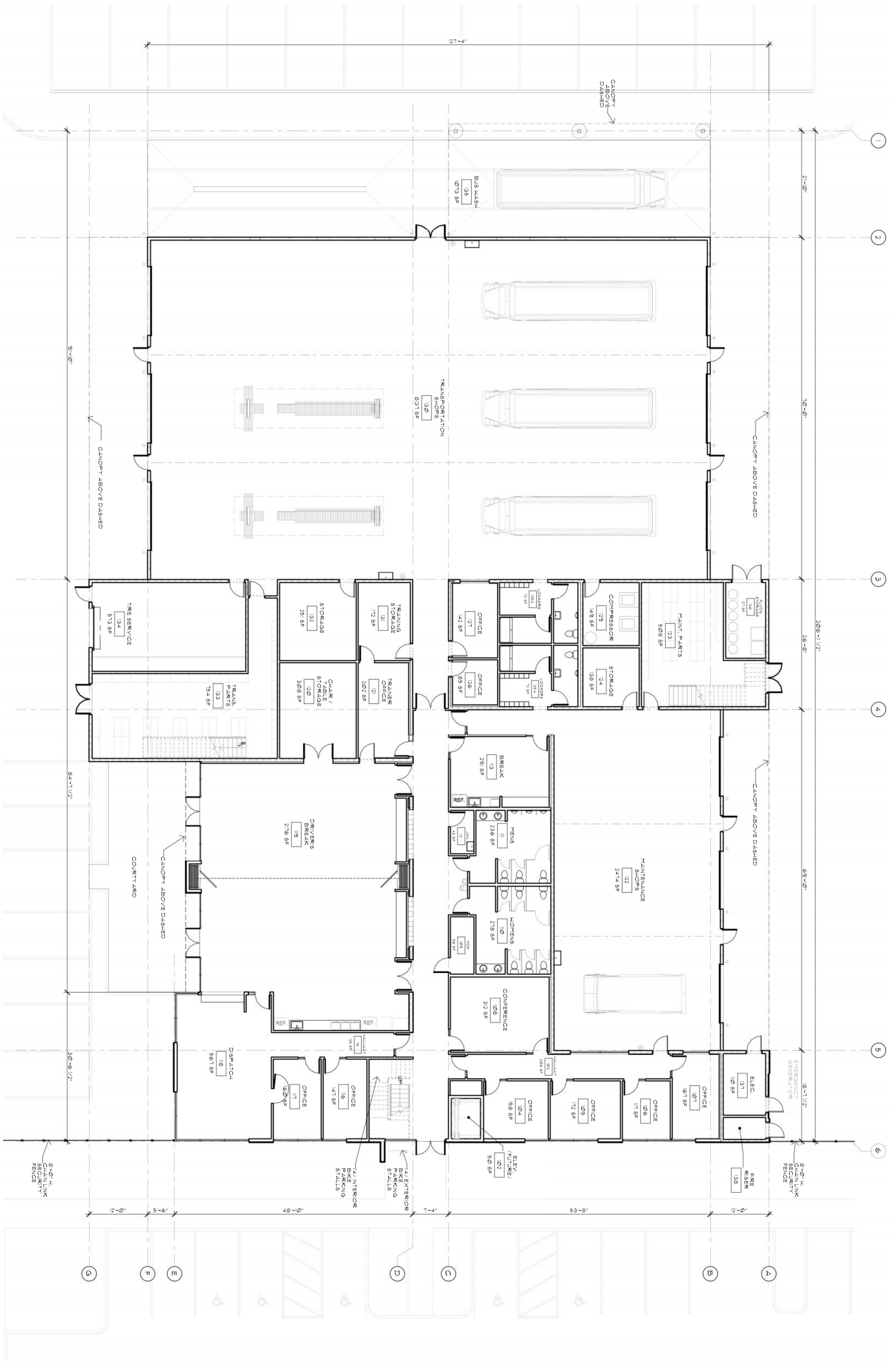
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LU
A0.3

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1 FIRST FLOOR PLAN - LAND USE
1/8" = 1'-0"



LAND USE/ DESIGN REVIEW

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OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
FIRST FLOOR PLAN

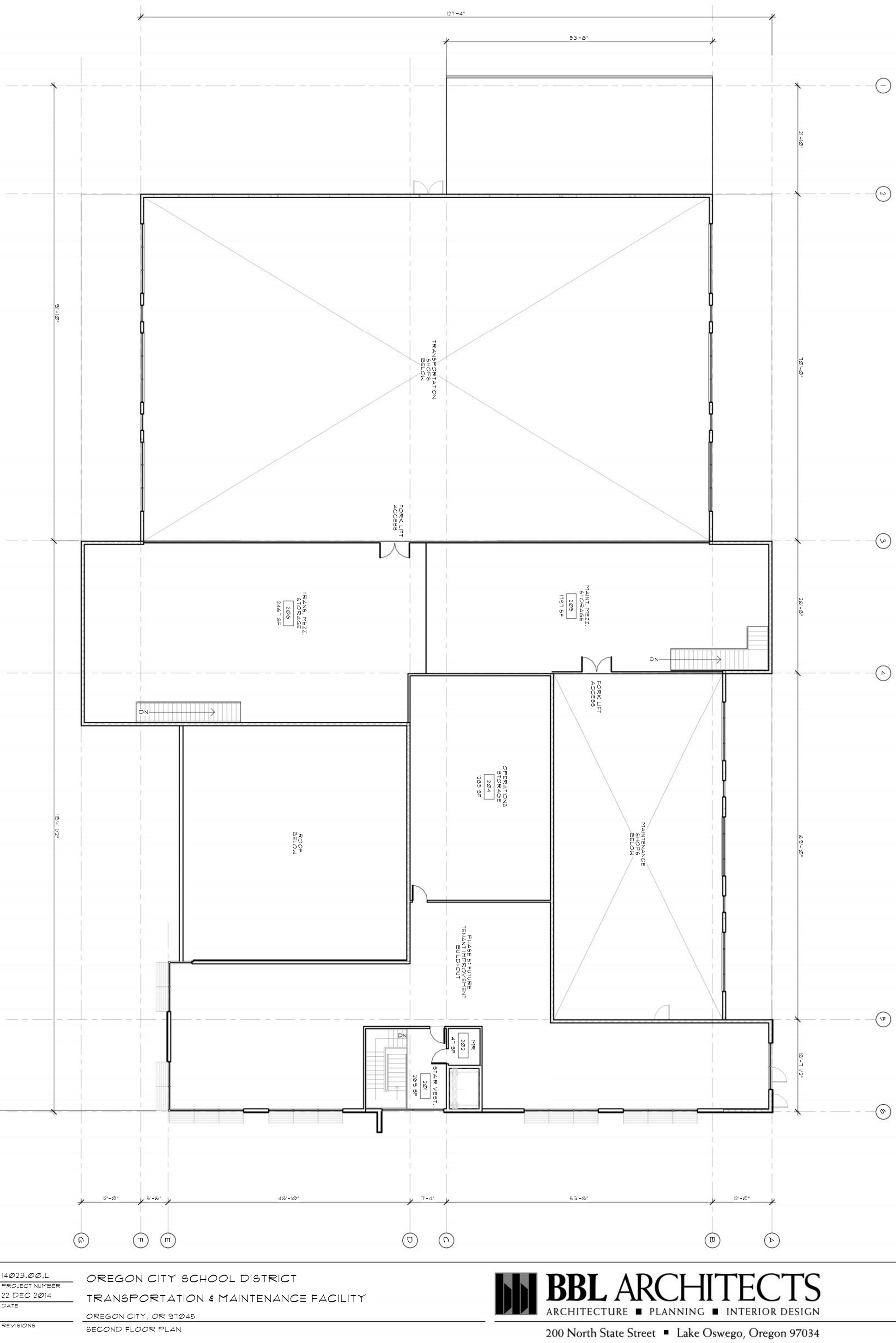
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1 SECOND FLOOR PLAN - LAND USE

1/8" = 1'-0"



LAND USE/ DESIGN REVIEW

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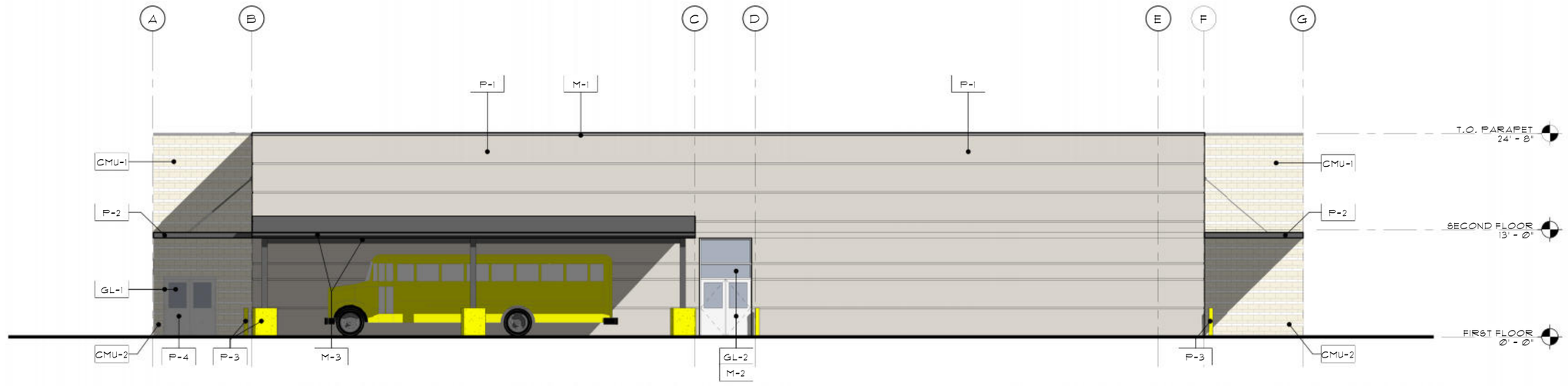
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SECOND FLOOR PLAN

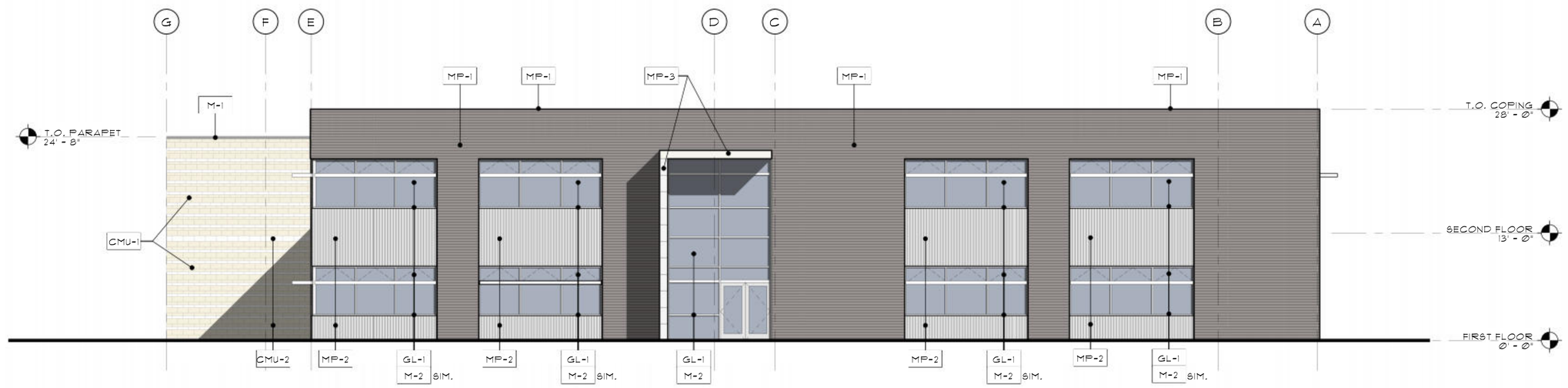
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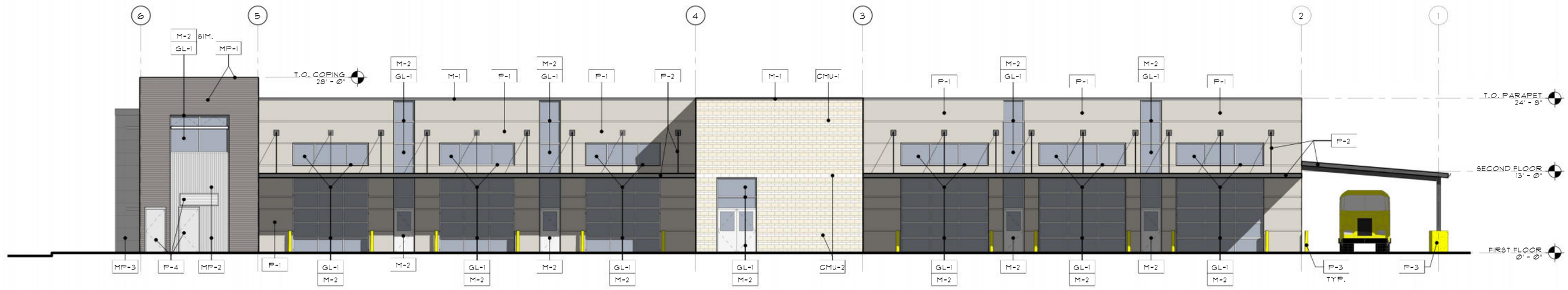
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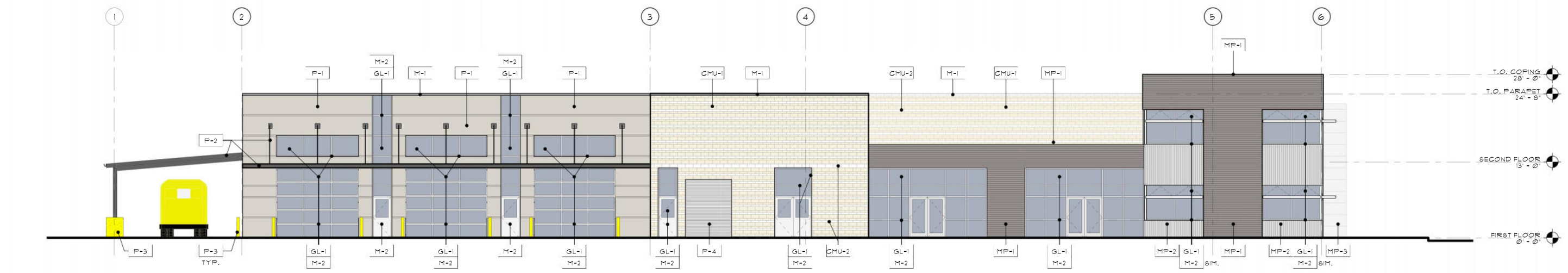
3 LU A2.1 NORTH ELEVATION - LAND USE
1/8" = 1'-0"



4 LU A2.1 SOUTH ELEVATION - LAND USE
1/8" = 1'-0"



1 LU A2.1 EAST ELEVATION - LAND USE
1/8" = 1'-0"



2 LU A2.1 WEST ELEVATION - LAND USE
1/8" = 1'-0"

EXTERIOR FINISH MATERIAL LEGEND

CMU-1	SPLIT FACE CMU COLOR: CASTLE WHITE
CMU-2	GROUND FACE CMU COLOR: CASTLE WHITE
GL-1	GLAZING
M-1	PREFINISHED METAL FLASHINGS & TRIM COLOR: MATCH COOL ZACLIQUE II
M-2	ALUMINUM STOREFRONT SYSTEM (WITH INTEGRAL LIGHT SHELVES AT SIM.) COLOR: CLEAR ANODIZED
MP-1	METAL PANEL 1 (CORRUGATED) COLOR: COOL ZACLIQUE II
MP-2	METAL PANEL 2 (FLAT PAN WITH RIBS) COLOR: COOL METALLIC SILVER
MP-3	METAL PANEL 3 (FLUSH PANEL) COLOR: CLEAR ANODIZED
P-1	EXTERIOR PAINT (CONCRETE) COLOR: MATCH MILLER 0513 "CHINTZ"
P-2	EXTERIOR PAINT (METAL CANOPY) COLOR: MATCH COOL ZACLIQUE II
P-3	EXTERIOR PAINT (BOLLARD) COLOR: "SAFETY" YELLOW

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EXTERIOR ELEVATIONS

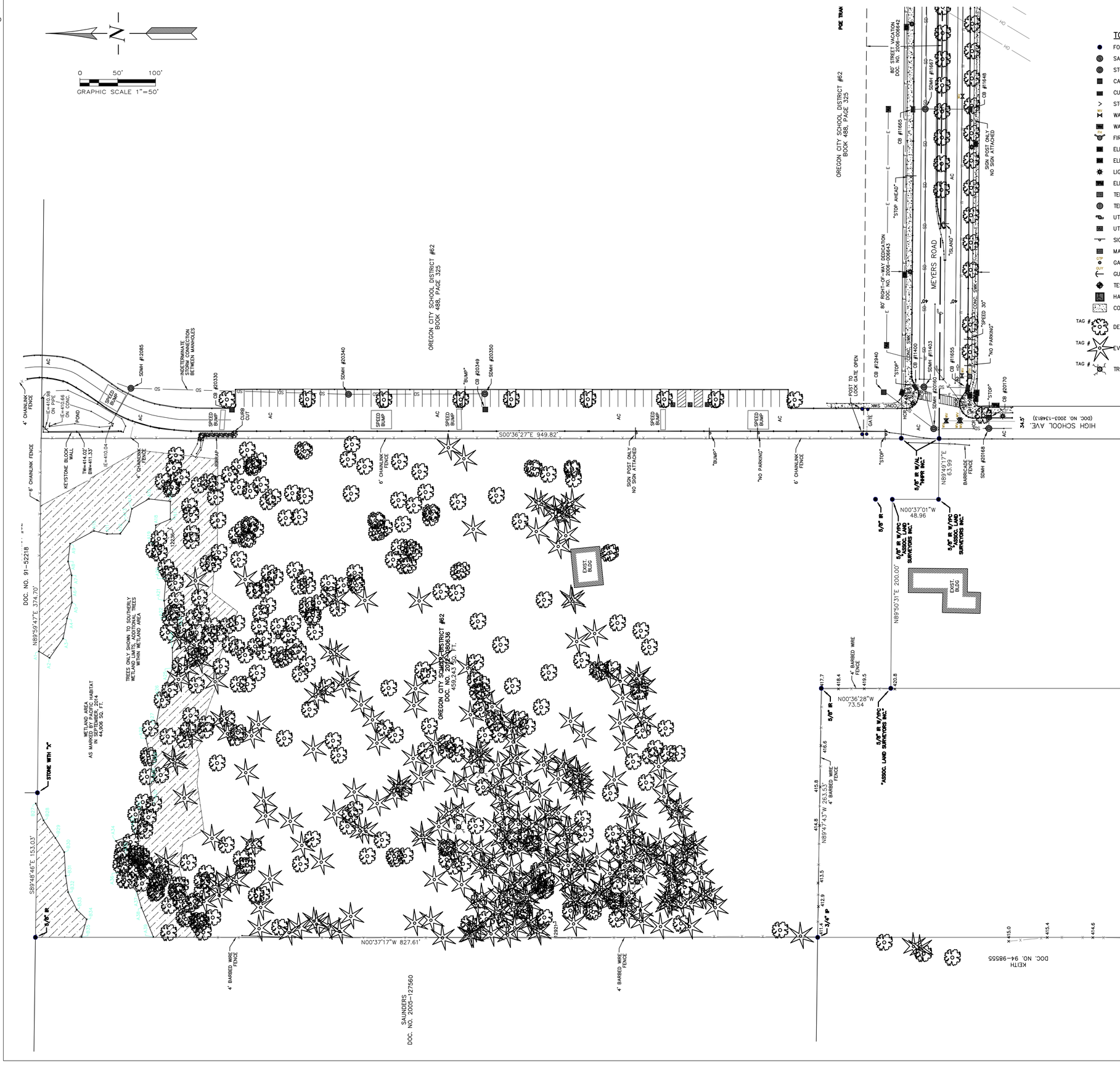
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DESIGN REVIEW

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TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
EXISTING CONDITIONS

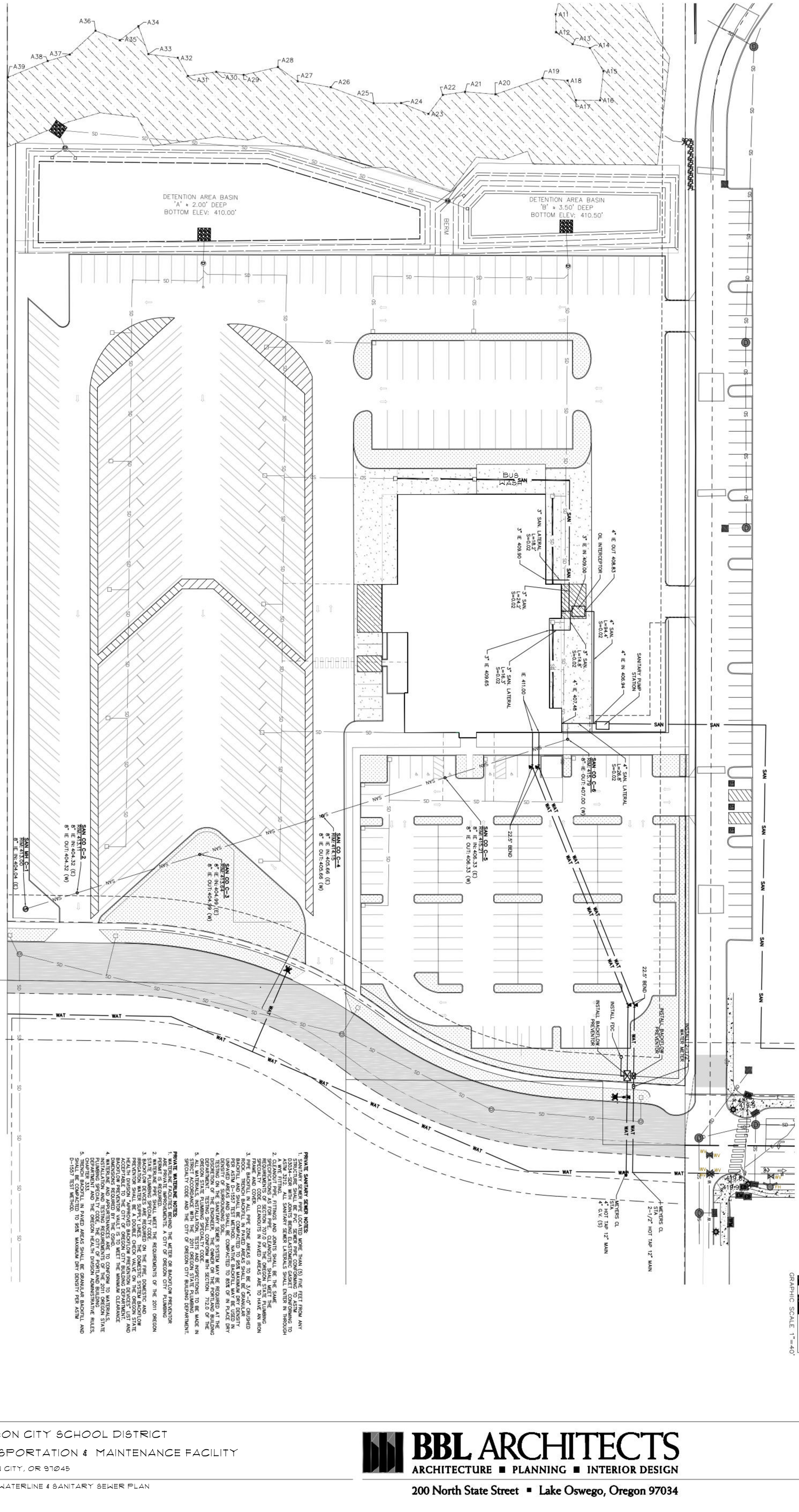
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SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188
DRAWING: SGL14-070 On Site Grading.dwg

REGISTERED PROFESSIONAL ENGINEER
12,820
PREMININARY
OREGON
FEB 14, 1985
THOMAS J. SISUL
EXPIRES: 6/30/16

C1.2
50% REVIEW SET

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PRIVATE SANITARY SEWER NOTES:

1. SANITARY SEWER PIPE LOCATED MORE THAN (5) FIVE FEET FROM ANY STRUCTURE SHALL BE POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D3034-SDR WITH JOINTS BEING ELASTOMERIC GASKET CONFORMING TO ASTM 3212. ALL SANITARY SEWER LATERALS SHALL ENTER IN THROUGH A WYE FITTING.
2. CLEANOUT PIPE, FITTINGS AND JOINTS SHALL BE THE SAME MATERIALS AS THE SANITARY SEWER LATERALS. CLEANOUTS SHALL MEET REQUIREMENTS OF SECTION 707.0 OF THE OREGON STATE PLUMBING SPECIALTY CODE. CLEANOUTS IN PAVED AREAS ARE TO HAVE AN IRON FRAME AND COVER.
3. PIPE BACKFILL IN ALL PIPE ZONE AREAS IS TO BE 3/4"-0" CRUSHED ROCK. TRENCH BACKFILL IN PAVED AREAS SHALL BE GRANULAR BACKFILL AND SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY PER ASTM D-1557 TEST METHOD. NATIVE BACKFILL MAY BE USED IN UNPAVED AREAS AND SHALL BE COMPACTED TO 85% OF IN PLACE DRY DENSITY OF SURROUNDING SOIL.
4. TESTING ON THE SANITARY SEWER SYSTEM MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER, THE OWNER OR THE PORTLAND BUILDING BUREAU INSPECTOR. TESTING SHALL CONFORM WITH SECTION 712.0 OF THE OREGON STATE PLUMBING SPECIALTY CODE
5. ALL MATERIALS, INSTALLATION, TESTS AND INSPECTIONS TO BE MADE IN STRICT ACCORDANCE WITH THE 2011 OREGON STATE PLUMBING SPECIALTY CODE AND THE CITY OF OREGON CITY BUILDING DEPARTMENT.

PRIVATE WATERLINE NOTES:

1. WATERLINE FACILITIES BEHIND THE METER OR BACKFLOW PREVENTOR ARE PRIVATE IMPROVEMENTS. A CITY OF OREGON CITY PLUMBING PERMIT IS REQUIRED.
2. WATERLINE PIPE SHALL MEET THE REQUIREMENTS OF THE 2011 OREGON STATE PLUMBING SPECIALTY CODE.
3. IRRIGATION WATER SUPPLY LINES TAPPED ON THE FIRE, DOMESTIC AND IRRIGATION WATER SUPPLY LINES THE DOMESTIC SYSTEM BACKFLOW PREVENTOR SHALL BE A DOUBLE CHECK VALVE ON THE OREGON STATE HEALTH DIVISION "APPROVED BACKFLOW PREVENTION DEVICES" LIST AND ACCEPTABLE TO THE CITY OF OREGON CITY BUILDING DEPARTMENT. BACKFLOW PREVENTOR VAULT IS TO MEET THE MINIMUM CLEARANCE REQUIREMENTS ESTABLISHED BY THE CITY.
4. WATERLINE AND APPURTENANCES ARE TO CONFORM TO MATERIALS, INSTALLATION AND TESTING REQUIREMENTS OF THE 2011 OREGON STATE PLUMBING SPECIALTY CODE, THE CITY OF PORTLAND BUILDING DEPARTMENT, AND THE OREGON HEALTH DIVISION ADMINISTRATIVE RULES.
5. TRENCH BACKFILL IN PAVED AREAS SHALL BE GRANULAR BACKFILL AND SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY PER ASTM D-1557 TEST METHOD.

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING: SCL14-070 On Site Wat&San.dwg

REGISTERED PROFESSIONAL ENGINEER
THOMAS J. SISUL
FEB 14, 1985
OREGON
12,820
PRELIMINARY

EXPIRES: 6/30/16

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50% REVIEW SET

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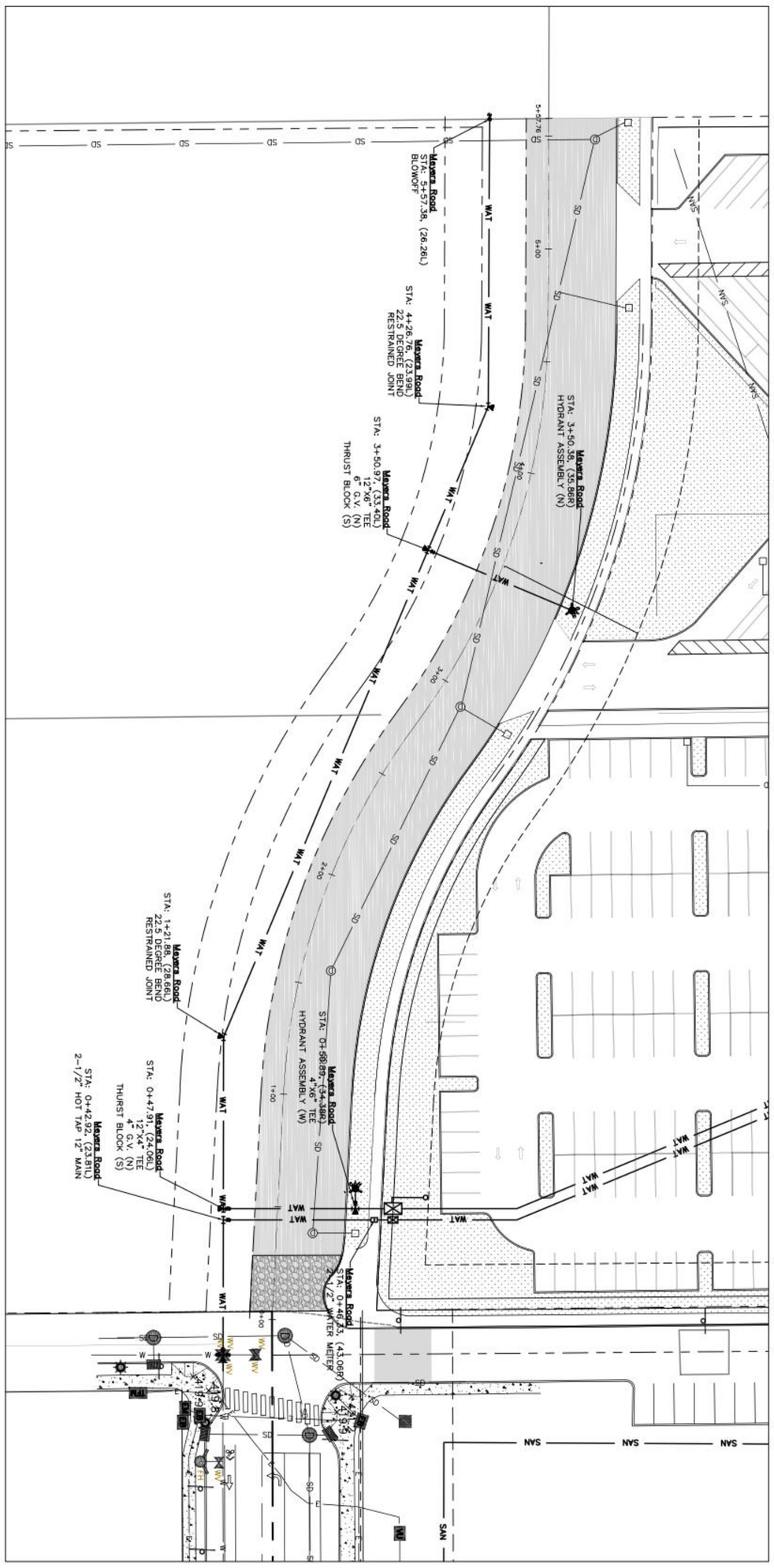
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OREGON CITY, OR 97045

ON SITE WATERLINE & SANITARY SEWER PLAN

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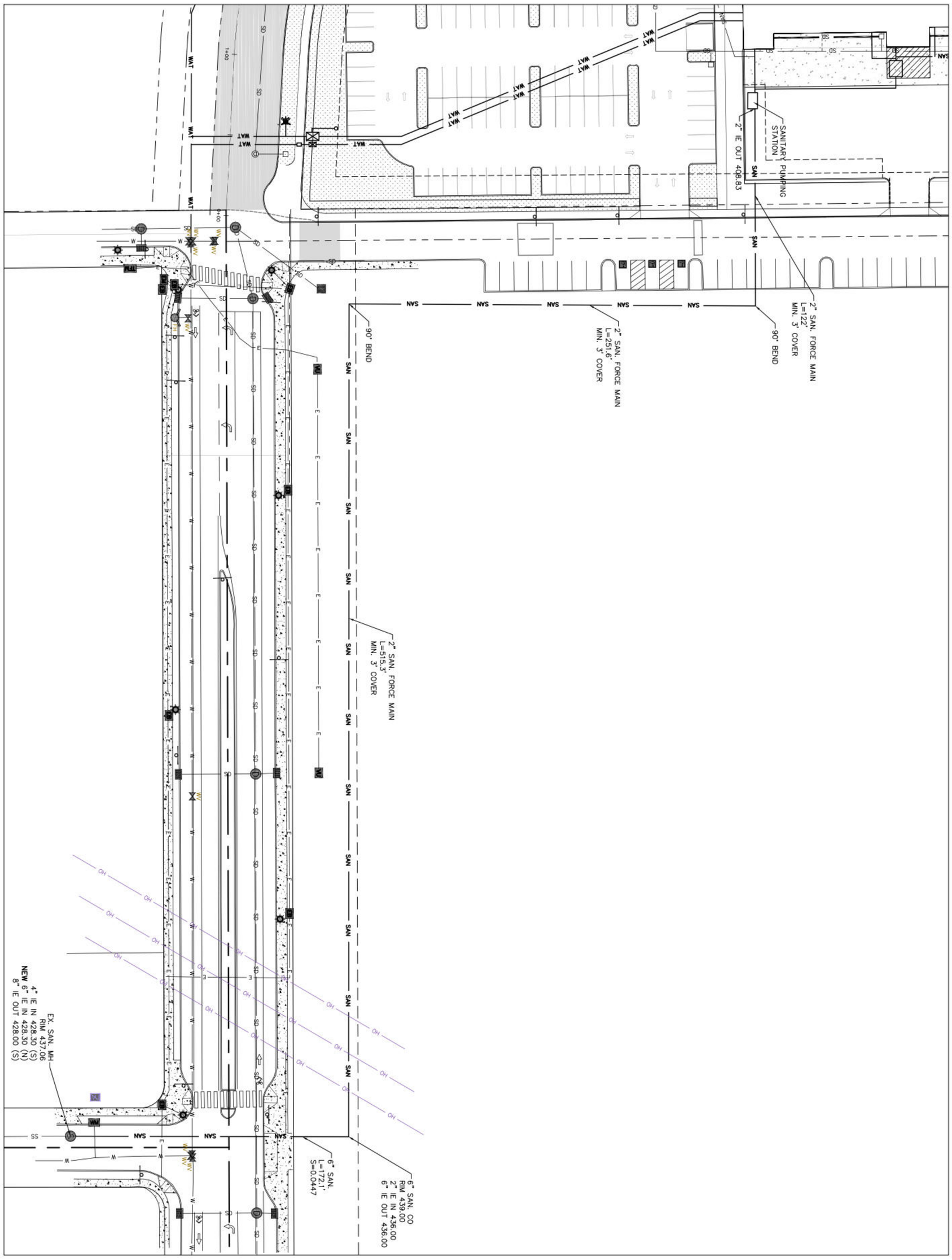
PRELIMINARY

REGISTERED PROFESSIONAL ENGINEER
12,620
OREGON
FEB. 14, 1985
THOMAS J. SISUL

EXPIRES: 6/30/16

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PRELIMINARY

THOMAS J. SISUL — REGISTERED PROFESSIONAL ENGINEER — OREGON — FEB. 14, 1985 — 12,620

EXPIRES: 6/30/16

SHEET	OF	SHEETS
3	9	

JOB	DRAWN	SCALE	DATE
SGL14-070	JVM	1"=30'	FEB. 2015

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING: 14-070 Public Sewer.dwg

Public Sanitary Sewer Plan

OCSD TRANSPORTATION & MAINTENANCE FACILITY

REVISIONS	BY

C2.3

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PROJECT NUMBER

13 FEB 2015
DATE

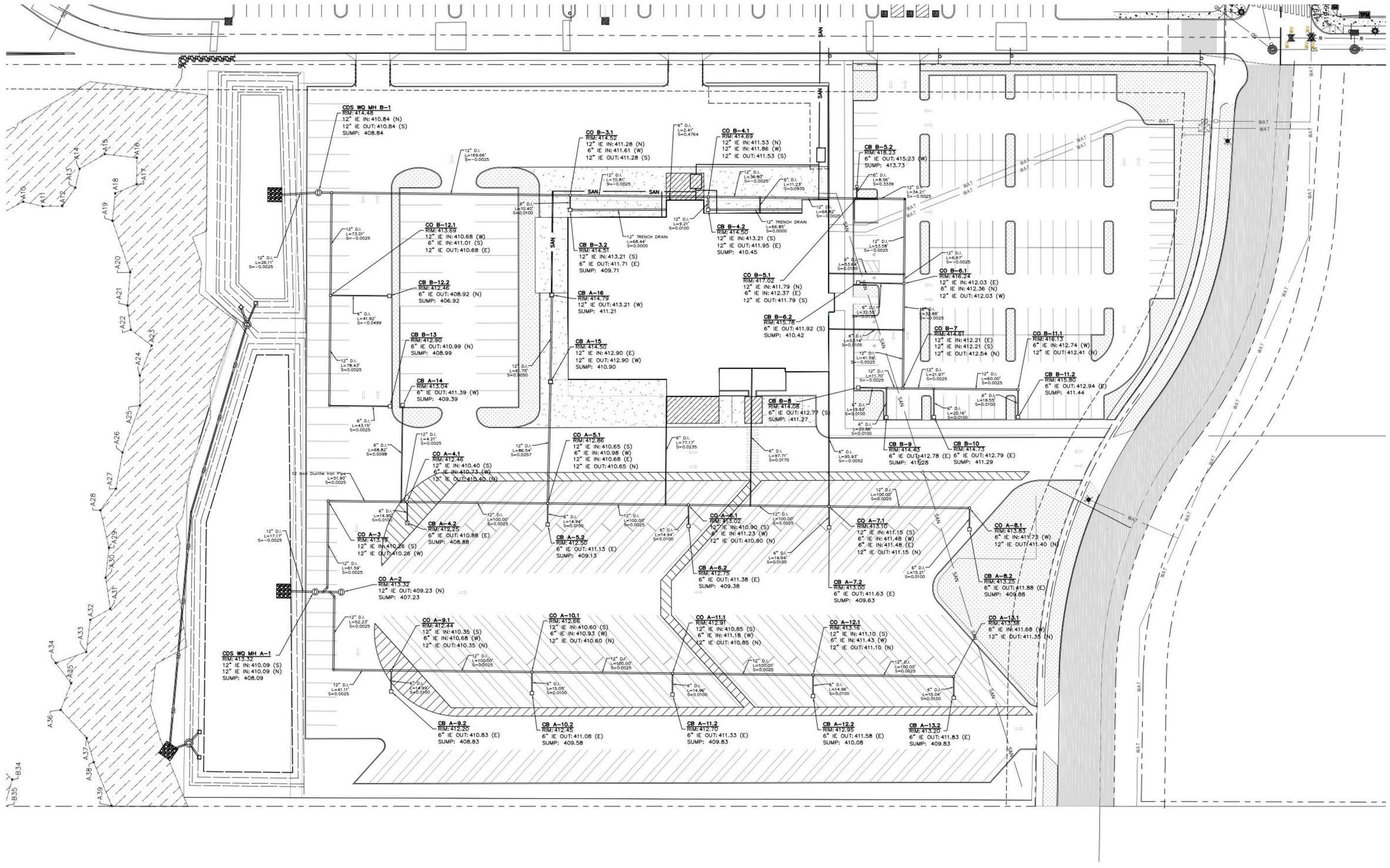
REVISIONS

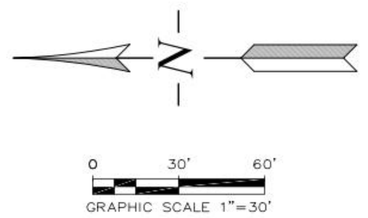
OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

PUBLIC SANITARY SEWER PLAN

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TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
ON SITE STORM DRAIN PLAN

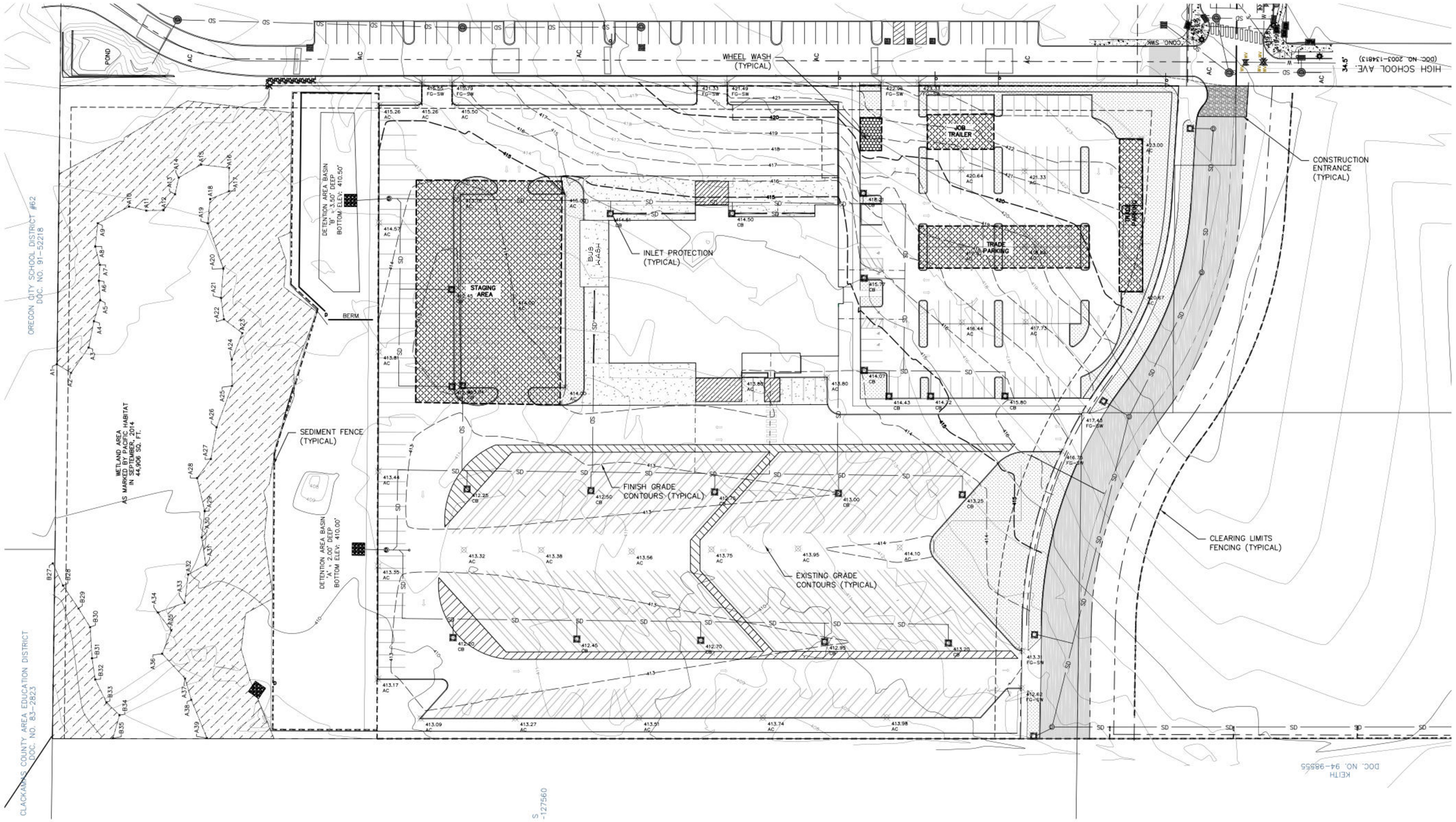
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C3.1
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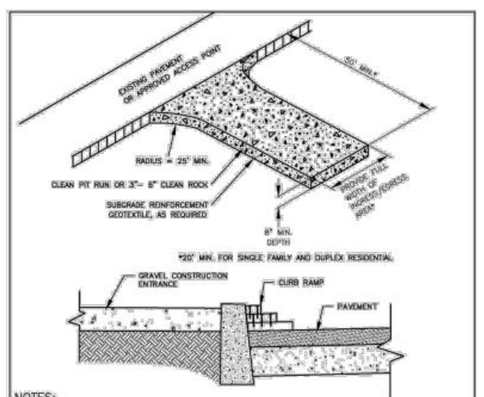
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375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188
DRAWING: SOL14-070 On Site Wat&San.dwg

REGISTERED PROFESSIONAL ENGINEER
12,820
OREGON
FEB 14, 1985
THOMAS J. SISUL
PREMININARY
EXPIRES: 6/30/16

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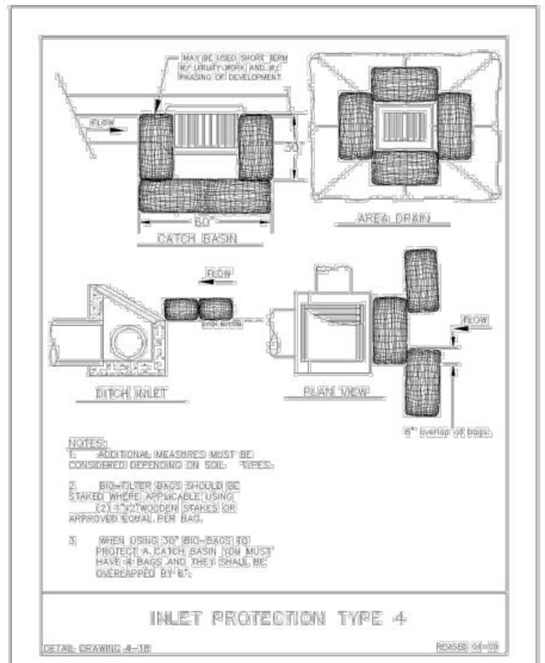
0 40' 80'
GRAPHIC SCALE 1"=40'



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ALL SEDIMENT CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL
   50' LONG BY 20' WIDE 3-8" CLEAN ROCK.
   GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

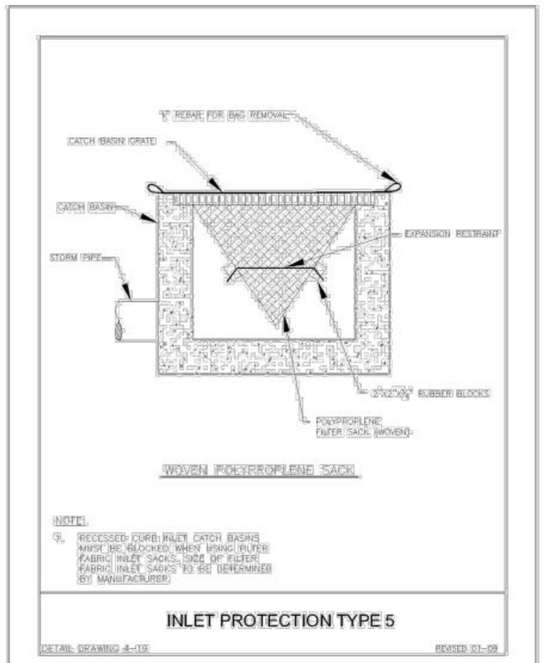
DETAIL DRAWING 4-13 REVISED 01-09



NOTES:
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 20" BIO-BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

INLET PROTECTION TYPE 4

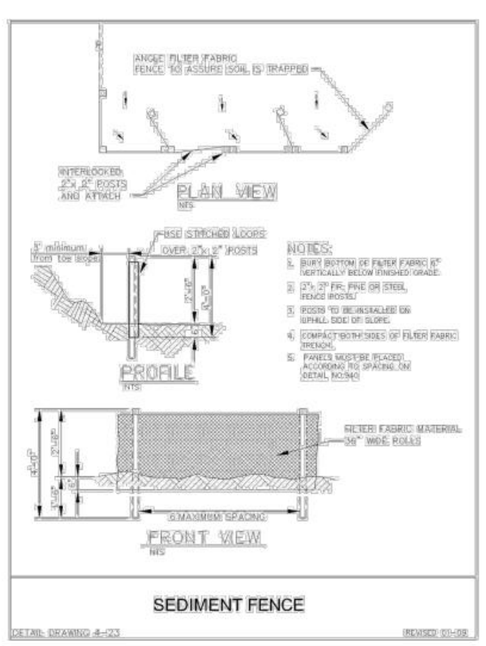
DETAIL DRAWING 4-18 REVISED 04-09



NOTE:
1. RECESSED FORM INLET CATCH BASINS MAY BE BLOCKED, WHEN USING SUPER FABRIC INLET SACKS, SIDE OF INLET. FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

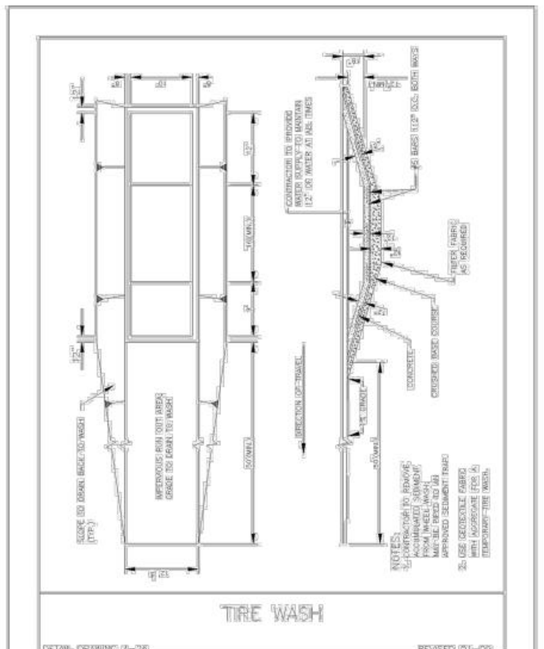
INLET PROTECTION TYPE 5

DETAIL DRAWING 4-19 REVISED 01-09



SEDIMENT FENCE

DETAIL DRAWING 4-23 REVISED 01-09



DETAIL DRAWING 6-26 REVISED 01-09

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING: SOL14-070 On Site Grading.dwg

REGISTERED PROFESSIONAL ENGINEER 12,820 OREGON FEB 14, 1986 THOMAS J. SISUL
PREMININARY
EXPIRES: 6/30/16

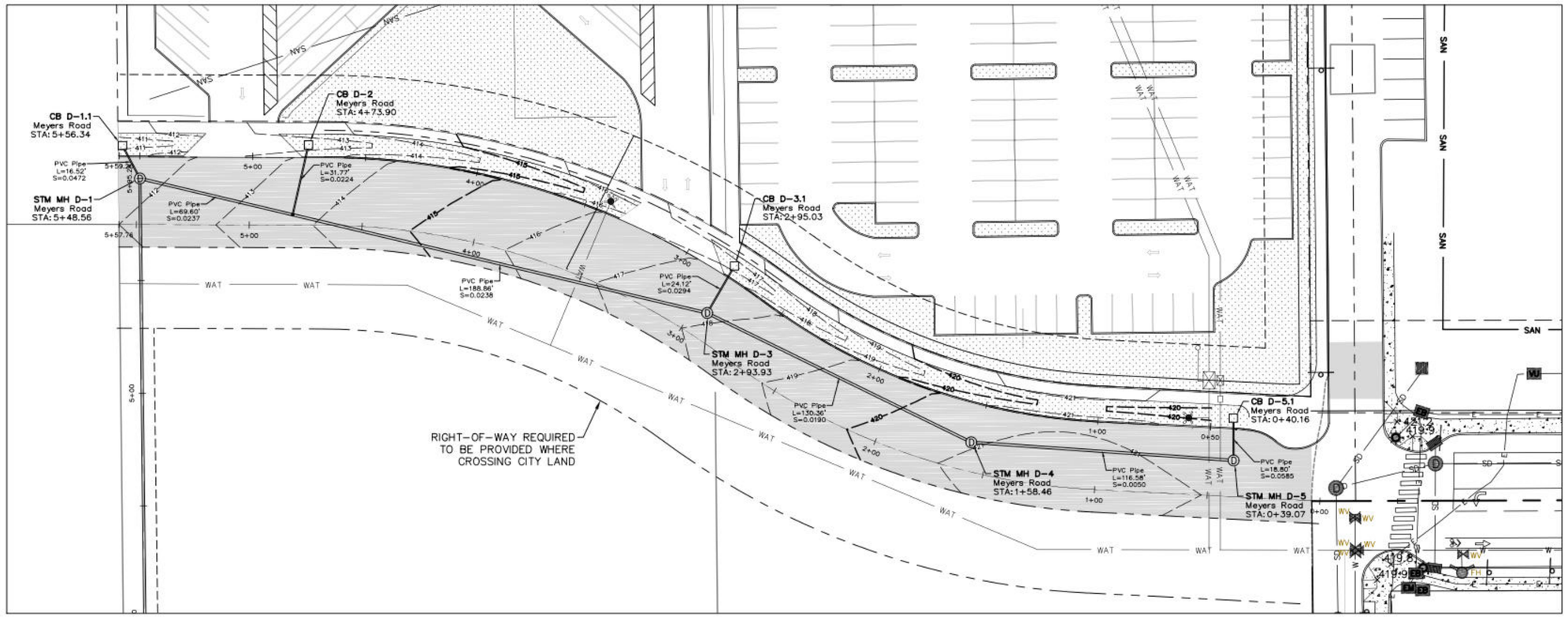
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200 North State Street ▪ Lake Oswego, Oregon 97034

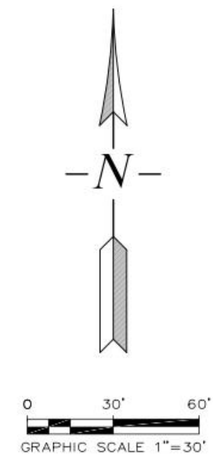
OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
ON SITE PARKING LOT GRADING & EROSION CONTROL PLAN

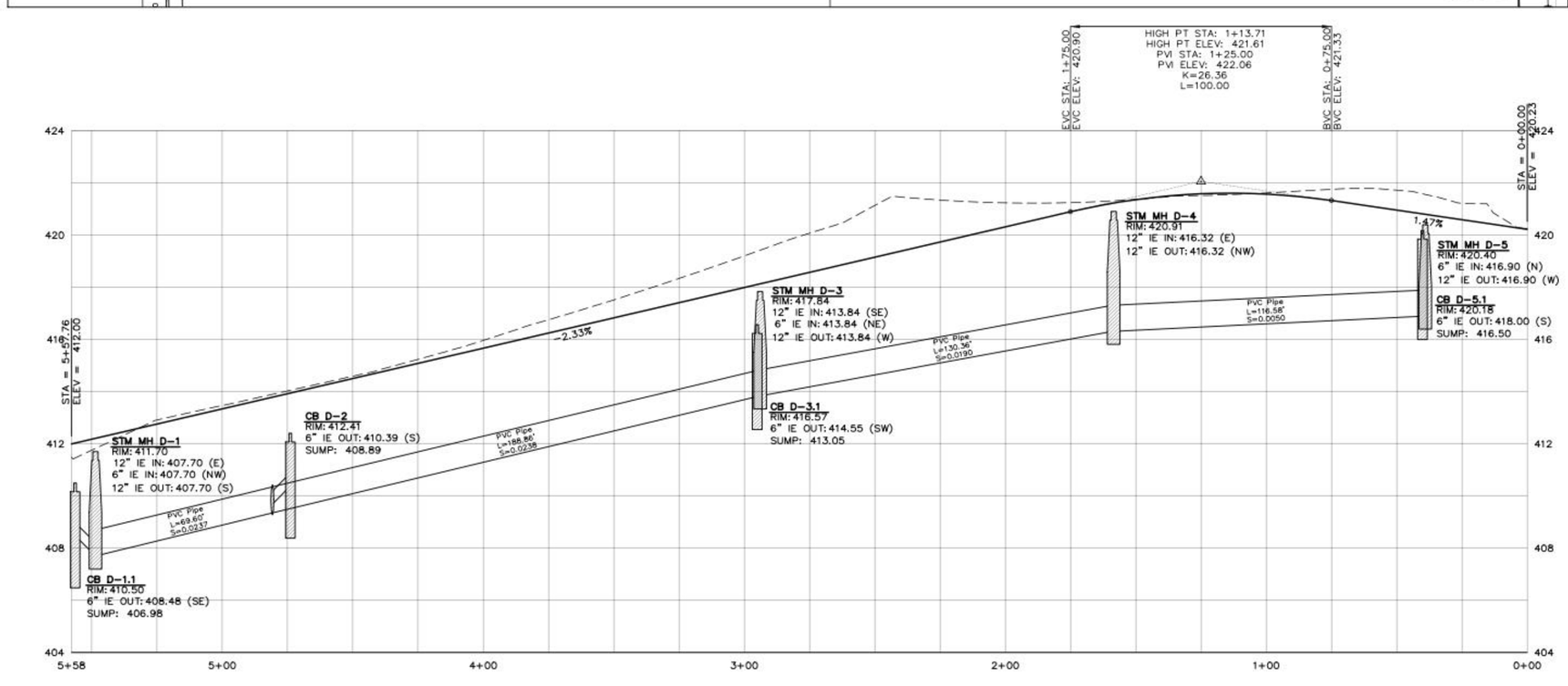
14023.00.L PROJECT NUMBER
13 FEB 2015 DATE
REVISIONS

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50% REVIEW SET

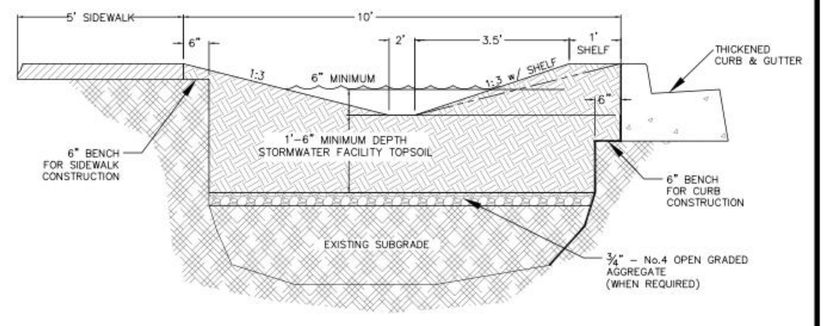
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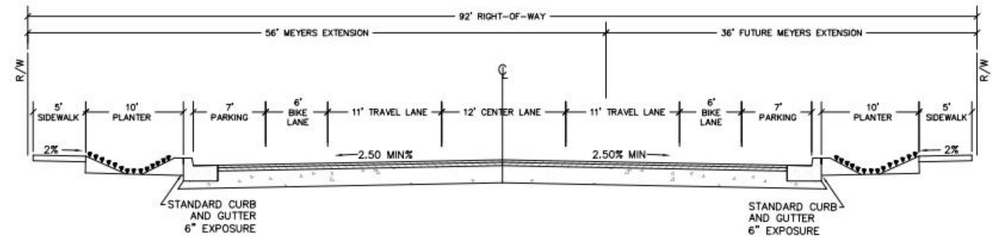




Meyers Road1
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



SWALE WITH PARKING TYPICAL SECTION



MEYERS ROAD TYPICAL SECTION

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PREMINIARY
EXPIRES: 6/30/16

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OCSD TRANSPORTATION & MAINTENANCE FACILITY

Public Street & Storm Drain Plan

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DATE	FEB. 2015
SCALE	1"=30'
DRAWN	JVM
JOB	SGL14-070
SHEET	4
OF	9 SHEETS

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TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

PUBLIC STREET & STORM DRAIN PLAN

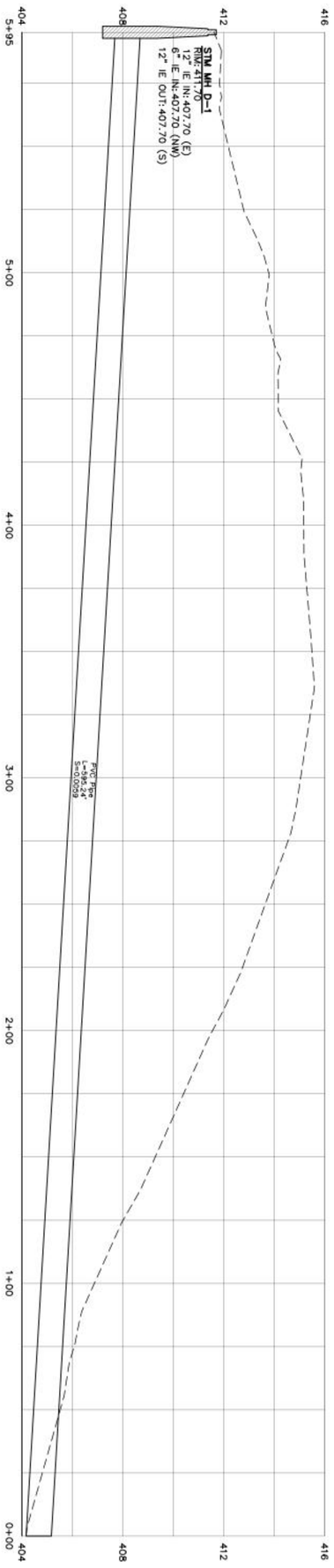
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PROJECT NUMBER
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DATE

REVISIONS

C5.1

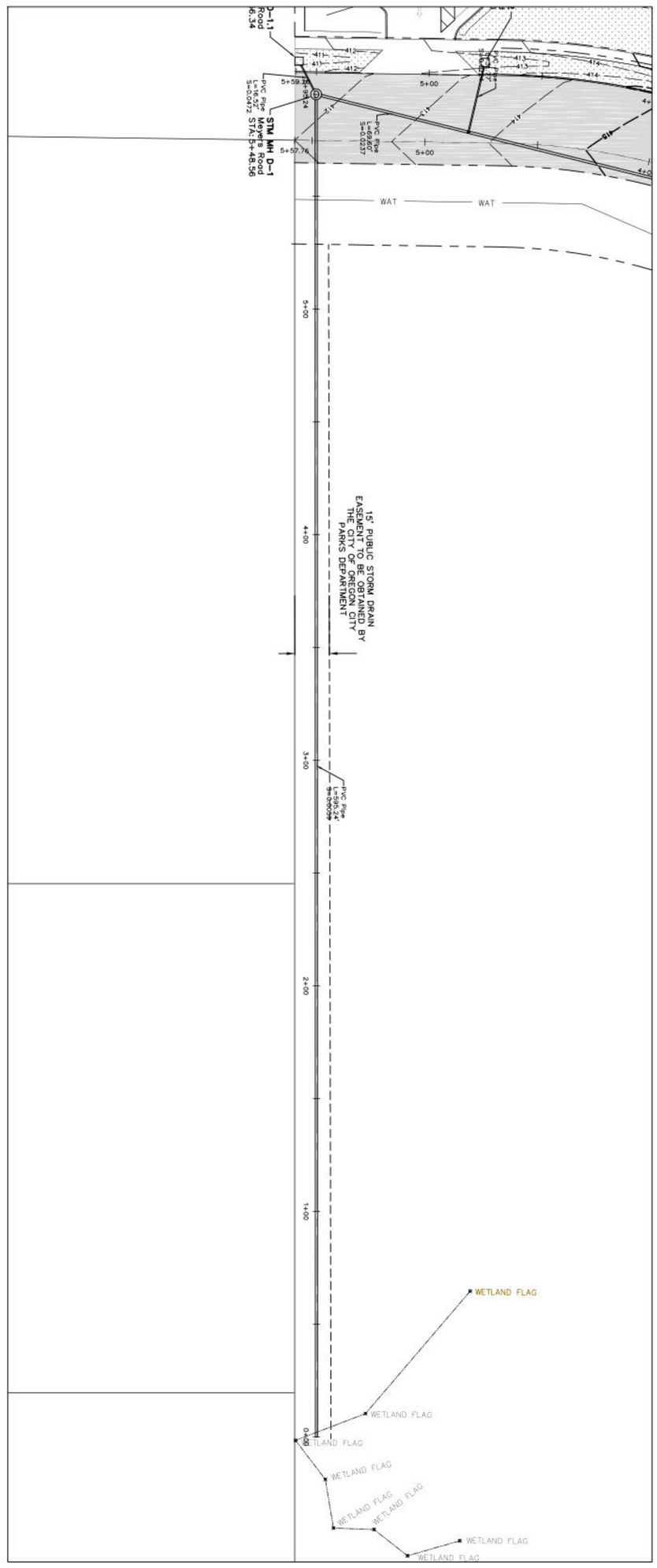
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Off-Site Drain Plan

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



REGISTERED PROFESSIONAL ENGINEER
12,820
OREGON
FEB 14, 1985
THOMAS J. SISUL
PREMININARY
EXPIRES: 6/30/16

SHEET	JOB	DRAWN	SCALE	DATE
5 OF 9 SHEETS	SGL14-070	JVM	1"=30'	FEB. 2015

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188
DRAWING: 14-070 Public Street&Storm.dwg

Off-Site Storm Drain Plan

OCSD TRANSPORTATION & MAINTENANCE FACILITY

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PROJECT NUMBER
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DATE
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OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
PUBLIC STREET & STORM DRAIN PLAN

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CLACKAMAS COUNTY AREA EDUCATION DISTRICT
DOC. NO. 83-2823

OREGON CITY SCHOOL DISTRICT #62
DOC. NO. 91-52218

SAUNDERS
DOC. NO. 2005-127560

OREGON CITY SCHOOL DISTRICT #62
BOOK 488, PAGE 325

WETLAND AREA
AS MARKED BY PACIFIC HABITAT
IN SEPTEMBER, 2014
44,906 SQ. FT.

POND

DETENTION AREA BASIN
'A' = 2.00' DEEP
BOTTOM ELEV. 410.00'

DETENTION AREA BASIN
'B' =3.50' DEEP
BOTTOM ELEV. 410.50'

SEDIMENT FENCE (TYPICAL)

BERM

STORAGE AREA

BUS WASH

INLET PROTECTION (TYPICAL)

FINISH GRADE CONTOURS (TYPICAL)

EXISTING GRADE CONTOURS (TYPICAL)

WHEEL WASH (TYPICAL)

BUS PARKING

STAFF PARKING

PORTABLE TRAILER

CLEARING LIMITS FENCING (TYPICAL)

CONSTRUCTION ENTRANCE (TYPICAL)

80' RIGHT-OF-WAY DEDICATION
DOC. NO. 2006-006643

MEYERS ROAD

HIGH SCHOOL AVE.
(DOC. NO. 2003-114151)

34.5'

CONC. SWK

AC

SD

UNKNOWN WETLAND DELINEATION

WETLAND FLAG

403.1

404.7

WHEEL WASH

LEGEND

- 1' PROPOSED GROUND CONTOURS
- 1' EXISTING GROUND CONTOURS
- CLEARING LIMITS/ SEDIMENT FENCING
- CONSTRUCTION ENTRANCE
- EQUIPMENT/STOCKPILE STORAGE AREAS
- DRAINAGE FLOW DIRECTION
- BIOFILTER BAG INLET PROTECTION

GRAPHIC SCALE 1"=40'

N

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING SIZE:14-070 ESCP-384-4.dwg

REGISTERED PROFESSIONAL ENGINEER
THOMAS J. SISUL
OREGON
JULY 14, 1989
12,827
PRELIMINARY
EXPIRES: 6/30/16

C1.3

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PROJECT NUMBER

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TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

LATE CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN

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PLANTING NOTES

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING TREES INDICATED TO REMAIN PRIOR TO SOIL PREPARATION. PROTECT ALL TREES AND SHRUBS INDICATED TO REMAIN. COORDINATE WITH THE OWNER'S REPRESENTATIVE.

2. PLANTING AREAS TO BE SUFFICIENTLY CLEANED OF ALL CONSTRUCTION MATERIALS, INCLUDING IMPORTED ROCK, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE BEFORE BEGINNING ANY LANDSCAPE WORK.

3. IDENTIFY ALL PLANTING AREAS IN FIELD WITH WHITE FIELD-MARKING CHALK OR APPROVED EQUAL. PLANTING BEDS TO BE ADJUSTED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLANT LOCATION.

4. FOR PLANTING OCCURRING IN MASSES OF SAME SPECIES PLANT, LABELING REFERS TO ALL ADJACENT IDENTICAL SYMBOLS. REFER TO DETAILS AND LEGEND FOR SPACING INFORMATION.

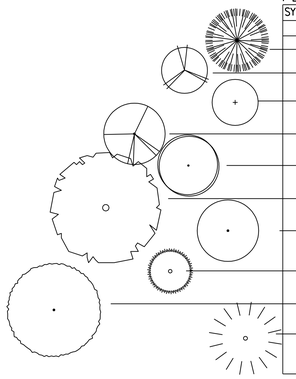
5. THE OWNER'S REPRESENTATIVE WILL APPROVE INDIVIDUAL PLANT MATERIAL AND LOCATION OF PLANT MATERIAL PRIOR TO INSTALLATION. REFER TO SPECIFICATIONS FOR PROCEDURE.

6. SHRUBS AND GROUNDCOVER TO BE PLANTED A MINIMUM OF ONE HALF THEIR ON CENTER SPACING AWAY FROM PAVEMENT EDGES; UNLESS OTHERWISE NOTED.

7. PROVIDE ROOT BARRIER AROUND ALL TREES WITHIN 5' OF PAVING, CURBS, WALLS, BUILDINGS, UTILITY DUCTS AND OTHER APPURTENANCES.

8. PLANT QUANTITIES INDICATED ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PLANTS IN QUANTITIES AND LOCATIONS SHOWN ON DRAWINGS.

9. PROVIDE JUTE NETTING ON ALL SLOPES WITH GRADIENT OF 3:1 OR GREATER AS DIRECTED IN THE FIELD BY THE OWNER'S REPRESENTATIVE. STAPLE FABRIC TO GROUND WITH METAL STAKES AT 4' O.C.



PLANT SCHEDULE

SYMBOL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
		TREES				
	ABGR	ABIES GRANDIS	GRAND FIR	6-8FT.	AS SHOWN	3
	ACCI	ACER CIRCINATUM	VINE MAPLE	2" CAL.	AS SHOWN	4
	ACFR	ACER X FREEMANII 'ARMSTRONG'	ARMSTRONG MAPLE	3" CAL.	AS SHOWN	75
	ALRU	ALNUS RUBRA	RED ALDER	2" CAL.	AS SHOWN	10
	CABE	CARPINUS BETULUS 'FASTIGIATA'	EUROPEAN HORNBEAM	3" CAL.	AS SHOWN	48
	CLLU	CLADASTRIS LUTEA	YELLOW WOOD	2" CAL.	AS SHOWN	28
	FRLA	FRAXINUS LATIFOLIA	OREGON ASH	2" CAL.	AS SHOWN	5
	PSME	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	6-8FT.	AS SHOWN	11
	QUGA	QUERCUS GARRYANA	OREGON WHITE OAK	2" CAL.	AS SHOWN	4
	THPL	THUJA PLICATA	WESTERN RED CEDAR	6-8FT.	AS SHOWN	13

TOTAL # TREES: 201

	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
		SHRUBS			
	ARUN	ARBUTIS UNEDO 'COMPACTA'	DWARF STRAWBERRY TREE	#5	48" O.C.
	CHPI	CHAMAECYPARIS PISIFERA 'FILIFERA NANA'	SAWARA FALSE CYPRESS	#3	36" O.C.
	CIHE	CISTUS X HETEROCALYS 'CHELSEA BONNET'	CHELSEA BONNET ROCK ROSE	#3	36" O.C.
	EUJA	EUONYMUS JAPONICAS 'MICROPHYLLUS'	BOX LEAF EUONYMOUS	#3	24" O.C.
	GASH	GAULTHERIA SHALLON	SALAL	#2	36" O.C.
	ILCR	ILEX CRENATA 'HELLERI'	JAPANESE HOLLY	#5	36" O.C.
	MAAQ	MAHONIA AQUAFOLIUM 'COMPACTA'	COMPACT OREGON GRAPE	#5	30" O.C.
	NADO	NANDINA DOMESTICA 'GULF STREAM'	GULF STREAM NANDINA	#5	30" O.C.
	POFR	POTENTILLA FRUTICOSA 'ABBOTSWOOD'	SHRUBBY POTENTILLA	#3	36" O.C.
	PRLA	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN LAUREL	#5	36" O.C.
	THOC	THUJA OCCIDENTALIS 'SMARAGD'	AMERICAN ARBORVITAE	5-6FT	36" O.C.
		WETLAND ZONE			
	BLSP	BLECHNUM SPICANT	DEER FERN	#1	30" O.C.
	CAOB	CAREX OBNUPTA	SLOUGH SEDGE	6" POT	12" O.C
	COSE	CORNUS SERICEA 'ARCTIC FIRE'	RED TWIG DOGWOOD	#1	36" O.C.
	JUPA	JUNCUS PATENS	SPREADING RUSH	#1	18" O.C.
	LOIN	LONICERA INVOLUCRATA	BLACK TWINBERRY	#3	48" O.C.
	SASC	SALIX SCOULERIANA	SCOULER WILLOW	#5	AS SHOWN
	SCMI	SCIRPUS MICROCARPUS	SMALL FRUITED BULRUSH	#1	18" O.C.
	SPDO	SPIRAEA DOUGLASII	DOUGLAS'S SPIRAEA	#3	48" O.C.
	THPL	THUJA PLICATA	WESTERN RED CEDAR	6-8FT.	AS SHOWN
		RIPARIAN ZONE			
	BLSP	BLECHNUM SPICANT	DEER FERN	#1	30" O.C.
	CAOB	CAREX OBNUPTA	SLOUGH SEDGE	4" POT	12" O.C.
	COSE	CORNUS SERICEA 'ARCTIC FIRE'	RED TWIG DOGWOOD	#1	36" O.C.
	FRLA	FRAXINUS LATIFOLIA	OREGON ASH	2" CAL.	AS SHOWN
	HEMI	HEUCHERA MICRANTHA	SMALL FLOWERED ALUMROOT	#1	24" O.C.
	LOIN	LONICERA INVOLUCRATA	BLACK TWINBERRY	#3	48" O.C.
	RISA	RIBES SANGUINEUM	RED FLOWERING CURRANT	#3	48" O.C.
	RUPA	RUBUS PARVILORUS	THIMBLEBERRY	#1	48" O.C.
	SASC	SALIX SCOULERIANA	SCOULER WILLOW	#5	AS SHOWN
	SPBE	SPIRAEA BETULIFOLIA 'LUCIDA'	BIRCH LEAF SPIRAEA	#3	36" O.C.
	SPDO	SPIRAEA DOUGLASII	DOUGLAS'S SPIRAEA	#3	48" O.C.
	THPL	THUJA PLICATA	WESTERN RED CEDAR	6-8FT.	AS SHOWN
		FOREST ZONE			
	BLSP	BLECHNUM SPICANT	DEER FERN	#1	30" O.C.
	GASH	GAULTHERIA SHALLON	SALAL	#1	36" O.C.
	HEMI	HEUCHERA MICRANTHA	SMALL FLOWERED ALUMROOT	#1	24" O.C.
	POMU	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1	24" O.C.
	PSME	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	6-8FT.	AS SHOWN
	QUGA	QUERCUS GARRYANA	WHITE OAK	2" CAL.	AS SHOWN
	RISA	RIBES SANGUINEUM	RED-FLOWERING CURRANT	#3	48" O.C.
	RUPA	RUBUS PARVILFORUS	THIMBLEBERRY	#2	48" O.C.
	SYAL	SYMPHOCARPOS ALBUS	SNOWBERRY	#2	36" O.C.
	THPL	THUJA PLICATA	WESTERN RED CEDAR	6-8FT	AS SHOWN

SHRUB AREAS TO BE IRRIGATED WITH PERMANENT AUTOMATIC CONTROL IRRIGATION

WETLAND ZONE TO BE IRRIGATED WITH TEMPORARY AUTOMATIC CONTROL IRRIGATION

RIPARIAN ZONE TO BE IRRIGATED WITH TEMPORARY AUTOMATIC CONTROL IRRIGATION

FOREST ZONE TO BE IRRIGATED WITH TEMPORARY AUTOMATIC CONTROL IRRIGATION

NOTE: 273 TOTAL TREES PLANTED TOWARDS MITIGATION REQUIREMENT

WALKER | MACY
711 SW OAK, SUITE 200
PORTLAND, OR 97204
503.228.3122

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OREGON CITY, OR 97045

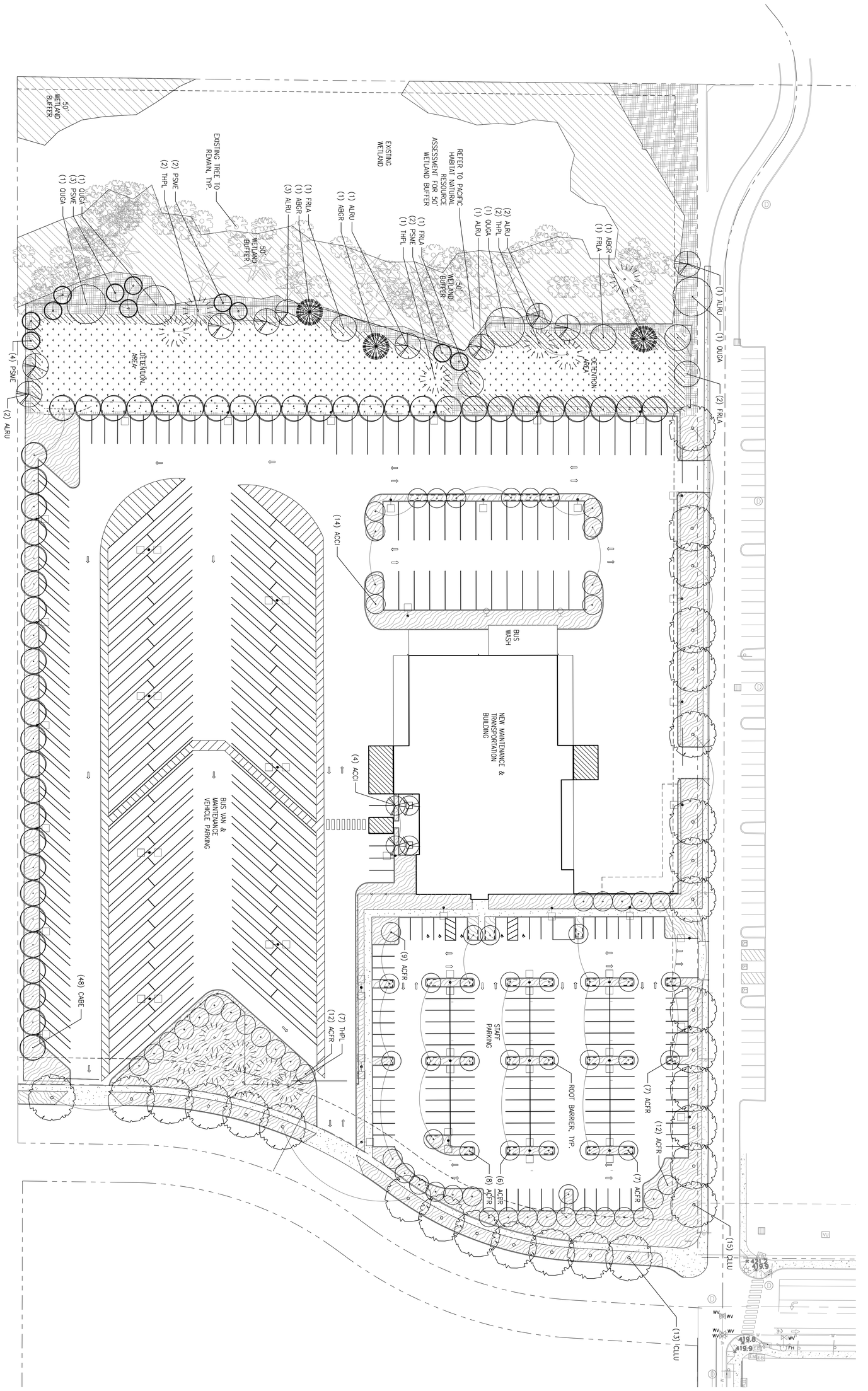
PLANTING SCHEDULE AND NOTES

14023.00.L
PROJECT NUMBER
13 FEB 2015
DATE

REVISIONS

L1.0
50%
REVIEW SET

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SEE SHEET L1.0 FOR PLANT SCHEDULE AND NOTES

SCALE: 1" = 30'-0"

0 10 20 30 60

NORTH

L1.1

50% REVIEW SET

14023.00.L
PROJECT NUMBER

13 FEB 2015
DATE

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OREGON CITY SCHOOL DISTRICT

TRANSPORTATION & MAINTENANCE FACILITY

OREGON CITY, OR 97045

PLANTING PLAN

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ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

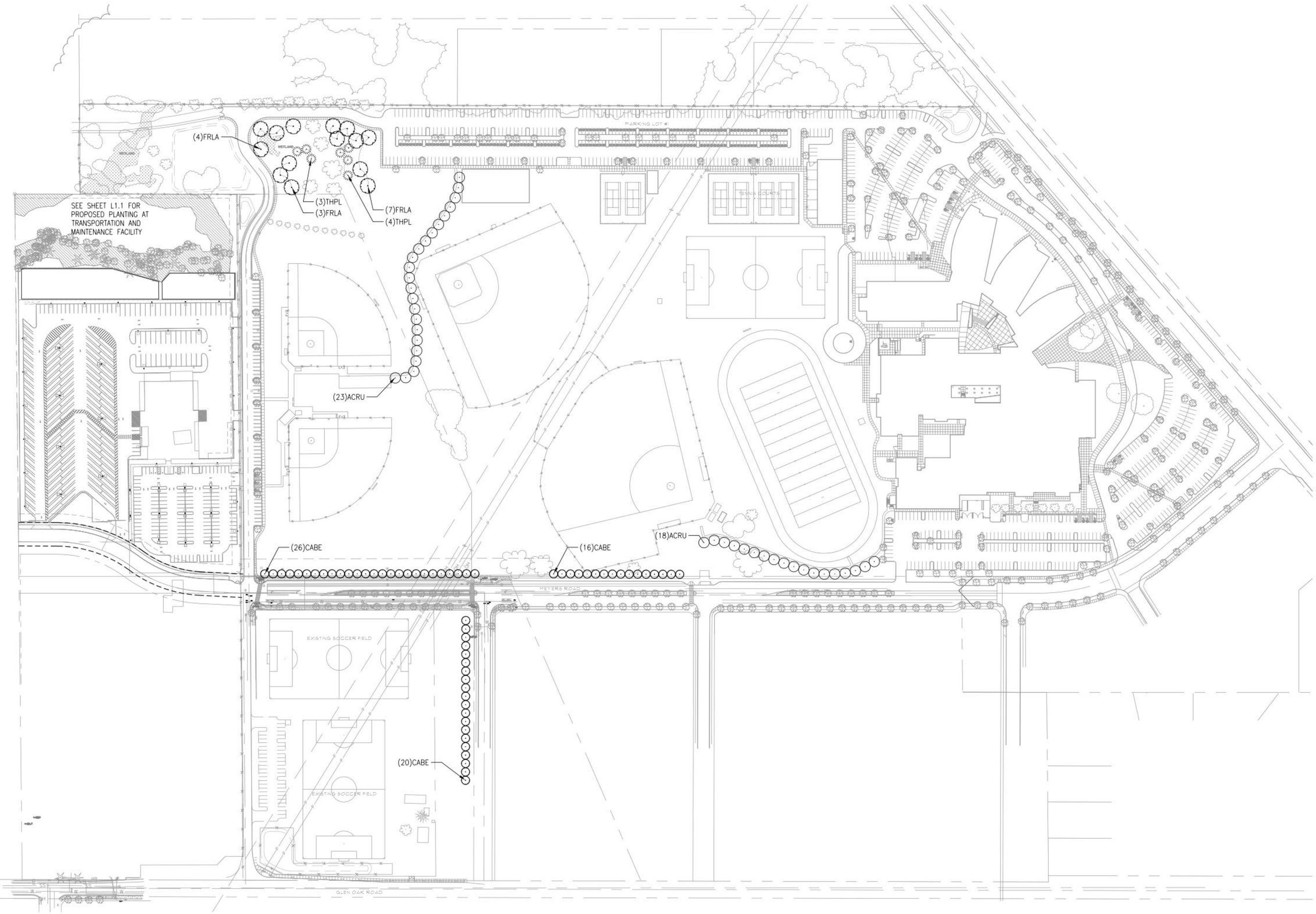
WALKER MACY
111 SW OAK, SUITE 200
PORTLAND, OR 97204
503-228-3122

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PLANT SCHEDULE

SYMBOL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
		TREES (154 TREES)				
	ACRU	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	3" CAL.	AS SHOWN	41
	CABE	CARPINUS BETULUS 'FASTIGIATA'	EUROPEAN HORNBEAM	3" CAL.	AS SHOWN	62
	FRLA	FRAXINUS LATIFOLIA	OREGON ASH	3" CAL.	AS SHOWN	14
	THPL	THUJA PLICATA	WESTERN RED CEDAR	6-8FT.	AS SHOWN	7

TOTAL # TREES PLANTED: 124



0 20 50 100 200
SCALE: 1" = 100'-0"

NORTH

WALKER | MACY
111 SW OAK, SUITE 200
PORTLAND, OR 97204
503.224.6.22

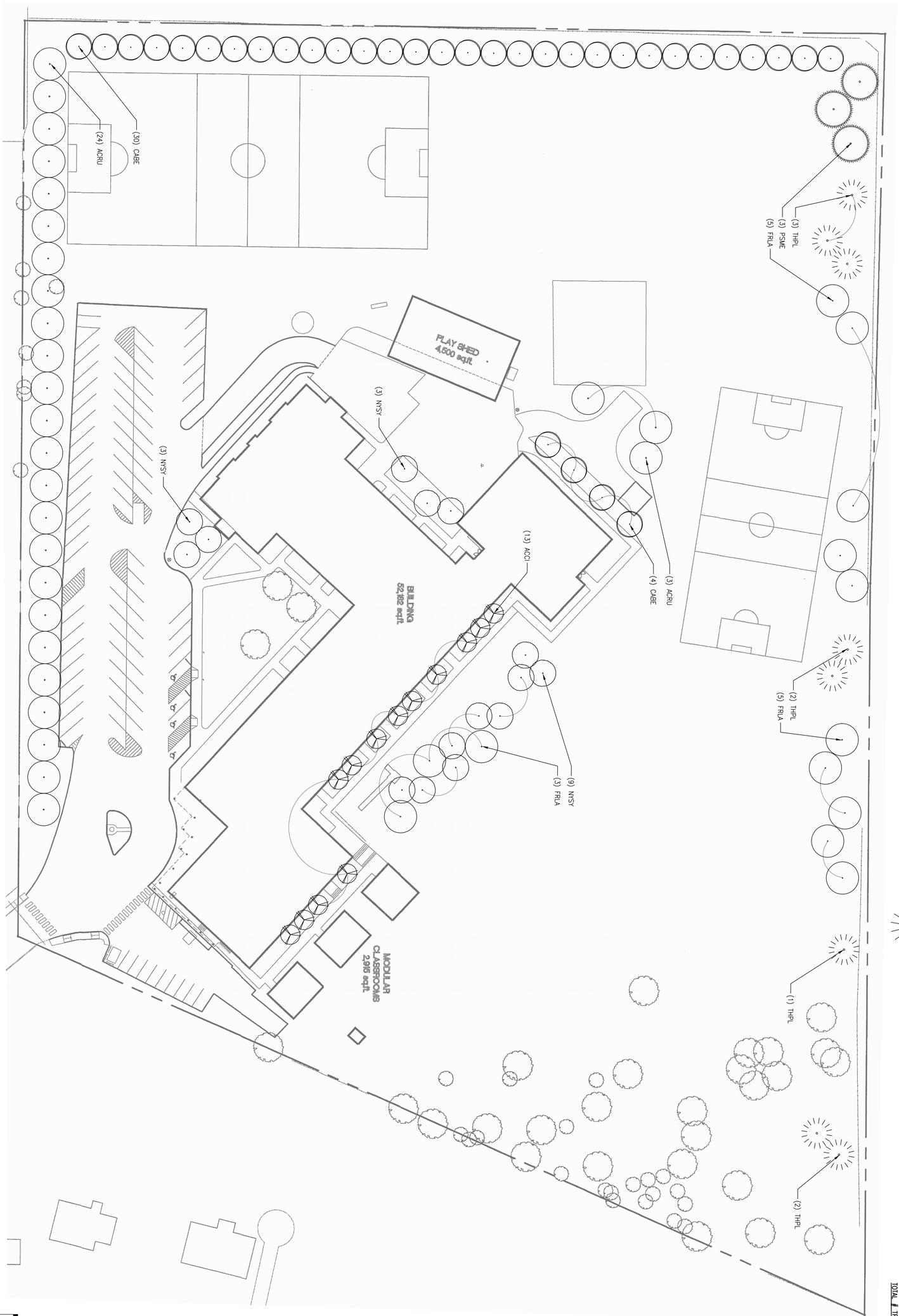
BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
TREE MITIGATION PLAN - HIGH SCHOOL SITE

14023.00.L
PROJECT NUMBER
13 FEB 2015
DATE
REVISIONS

L1.2
50%
REVIEW SET

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PLANT SCHEDULE

SYMBOL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
		TREES				
	ACCI	ACER CIRCINATUM	VINE MAPLE	2" CAL.	AS SHOWN	13
	ACFR	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	3" CAL.	AS SHOWN	27
	CABE	CARPINUS BETULUS 'FASTIGIATA'	EUROPEAN HORNBEAM	3" CAL.	AS SHOWN	34
	FRLA	FRAXINUS LATIFOLIA	OREGON ASH	3" CAL.	AS SHOWN	13
	NYSY	NYSSA SYLVATICA	BLACK TUPELO	2" CAL.	AS SHOWN	15
	PSME	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	6-8FT.	AS SHOWN	13
	THPL	THUJA PLICATA	WESTERN RED CEDAR	6-8FT.	AS SHOWN	8

TOTAL # TREES PLANTED: 113

NORTH
0 10 20 30 60
SCALE: 1" = 30'-0"

L1.3
50%
REVIEW SET

14023.00.L
PROJECT NUMBER
13 FEB 2015
DATE
REVISIONS

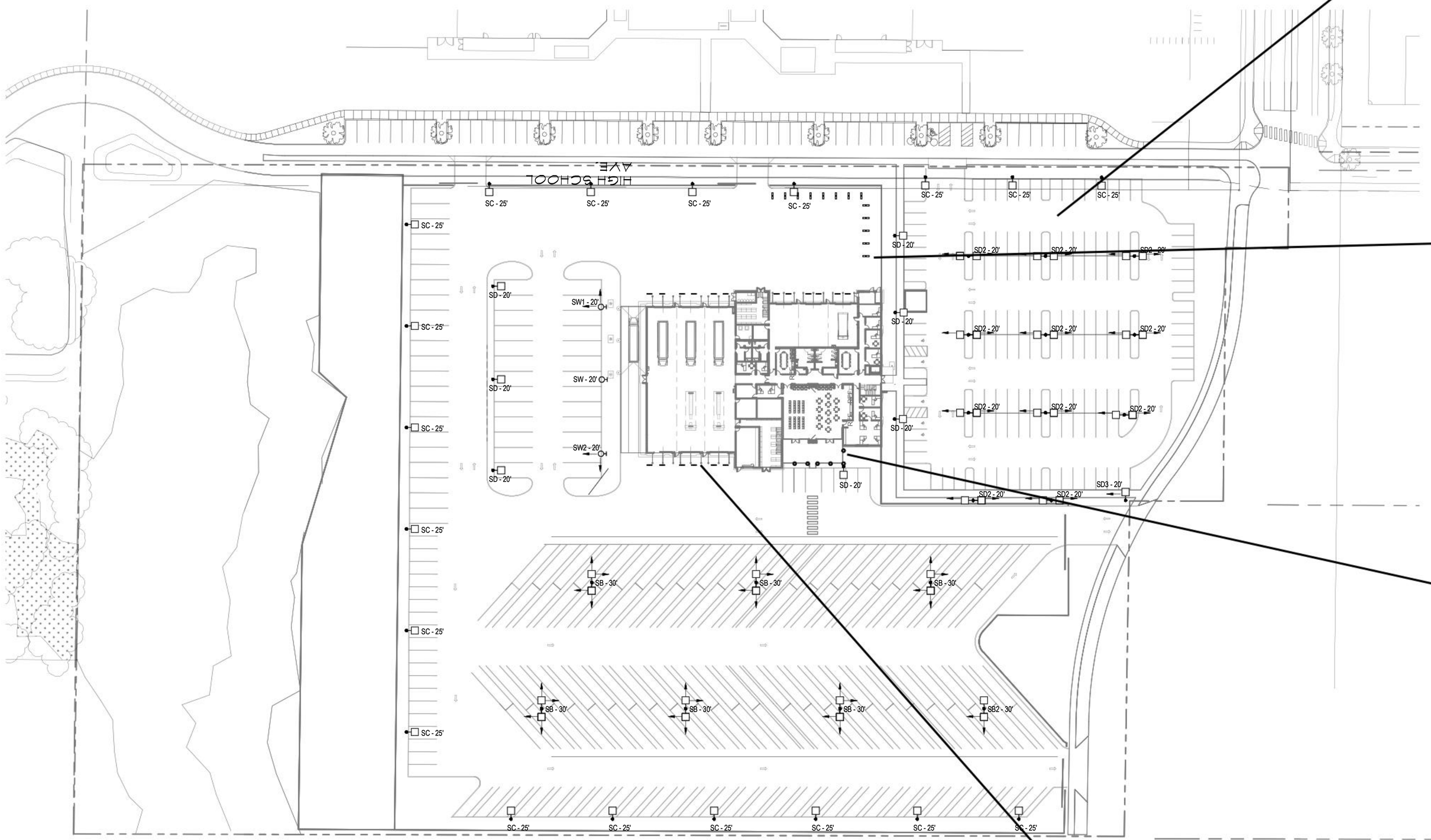
OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

TREE MITIGATION PLAN - HOLCOMB ELEMENTARY SITE

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

WALKER MACY
111 SW OAK, SUITE 200
PORTLAND, OR 97204
503-228-3122

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1 **SITE PLAN - LIGHTING**
SCALE: 1" = 40'-0"

1" = 40'-0"
0 40 80 120 160

SITE PLAN - LIGHTING

1/8" = 1'-0"
0 8 16 24 32

SHEET NOTES

A PHOTOMETRICS WERE ONLY CALCULATED FOR SITE POLES AND WALL MOUNTED LUMINAIRES AT BUILDING PRIVATE ENTRIES. PEDESTRIAN SCALE LUMINAIRES WERE NOT INCLUDED IN CALCULATIONS.

KEYED NOTES

1) PARKING POLE



The LED Galleon Gleon pole at 20', 25', and 30' has many different light output and distribution options making it a great candidate to light a large area with the same pole.

2) COVERED STORAGE



SLS Linda fixture, LED, is a vapor tight wrap that can be surface or pendant mounted in the exterior covered area. The LED's can handle exterior temperature swings.

3) BOLLARD



The LED Cooper Eon 303 bollard will be used to light the courtyard by the main entrance. It's comes with one or two heads and has a similar aesthetic to the site pole.

4) UNDER CANOPY LIGHTING



Surface mounting the Alight Accolade directly beneath the canopy on the outer edge will provide light for the drive entries and the drive aisles as well.

GLUMAC
900 SW Fifth Ave., Suite 1600
Portland, OR 97204
T. 503.227.5280 F. 503.274.7674
Job No.: 02.12.00264
Contact: ?
engineers for a sustainable future:

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
SITE PLAN - LIGHTING

14023.00.L PROJECT NUMBER
22 DEC 2014 DATE
REVISIONS

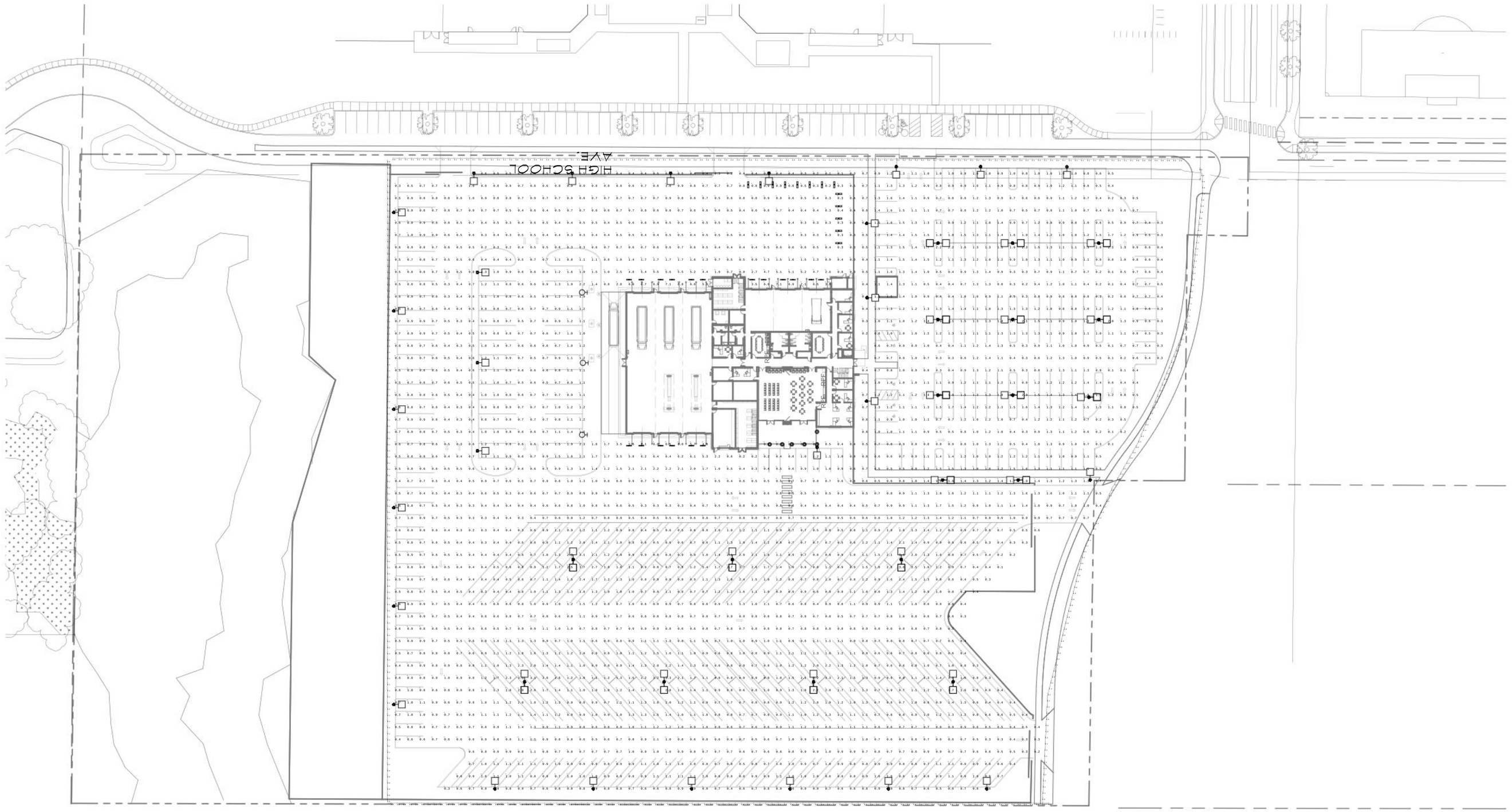
LU
EL0.2
LAND USE / DESIGN REVIEW

12/19/2014 1:51:05 PM

© COPYRIGHT BBL ARCHITECTS

SHEET NOTES

A PHOTOMETRICS WERE ONLY CALCULATED FOR SITE POLES AND WALL MOUNTED POLE FIXTURES BY BUILDING DRIVE ENTRIES. PEDESTRIAN SCALE LUMINAIRES WERE NOT INCLUDED IN CALCULATIONS.



1 **SITE PLAN - LIGHTING PHOTOMETRICS**
SCALE: 1" = 40'-0"

1" = 40'-0"
0 40 80 120 160

GLUMAC
805 SW Fifth Ave., Suite 1600
Portland, OR 97204
T. 503.227.5280 F. 503.274.7974
www.glumac.com
Job No. 02.12.03364
Contact: ?
engineers for a sustainable future℠

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200 North State Street ■ Lake Oswego, Oregon 97034

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
SITE PLAN - LIGHTING PHOTOMETRICS

14023.00.L PROJECT NUMBER
22 DEC 2014 DATE
REVISIONS

LU
EL0.2P

LAND USE/
DESIGN REVIEW

12/22/2014 9:53:53 AM

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Exhibit A -Title Reports

Title Reports for the parcels of the campus site follow.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Tax Lot 1100

SCHEDULE A

Amount $ 55,982.50 Date November 25, 1968 At 4:04 P.M.

INSURED

----- SCHOOL DISTRICT NO. 62, CLACKAMAS COUNTY, OREGON -----

The fee simple title to said land is, at the date hereof, vested in

----- MILTON O. ESSIG AND O. NATALIE ESSIG, as tenants by the entirety. -----

The land referred to in this policy is described as:

IN THE COUNTY OF CLACKAMAS AND STATE OF OREGON

PARCEL A: Part of the Andrew Hood D. L. C. in T. 3 S., R. 2 E., of the W. M., described as follows:

Beginning at a point North 7.09 chains from a point North 89° 24' West 8.89 chains from the common corner of Sections 9, 10, 15, and 16, T. 3 S., R. 2 E., of the W. M.; thence North 275.22 feet to the South boundary of that certain tract conveyed by Thomas Blackburn and wife, to Charles A. Baxter and wife, by deed recorded in Book 224, page 304, Deed Records; thence tracing the South line of said Gilbert tract South 89° 24' East a distance of 1092.3 feet to the center of the County Road; thence tracing the center of the County Road South 40° 45' East 130.54 feet; thence North 89° 24' West 321.26 feet; thence South 175 feet to the South boundary of that certain tract described in Deed from Charles Derrick and wife, to Raymond Rilance and wife by deed recorded in Book 242, page 302, Deed Records; thence tracing said South boundary of the Rilance tract North 89° 24' West a distance of 836.82 feet to the place of beginning.

EXCEPT that part lying within the boundary of the County Roads.

ALSO EXCEPT a tract of land conveyed to William F. Essig, et us, by deed recorded March 16, 1955, in Clackamas County Deed Book 493, page 184.

PARCEL B: A part of the D. L. C. of Andrew Hood and wife, in T. 3 S., R. 2 E., of the W. M., described as follows:

Beginning at the southwest corner of a certain 5 acre tract of land deeded by Christian Muralt and Erma Muralt, his wife, to E. W. Hornshuh on March 4, 1908 and which deed is recorded in Book 102, page 516, Deed Records of Clackamas County, Oregon, running thence South

6.34 chains; thence East 34.31 chains to the middle of the County Road known as the Oregon City and Ringo Road; thence Northwesterly along the center of the said road 8.37 chains to the southeast corner of the above tract of land; thence West 28.85 chains to the place of beginning

EXCEPT that parcel described in deed from Thomas Blackburn and wife to Clackamas Southern Railway company recorded in Book 134, page 394, Deed Records.

ALSO EXCEPT a tract of land conveyed to William F. Essig, et ux, by deed recorded March 16, 1955 in Clackamas County Deed Book 493, page 184.

FURTHER EXCEPTING THEREFROM that portion in County Road. -----

SCHEDULE B

This policy does not insure against loss by reason of the matters shown or referred to in this Schedule except to the extent that the owner of any mortgage or deed of trust is expressly insured on page 1 of this policy.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; pending proceedings for vacating, opening or changing of streets or highways preceding entry of the ordinance or order therefor.

2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, claims of easement or encumbrances which are not shown by the public records; unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

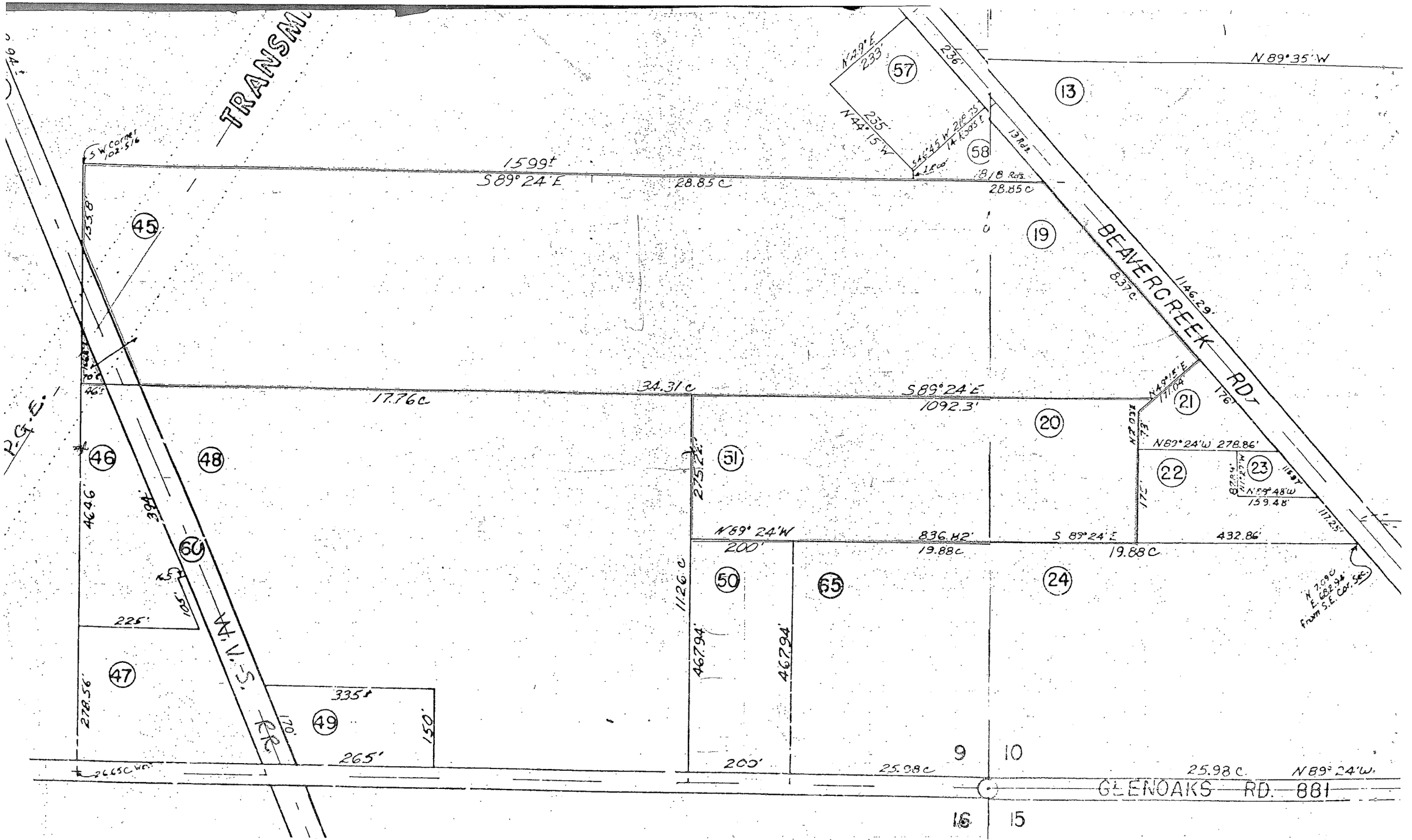
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments or any other facts which a correct survey would disclose.

5. 1968-69 taxes $975.11 of which 374.16 has been paid. 62-15 #32217

6. Easement, including the terms and provisions thereof, from Milton O. Essig and O. Natalie Essig, husband and wife, to Portland General Electric Company, an Oregon corporation, recorded June 10, 1958, Fee No. 8426, Deed Records.

7. Right of Way Contract, including the terms and provisions thereof, from Milton O. Essig and O. Natalie Essig, husband and wife, to Pacific Northwest Pipeline Corporation, a Delaware corporation, dated October 15, 1959, recorded October 27, 1959, Fee No. 19705, Deed Records, and corrected by instrument recorded August 10, 1960, Fee No. 14286, Deed Records.

8. Contract of Sale, including the terms and provisions thereof, between Milton O. Essig and O. Natalie Essig, his wife, vendors, and School District No. 62, Clackamas County, Oregon, vendee, dated November 19, 1968, recorded November 25, 1968, Fee No. 68 23940.-----


TRANSM
N 89° 35' W
57
236'
N 42° E 233'
235'
N 42° 15' W
S 46° 45' W 216.35
14 Rods
15 rod
58
13
13 Rd.
1599 t
S 89° 24' E
28.85 c
918 Rds
28.85 c
45
135.8'
19
BEAVER CREEK RD
1146.29'
837 c
34.31 c
S 89° 24' E
1092.3'
17.76 c
N 49° 15' E
111.04'
176'
21
20
N 89° 24' W 278.86'
46
48
51
275.22'
22
23
N 59° 48' W
159.48'
117.25'
N 89° 24' W
836.42'
S 89° 24' E
432.86'
200'
19.88 c
19.88 c
1126 c
50
65
24
46794'
46794'
N 7.09 c
N. E. Cor. 9&8
From S.E. Cor. Sec.
4646'
394'
60
45'
105'
225'
47
278.56'
335 t
49
120'
150'
265'
200'
25.98 c
25.98 c
N 89° 24' W.
9
10
16
15
GLENOAKS RD. 881

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Tax Lot 1200

CHICAGO TITLE INSURANCE COMPANY
OF OREGON
STATUS OF RECORD TITLE
January 16, 2001

10001 SE SUNNYSIDE ROAD
CLACKAMAS, OREGON 97015
Telephone: (503) 653-7300

Order No.: 222761

TO: Milstead & Associates Inc.
10121 SE Sunnyside Road #335
Clackamas, Oregon 97015

Attention: Gary Cooper

Charge: $500.00

We have searched our Tract Indices as to the following described real property:

PLEASE SEE ATTACHED

Vestee: OREGON CITY SCHOOL DISTRICT NO. 62, as to Parcels I, II, V and VI, PEARL R. HUNT as Trustee of the HUNT-FAMILY REVOCABLE LIVING TRUST dated September 27, 1993, as to Parcel III, DOROTHY HESS, as to Parcel IV, CLACKAMAS COUNTY SCHOOL DISTRICT NO. 62, as to Parcel VII, and SCHOOL DISTRICT NO. 62, CLACKAMAS COUNTY, OREGON, as to Parcel VIII

Dated as of: December 29, 2000 at 8:00 a.m.

CHICAGO TITLE INSURANCE COMPANY OF OREGON

By:_____
Deanne Edwards
Title Officer

THIS REPORT IS TO BE UTILIZED FOR INFORMATION ONLY. ANY USE OF THIS REPORT AS A BASIS FOR TRANSFERRING, ENCUMBERING OR FORECLOSING THE REAL PROPERTY DESCRIBED WILL REQUIRE PAYMENT IN THE AMOUNT EQUIVALENT TO APPLICABLE TITLE INSURANCE PREMIUM AS REQUIRED BY THE RATING SCHEDULE ON FILE WITH THE OREGON INSURANCE DIVISION.

The liability of Chicago Title Insurance Company is limited to the addressee and shall not exceed the fee paid therefore.

Said property is subject to the following on record matters:

EXCEPTIONS

1. Taxes, including the current fiscal year, not assessed because of School Exemption. If the exempt status is terminated under the statute prior to the date on which the assessment roll becomes the tax roll in the year in which said taxes were assessed, an additional tax may be levied.
   Code: 062-084
   Account No.: 00869929
   Map No.: 32E09D
   Tax Lot No.: 00500

   Taxes, including the current fiscal year, not assessed because of School Exemption. If the exempt status is terminated under the statute prior to the date on which the assessment roll becomes the tax roll in the year in which said taxes were assessed, an additional tax may be levied.
   Code: 062-084
   Account No.: 00869938
   Map No.: 32E09D
   Tax Lot No.: 00600

   Taxes, including the current fiscal year, not assessed because of School Exemption. If the exempt status is terminated under the statute prior to the date on which the assessment roll becomes the tax roll in the year in which said taxes were assessed, an additional tax may be levied.
   Code: 062-064
   Account No.: 00870034
   Map No.: 32E09D
   Tax Lot No.: 01300

2. Taxes for the fiscal year 2000-2001, partial payment has been made;
   Original Amount: $2,694.94
   Unpaid Balance: $1,796.62, plus interest
   Levy Code: 062-084
   Account No.: 00870025
   Map No.: 32E09D
   Tax Lot No.: 01200

   Potential additional tax liability resulting from deletion of farm use deferral per the Clackamas County Tax Roll.

3. City liens, if any, of the City of Oregon City. No search has been made or will be made as to the existence of such liens.

4. Regulations, including levies, liens, assessments, rights of way, and easements of Clackamas River Water District.

5. The rights of the public in and to that portion of the premises herein described lying within the limits of roads, streets and highways.
   (Affects Parcels I, III, IV, V and VIII)

(Continued)

Order No: 222761

LEGAL DESCRIPTION

PARCEL I:

A tract of land situated in the Andrew Hood Donation Land Claim, in Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at the Southeast corner of Section 9, Township 3 South, Range 2 East, of the Willamette Meridian; thence South 89°45'45" West along the South line of said Section 9, a distance of 1773.94 feet to a point; thence North 0°50'15" West a distance of 1164.10 feet to the Southwest corner of a certain 5 acre tract of land Deeded to E.W. Hornshuh on March 4, 1908 in Book 102, Page 516 Deed Records; thence North 89°45'45" East along the South line of said Hornshuh Tract, a distance of 1572.97 feet to the Southwest corner of that certain tract of land conveyed to Lanora L. Parker on June 3, 1964 and recorded in Book 33, Page 657, Miscellaneous Records; thence North 0°50'15" West along the West line of said Parker Tract a distance of 16.50 feet to the most Southerly corner of that certain tract of land conveyed to James C. Lee and Helen M. Lee, husband and wife, on July 12, 1966, recorded in Book 676, Page 538, Deed Records; thence South 46°53'00" West along the Southwesterly extension of the Southeasterly line of said Lee Tract 11.00 feet to an existing fence line and the most Westerly corner of that tract of land described in document recorded November 3, 1975 as Recorder's Fee No. 75-32201, Film Records, and the true point of beginning of the tract of land herein to be described; thence South 42°32' East along the existing fence line 6.39 feet, more or less, to an iron pipe at a fence corner; thence North 46°45' East along an existing fence 203.00 feet, more or less, to the Southwesterly right of way line of Beavercreek Road, also known as Market Road No. 11, passing over an iron pipe 0.49 feet back; thence North 46°45' East 30.00 feet to the center of Beavercreek Road; thence North 40°45' West along said road 236.00 feet to the most Northerly corner of the Lee Tract; thence South 49°00' West along the Northwesterly boundary of the Lee Tract 233.00 feet to an iron pipe as disclosed by land surveys filed with the County Surveyor as Nos. 218 and 12168, being the most Westerly corner of the Lee Tract and the most Northerly corner of that tract of land described in document recorded November 3, 1975 as Recorder's Fee No. 75-32200, Film Records; thence South 42°32'20" East 228.78 feet to a point that bears South 46°53' West 0.50 feet from the true point of beginning; thence North 46°53' East 0.50 feet to the true point of beginning.

PARCEL II:

A part of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Commencing at a stone, scribed with an "X", marking the section corner common to Sections 9, 10, 15 and 16, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon; thence along the line common to said Section 9 and 16, North 89°52'19" West, 1758.90 feet to a point; thence leaving said line, North 00°26'02" West, 744.10 feet to 1-1/4 inch iron pipe; thence North 89°49'28" East, 110.16 feet to a 1-1/4 inch iron pipe; thence running along the existing chain link fence line North 89°59'28" East, 1076.76 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "Mason"; thence running along a wire fence line the following 2 courses: South 89°41'43" East 457.08 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "Compass Corp."; thence North 49°27'44" East, 412.18 feet to a 5/8" iron rod with yellow plastic cap stamped "Compass Corp.") on the Southwesterly right-of-way of Beavercreek Road (Market Road No. 11, 30 feet from centerline), from which a 1/2 inch diameter iron pipe at Station 108+74.97 bears South 40°27'34" East, 588.32 feet; thence along said right-of-way North 40°27'34" West, 182.59 feet to a 5/8 inch iron rod with a yellow plastic cap stamped

(Continued)

Order No: 222761

LEGAL DESCRIPTION

"Compass Corp.", and being the point of beginning of Boundary Line Agreement recorded June 17, 1994, Fee No. 94-050227 and the point of beginning of the herein described premises; thence running along the existing chain link fence line South 88°48'00" West, 259.09 feet to a 5/8 inch iron rod with yellow plastic cap stamped "Compass Corp."; thence North 41°12'32" West, 28.89 feet to a 1/4 inch iron pipe at the most Southerly corner of that tract of land described in Deed to Kyle R. Kaser and Stella M. Kaser, recorded in Deed Fee No. 75-32201, Clackamas County Deed Records, and also being the terminus of said Boundary Agreement Line; thence Northeasterly along the Southeasterly line of said Kaser tract 203 feet, more or less, to the Southwesterly right-of-way line of Beavercreek Road; thence Southeasterly along said Southwesterly right-of-way of Beavercreek Road to the place of beginning.

PARCEL III:

A part of A. Hood Donation Land Claim, situated in Sections 9 and 10, Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon:

Beginning at the Northwest corner of a tract of land deeded by C. Muralt and wife to E.W. Hornshuh, on March 4, 1908, which deed is recorded in Book 102, Page 516 of records of Clackamas County, Oregon; running thence South 442.2 feet; thence East 2161.5 feet to center of Oregon City and Ringo County Road; thence Northwesterly along center of said County Road to Northeast corner of above Hornshuh Tract of land; thence West 1787.28 feet to the place of beginning.

The strip of land intended to be conveyed is more particularly described as follows:

Beginning at the Southwest corner of the above mentioned property; thence North along West boundary of said property a distance of 166.8 feet, more or less; thence Southeasterly and 30 feet parallel with the center line of said Railway as the same is now surveyed, located and marked with stakes, over, upon and across said land a distance of 181.2 feet, more or less, to a point in the South line of said property; thence along South boundary of said property a distance of 70.6 feet, more or less, to point of beginning.

PARCEL IV:

That portion of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a stone on the line between Sections 9 and 16 in Township 3 South, Range 2 East, of the Willamette Meridian, 5.67 chains East of the one-quarter corner between said Sections; said point being the Southeast corner of that tract conveyed to John T. Russell by Deed Recorded April 24, 1906 in Book 95, Page 396, Deed Records; thence North 89°45' East along the Section line 8 chains to a stone 13.67 chains East along the Section line from the one-quarter corner between said Sections 9 and 16; thence North, parallel with the West boundary of the Andrew Hood Donation Land Claim No. 44, a distance of 25 chains to a stone; thence South 89°45' West parallel with the Section line 8 chains to a stone; said point being the Northeast corner of the aforementioned Russell Tract; thence South along the East line of said Russell Tract 25 chains to the point of beginning;

EXCEPTING THEREFROM that portion lying North and East of the Easterly right-of-way conveyed to Clackamas Southern Railway Company by Deed Recorded March 6, 1914 in Book 134, page 389, Deed Records.

(Continued)

Order No: 222761

LEGAL DESCRIPTION

PARCEL V:

Part of the Andrew Hood and wife Donation Land Claim in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as:

Beginning at a point on the one-quarter section line of Section 9, said Township and Range, 10.70 chains South of the North line of said Hood Donation Land Claim, running thence South 3.24 chains; thence South 89°24' East 628.10 feet, more or less, to the Easterly line of the Willamette Valley Southern Railway Company right of way; running thence South 24°36' East along said Easterly line a distance of 712.94 feet, more or less, to an iron pipe 155.8 feet South of the Southwest corner of that tract of land conveyed to E.W. Hornshuh by Deed Recorded March 14, 1908, in Deed Book 102, Page 156, Deed Records of Clackamas County, Oregon; running thence North 155.8 feet to the Southwest corner of E.W. Hornshuh Tract; running thence South 89°24' East along the South line of said Hornshuh Tract 1599.00 feet, more or less, to the Southwest corner of that tract conveyed to George Coleman and Irma Coleman, husband and wife, by Deed Recorded July 23, 1938 in Deed Book 249, Page 11; said Records; running thence North 1 rod; running thence North 44°15' West a distance of 235.00 feet to an iron pipe; running thence North 49°30' East 233.00 feet to the center of the County Road; running thence North 40°45' West along the center of the County Road a distance of 494.7 feet, more or less, to the Northeast corner of that tract of land conveyed to E.W. Hornshuh by Deed Recorded January 7, 1910, in Deed Book 114, Page 12; running thence North 89°24' West along the North line of the last mentioned Hornshuh Tract, a distance of 33.15 chains, more or less, to the point of beginning.

EXCEPTING THEREFROM part of the Andrew Hood Donation Land Claim No. 44, in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at a point on the Easterly line of the Willamette Valley Southern Railway Companys right of way, being South 89°24' East 628.10 feet and South 920.04 feet from the Northwest corner of said claim; thence South 23°23'20" East 712.94 feet to an iron pipe South 0°50'15" East 155.8 feet from the Southwest corner of that tract of land conveyed to E.W. Hornshuh by Deed Recorded March 14, 1908, in Book 102, Page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0°50'15" West 155.8 feet to the Southwest corner of said Hornshuh Tract; thence North 89°45'45" East along the South line of said Hornshuh Tract 1572.97 feet to a point South 0°50'15" East 16.5 feet from the most Southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by Deed Recorded October 30, 1970, Fee No. 70-24574; thence North 0°50'15" West 16.5 feet to the most Southerly corner of said Kaser Tract; thence North 45°25'10" West along the Westerly line of said Kaser Tract 235.00 feet to the Northwest corner thereof; thence North 49°03'30" East along the Northerly line of said Kaser Tract 34.09 feet to a point; thence South 89°45'45" West parallel with the South line of said Hornshuh Tract 1586.00 feet to the Easterly line of the Willamette Valley Southern Railway Companys right of way; thence South 23°23'20" East along said right of way line to the true point of beginning.

AND FURTHER EXCEPTING part of the Andrew Hood Donation Land Claim, in Section 9, township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a point on the North-South one-quarter section line of said Section 9, a distance of 706.2 feet South of the North line of said Hood Donation Land Claim; thence South 89°24' East to the Southwesterly right of way line of Market Road No. 11, said point being on the South line of that tract of land conveyed to Virgil D. Webb, et ux, by Deed

(Continued)

Order No: 222761

LEGAL DESCRIPTION

Recorded August 9, 1965, in Book 661, Page 216, Fee No. 13239, Deed Records; said point further being the true place of beginning of the tract herein; thence Southeasterly along the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to a point; thence North 89°24' West, parallel with the South line of said Webb Tract, a distance of 670 feet to a point; thence Northwesterly parallel with the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the South line of said Webb Tract; thence South 89°24' East along said South line a distance of 670 feet to the true place of beginning.

PARCEL VI:

Part of the Andrew Hood Donation Land Claim in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a point on the North-South one-quarter section line of said Section 9, a distance of 706.2 feet South of the North line of said Hood Donation Land Claim; thence South 89°24' East to the Southwesterly right of way line of Market Road No. 11, said point being on the South line of that tract of land conveyed to Virgil D. Webb, et ux, by Deed Recorded August 9, 1965, Book 661, Page 216, Fee No. 13239, Deed Records; said point further being the true place of beginning of the tract herein; thence Southeasterly along the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to a point; thence North 89°24' West, parallel with the South line of said Webb Tract, a distance of 670 feet to a point; thence Northwesterly parallel with the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the South line of said Webb Tract; thence South 89°24' East along the South line a distance of 670 feet to the true point of beginning.

PARCEL VII:

Part of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at a point on the Easterly line of the Willamette Valley Southern Railway Companys right of way, being South 89°24' East 628.10 feet and South 920.04 feet from the Northwest corner of said claim; thence South 23°23'20" East 712.94 feet to an iron pipe South 0°50'15" East 155.8 feet from the Southwest corner of that tract of land conveyed to E.W. Hornshuh by Deed Recorded March 14, 1908, Book 102, Page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0°50'15" West 155.8 feet to the Southwest corner of said Hornshuh Tract; thence North 89°45'45" East along the South line of said Hornshuh Tract 1572.97 feet to a point South 0°50'15" East 16.5 feet from the most Southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by Deed Recorded October 30, 1970, Fee No. 70 24574; thence North 0°50'15" West 16.5 feet to the most Southerly corner of said Kaser Tract; thence North 45°25'10" West along the Westerly line of said Kaser Tract 235.00 feet to the Northwest corner thereof; thence North 49°03'30" East along the Northerly line of said Kaser Tract 34.09 feet to a point; thence South 89°45'45" West parallel with the South line of said Hornshuh Tract 1586.99 feet to the Easterly line of the Willamette Valley Southern Railway Companys right of way; thence South 23°23'20" East along said right of way line to the true point of beginning.

PARCEL VIII:

A part of the Donation Land Claim of Andrew Hood and wife, in Township 3 South, Range 2

(Continued)

Order No: 222761

LEGAL DESCRIPTION

East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at the Southwest corner of a certain 5 acre tract of land deeded by Christian Muralt and Erma Muralt, his wife, to E.W. Hornshuh on March 4, 1908 and which deed is recorded in Book 102, page 516, Deed Records of Clackamas County, Oregon, running thence South 6.34 chains; thence East 34.31 chains to the middle of the County Road known as the Oregon City and Ringo Road; thence Northwesterly along the center of said road 8.37 chains to the Southeast corner of the above tract of land; thence West 28.85 chains to the place of beginning.

EXCEPT that parcel described in Deed from Thomas Blackburn and wife to Clackamas Southern Railway Company Recorded in Book 134, Page 394, Deed Records.

ALSO EXCEPT a tract of land conveyed to William F. Essig et ux, by Deed Recorded March 16, 1955 in Clackamas County Deed Book 493, Page 184.

ALSO EXCEPTING THEREFROM:

A tract of land in Sections 9 and 10, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, described as follows:

Beginning at the Northwest corner of GLEN OAKS CREST ADDITION NO. 2, a duly recorded town plat in Clackamas County; thence South 89°47'03" East tracing the North line of said plat, 598.04 feet to a 5/8 inch x 30 inch iron rod; thence North 2°17'20" East 177.93 feet to the Southwest corner of that tract conveyed to Milton O. Essig and O. Natalie Essig, husband and wife, by Deed recorded in Book 493, Page 184, Deed Records; thence continuing North 2°17'20" East 72.89 feet (called North 2°08' East 73.00 feet in Deed to Essig), to a 3/4 inch pinched pipe; thence North 49°24'20" East deflecting 47°07' right from the previous course (as called in the Deed to Essig) and running a distance of 159.83 feet to the Southwest right-of-way line of Beavercreek Road; thence tracing said right-of-way line North 40°30'40" West 250.00 feet to a 5/8 inch x 30 inch iron rod; thence South 49°24'20" West 412.18 feet to a 5/8 inch x 30 inch iron rod; thence North 89°47'03" West 437.08 feet to a 5/8 inch x 30 inch iron rod; thence South 00°38' East 275.22 feet to a 5/8 inch x 30 inch rod in the Westerly projection of the North line of GLEN OAKS CREST ADDITION NO. 2; thence South 89°47'03" East along the Westerly projection of said North line 200.00 feet to the Northwest corner of GLEN OAKS CREST ADDITION NO. 2, and the place of beginning.

Order No: 222761

SPECIAL EXCEPTIONS (Continued)

6. W.V.S. Railroad right of way as disclosed by various matters of public record. (Affects Parcel V)

7. An easement created by instrument, including terms and provisions thereof;
   Recorded: March 16, 1914
   Book: 134
   Page: 389
   In Favor Of: Clackamas Southern Railway Company, an Oregon corporation
   For: Railroad
   Affects: Parcel IV

8. An easement created by instrument, including terms and provisions thereof;
   Recorded: May 1, 1956
   Book: 510
   Page: 206
   In Favor Of: Portland General Electric Company, an Oregon corporation
   For: Electric power lines and poles and appurtenant equipment
   Affects: Parcel III

9. An easement created by instrument, including terms and provisions thereof;
   Recorded: June 2, 1958
   Book: 540
   Page: 673
   In Favor Of: Portland General Electric Company, an Oregon corporation
   For: Electric power transmission lines
   Affects: Parcel IV

10. An easement created by instrument, including terms and provisions thereof;
    Dated: May 26, 1958
    Recorded: June 10, 1958
    Book: 541
    Page: 268
    In Favor Of: Portland General Electric Company
    For: Electric transmission lines and appurtenances
    Affects: Parcel VIII

11. An easement created by instrument, including terms and provisions thereof;
    Recorded: July 3, 1958
    Book: 542
    Page: 292
    In Favor Of: Portland General Electric Company, an Oregon corporation
    For: To erect, maintain, repair, rebuild, operate and patrol electric power transmission lines, structures and appurtenant signal lines
    Affects: See document for location for Parcel III

12. An easement created by instrument, including terms and provisions thereof;
    Recorded: March 6, 1959
    Book: 552
    Page: 133
    In Favor Of: Portland General Electric Company, an Oregon corporation
    Affects: Parcels V, VI and VII

(Continued)

Order No: 222761

SPECIAL EXCEPTIONS (Continued)

13. An easement created by instrument, including terms and provisions thereof;
Dated: October 15, 1959
Recorded: October 27, 1959
Book: 563
Page: 54
In Favor Of: Pacific Northwest Pipeline Corporation (El Paso Natural Gas Company is successor by merger to all the rights of Pacific Northwest Pipeline Corporation)
For: Right-of-way

And corrected by Agreement;
Recorded: August 10, 1960
Book: 575
Page: 275
(Affects Parcel VIII)

14. An easement created by instrument, including terms and provisions thereof;
Dated: June 30, 1975
Recorded: August 5, 1975
Recorder's Fee No.: 75 21417
In Favor Of: Portland General Electric Company, an Oregon corporation
For: Underground electric power lines and appurtenances
Affects: See document for location of Parcel VIII

15. Waiver of Remonstrance, including the terms and provisions thereof.
Recorded: June 17, 1993
Recorder's Fee No.: 93 41874
(Affects Parcel VI)

16. Boundary Line Agreement, including the terms and provisions thereof;
Dated: April 22, 1994
Recorded: June 17, 1994
Recorder's Fee No.: 94-050084
Between: Oregon City School District No. 62; Pearl R. Hunt, Trustee of the Hunt Family Revocable Living Trust under instrument dated September 27, 1993; Edgar L. Hunt and Pearl Hunt; and James C. Ventura and Dyan L. Ventura

And also by instrument;
Recorded: June 17, 1994
Recorder's Fee No.: 94-050228
(Affects Parcel VIII and other property also)

17. An easement created by instrument, including terms and provisions thereof;
Recorded: November 28, 1994
Recorder's Fee No.: 94091440
In Favor Of: City of Oregon City
For: Slope easement
Affects: Northerly of and adjacent to the centerline of relocated Glenn Oaks Road Variable in width of Parcel IV

(Continued)

Order No: 222761

SPECIAL EXCEPTIONS (Continued)

18. City of Oregon City Resolution No. 95-42 being a resolution adopting the final cost distribution roll for sanitary sewer construction in the Glen Road Sanitary sewer Advance Finance District, including the terms and provisions thereof;
Recorded: November 17, 1995
Recorder's Fee No.: 95071958
Original Amount $27,142.50 plus interest and penalties, if any.

NOTE: Taxes for the fiscal year 2000-2001, paid in full;
Amount: $1,989.98
Levy Code: 062-088
Account No.: 00869974
Map No.: 32E09D
Tax Lot No.: 01000

NOTE: Taxes for the fiscal year 2000-2001, paid in full;
Amount: $138.70
Levy Code: 062-088
Account No.: 00869983
Map No.: 32E09D
Tax Lot No.: 01001

NOTE: Any discrepancies in the legal descriptions, herein, that a correct survey could disclose.

END OF REPORT

cc: NONE

DE/tn
January 16, 2001

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Tax Lot1300

TICOR TITLE INSURANCE

SCHEDULE A

Amount $770,000.00 Date: October 15, 1991 At 8:00 A.M.

Premium: $1,755.00

INSURED

OREGON CITY SCHOOL DISTRICT #62

The estate or interest referred to herein is, at the date hereof, vested in

OREGON CITY SCHOOL DISTRICT #62

The land referred to in this policy is described as

SEE 'LEGAL DESCRIPTION' ATTACHED HERETO AND BY REFERENCE MADE A PART HEREOF.

The estate or interest in the land described in this schedule is:

a fee

SCHEDULE B

This policy does not insure against loss or damage, nor against costs, attorney's fees or expenses, any or all of which arise by reason of the matters shown or referred to in this Schedule except to the extent that the owner of any mortgage or deed of trust is expressly insured on page 1 of this policy.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Any facts, rights, interest, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records; unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments or any other facts which a correct survey would disclose.

5. As disclosed by the tax rolls, the premises herein described have been zoned or classified for farm use. At any time that said land is disqualified for such use, the property will be subject to additional taxes or penalties and interest.

6. Any improvements located upon the insured property which is described or defined as a mobile home under the provisions of Chapters 803 and 820, OREGON REVISED STATUTES and is subject to registration as provided therein.

7. The premises herein described are within and subject to the statutory powers, including the power of assessment of Tri City Service District No. 4.
None due as of the date of this policy.

8. The premises herein described are within and subject to the statutory powers, including the power of assessment of Clairmont Water District.

9. Rights of the public in and to that portion lying within streets, roads and highways.

10. Easement, including the terms and provisions thereof,
From: Emily May Marr
To: Portland General Electric Company, an Oregon corporation
Recorded: March 6, 1959
Fee: 3742
Book: 552 Page: 133
Records of Clackamas County, Oregon.

11. W.V.S. Railroad Right of Way as disclosed by various matters of public record.

****

TICOR TITLE INSURANCE

198-087

LEGAL DESCRIPTION

IN THE COUNTY OF CLACKAMAS AND STATE OF OREGON

Part of the Andrew Hood and wife D.L.C. in Section 9, Township 3 South, Range 2 East, of the W.M., described as:

Beginning at a point on the one-quarter section line of Section 9, said Township and Range, 10.70 chains south of the north line of said Hood D.L.C., running thence South 3.24 chains; thence South 89° 24' East 628.10 feet, more or less, to the easterly line of the Willamette Valley Southern Railway Company right of way; running thence South 24° 36' East along said easterly line a distance of 712.94 feet, more or less, to an iron pipe 155.8 feet south of the southwest corner of that tract of land conveyed to E. W. Hornshuh by Deed recorded March 14, 1908, in Deed Book 102, page 156, Deed Records of Clackamas County, Oregon; running thence North 155.8 feet to the southwest corner of E. W. Hornshuh tract; running thence South 89° 24' East along the south line of said Hornshuh tract 1599.00 feet, more or less, to the southwest corner of that tract conveyed to George Coleman and Irma Coleman, husband and wife, by Deed recorded July 23, 1938 in Deed Book 249, page 11; said Records; running thence North 1 rod; running thence North 44° 15' West a distance of 235.00 feet to an iron pipe; running thence North 49° 30' East 233.00 feet to the center of the County Road; running thence North 40° 45' West along the center of the County Road a distance of 494.7 feet, more or less, to the northeast corner of that tract of land conveyed to E. W. Hornshuh by Deed recorded January 7, 1910, in Deed Book 114, page 12; running thence North 89° 24' West along the north line of the last mentioned Hornshuh tract, a distance of 33.15 chains, more or less, to the point of beginning.

EXCEPTING THEREFROM part of the Andrew Hood D.L.C. No. 44, in Section 9, Township 3 South, Range 2 East, of the W.M., described as follows:

Beginning at a point on the easterly line of the Willamette Valley Southern Railway Companys right of way, being South 89° 24' East 628.10 feet and South 920.04 feet from the northwest corner of said claim; thence South 23° 23' 20" East 712.94 feet to an iron pipe South 0° 50' 15" East 155.8 feet from the southwest corner of that tract of land conveyed to E. W. Hornshuh by Deed recorded March 14, 1908, in Book 102, page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0° 50' 15" West 155.8 feet to the southwest corner of said Hornshuh tract; thence North 89° 45' 45" East along the south line of said Hornshuh tract 1572.97 feet to a point South 0° 50' 15" East 16.5 feet from the most southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by Deed recorded October 30, 1970, Fee No. 70 24574; thence North 0° 50' 15" West 16.5 feet to the most southerly corner of said Kaser tract; thence North 45° 25' 10" West along the westerly line of said Kaser tract 235.00 feet to the northwest corner thereof; thence North 49° 03' 30" East along the northerly line of said Kaser tract 34.09 feet to a point; thence South 89° 45' 45" West parallel with the south line of said Hornshuh tract 1586.00 feet to the easterly line of the Willamette Valley Southern Railway Companys right of way; thence South 23° 23' 20" East along said right of way line to the true point of beginning.

AND FURTHER EXCEPTING part of the Andrew Hood D.L.C. in Section 9, Township 3 South, Range 2 East, of the W.M., more particularly described as follows:

Beginning at a point on the north-south one-quarter section line of said Section 9, a distance of 706.2 feet south of the north line of said Hood D.L.C.; thence South 89° 24' East to the southwesterly right of way line of Market Road No. 11, said point

198-087

being on the south line of that tract of land conveyed to Virgil D. Webb, et ux, by Deed recorded August 9, 1965, in Book 661, page 216, Fee No. 13239, Deed Records; said point further being the true place of beginning of the tract herein; thence Southeasterly along the southwesterly right of way line of Market Road No. 11, a distance of 220 feet to a point; thence North 89° 24' West, parallel with the south line of said Webb tract, a distance of 670 feet to a point; thence Northwesterly parallel with the southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the south line of said Webb tract; thence South 89° 24' East along said south line a distance of 670 feet to the true place of beginning. **********

14500

14800

15000

CENTER SEC. 9

1/4 COR.

SEE MAP 3 2E 9A

Most Ely SE COR DLC 53

Most Sly SW COR DLC 56

This strip carried on 3 2E 09C

JOHNSON CREEK-KEELER NO. 1

N. LINE ANDREW HOOD D.L.C. NO. 44

LODER RD.

CO. RD. NO. 877

BIG EDDY OREGON CITY

SEE B.P.A. DWG. No. 12S-104

BIG EDDY KEELER NO. 1

B.P.A.

MARKET

CANCELLED TAX LOTS
1190
1191
290

200
8.51Ac.

100
3.46Ac.
19617

280
1.64Ac.

281
5.62Ac.
19637

62-34

300
5.15 Ac.
1988

401
2.00Ac.

402
1.20Ac.

400
1.80Ac.
19675

1300
19.88 Ac.
1975

1302
2.50 Ac.
1970

62-64

1400
13.69Ac.

1200
18.01 Ac.
1964

500
1.08 Ac.
1977

1301
7.42 Ac.

600
0.38 Ac.
1978

110
18.40 Ac.

FU-10

62-33

SEE MAP 3 2E 9C

SEE MAP 3 2E 10C

1500
4.76 Ac.
1988

1401

Scenic Dist. 62

LEGAL DESCRIPTION
40' STRIP INCLUDING TRIANGLE- HUNT PROPERTY
OREGON CITY SCHOOL DISTRICT

JOB NO. 4931
4/16/02 MAR

EXHIBIT "B"

A TRACT OF LAND SITUATED IN THE SOUTHEAST ONE-QUARTER OF SECTION 9, TOWNSHIP 3 SOUTH, RANGE 2 EAST, WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3-1/4" BRASS DISC STAMPED "LAND DEV CONSULTANTS" AT THE SOUTHEAST CORNER OF SAID SECTION 9; THENCE ALONG THE SOUTH LINE THEREOF, N.89°52'19"W., 578.00 FEET; THENCE N.00°32'00"W., 706.93 FEET TO THE TRUE POINT-OF-BEGINNING; THENCE RUNNING 40.00 FEET SOUTH OF AND PARALLEL WITH THAT LINE DESCRIBED IN A BOUNDARY LINE AGREEMENT RECORDED IN FEE NO. 94-050228, CLACKAMAS COUNTY RECORDS, S.89°59'28"W., 1179.65 FEET TO THE WEST LINE OF THAT TRACT OF LAND DESCRIBED AS PARCEL I TO PEARL R. HUNT, TRUSTEE OF THE HUNT FAMILY REVOCABLE LIVING TRUST, RECORDED OCTOBER 16, 1997, CLACKAMAS COUNTY RECORDERS FEE NO. 97-081187; THENCE ALONG SAID WEST LINE, N.00°26'02"W., 40.00 FEET TO A 1-1/4 INCH IRON PIPE; THENCE N.00°31'40"W., 264.20 FEET TO A 1/4-INCH IRON PIPE ON THE SOUTHWESTERLY LINE OF THAT TRACT OF LAND DESCRIBED IN DEED TO THE OREGON CITY SCHOOL DISTRICT, RECORDED IN FEE NO. 73-19139, CLACKAMAS COUNTY DEED RECORDS; THENCE ALONG SAID LINE, S.23°05'05"E., 287.17 FEET TO A 1-1/4 INCH IRON PIPE ON THAT LINE DESCRIBED IN THE AFOREMENTIONED BOUNDARY LINE AGREEMENT (FEE NO. 94-050228); THENCE ALONG SAID LINE, N.89°59'28"E., 1069.42 FEET TO A 5/8-INCH IRON ROD WITH A YELLOW PLASTIC CAP STAMPED "COMPASS ENGINEERING"; THENCE S.00°32'00"E., 40.00 FEET TO THE POINT-OF-BEGINNING, CONTAINING 61,737 SQUARE FEET (1.42 ACRES) MORE OR LESS.

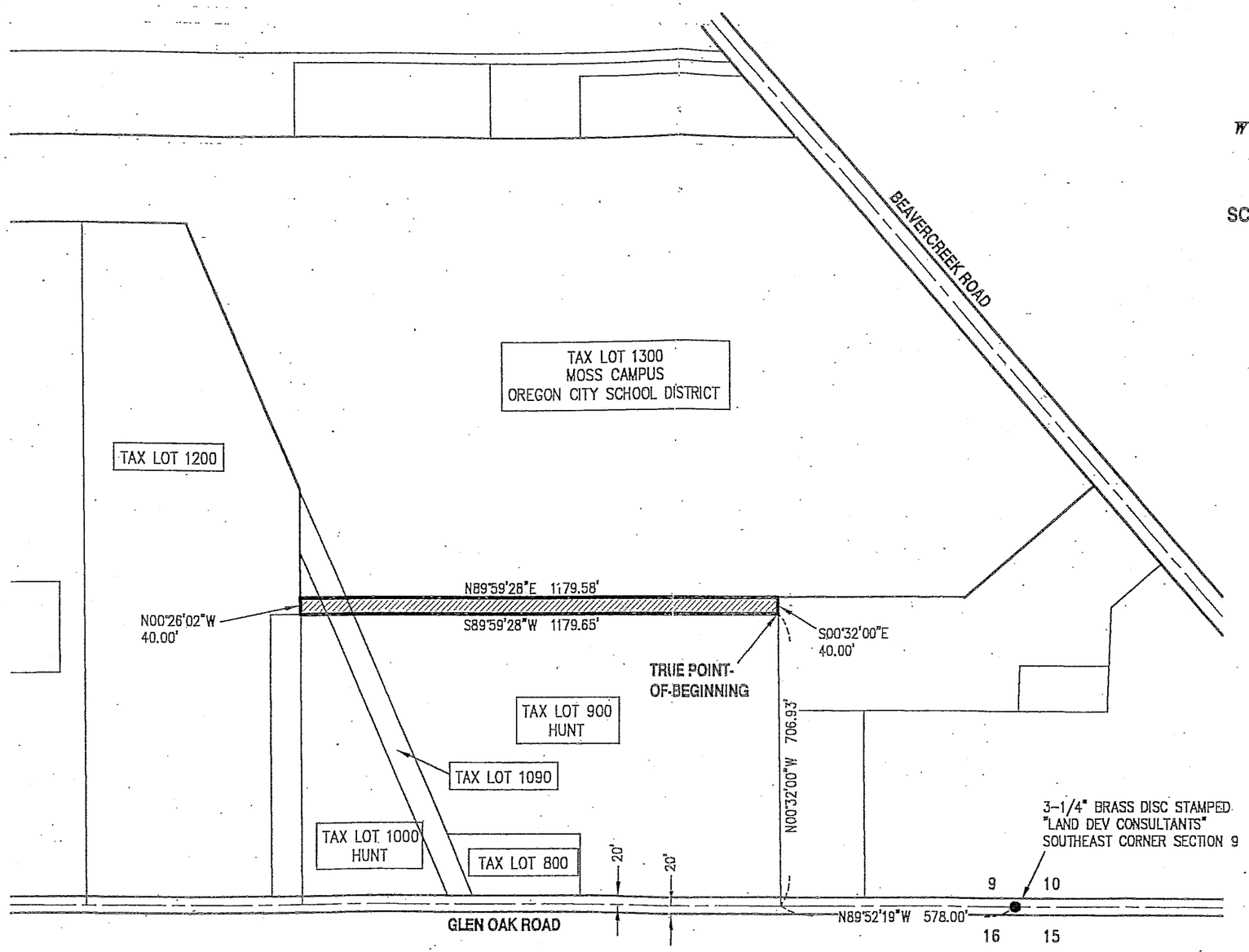


EXHIBIT "B"

DRAWN MMM	DESIGNED -	MAR	CHK
SCALE 1"=300'	DATE APRIL,2002		
PLAN 4761.1	4761EXH2.DWG		

COMPASS ENGINEERING

ENGINEERING SURVEYING PLANNING

6564 S.E. LAKE ROAD
MILWAUKIE, OREGON 97222

(503) 653-9095 FAX
(503) 653-9093 PHONE

IN THE SOUTHEAST ONE-QUARTER OF SECTION 9
TOWNSHIP 3 SOUTH, RANGE 2 EAST, WILLAMETTE MERIDIAN
CLACKAMAS COUNTY, OREGON

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Tax Lot 1301

SCHEDULE A

Amount $25,500.00 Date February 1, 1974 At 8:00 A. M.

INSURED

----- CLACKAMAS COUNTY SCHOOL DISTRICT NO. 62 -----

The estate or interest referred to herein is, at the date hereof, vested in

----- CLACKAMAS COUNTY SCHOOL DISTRICT NO. 62 -----

The land referred to in this policy is described as

IN THE COUNTY OF CLACKAMAS AND STATE OF OREGON

Part of the Andrew Hood D. L. C. No. 44 in Section 9, T. 3 S., R. 2 E., of the W. M., described as follows:

Beginning at a point on the easterly line of the Willamette Valley Southern Railway Companys right of way, being South 89° 24' East 628.10 feet and South 920.04 feet from the northwest corner of said claim; thence South 23° 23' 20" East 712.94 feet to an iron pipe South 0° 50' 15" East 155.8 feet from the southwest corner of that tract of land conveyed to E. W. Hornshuh by deed recorded March 14, 1908, Book 102, page 156, Deed Records and the true point of beginning of the tract herein described; thence North 0° 50' 15" West 155.8 feet to the southwest corner of said Hornshuh tract; thence North 89° 45' 45" East along the south line of said Hornshuh tract 1572.97 feet to a point South 0° 50' 15" East 16.5 feet from the most southerly corner of that tract of land conveyed to Kyle R. Kaser, et ux, by deed recorded October 30, 1970, Fee No. 70 24574; thence North 0° 50' 15" West 16.5 feet to the most southerly corner of said Kaser tract; thence North 45° 25' 10" West along the westerly line of said Kaser tract 235.00 feet to the northwest corner thereof; thence North 49° 03' 30" East along the northerly line of said Kaser tract 34.09 feet to a point; thence South 89° 45' 45" West parallel with the south line of said Hornshuh tract 1586.99 feet to the easterly line of the Willamette Valley Southern Railway Companys right of way; thence South 23° 23' 20" East along said right of way line to the true point of beginning. -----

SCHEDULE A — Continued

The estate or interest in the land described in this schedule is: a fee.-----

SCHEDULE B

This policy does not insure against loss by reason of the matters shown or referred to in this Schedule except to the extent that the owner of any mortgage or deed of trust is expressly insured on page 1 of this policy.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; pending proceedings for vacating, opening or changing of streets or highways preceding entry of the ordinance or order therefor.

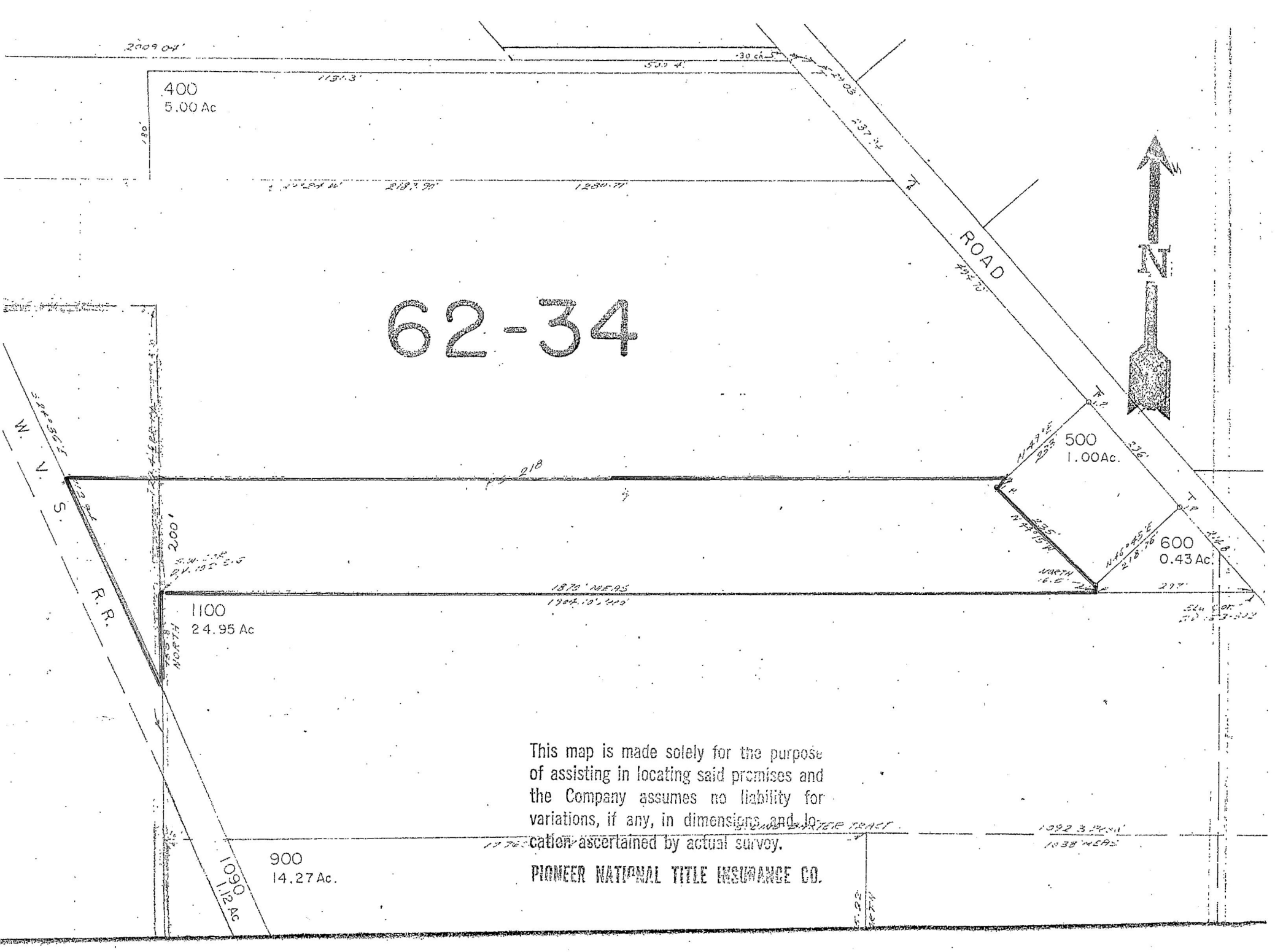
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, claims of easement or encumbrances which are not shown by the public records; unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments or any other facts which a correct survey would disclose.

5. The easement, including the terms and provisions thereof, affecting a portion of said premises and in favor of Portland General Electric Company, an Oregon corporation, recorded March 6, 1959, in Book 552, page 133, Fee No. 3743, Deed Records.

6. We are unable to ascertain from the records if the premises herein described have a means of ingress and egress to and from a legally dedicated road or highway, and for this reason such rights cannot be insured.-----


62-34
400
5.00 Ac
ROAD
N
500
1.00Ac.
600
0.43 Ac.
1100
24.95 Ac
900
14.27Ac.
1090
1.12 Ac
W. V. S. R.R.
This map is made solely for the purpose of assisting in locating said premises and the Company assumes no liability for variations, if any, in dimensions and location ascertained by actual survey.
PIONEER NATIONAL TITLE INSURANCE CO.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Tax Lots 1302

TICOR TITLE INSURANCE

SCHEDULE A

AMOUNT: $200,000.00

PREMIUM: $700.00

DATE: October 9, 1992
At: 5:00 P.M.
POLICY NUMBER: C594526

1. NAME OF INSURED:

OREGON CITY SCHOOL DISTRICT NO. 62

2. THE ESTATE OR INTEREST IN THE LAND WHICH IS COVERED BY THIS POLICY IS:

Fee

3. TITLE TO THE ESTATE OR INTEREST IN THE LAND IS VESTED IN:

OREGON CITY SCHOOL DISTRICT NO. 62

4. THE LAND REFERRED TO IN THIS POLICY IS DESCRIBED AS FOLLOWS:

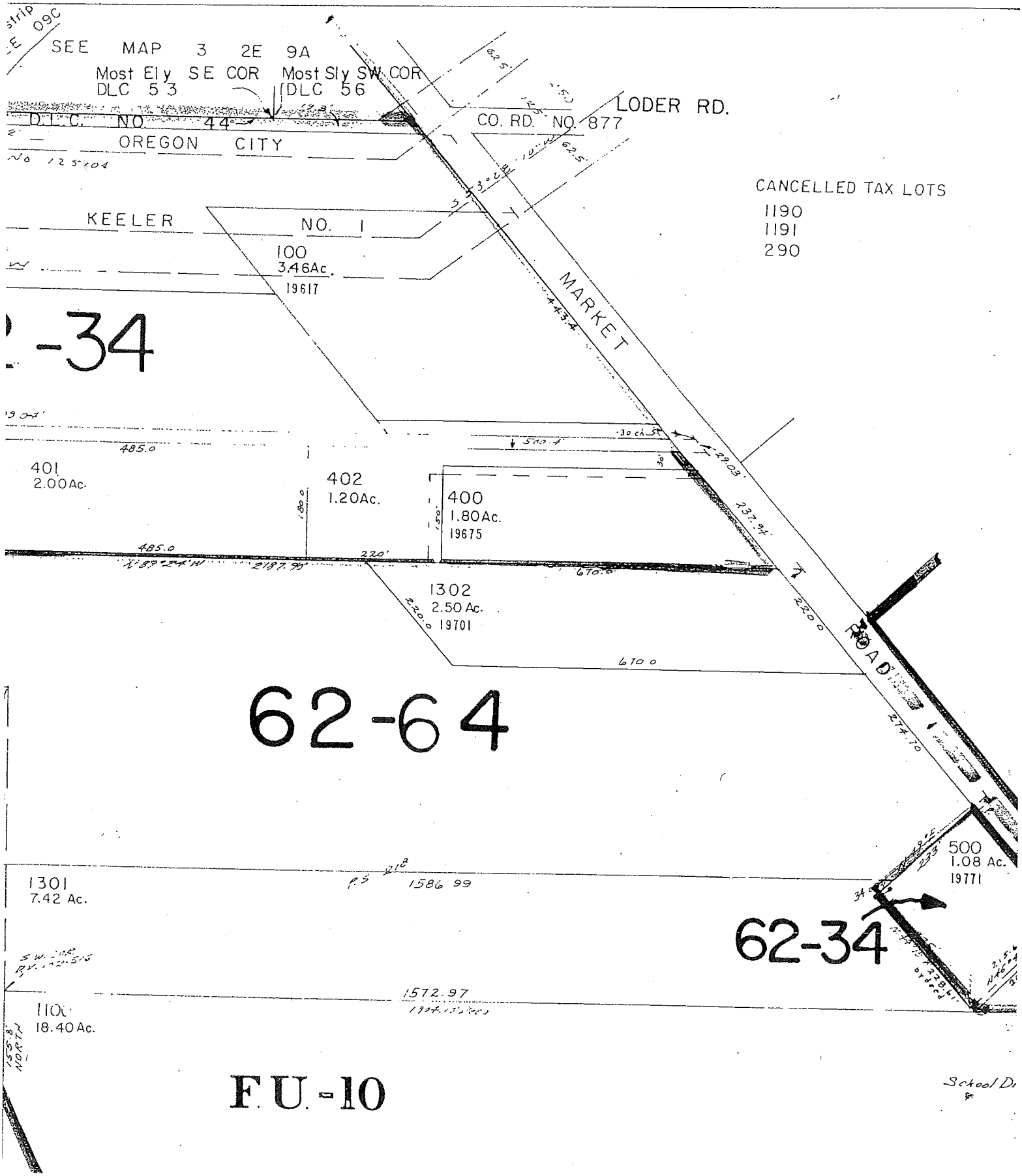
Part of the Andrew Hood D.L.C. in Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at a point on the North-south one-quarter section line of said Section 9, a distance of 706.2 feet South of the North line of said Hood D.L.C.; thence South 89° 24' East to the Southwesterly right of way line of Market Road No. 11, said point being on the South line of that tract of land conveyed to Virgil D. Webb, et ux, by deed recorded August 9, 1965, Book 661, Page 216, Fee No. 13239, Deed Records; said point further being the true place of beginning of the tract herein; thence Southeasterly along the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to a point; thence North 89° 24' West, parallel with the South line of said Webb tract, a distance of 670 feet to a point; thence Northwesterly parallel with the Southwesterly right of way line of Market Road No. 11, a distance of 220 feet to the South line of said Webb tract; thence South 89° 24' East along said South line a distance of 670 feet to the true point of beginning. -----

CONTINUED

The sketch below is made solely for the purpose of assisting in locating said premises and the company assumes no liability for variations, if any, in dimensions and location ascertained by actual survey.

TICOR TITLE INSURANCE



OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Tax Lot 1380

THIS MAP IS FURNISHED AS A CONVENIENCE IN LOCATING PROPERTY AND THE COMPANY ASSUMES NO LIABILITY FOR ANY VARIATIONS AS MAY BE DISCLOSED BY ACTUAL SURVEY

First American Title Insurance Company of Oregon

An assumed business name of TITLE INSURANCE COMPANY OF OREGON

1700 S.W. FOURTH AVENUE, PORTLAND, OR 97201-5512

(503) 222-3651

62-84

62-88

S. Pac. R.R. W. V. S.

722.4' G.L.O. Rec. Mea.

P.S. 918 1586.99

S.W. COR. D.V. 102-516

1572.97 1904.10' Deed

NORTH 1572.8'

-17.76 Ch. = 1172.16'

900 14.27 Ac. 14859

1001 1.12 Ac.

1000 3.71 Ac. 14725

1101 5.99 Ac. 19851

700 2.06 Ac. 14921

800 1.04 Ac. 14771

N89

200.00

200.00

743.16

467.94

462.84

11.26 Ch.

(743.16)

335.00

120 M/L

150

SW COR DV 466-702 265.00

528.00

60

40

50'

30'

ROAD C. R. NO. 881

SEE MAP 3 2E 16A

SCHEDULE A

Policy No.: 963324

Amount of Insurance: $19,000.00 **Premium:** $175.00

Date of Policy: March 11, 2003 at 10:01AM

1. Name of Insured:

SCHOOL DISTRICT NO. 62, Clackamas County, Oregon---

2. The estate or interest in the land which is covered by policy is:

The fee simple estate---

3. Title to the estate or interest in the land is vested in:

SCHOOL DISTRICT NO. 62, Clackamas County, Oregon---

4. The land referred to in this policy is described as follows:

For legal description see Exhibit "A" attached hereto.

SCHEDULE B

EXCEPTIONS FROM COVERAGE

This Policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, encumbrances, or claims thereof, not shown by the public records, unpatented mining claims, reservations or exceptions in patents or in acts authorizing the issuance thereof, water rights, claims or title to water.

4. Any lien, or right to a lien, for services, labor, or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

Notwithstanding this provision and in accordance with and subject to the limitations of Section 2.15 of the First American Title Insurance Company of Oregon rate filing, protection afforded to the Insured hereunder will be consistent with any coverage provided to a Lender pursuant to any policy issued contemporaneous hereto.

5. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose.

6. Taxes for the current fiscal year are reduced by reason of Veterans' Exemption. If the exempt status is terminated under the statute prior to July 1, said property will be taxed at 100% of the assessed value.

7. These premises are within the boundaries of the Clackamas River Water District and are subject to the levies and assessments thereof.
Note: There are no liens as of the date of this policy.

8. An easement reserved in a deed, including the terms and provisions thereof;

Recorded	:	September 27, 1950 in Book 436, page 503
From	:	Oscar Chandler and Theresa Chandler, husband and wife
To	:	Portland General Electric Company, an Oregon corporation
For	:	Erection, construction, maintenance, operation, and electric transmission line or lines

9. An easement created by instrument, including the terms and provisions thereof;

Recorded	:	May 1, 1956 in Book 510, page 206
Favor of	:	Portland General Electric Company, an Oregon corporation
For	:	Electric power lines and poles and appurtenant equipment

10. An easement created by instrument, including the terms and provisions thereof;

Recorded	:	July 3, 1958 in Book 542, page 292
Favor of	:	Portland General Electric Company, an Oregon corporation
For	:	To erect, maintain, repair, rebuild, operate and patrol electric power transmission lines, structures and appurtenant signal lines

SCHEDULE B (Continued)

11. Boundary Line Agreement, including the terms and provisions thereof,
Dated : April 22, 1994
Recorded : June 17, 1994 as Fee No. 94-050084
Between : Oregon City School District No. 62, Pearl R. Hunt, Trustee of the Hunt Family Revocable Living Trust under instrument dated September 27, 1993, Edgar L. Hunt and Pearl Hunt, and James C. Ventura and Dyan L. Ventura

---

EXHIBIT "A"

A tract of land situated in the Southeast one-quarter of Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the County of Clackamas and State of Oregon, being more particularly described as follows:

Commencing at a 3¼ inch brass disc stamped "Land Dev Consultants" at the Southeast corner of said Section 9; thence along the South line thereof, North 89°52'19" West, 578.00 feet; thence North 00°32'00" West, 706.93 feet to the true point-of-beginning; thence running 40.00 feet South of and parallel with that line described in a Boundary Line Agreement recorded in Fee No. 94-050228, Clackamas County Deed Records, South 89°59'28" West, 1,179.65 feet to the West line of that tract of land described as Parcel I to Pearl R. Hunt, Trustee of the Hunt Family Revocable Living Trust, recorded October 16, 1997 as Fee No. 97-081187, Clackamas County Deed Records; thence along said West line, North 00°26'02" West, 40.00 feet to a 1¼ inch iron pipe; Thence North 00°31'40" West 264.20 feet to a ¼ inch iron pipe on the Southwesterly line of that tract of land described in Deed to the Oregon City School District, recorded in Fee No. 73-19139, Clackamas County Deed Records; thence along said line, South 23°05'05" East, 287.17 feet fo a 1¼ inch iron pipe on that line described in the aforementioned Boundary Line Agreement (Fee No. 94-050228); thence along said line, North 89°59'28" East, 1,069.42 feet to a ⅝ inch iron rod with a yellow plastic cap stamped "Compass Engineering"; thence South 00°32'00" East, 40.00 feet to the point of beginning.

FIRST AMERICAN TITLE INSURANCE COMPANY
PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information-particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use the information we have obtained from any other source, such as information obtained from a public record or from another person or entity.

Types of Information

Depending upon which of our services you are utilizing of nonpublic person information that we may collect include:

Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone of any other means;

Information about your transactions with us, our affiliated companies, or others; and

Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic information.

CITY OF OREGON CITY

COMMUNITY DEVELOPMENT DEPARTMENT, 320 WARNER MILNE ROAD,
P.O. BOX 3040, OREGON CITY, OR 97045, (503)-657-0891 FAX: (503)657-7892

ORIGINAL

LAND USE APPLICATION FORM

REQUEST:

Type II	Type III	Type III / IV
☐ Partition	☐ Conditional Use	☐ Annexation
☐ Site Plan/Design Review	☐ Variance	☐ Plan Amendment
☐ Subdivision	☐ Planned Development	☐ Zone Change
☐ Extension	☐ Modification	☒ Zone Change w/Annex AN 99-0
☐ Modification		

OVERLAY ZONES: ☒ Water Resources ☐ Unstable Slopes/Hillside Constraint

Please ***print or type*** the following information to summarize your application request:

APPLICATION # _____ (Please use this file # when contacting the Planning Division)

APPLICANT'S NAME: Oregon City School District by Ken Rezac

PROPERTY OWNER (if different): Mrs. Dorothy Hess

PHYSICAL ADDRESS OF PROPERTY: 14641 S. Glen Oak Road, Oregon City Oregon

DESCRIPTION: TOWNSHIP: 3 RANGE: 2E SECTION: 9D TAX LOT(S): 1200

PRESENT USE OF PROPERTY: Residence, Farm

PROPOSED LAND USE OR ACTIVITY: High School Athletic Fields

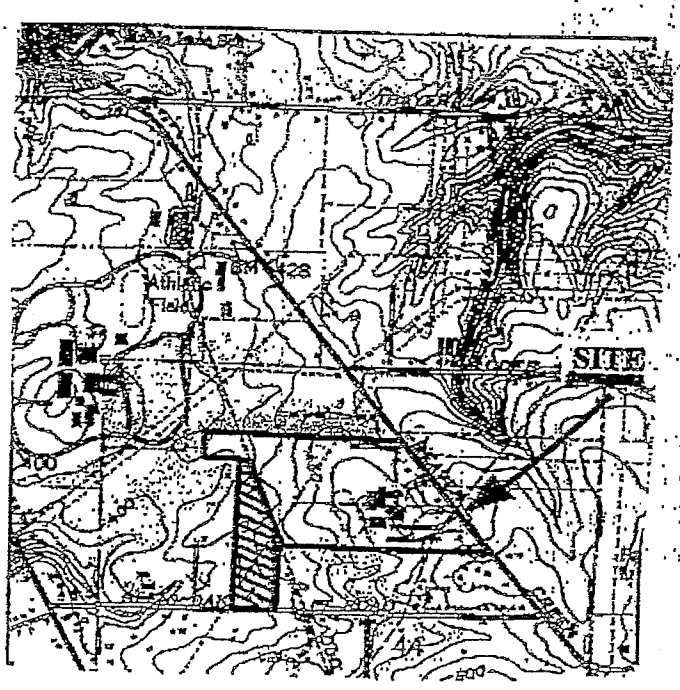
DISTANCE AND DIRECTION TO INTERSECTION:

3000 feet west

CLOSEST INTERSECTION: Beaver Creek Road

PRESENT ZONING: Recently Annexed MI, Campus

TOTAL AREA OF PROPERTY: 18.01 AC



Land Divisions

PROJECT NAME: N/A

NUMBER OF LOTS PROPOSED: _____

MINIMUM LOT SIZE PROPOSED: _____

MINIMUM LOT DEPTH PROPOSED: _____

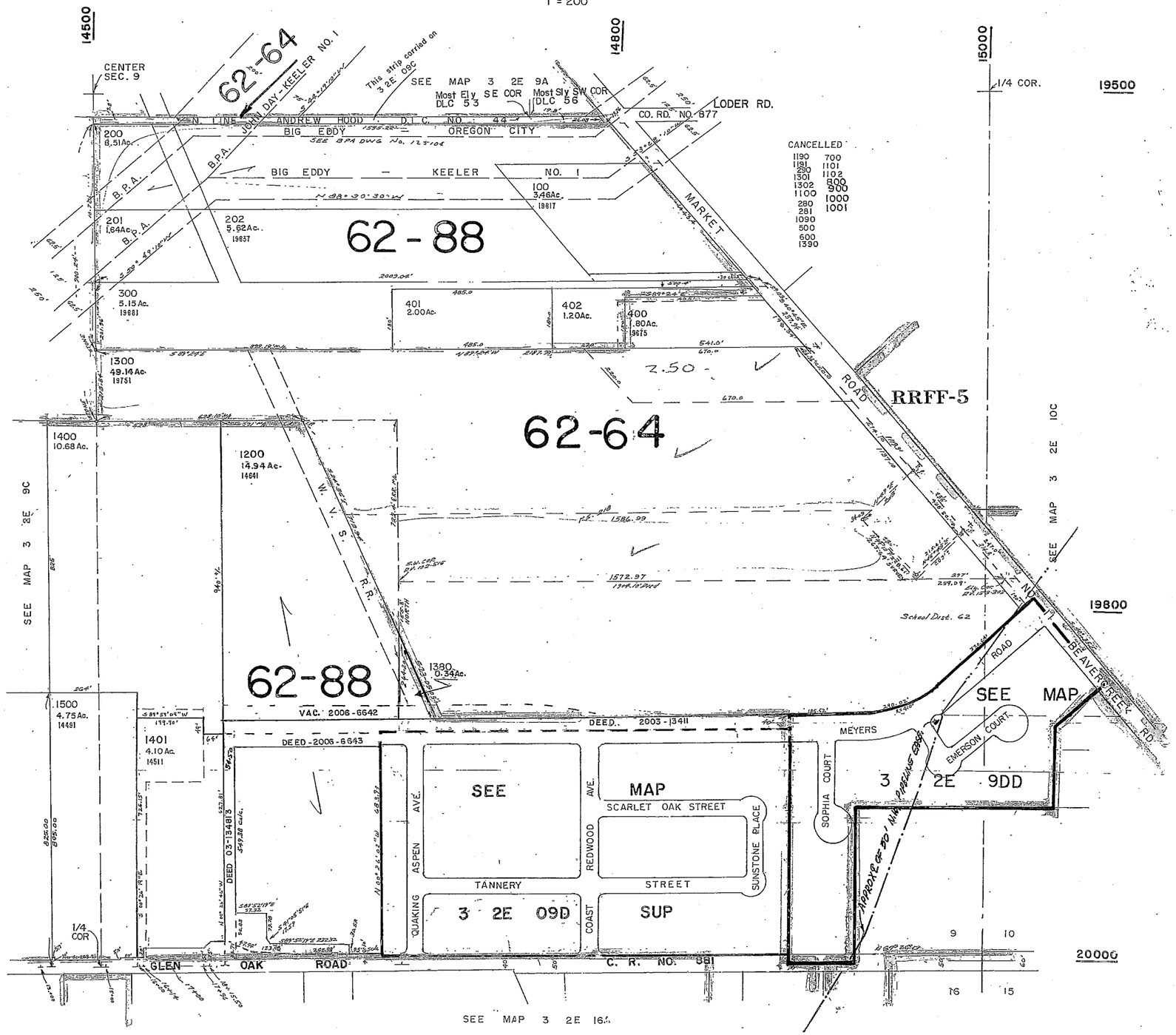
MORTGAGEE, LIENHOLDER, VENDOR, OR SELLER: ORS CHAPTER 227 REQUIRES THAT IF YOU RECEIVE THIS NOTICE, IT MUST BE PROMPTLY FORWARDED TO PURCHASER

This map was prepared for assessment purpose only.

SE 1/4 SEC. 9 T.3S. R.2E. W.M.
CLACKAMAS COUNTY
1"= 200'

D.L.C.
ANDREW HOOD NO. 44

3 2E 9D



3 2E 9D
BOOK 29

LEGAL DESCRIPTION
40' STRIP INCLUDING TRIANGLE- HUNT PROPERTY
OREGON CITY SCHOOL DISTRICT

JOB NO. 4931
4/16/02 MAR

EXHIBIT "A"

A TRACT OF LAND SITUATED IN THE SOUTHEAST ONE-QUARTER OF SECTION 9, TOWNSHIP 3 SOUTH, RANGE 2 EAST, WILLAMETTE MERIDIAN, CLACKAMAS COUNTY, OREGON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3-1/4" BRASS DISC STAMPED "LAND DEV CONSULTANTS" AT THE SOUTHEAST CORNER OF SAID SECTION 9; THENCE ALONG THE SOUTH LINE THEREOF, N.89°52'19"W., 578.00 FEET; THENCE N.00°32'00"W., 706.93 FEET TO THE TRUE POINT-OF-BEGINNING; THENCE RUNNING 40.00 FEET SOUTH OF AND PARALLEL WITH THAT LINE DESCRIBED IN A BOUNDARY LINE AGREEMENT RECORDED IN FEE NO. 94-050228, CLACKAMAS COUNTY RECORDS, S.89°59'28"W., 1179.65 FEET TO THE WEST LINE OF THAT TRACT OF LAND DESCRIBED AS PARCEL I TO PEARL R. HUNT, TRUSTEE OF THE HUNT FAMILY REVOCABLE LIVING TRUST, RECORDED OCTOBER 16, 1997, CLACKAMAS COUNTY RECORDERS FEE NO. 97-081187; THENCE ALONG SAID WEST LINE, N.00°26'02"W., 40.00 FEET TO A 1-1/4 INCH IRON PIPE; THENCE N.00°31'40"W., 264.20 FEET TO A 1/4-INCH IRON PIPE ON THE SOUTHWESTERLY LINE OF THAT TRACT OF LAND DESCRIBED IN DEED TO THE OREGON CITY SCHOOL DISTRICT, RECORDED IN FEE NO. 73-19139, CLACKAMAS COUNTY DEED RECORDS; THENCE ALONG SAID LINE, S.23°05'05"E., 287.17 FEET TO A 1-1/4 INCH IRON PIPE ON THAT LINE DESCRIBED IN THE AFOREMENTIONED BOUNDARY LINE AGREEMENT (FEE NO. 94-050228); THENCE ALONG SAID LINE, N.89°59'28"E., 1069.42 FEET TO A 5/8-INCH IRON ROD WITH A YELLOW PLASTIC CAP STAMPED "COMPASS ENGINEERING"; THENCE S.00°32'00"E., 40.00 FEET TO THE POINT-OF-BEGINNING, CONTAINING 61,737 SQUARE FEET (1.42 ACRES) MORE OR LESS.

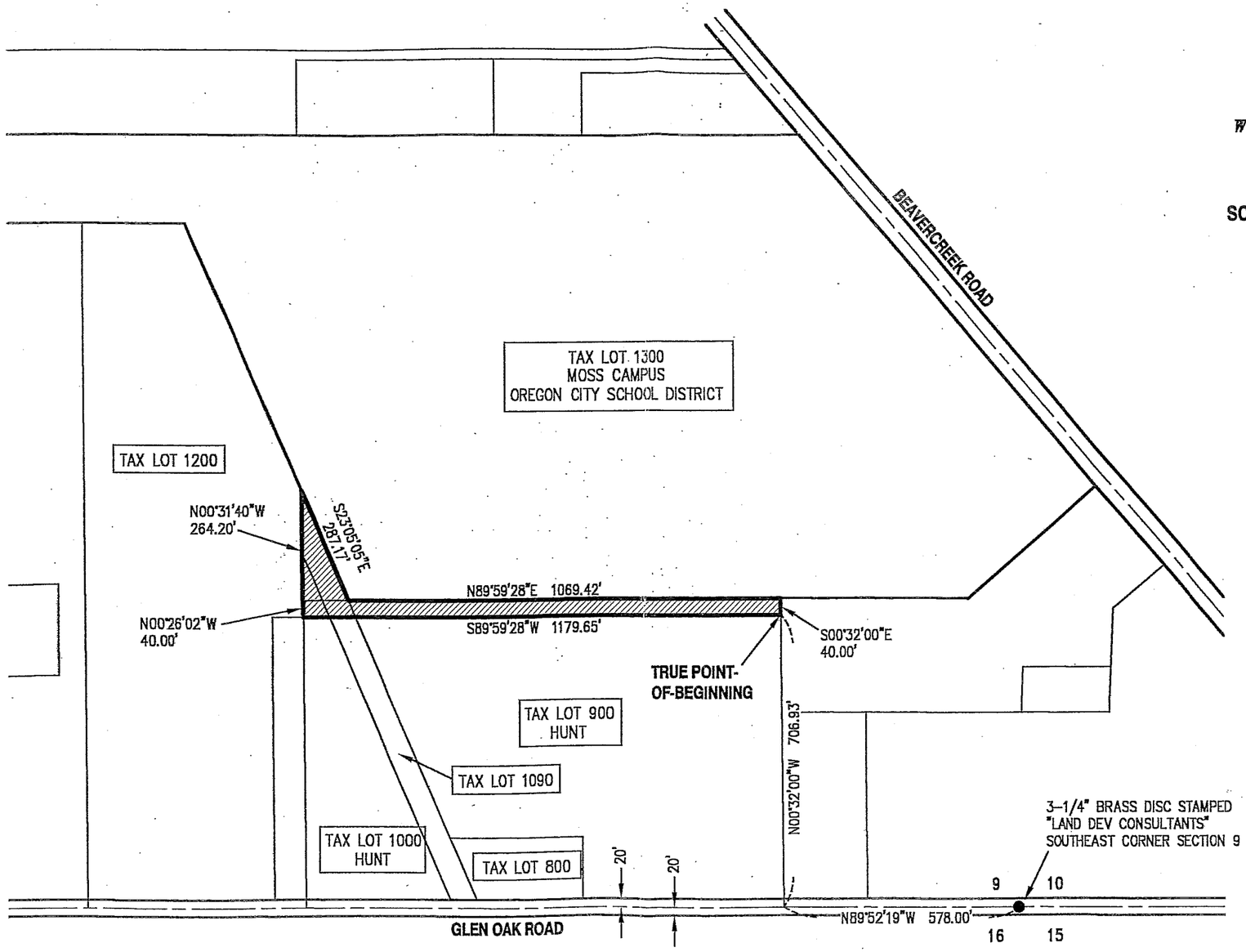


EXHIBIT "B"

DRAWN MMM	DESIGNED .	MAR	CHK
SCALE 1"=300'	DATE APRIL,2002		
PLAN 4761.1	4761EXH2.DWG		

COMPASS ENGINEERING
ENGINEERING SURVEYING PLANNING
6564 S.E. LAKE ROAD
MILWAUKIE, OREGON 97222
(503) 653-9095 FAX
(503) 653-9093 PHONE

IN THE SOUTHEAST ONE-QUARTER OF SECTION 9
TOWNSHIP 3 SOUTH, RANGE 2 EAST, WILLAMETTE MERIDIAN
CLACKAMAS COUNTY, OREGON

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Tax Lot 1400

First American Title Insurance Company of Oregon Owner's Policy	**Owner's Policy of Title Insurance** ISSUED BY **First American Title Insurance Company of Oregon** POLICY NUMBER **5011400-1634149**

Any notice of claim and any other notice or statement in writing required to be given to the Company under this policy must be given to the Company at the address shown in Section 18 of the Conditions.

COVERED RISKS

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE EXCEPTIONS FROM COVERAGE CONTAINED IN SCHEDULE B, AND THE CONDITIONS, **FIRST AMERICAN TITLE INSURANCE COMPANY**, a Nebraska corporation (the "Company") insures, as of Date of Policy and, to the extent stated in Covered Risks 9 and 10, after Date of Policy, against loss or damage, not exceeding the Amount of Insurance, sustained or incurred by the Insured by reason of:

1. Title being vested other than as stated in Schedule A.
2. Any defect in or lien or encumbrance on the Title. This Covered Risk includes but is not limited to insurance against loss from
   (a) A defect in the Title caused by
      (i) forgery, fraud, undue influence, duress, incompetency, incapacity, or impersonation;
      (ii) failure of any person or Entity to have authorized a transfer or conveyance;
      (iii) a document affecting Title not properly created, executed, witnessed, sealed, acknowledged, notarized, or delivered;
      (iv) failure to perform those acts necessary to create a document by electronic means authorized by law;
      (v) a document executed under a falsified, expired, or otherwise invalid power of attorney;
      (vi) a document not properly filed, recorded, or indexed in the Public Records including failure to perform those acts by electronic means authorized by law; or
      (vii) a defective judicial or administrative proceeding.
   (b) The lien of real estate taxes or assessments imposed on the Title by a governmental authority due or payable, but unpaid.
   (c) Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.
3. Unmarketable Title.
4. No right of access to and from the Land.

(Covered Risks Continued on Page 2)

In Witness Whereof, First American Title Insurance Company has caused its corporate name to be hereunto affixed by its authorized officers as of Date of Policy shown in Schedule A.

First American Title Insurance Company

Dennis J. Gilmore
President

Jeffrey S. Robinson
Secretary

(This Policy is valid only when Schedules A and B are attached) **This Jacket was created electronically and constitutes an original document**

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COVERED RISKS (Continued)

5. The violation or enforcement of any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (a) the occupancy, use, or enjoyment of the Land;
   (b) the character, dimensions, or location of any improvement erected on the Land;
   (c) the subdivision of land; or
   (d) environmental protection
   if a notice, describing any part of the Land, is recorded in the Public Records setting forth the violation or intention to enforce, but only to the extent of the violation or enforcement referred to in that notice.
6. An enforcement action based on the exercise of a governmental police power not covered by Covered Risk 5 if a notice of the enforcement action, describing any part of the Land, is recorded in the Public Records, but only to the extent of the enforcement referred to in that notice.
7. The exercise of the rights of eminent domain if a notice of the exercise, describing any part of the Land, is recorded in the Public Records.
8. Any taking by a governmental body that has occurred and is binding on the rights of a purchaser for value without Knowledge.
9. Title being vested other than as stated in Schedule A or being defective
   (a) as a result of the avoidance in whole or in part, or from a court order providing an alternative remedy, of a transfer of all or any part of the title to or any interest in the Land occurring prior to the transaction vesting Title as shown in Schedule A because that prior transfer constituted a fraudulent or preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws; or
   (b) because the instrument of transfer vesting Title as shown in Schedule A constitutes a preferential transfer under federal bankruptcy, state insolvency, or similar creditors' rights laws by reason of the failure of its recording in the Public Records
      (i) to be timely, or
      (ii) to impart notice of its existence to a purchaser for value or to a judgment or lien creditor.
10. Any defect in or lien or encumbrance on the Title or other matter included in Covered Risks 1 through 9 that has been created or attached or has been filed or recorded in the Public Records subsequent to Date of Policy and prior to the recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The Company will also pay the costs, attorneys' fees, and expenses incurred in defense of any matter insured against by this Policy, but only to the extent provided in the Conditions.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
      (i) the occupancy, use, or enjoyment of the Land;
      (ii) the character, dimensions, or location of any improvement erected on the Land;
      (iii) the subdivision of land; or
      (iv) environmental protection;
      or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

CONDITIONS

1. DEFINITION OF TERMS

The following terms when used in this policy mean:

(a) "Amount of Insurance": The amount stated in Schedule A, as may be increased or decreased by endorsement to this policy, increased by Section 8(b), or decreased by Sections 10 and 11 of these Conditions.

(b) "Date of Policy": The date designated as "Date of Policy" in Schedule A.

(c) "Entity": A corporation, partnership, trust, limited liability company, or other similar legal entity.

(d) "Insured": The Insured named in Schedule A.

(i) The term "Insured" also includes

(A) successors to the Title of the Insured by operation of law as distinguished from purchase, including heirs, devisees, survivors, personal representatives, or next of kin;

(B) successors to an Insured by dissolution, merger, consolidation, distribution, or reorganization;

(C) successors to an Insured by its conversion to another kind of Entity;

(D) a grantee of an Insured under a deed delivered without payment of actual valuable consideration conveying the Title

(1) if the stock, shares, memberships, or other equity interests of the grantee are wholly-owned by the named Insured,

(2) if the grantee wholly owns the named Insured,

(3) if the grantee is wholly-owned by an affiliated Entity of the named Insured, provided the affiliated Entity and the named Insured are both wholly-owned by the same person or Entity, or

(4) if the grantee is a trustee or beneficiary of a trust created by a written instrument established by the Insured named in Schedule A for estate planning purposes.

(ii) With regard to (A), (B), (C), and (D) reserving, however, all rights and defenses as to any successor that the Company would have had against any predecessor Insured.

(e) "Insured Claimant": An Insured claiming loss or damage.

(f) "Knowledge" or "Known": Actual knowledge, not constructive knowledge or notice that may be imputed to an Insured by reason of the Public Records or any other records that impart constructive notice of matters affecting the Title.

(g) "Land": The land described in Schedule A, and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is insured by this policy.

(h) "Mortgage": Mortgage, deed of trust, trust deed, or other security instrument, including one evidenced by electronic means authorized by law.

(i) "Public Records": Records established under state statutes at Date of Policy for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge. With respect to Covered Risk 5(d), "Public Records" shall also include environmental protection liens filed in the records of the clerk of the United States District Court for the district where the Land is located.

(j) "Title": The estate or interest described in Schedule A.

(k) "Unmarketable Title": Title affected by an alleged or apparent matter that would permit a prospective purchaser or lessee of the Title or lender on the Title to be released from the obligation to purchase, lease, or lend if there is a contractual condition requiring the delivery of marketable title.

2. CONTINUATION OF INSURANCE

The coverage of this policy shall continue in force as of Date of Policy in favor of an Insured, but only so long as the Insured retains an estate or interest in the Land, or holds an obligation secured by a purchase money Mortgage given by a purchaser from the Insured, or only so long as the Insured shall have liability by reason of warranties in any transfer or conveyance of the Title. This policy shall not continue in force in favor of any purchaser from the Insured of either (i) an estate or interest in the Land, or (ii) an obligation secured by a purchase money Mortgage given to the Insured.

3. NOTICE OF CLAIM TO BE GIVEN BY INSURED CLAIMANT

The Insured shall notify the Company promptly in writing (i) in case of any litigation as set forth in Section 5(a) of these Conditions, (ii) in case Knowledge shall come to an Insured hereunder of any claim of title or interest that is adverse to the Title, as insured, and that might cause loss or damage for which the Company may be liable by virtue of this policy, or (iii) if the Title, as insured, is rejected as Unmarketable Title. If the Company is prejudiced by the failure of the Insured Claimant to provide prompt notice, the Company's liability to the Insured Claimant under the policy shall be reduced to the extent of the prejudice.

4. PROOF OF LOSS

In the event the Company is unable to determine the amount of loss or damage, the Company may, at its option, require as a condition of payment that the Insured Claimant furnish a signed proof of loss. The proof of loss must describe the defect, lien, encumbrance, or other matter insured against by this policy that constitutes the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage.

5. DEFENSE AND PROSECUTION OF ACTIONS

(a) Upon written request by the Insured, and subject to the options contained in Section 7 of these Conditions, the Company, at its own cost and without unreasonable delay, shall provide for the defense of an Insured in litigation in which any third party asserts a claim covered by this policy adverse to the Insured. This obligation is limited to only those stated causes of action alleging matters insured against by this policy. The Company shall have the right to select counsel of its choice (subject to the right of the Insured to object for reasonable cause) to represent the Insured as to those stated causes of action. It shall not be liable for and will not pay the fees of any other counsel. The Company will not pay any fees, costs, or expenses incurred by the Insured in the defense of those causes of action that allege matters not insured against by this policy.

(b) The Company shall have the right, in addition to the options contained in Section 7 of these Conditions, at its own cost, to institute and prosecute any action or proceeding or to do any other act that in its opinion may be necessary or desirable to establish the Title, as insured, or to prevent or reduce loss or damage to the Insured. The Company may take any appropriate action under the terms of this policy, whether or not it shall be liable to the Insured. The exercise of these rights shall not be an admission of liability or waiver of any provision of this policy. If the Company exercises its rights under this subsection, it must do so diligently.

(c) Whenever the Company brings an action or asserts a defense as required or permitted by this policy, the Company may pursue the litigation to a final determination by a court of competent jurisdiction, and it expressly reserves the right, in its sole discretion, to appeal any adverse judgment or order.

6. DUTY OF INSURED CLAIMANT TO COOPERATE

(a) In all cases where this policy permits or requires the Company to prosecute or provide for the defense of any action or proceeding and any appeals, the Insured shall secure to the Company the right to so prosecute or provide defense in the action or proceeding, including the right to use, at its option, the name of the Insured for this purpose. Whenever requested by the Company, the Insured, at the Company's expense, shall give the Company all reasonable aid (i) in securing evidence, obtaining witnesses, prosecuting or defending the action or proceeding, or effecting settlement, and (ii) in any other lawful act that in the opinion of the Company may be necessary or desirable to establish the Title or any other matter as insured. If the Company is prejudiced by the failure of the Insured to furnish the required cooperation, the Company's obligations to the Insured under the policy shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation, with regard to the matter or matters requiring such cooperation.

(b) The Company may reasonably require the Insured Claimant to submit to examination under oath by any authorized representative of the Company and to produce for examination, inspection, and copying, at such reasonable times and places as may be designated by the authorized representative of the Company, all records, in whatever medium maintained, including books, ledgers, checks, memoranda, correspondence, reports, e-mails, disks, tapes, and videos whether bearing a date before or after Date of Policy, that reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Insured Claimant shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect, and copy all of these records in the custody or control of a third party that reasonably pertain to the loss or damage. All information designated as confidential by the Insured Claimant provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Insured Claimant to submit for examination under oath, produce any reasonably requested information, or grant permission to secure reasonably necessary information from third parties as required in this subsection, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this policy as to that claim.

7. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS; TERMINATION OF LIABILITY

In case of a claim under this policy, the Company shall have the following additional options:

(a) To Pay or Tender Payment of the Amount of Insurance.
To pay or tender payment of the Amount of Insurance under this policy together with any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment or tender of payment and that the Company is obligated to pay.
Upon the exercise by the Company of this option, all liability and obligations of the Company to the Insured under this policy, other than to make the payment required in this subsection, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.

(b) To Pay or Otherwise Settle With Parties Other Than the Insured or With the Insured Claimant.
(i) To pay or otherwise settle with other parties for or in the name of an Insured Claimant any claim insured against under this policy. In addition, the Company will pay any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay; or
(ii) To pay or otherwise settle with the Insured Claimant the loss or damage provided for under this policy, together with any costs, attorneys' fees, and expenses incurred by the Insured Claimant that were authorized by the Company up to the time of payment and that the Company is obligated to pay.
Upon the exercise by the Company of either of the options provided for in subsections (b)(i) or (ii), the Company's obligations to the Insured under this policy for the claimed loss or damage, other than the payments required to be made, shall terminate, including any liability or obligation to defend, prosecute, or continue any litigation.

8. DETERMINATION AND EXTENT OF LIABILITY

This policy is a contract of indemnity against actual monetary loss or damage sustained or incurred by the Insured Claimant who has suffered loss or damage by reason of matters insured against by this policy.

(a) The extent of liability of the Company for loss or damage under this policy shall not exceed the lesser of
(i) the Amount of Insurance; or
(ii) the difference between the value of the Title as insured and the value of the Title subject to the risk insured against by this policy.

(b) If the Company pursues its rights under Section 5 of these Conditions and is unsuccessful in establishing the Title, as insured,
(i) the Amount of Insurance shall be increased by 10%, and
(ii) the Insured Claimant shall have the right to have the loss or damage determined either as of the date the claim was made by the Insured Claimant or as of the date it is settled and paid.

(c) In addition to the extent of liability under (a) and (b), the Company will also pay those costs, attorneys' fees, and expenses incurred in accordance with Sections 5 and 7 of these Conditions.

9. LIMITATION OF LIABILITY

(a) If the Company establishes the Title, or removes the alleged defect, lien, or encumbrance, or cures the lack of a right of access to or from the Land, or cures the claim of Unmarketable Title, all as insured, in a reasonably diligent manner by any method, including litigation and the completion of any appeals, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused to the Insured.

(b) In the event of any litigation, including litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals, adverse to the Title, as insured.

(c) The Company shall not be liable for loss or damage to the Insured for liability voluntarily assumed by the Insured in settling any claim or suit without the prior written consent of the Company.

10. REDUCTION OF INSURANCE; REDUCTION OR TERMINATION OF LIABILITY

All payments under this policy, except payments made for costs, attorneys' fees, and expenses, shall reduce the Amount of Insurance by the amount of the payment.

11. LIABILITY NONCUMULATIVE

The Amount of Insurance shall be reduced by any amount the Company pays under any policy insuring a Mortgage to which exception is taken in Schedule B or to which the Insured has agreed, assumed, or taken subject, or which is executed by an Insured after Date of Policy and which is a charge or lien on the Title, and the amount so paid shall be deemed a payment to the Insured under this policy.

12. PAYMENT OF LOSS

When liability and the extent of loss or damage have been definitely fixed in accordance with these Conditions, the payment shall be made within 30 days.

13. RIGHTS OF RECOVERY UPON PAYMENT OR SETTLEMENT

(a) Whenever the Company shall have settled and paid a claim under this policy, it shall be subrogated and entitled to the rights of the Insured Claimant in the Title and all other rights and remedies in respect to the claim that the Insured Claimant has against any person or property, to the extent of the amount of any loss, costs, attorneys' fees, and expenses paid by the Company. If requested by the Company, the Insured Claimant shall execute documents to evidence the transfer to the Company of these rights and remedies. The Insured Claimant shall permit the Company to sue, compromise, or settle in the name of the Insured Claimant and to use the name of the Insured Claimant in any transaction or litigation involving these rights and remedies.

If a payment on account of a claim does not fully cover the loss of the Insured Claimant, the Company shall defer the exercise of its right to recover until after the Insured Claimant shall have recovered its loss.

(b) The Company's right of subrogation includes the rights of the Insured to indemnities, guaranties, other policies of insurance, or bonds, notwithstanding any terms or

Association ("Rules"). Except as provided in the Rules, there shall be no joinder or consolidation with claims or controversies of other persons. Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Insured arising out of or relating to this policy, any service in connection with its issuance or the breach of a policy provision, or to any other controversy or claim arising out of the transaction giving rise to this policy. All arbitrable matters when the Amount of Insurance is $2,000,000 or less shall be arbitrated at the option of either the Company or the Insured. All arbitrable matters when the Amount of Insurance is in excess of $2,000,000 shall be arbitrated only when agreed to by both the Company and the Insured. Arbitration pursuant to this policy and under the Rules shall be binding upon the parties. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court of competent jurisdiction.

15. LIABILITY LIMITED TO THIS POLICY; POLICY ENTIRE CONTRACT

(a) This policy together with all endorsements, if any, attached to it by the Company is the entire policy and contract between the Insured and the Company. In interpreting any provision of this policy, this policy shall be construed as a whole.

(b) Any claim of loss or damage that arises out of the status of the Title or by any action asserting such claim shall be restricted to this policy.

(c) Any amendment of or endorsement to this policy must be in writing and authenticated by an authorized person, or expressly incorporated by Schedule A of this policy.

(d) Each endorsement to this policy issued at any time is made a part of this policy and is subject to all of its terms and provisions. Except as the endorsement expressly states, it does not (i) modify any of the terms and provisions of the policy, (ii) modify any prior endorsement, (iii) extend the Date of Policy, or (iv) increase the Amount of Insurance.

16. SEVERABILITY

In the event any provision of this policy, in whole or in part, is held invalid or unenforceable under applicable law, the policy shall be deemed not to include that provision or such part held to be invalid, but all other provisions shall remain in full force and effect.

17. CHOICE OF LAW; FORUM

(a) Choice of Law: The Insured acknowledges the Company has underwritten the risks covered by this policy and determined the premium charged therefor in reliance upon the law affecting interests in real property and applicable to the interpretation, rights, remedies, or enforcement of policies of title insurance of the jurisdiction where the Land is located.

Therefore, the court or an arbitrator shall apply the law of the jurisdiction where the Land is located to determine the validity of claims against the Title that are adverse to the Insured and to interpret and enforce the terms of this policy. In neither case shall the court or arbitrator apply its conflicts of law principles to determine the applicable law.

(b) Choice of Forum: Any litigation or other proceeding brought by the Insured against the Company must be filed only in a state or federal court within the United States of America or its territories having appropriate jurisdiction.

18. NOTICES, WHERE SENT

Any notice of claim and any other notice or statement in writing

conditions contained in those instruments that address subrogation rights.

14. ARBITRATION

Either the Company or the Insured may demand that the claim or controversy shall be submitted to arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title

required to be given to the Company under this policy must be given to the Company at **First American Title Insurance Company, Attn: Claims National Intake Center, 1 First American Way; Santa Ana, CA 92707. Phone: 888-632-1642.**

First American Title Insurance Company of Oregon Schedule A	Owner's Policy of Title Insurance ISSUED BY **First American Title Insurance Company of Oregon** POLICY NUMBER **1634149**

Name and Address of Title Insurance Company:
First American Title Insurance Company of Oregon, 1 First American Way, Santa Ana, CA 92707.

File No.: 7072-1634149

Address Reference: Not Yet Assigned, Oregon City, OR 97045

Amount of Insurance: $1,675,000.00

Premium: $2,335.00

Date of Policy: December 07, 2012 at 10:16 a.m.

1. Name of Insured:

   Oregon City School District

2. The estate or interest in the Land that is insured by this policy is:

   Fee Simple

3. Title is vested in:

   Oregon City School District

4. The Land referred to in this policy is described as follows:

   See Exhibit "A" attached hereto and made a part hereof

First American Title Insurance Company of Oregon	Owner's Policy of Title Insurance ISSUED BY **First American Title Insurance Company of Oregon**
Schedule B	POLICY NUMBER **1634149**

EXCEPTIONS FROM COVERAGE

File No.: 7072-1634149

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees, or expenses that arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.

5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

   This exception (#5) is hereby waived without additional cost in accordance with the provisions of the Oregon Title Insurance Rating Manual provision 5.001 A 5 PROVIDED a Lender has been issued a simultaneous title insurance policy on the subject property and to the extent this exception has been eliminated or modified on said Lender's policy.

6. These premises are within the boundaries of the Clackamas River Water District and are subject to the levies and assessments thereof.

7. Easement, including terms and provisions contained therein:

Recording Information:	October 06, 2003 as Fee No. 2003-134815
In Favor of:	City of Oregon City
For:	slope

8. Easement, including terms and provisions contained therein:

Recording Information:	December 15, 2006 as Fee No. 2006-115524
In Favor of:	City of Oregon City
For:	permanent traffic barricade

First American Title Insurance Company of Oregon	ISSUED BY **First American Title Insurance Company of Oregon** POLICY NUMBER **5011400-1634149**
Exhibit A	

File No.: 7072-1634149

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF Clackamas, STATE OF OR, AND IS DESCRIBED AS FOLLOWS:

A TRACT OF LAND IN THE SOUTHEAST AND SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 3 SOUTH, RANGE 2 EAST OF THE WILLAMETTE MERIDIAN, IN THE CITY OF OREGON CITY, IN THE COUNTY OF CLACKAMAS AND STATE OF OREGON, BEING ALL OF PARCEL I AND II OF THAT PROPERTY DESCRIBED IN DOCUMENT NO . 2000-009206, CLACKAMAS COUNTY DEED RECORDS TO JOSEPH F. AND PENNEY J. SPAZIANI AND TIMOTHY J. KOTZ,

EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PORTION:

BEGINNING AT THE SOUTHEAST CORNER OF SAID TRACT OF LAND, A POINT ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 9, 374.22 FEET EASTERLY OF THE SOUTH 1/4 CORNER THEREOF; THENCE, NORTH 00°26'46" WEST ALONG THE EAST LINE OF SAID SPAZIANI PROPERTY A DISTANCE OF 627.81 FEET TO THE CENTER LINE OF MEYERS ROAD; THENCE, SOUTH 89°59'09" WEST ALONG THE WESTERLY EXTENSION OF SAID CENTER LINE A DISTANCE OF 64.00 FEET; THENCE, NORTH 00°26'46" WEST A DISTANCE OF 49.00 FEET; THENCE, SOUTH 89°59'09" WEST A DISTANCE OF 199.90 FEET TO THE SOUTHERLY WEST LINE OF SAID SPAZIANI TRACT; THENCE, SOUTH 00°26'19" EAST ALONG SAID LINE 726.15 FEET TO THE SOUTHWEST CORNER OF SAID SPAZIANI TRACT ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 9; THENCE, SOUTH 89°52'19" EAST ALONG SAID LINE 264.00 FEET TO THE POINT OF BEGINNING.

NOTE: This legal description was created prior to January 1, 2008.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Exhibit B - Conditional Use Application Narrative (High School)

Refer to attached Conditional Use Application Narrative submitted prior to the Construction of the Oregon City High School.

October 22, 2014

DRAFT

Ms. Maggie Collins
CITY OF OREGON CITY
PO Box 3040
320 Warner Milne Road
Oregon City, OR 97045-0304
Phone: 503 657-0891
Fax: 503 657-7892

RE: **Oregon City High School**

Application for Conditional Use

Oregon City File No. PA00-66

Clackamas County Tax Assessor Map 3 2E 09D

Including Tax Lots 500, 600, and 1300 as well as

Tax Lot 1200 (being acquired)

and the newly created Lot (being partitioned and acquired) including northerly portions of Tax Lots No. 1000 and 1001.

Dear Maggie:

Attached are following documents necessary for Conditional Use Application:

Filing Fee, Application and Forms for Conditional Use, Narrative, Vicinity Map, Aerial Photo Tax Lot Map, Zoning Map, Site Development Plan, Site Landscaping/Circulation Plan, Topographic Site Map (Existing conditions), Geo-Technical Report, Traffic Study, Water Resource Report

Narrative:

General:

This is application for the Conditional Land Use within the City of Oregon City (the City), the County of Clackamas (the County) within the state of Oregon (the State). The owner for this application is the Oregon City School District No. 62 (the School District). The Owner's Project Manager, Milstead and Associates, Inc., will be the Applicant handling the Conditional Use Process.

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This Application requests conversion of the current Moss Ninth Grade Campus on South Beavercreek Road into a single site High School replacing the current Moss Ninth Grade Center at Moss and the Oregon City Senior High School on at 12th and Jackson Street. This project will consolidate Oregon City High School from its present split campus to the Beavercreek Road site.

The project includes demolition of a small portion of the existing building and remodeling the rest. There will be several extensive new building additions and new stand alone buildings. New support parking and extensive outdoor athletic facilities are also proposed.

The project consists of the five properties on Clackamas County Tax Lots No. 500, 600, and 1300, which are owned by the School District. Tax Lots 500 and 600 are currently in the process of Annexation into the City. The reason for Annexation is to create a single unified campus for development within City boundaries as required by City policy.

A fourth parcel Tax Lot No. 1200, currently referred to as the "Hess" Parcel" is currently in the process of being acquired and will be used for athletic fields.

A small Fifth lot, currently referred to as the "Hunt Triangle" is in the process of both being created and acquired. The new lot is formed from the northerly portions of Tax Lots No. 1000 and 1001 in a Lot line adjustment. Both of the "Hunt" parcels have the same owner and are in the City of Oregon City.

Tax Lots 500 and 600:

The two Lots No. 500 and 600 are located along the West Side of South Beavercreek Road (County Market Road No. 11). They gently slope down to the west (away from South Beavercreek Road.) at a rate of approximately six-percent.

Tax Lot No. 500 is 1.08 acres and has a house and out-building. Tax Lot No. 600 is 0.38 acres and similarly has a house and two outbuildings. Together they are 1.46 acres. The School District is currently using the house on Tax Lot No. 500 for a support Moss Campus print shop and the residence on Tax Lot No. 600 is surplus. All of these buildings will eventually be demolished.

Several significant Oak trees on both of the two Tax Lots will be saved. Many of them are being incorporated into the proposed High School project as support elements the new school Main Entry. Some trees will be removed on these parcels to allow for proposed parking lot and drop-off lane.

The design of the new campus includes the layout of buildings and athletic fields proposed on the attached drawings. New and remodeled buildings are all located on Tax Lot No. 1300 *with a small portion on Tax Lot No. 500.*

Tax Lot 1300 (the Current Moss Campus):

The current Moss Ninth Grade Campus located on adjacent Tax Lot No.1300 that consists of 48.20 acres. It is situated north, west and south surrounding

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Tax Lots No. 500 and 600 on three sides with South Beavercreek Road on the fourth.

The parcel slopes gently downhill to the west from at an overall rate of two percent. Drainage for these three parcels migrates west and ends up on the Clackamas Community College Campus to the northwest. The college currently accounts for this runoff and has it controlled with its own run-off in a shallow man made pond near the center of the college campus. Our Civil Engineer's discussion with the College and City has found that the current pond will need to be replaced eventually. The College is amenable to working with the School District to solve mutual drainage issues and possibly on the College's property. However, to proceed with overall improvements as quickly as possible the School District plans to mitigate run-off and water quality issues on its own property. The district is open to future discussions with valid stakeholders including neighbors and governmental jurisdictions for creative solutions and agreements.

New improvements will require removal of some trees to accomplish new campus improvements. "Sage" House (former residence) at northerly portion of Tax Lot No. 1300 will eventually be removed. It is currently used for Special Education and will continue as such until accommodation in the new school is ready.

The westerly portion of this parcel is designated on "Metro" Maps as Community Park. This are consists of the current athletic fields. The School District intends to add more community use athletic facilities to enhance this designation.

Tax Lot No. 1200 Acquisition:

The fourth Parcel is Tax Lot No. 1200 (Hess Parcel), which has recently been annexed into the City. Tax Lot No. 1200 consists of 18.01 acres and is currently a non-producing orchard with a residence and two outbuildings consisting of a garage and shop. Combined the four parcels together will consist of 67.67 acres.

The School District is in the Process of purchasing this parcel which will be used as athletic fields. Current efforts are being made by the School District to acquire Tax Lot No 1200 at a mutually agreeable fair market price. Should negotiations stall and a longer condemnation process transpire, the School District will proceed with the work on land it owns (Parcels 500, 600, and 1300). The School District Board has approved the Condemnation Option should it become necessary for acquisition. Development of Parcel No. 1200 will occur upon acquisition.

The residence is located at the southeast corner of the parcel that fronts Glen Oak Road. The District may create a separate additional Tax Lot for house, outbuildings and immediate grounds. For the immediate future the residence and out building will be maintained for School District use.

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The School District's intent is to remove the orchard, which currently covers most of the property for new-lighted athletic play fields.

Triangle Acquisition formed by Portions of Tax Lots No.1000 and 1001:

The Fifth Parcel (Hunt Triangle) is in the process of both being created and then acquired. Through Lot Line Adjustment proceedings a new Tax Lot will be formed. Alternatively this triangle could be included into Moss Tax Lot No. 1300. Triangle is formed with the northerly portions of Tax Lots No. 1000 and 1001. Tax Lot 1001 was a portion of the abandoned W.V.S. Railroad right-of – way which deeded to owner of Tax Lot No. 1000. Both parcels have the same owner (Hunt) and are located in the City of Oregon City.

The reason for adding this triangle is to complete the missing corner between Tax Lots 1300 (Moss) and Tax Lots 1200 (Hess). Unofficial area of newly created Hunt Triangle is approximately 14,552 SF or 0.334 Acres. Combined the five parcels consist of 68.00 Acres.

Land Use/ Zoning:

The following is a summary of Parcel Land areas:

Site Areas:

Tax Lot	Area	Acres	LU Zone	Proposed Zone
• **500**	**47,045 SF**	**1.08**	FU-10	**R-10**
• **600**	**16,552 SF**	**0.38**	FU-10	**R-10**
• 1300 (northerly)	(973,566 SF)	(22.35)	**CI**	
• 1300 (southerly)	(1,118,185 SF)	(25.67)	**R-8**	
• **Total 1300**	**2,099,593 SF**	**48.20**	**See Above**	
• **Total Three Parcels**	**2,163,190 SF**	**49.66 AC**		
• **1200** (Acquisition)	**784,516 SF**	**18.01**	**Pending**	**CI or R-10**
• **Total Four Parcels**	**2,947,706 SF**	**67.67 AC**		
• **Part. 1000+1001**	**14,552 SF**	**0.33**	**Pending**	**CI or R-10**
• **Total Five Parcels**	**2,962,258 SF**	**68.00 AC**		

Land Use Discussion:

According to City Officials it is our understanding that in order to receive Conditional Use Approval the entire Moss Campus must be consolidated into the City. This is a City policy requiring a single governmental jurisdiction over a single project. Currently Tax Lots No. 500 and 600 are zoned in Clackamas

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County, Low Density Residential- FU-10. Proposed Annexation zoning of these two parcels is the City comparable Single-Family Dwelling designation R-10.

The current Moss Campus Tax Lot No. 1300 is divided into two City Land Use Zones: CI (approximately 22.35 acres), Campus Commercial to the north and R-8 (approximately 25.85 acres), Single Family Dwelling to the south. The proposed acquisition parcel, Tax Lot No. 1200 has recently been annexed into the City and tentatively zoned CI. Parcel 1200 will be used for athletic play fields. On the northerly portion of the site in conjunction with Parcel No. 1300, a complex of baseball/ softball diamonds is being developed. Two are on Parcel No.1300 and two on Parcel No. 1200 in a circular configuration around a future concession/ restroom building (on Parcel No. 1300). The southeasterly field of this quartet grouping is existing with lighting. It will be modified slightly to fit this new grouping. These four fields are proposed to be night lighted. The current southwesterly field is currently night lighted as is the practice football field.

All City Land Use Zones require Conditional Use Processing for High School Use. It is our understanding that the Moss Campus Improvements are allowed under with the three different Land Use zones without a zone change to consolidate them into one.

Existing Moss Buildings:

The Moss complex was originally designed as a Junior High School and converted to Ninth grade use with minimal physical change. Currently the students are generally bused into the campus from the Jackson Campus. The Moss facility opened in 1976 and is 24 years old. Existing building systems and infrastructure are aging. This project will replace most of the obsolete mechanical and electrical systems with new energy efficient ones. Current Structural systems will be supplemented to comply with current earthquake code.

The upgraded Moss Campus will include demolishing some portions of current buildings and remodeling the remainder. It will provide a more efficient organization of the new and remodeled portions of the proposed school. The current multi-level Commons will be demolished. Current Commons lacks flexibility and handicapped accessibility required for a new High School. The remainder will be remodeled into library, offices and supplemental athletic and teaching areas.

Remodeled Moss campus buildings will be used for library, teaching and athletics. New Athletic addition will be made at south portion of Moss complex replacing smaller middle school gym. Smaller gym will remain as a secondary athletic space and downstairs locker rooms. Currently this gym is 39.9 feet high and violates R-8 maximum of 35 feet. New gym will be a double level pair of gyms for an overall building height of 54 feet. This exceeds R-8 height limit of 35 feet.

The School District requests a Height Variance as part of this application.

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Building Additions:

Several large new additions are planned. Additions include new academic (classroom) teaching stations, science laboratories, Performing Arts Theater, athletic facilities, Student Commons. New stand-alone Buildings include Technology/ROTC (shop), Maintenance Shed, Baseball Bleachers/ Concession/ Restroom building and another Concession/ Restroom Building for Baseball Softball. These changes are required to successfully convert Moss Ninth Grade Campus into a single consolidated four year Oregon City High School (grades 9-12) and to support a growing community.

A new 550 Seat Theater with full theatrical fly loft and main Entry will be built on the southerly half of Parcel No.1300 zoned R-8. The proposed Theater will be 50 ft high (in excess of the 35-ft. height limit).

A Separate Shop Technology/ ROTC Building will be constructed on Parcel 1300 north of the proposed Academic addition. This U-shaped structure will have a central vehicle courtyard space within the U. The open end will be secured by fence.

At the time of this application approximately 3100 SF on two levels is placed on the Lot 500.

Current Jackson Campus (High School) Phase-Out:

The aging Twelfth Street, "Jackson Campus" (currently grades 10-12) will be phased out over the next three years upon the completion of the Moss improvements. District Offices and outdoor lighted Stadium activities (Football, Track and Field) will be maintained at present Van Buren Street location.

Building Construction Types:

The **Existing** Moss Building is:

- **Type V-N Construction, (Combustible), with no automatic fire sprinkler system.** The design intention is to separate existing non-rated buildings from new with rated Area Separation walls and to provide automatic fires sprinkler protection throughout.

The **New** academic, science additions and new technology building are proposed to be:

- **Type II-1Hr Construction (Non-combustible), Fully sprinkled.** Westerly athletic field support buildings (maintenance shed, concessions, etc) will likely be Type V-N, Non-sprinklered.

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Energy Efficiency and Sustainability Goals:

The School District is actively seeking involvement in several State of Oregon Energy (efficiency) programs. They are working through similar programs with the local Utility (PGE). The District's goal is to make the new facilities energy efficient beyond code requirements. The District also wants to make the facilities reasonably "sustainable" in the selection of building materials, furniture equipment and landscape materials. Examples include the use of native landscape materials, the use of natural lighting, indirect and task oriented energy efficient lighting systems, natural ventilation, energy efficient mechanical systems, and "health-conscience" interior finishes.

Proposed Campus Population:

The new consolidated High School will have the following student population supported by School District projects based on current enrollment:

High School Population:

2000-1 Enrollment at Jackson Campus (grades 10-12)	1,314
2000-1 Enrollment at Moss Campus (grade 9)	555
Total Current High School Enrollment	1,869
Proposed Students (2003)	**2,100**
2010 Ultimate Student Enrollment	2,400

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Proposed Building Area:

The proposed building area are based on the Education Program and the plan that are currently being developed in schematic design:

Proposed High School Program Areas:

Existing Moss 9th Grade School to be remodeled:
(96,076 SF Currently)

	Area:	Footprint:
Demolition (not incl. in total) <24,982 SF>		
Main Floor Remodel	49,637 SF	49,637 SF
Upper Gym Remodel	15,260 SF	0
Lower Gym Remodel	6,197 SF	6,197
Total Remodel	**71,094 SF**	**55,834 SF**
New Academic Wing (North), Athletic/Theater Wing (South)		
Main Floor	145,544 SF	145,544 SF
Upper Academic	62,870 SF	0
Upper Gym	9,361 SF	0
Subtotal (New Construction)	**217,775 SF**	**145,544 SF**
New Technology/ ROTC Building	17,091 SF	17,091 SF
New Maintenance Shed	1,800 SF	1,800 SF
Total Facility (2003)	**307,760 SF***	**220,269 SF***
Future Baseball/Softball Support:		
615 Seat Bleachers/Concession/Rest Rms./ Storage (interior only)	2,100 SF	2,420 SF
Future West Concession/ Rest Rms./Str.	1,600 SF	1,600 SF
Academic Addition by 2010		
New Wing	32,700 SF	16,350 SF
Total Facility (2010)	**344,160 SF**	**240,639 SF**

Notes:

*Includes Phase 2a southeasterly Academic wing that overlaps Tax Lot 500. Overlapping wing will not be constructed until Tax Lots 500 and 600 are Annexed into the City of Oregon City. This wing includes a total of 25,800 SF over two stories (12,900 SF footprint).

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Planning Standards and Requested Variance:

The following are Oregon City Planning Standards for applicable Zoning:

OREGON CITY STANDARDS

Parcel	LU Zone	Front Yard	Side Yard	Corner Side	Rear	Max. Height
• **TL 500**	*R-10*	***25 ft***	***10/8 ft.***	*20 ft. (NA)*	***20 ft.***	***35 ft***
• **TL 600**	*R-10*	***25 ft***	***10/8 ft.***	*20 ft. (NA)*	***20 ft.***	***35 ft***
• **TL 1300 North**	*CI*	***10 ft***	***0 ft.***	*10 ft. (NA)*	***10 ft***	***40 ft***
• **TL 1300 South**	*R-8*	***20 ft***	*9/7 ft.*	***20 ft.***	***20 ft***	***35 ft****
• **TL 1200**	*CI*	***20 ft***	*0 ft.*	*20 ft. (NA)*	***10 ft***	***40 ft***
OR	*R-10*	***25 ft***	***10/8 ft***	*20 ft (NA)*	***20 ft***	***35 ft***
• **Part 1000+1001**	***(Same as TL 1200)***					

*Existing Moss gym building is currently 39.9' high.

PROPOSED BUILDING HEIGHT VARIANCE:

Within OC planning requirements stated above except:

- **TL1300** North *CI* **Height Variance Request** **43 ft[1]**
- **TL1300** South *R-8* **Height Variance Request** **50 ft[2] and 54 ft[3]**

School District proposes Variance for the following exceptions:

1. **43 ft high for Mechanical Penthouses at (3) locations.** These are non-occupied mechanical spaces at the roof of each academic wing. This additional height is acceptable per planning code because it is a mechanical area.
2. **50 ft high for new Theater.** This height is required for a 550-seat performing arts theater. Theater room and stage requires this height for proper lighting, acoustics, and scenery drops. This theater does not have a traditional fly loft that is usually 65 feet or more. This additional requested height is acceptable per planning code because it is only volumetric functional support space and not occupied by people. The proposed volume allows the theater to have appropriate ceiling height for slight lines, patron comfort, acoustic baffles, theatrical lighting, structure for long span, mechanical system and traditional stage proscenium opening.
3. **54 ft high for proposed double level gymnasium**. Existing gym on site that will remain is currently 39.9 ft. high. New double level gym(s) will be added for various sports. This multi-gym complex includes a competition

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court with seating for 2400 spectators. This large room requires ceiling height to comfortably accommodate spectators. A second upper level or balcony level gym also allows for some spectators but not at the same times as the main competition gym.

Parking and Circulation:

The Consolidated Campus is being designed as a "Closed Campus" with on site parking. Students will not be allowed to go off campus during the day without special permission. Existing lots will be remodeled and additional lots are planned to meet the following load:

Required Parking: (Oregon City Planning Code Sec. 17.5.010)

1 space/ Classroom=95 teaching stations =	*95*
1 space/ Admin. Employe=32 =	*32*
1 space/ ea. 4 seats of gym =	*600*
Total Spaces Required	*727 Spaces Required*
Maximum Parking allowed = 2x req'd. = 2 x 727=	*1,452 Spaces Allowed*

Provided Parking:

(128 Current Moss Parking Spaces to be reconfigured)

Driving Students	700
Faculty/ Administration	152
Visitor spaces	248
Total provided Parking Spaces	**1,100 Spaces provided OK**

(Handicapped and Carpool spaces included in total).

Required Handicapped Parking: *(OSSC- (UBC) Chapter 11 447.233)*

For Lots over 1000 vehicles = 20 for the first 1000+

(1) for ea. additional 100= *21 total spaces required*

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Provided Handicapped Parking: **18 Std. HC spaces provided**

(Dispersed among entries and facilities w/ 6' aisle)

Required Handicapped Van Spaces: *(OSSC- (UBC) Chapter 11 447.233)*

21÷8=2.6≅ *3 spaces Required*

Provided Van Spaces: **3 Van HC spaces provided OK**

(Dispersed w/ 8' aisle)

Required Carpool Spaces: *(Oregon City Planning Code 17.52.040)*

Min. 5% of sum of Employee+Student+Commuter Spaces

Located nearest all entries exclusive of HC spaces.

Provided Carpool Spaces:

152 Faculty+700 Students=825 X .05=42.6 ≅**43 Carpool Spaces provided OK**

(Dispersed between faculty and student entries)

Roadway Improvements:

Roadway and circulation improvements to the three parcels 500, 600 and 1300 will include a new signalized intersection centered on Parcel No. 1300 south property line and South Beavercreek Road (County Market Road No. 11). This property line is perpendicular to South Beavercreek Road. The City's vision is that this will be the beginning of a new Collector /Minor Arterial Street. The School District proposed a second proposed driveway about four hundred feet west of the newly proposed intersection.

Traffic Study demonstrates this new intersection consisting of South Beavercreek Road and the proposed Collector/ Minor Arterial Street warrants signalization. The School District intends to participate in a portion of these improvements that directly abuts school property on Parcel No.1300. The School District's intent is to dedicate 30' of land to the City parallel with this line. (Approximately 400' long at maximum) This dedication with an equal dedication from southerly neighboring Property Owner (Tax Lot 1101) will form the 60' Right of Way needed for the new Collector Street. There is a row of Maple trees along this property line. If it is acceptable to the City and southerly landowner these tree will be maintained in the form of an island will be the centerline.

The School proposes two entry driveways off this new Collector Street in lieu of current direct access driveway off South Beavercreek. Current Moss School

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entry driveway onto South Beavercreek will be discontinued. Existing driveways for residences on Tax Lots No. 500 and 600 will be discontinued. Current driveway for "Sage" house near northerly property line on Tax Lot 1300 will also be discontinued when the proposed development of the new northerly access point is constructed.

School District proposes a northerly vehicle access point north property line of Tax Lot 1300. This entry is proposed as a right-turn in and right-turn out entry/exit with no cross traffic north on South Beavercreek Road permitted. This proposed access point will alleviate congestion at the southerly-proposed Collector Street intersection especially in the AM peak commute hours, which is shown in Traffic Study. This will be the prime access point for buses and passenger car drop-off activities. Most bus and vehicle traffic will be coming from the north. A meandering internal roadway drive roughly parallel to South Beavercreek Road will allow for both vehicle and bus pick-up and drop-off queuing activity. Drive will have over seven hundred lineal feet of curbside sidewalk for pedestrian movement.

An interior east-west roadway is proposed parallel to the north property line of Parcel No. 1300. It begins at proposed access point at South Beavercreek Road and terminates at west property line shared with Clackamas Community College Several Parking Lots are to located along this roadway to support the athletic fields. The west property line is at the panhandle portion of Parcel No. 1300. This access point will be a gated and limited to traffic between the two schools with no through traffic allowed. Access between the two schools will be allowed for joint use of facilities and shared programs. Emergency vehicles both to and from the High School from Clackamas Community College will be allowed to have access for both emergencies and security.

Development of acquisition Parcel No.1200 will include a north south internal road connecting Parcel No. 1300 perimeter road to Glen Oak Road. This access point will be adjacent to Parcel No. 1200 west property line. This road will have several parking lots along it. Current driveway to Glen Oak from residence and out-building will be maintained as will the house and shop for the school's use.

Bicycle Parking:

City Planning Code requires bicycle parking and the school intends to provide it. Based on Code provision the following applies:

Required Bicycle Parking: (Oregon City Planning Code Sec. 17.52.060)

2 space/ Classroom=95 x 2 =	*190*
Total Spaces Required	*190 Spaces Required*

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Provided Bicycle Parking:

Total provided Parking Spaces **190 Bike Spaces provided OK**

(Dispersed among proposed three principal entries with a portion covered)

The School District feels that fewer students will ride bicycles to school than is prescribed by Land Use regulation. The regulation appears to be written for smaller projects in general. The District reserves the right to provide fewer during Site Plan Review. This position will be justified by current data provided from the Jackson Campus.

Landscaping and Fencing:

Existing significant trees are being incorporated into the design of a new central entry. All existing residential structures on Parcels 500, 600 and 1300 will eventually be demolished including current fences, paving and other miscellaneous site elements to implement new school plan.

The school site will be fenced with a 6-foot high woven wire fence on interior lot lines. Project will be landscaped. Appropriate trees and plantings will be provided to make the campus pleasant and positive learning environment. Parking lots abutting neighboring residentially zoned parcels will be properly screened with plant materials or opaque fencing. A majority of the site is dedicated to athletic fields, which will be developed in appropriate field grasses. The Site will exceed City's 15% minimum landscape requirement.

Trees and plantings will be selected with security in mind so as to maintain good sight lines throughout. Plant materials will primarily be local indigenous low-maintenance species. Particular species will be selected from the City's list of acceptable landscaping materials.

Two exterior courts formed by the new building configuration have two courts between wings open from the west. This opening will be fenced to maintain security. These fences will be fitted with gates to allow egress for emergencies.

Geotechnical:

Attached geotechnical report finds that the site is acceptable for the proposed High School use and construction of new structures.

Wet Lands:

A small wet land has been located at the small drainage swale flowing south north on the panhandle portion of Parcel No. 1300. The owner's environmental consultant is studying the wet land. Their Water Resource Report is attached as part of this application.

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Mitigation procedures are being developed to properly handle both during construction and permanently. The School District intends to file for and receive required permits from the Army Corp. of Engineers and Oregon Division of State Lands (DSL).

Security:

The School District has addressed security concerns in several ways. They maintain a current working relationship with the City of City Police Department currently with an assigned on site Campus Police Officer who will move to the new Campus. The District is currently working to improve on site communication systems for both day to day activities and large-scale emergencies.

The primary security feature of the new High School will be card lock keying of all secure doors in lieu of traditional keying. Camera surveillance of entries and critical locations will be provided.

The School District also wishes that no Tri-Met Bus Stop be placed in front of School Property. Few students will come that way and the Administration sees a Bus Stop as security problem in that loitering in front of school property could be legally allowed. The District does not object to a stop either north or south of the Site on South Beavercreek Road.

Schedule:

Currently Soderstrom Architects is in the Schematic Design Phase of the new consolidated High School. We intend to submit for conditional Use as soon as possible following our Pre-App meeting. The following schedule indicates key dates to implement the Moss Campus consolidation.

Major Schedule Dates

• Start Annexation Process of Lots 500 and 600	September 25,2000
• Start Conditional Use Process	October 30, 2000
• Submit for Early Site Package Grading/ Utilities Permit	February 12, 2001
• Submit for Building Permit	September 1, 2001
• Start Site Construction	April 1, 2001
• Start Building Construction	November 1, 2001
• Substantially Complete Building Construction	July 31, 2003
• Move-in	Aug 1, 2003

Open Full High School September 5. 2003

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Phasing:

In order to accomplish the task of consolidating two campuses within the time frame described, the School District intends to phase the improvements. Simply the owner wants to procure land use approvals and site/utility work building permits for Early Site Construction Work next summer. This includes work on Parcels No. 500, 600, and 1300 (Phase I). It is the goal of the School District to have legally acquired Parcel 1200 by this time and site improvements take place there as well (Phase 1A). Ideally these improvements would start with Phase 1. Should this not happen as quickly as anticipated site will be developed as it become available.

Similarly Annexation of Parcels 500 and 600 may still be in process at the time of early site work next summer. Therefore work in those parcels will be considered Phase 1B and commence when annexation is complete next spring.

Note that the existing Moss Ninth Grade School will remain open during all construction activities.

Phase 1:

Construct Site Work (Early Site Package):

The mass grading for the new academic/ science addition, technology building and athletic field improvements will be completed along with site utility work this upcoming summer of 2001. All interior site roadway and utility work will be accomplished on Parcels No. 500, 600, and 1300 with the exception of the "Sage" house near the northerly boundary of Parcel No. 1300. This will remain as Special Education Classrooms until new Academic building is completed.

Site utilities installed during this phase will include sanitary sewer, storm water management system including detention and water quality features required. Main water line including fire protection loop and new fire hydrants will be installed and made operational for next phase when building construction begins.

Phase 1A:

Tax Lot 1200: Remove Orchard; Construct Athletic Fields, Parking and Roadway to Glen Oak Road:

This phase is contingent with the acquisition of the Tax Lot 1200. Acquisition is currently in process. In order not to delay Land Use processing the School District wishes to proceed now for conditional Use with the portions of the project in direct control. Parcel 1200 will supplement proposed High School Project but is not necessary functionally or legally for land use or site engineering. Ideally Therefore for the sake of this application work on this

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property will likely take place next summer along with Phase 1: Early Site Work. The Athletic fields will likely be placed in service for the summer use 2002.

This phase will include the work necessary to implement athletic field and vehicle circulation show as well as necessary utility work. This Lot slopes to the southeast towards Glen Oak Road. Storm water management will be implemented. Also a half-street improvement along Parcel No. 1200 will be implemented at this time including a new driveway access off Glen Oak Road.

Phase 1 B:

This phase is contingent with the Annexation of Lots 500 and 600 into the City of City. This is a minimum six-month process that has been started and will eventually need voter approval. Should this process find a snag as it moves from City Planning Commission, To City Council, the State Attorney General and then City Voter Approval, the School District plans to build the portions of project on Parcel 1300 regardless of the timing of Annexation. The District plans to remove the need for Building Permit on Lots 500 and 600 (similar to approach for Lot 1200). Therefore as previously mentioned by the time of application for Conditional Use the small portion of Academic Addition will be removed from Lot 500. Parking and on-site drop-off will not be constructed until Annexation takes place. Similarly Parcel 500 and 600 will supplement proposed High School Project but not required.

The residences and three accessory buildings on Parcels 500 and 600 will be removed. The exception is the two houses on parcels 500 and 600 respectively, may be used as a job shacks until project nears completion in 2003. At that time they will be raised to finalize driveway and parking improvements

Phase 2:

Construct Academic and Technology Buildings:

Building construction will begin fall of 2001. New construction will take place during this phase while Ninth Grade is in session in the current Moss facilities. Access will be separated from new construction with temporary construction fencing and barriers. The new two-story Academic addition and Technology building addition will begin. It is possible portions of the new Theater/ Athletics areas will be started as well.

This Phase will include off-site roadwork at the new described Collector street and intersection with South Beavercreek Road. Current vehicle and pedestrian circulation patterns will be modified to allow for building construction and support activities. Care will be taken to establish safe access to the operating ninth Grade facilities.

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Proposed and upgraded athletic field projects including Concession/Rest Room building will be completed during this phase. This phase includes finishing the soccer and baseball/softball fields on Parcel No. 1300 provided acquisition has been secured.

Phase 3:

Demolish/Remodel Selected Moss Buildings; Construct Theater, Commons and Gym:

This Phase will begin upon the completion of the new Academic/Science addition and Technology building construction, the summer of 2002. New Buildings will be readied to accept Ninth Grade teaching activities while remainder of project is constructed in the current Moss configuration. Similar safety fencing and barriers will be provided to separate operating new ninth grade facilities from construction activities. This phase will be completed and students from Jackson Campus will report to new consolidated High School for the beginning of Classes Fall of 2003.

Phase 4:

Construct Additional Academic wing to north end of school and remodel adjacent parking lot. -TBD

This phase is has no determined time of construction between School Opening in 2003 and 2010 when demographics suggest school will need to be larger. New wing will be located in north parking lot as shown dashed in on site phasing plan. At this time it will be hard to foresee final design however an assumption is made that another two-story wing module will be added for approximately 32,700 SF. Displaced parking will be replaced elsewhere on site.

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Please begin the processing of this application and set Pre-Application Conference as soon as possible to maintain this challenging project's schedule. Your help will be greatly appreciated.

Sincerely,

MILSTEAD & ASSOCIATES, INC.

Jeffrey Houle

Project Manager

RJ/rj

Enclosure

cc: Ken Rezac/ OCSD
Ron Ron Stewart/ OCSD
Bob Janik/ SAPC
Marc Bevens/ SAPC

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CLACKAMAS COMMUNITY COLLEGE
GATED ENTRY LIMIT ACCESS
PROPOSED ROAD
PROPOSED PARKING
EXISTING SANITARY SEWER
POWER LINES EASMENT
SOUTH BEAVER CREEK ROAD
PROPOSED RIGHT-TURN IN RIGHT-TURN OUT VEHICLE ENTRY
PROPOSED 1/2 ST. UPGRADE (70' ROW-3 LANES+1 BIKE+ 8' SIDEWALK)
CURRENT 60' ROW
C.L.
SECONDARY PARKING LOOP
PROPOSED ENTRY DROP-OFF DRIVE
PROPOSED DETENTION PONDS
PROPOSED MAINT. SHED
PROPOSED LIGHTED ATHLETIC FIELDS (TYP. TL 1200)
PROPOSED CONCESSION/ RESTROOMS
PROPOSED LIGHTED ATHLETIC FIELD
PROPOSED LIGHTED TENNIS COURTS
STUDENT PARKING
FUTURE ADDITION
23 CARPOOL SPACES
PROPOSED ENTRY
PROPOSED SCIENCE/ TECHNOLOGY
PROPOSED ACADEMIC WINGS
PROPOSED DAY-CARE DROP-OFF
FENCED COURT
CURRENT MOSS BUILDING
PROPOSED MAIN ENTRY
COURT
PROPOSED LIBRARY
PROPOSED THEATER
PROPOSED COMMONS
DEMOLITION AREA
FENCED COURT
PROPOSED GYM
CURRENT GYM
PROPOSED LOADING
EVENT PARKING
COLLECTOR ST.
(5) BUILDINGS TO BE REMOVED
EXISTING TREES TO REMAIN
PROPOSED SIGNALIZED INTERSECTION
ANNEXATION TAX LOTS No. 500+600 (SHADED)
RECONFIGURED EXISTING LIGHTED SOFTBALL FIELD
TAX LOT 1200 HESS ACQUISITION PARCEL
TAX LOT 1300 CURRENT MOSS CAMPUS
EXISTING LIGHTED PRACTICE FIELD AND TRACK
EXISTING LIGHTED BASEBALL FIELD
FUTURE 615 SEAT BLEACHERS, REST. RMS. STR. & CONCESSIONS
PRIVATE ACCESS RD.
24'-0" PRIVATE ACCESS RD.
REGULATION SOCCER FIELD
TAX LOT PART.1000+1001 HUNT TRIANGLE ACQUISTION PARCEL
50'-0" R.O.W.
36'-0" PAVING
REGULATION SOCCER FIELDS
P.L.
48'-0" PAVING
80'-0" R.O.W.
T.S. DOORBOREEN
PROPOSED PARKING
NON-REGULATION SOCCER FIELD
EXSISTING RESIDENCE AND OUT BUILDINGS TO REMAIN
EXISTING NEIGHBORHOOD STRUCTURES TYP.
GATED ENTRY LIMITED ACCESS
GLEN OAK ROAD
NORTH

1 Site Development Plan
1" = 80'

SITE STATISTICS:
(SEE NARRATIVE FOR DETAIL QUANTITIES)

SITE NOTES:
1. ENTIRE FIVE TAX LOT CAMPUS WILL BE FENCED AT INTERIOR PERIMETER LOT LINES
2. ALL ATHLETIC FIELDS AND PARKING LOTS WILL BE LIGHTED AND LANDSCAPED
3. ALL STORM WATER RUN-OFF WILL BE DETAINED FOR PEAK FLOWS AND FILTERED FOR QUALITY

SODERSTROM ARCHITECTS pc
1200 NW NAITO PARKWAY SUITE 410
PORTLAND, OREGON 97209
TEL: (503) 228 6617
FAX: (503) 273 8584

ARCHITECTURE
PLANNING
INTERIOR DESIGN
EXTERIOR RESTORATION

OREGON CITY SCHOOL DISTRICT NO. 62
OREGON CITY HIGH SCHOOL - MOSS CAMPUS
19761 S. BEAVERCREEK RD. OREGON CITY, OR 97045

Drawn: BOBJ
Date: 02/05/01
Plot: 02/05/01
File: 00100C110CUP
Check:
Revisions:

Sheet Title
Site Development Plan

CONDITIONAL USE

CUP-6
Job No: 00100

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Exhibit E – Existing High School Photos



High School Entry



High School Entry



High School Courtyard



Typical Exterior Classroom Wing Finishes



Exterior Finishes



Unused/underutilitzed bike racks



Unused/underutilized bike racks



Chain link fence along perimeter of existing High School Site/Athletic Fields



Chain link fence along perimeter of existing High School Site/Athletic Fields



Existing chain link screen/fence

OREGON CITY

Public Works – Development Services

625 Center Street | Oregon City OR 97045
Ph (503) 657-0891 | Fax (503) 657-7829

PRE-APPLICATION MEETING NOTES

Date: 10-9-14

Planning Project Number: PA 14-31
Address: No address given
Map Number: 32E09D
Tax Lot: 01400
Project Name: OCSD Maintenance Facility
Meeting Date: 10-14-14
Reviewer: Gordon Munro

GENERAL COMMENTS

1. The Applicant is responsible for this project's compliance with Engineering Policy 00-01. The policy pertains to any land use decision requiring the Applicant to provide any public improvements.
2. The Applicant shall sign a Non-Remonstrance Agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the Property and assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement.
3. The Applicant shall provide an Erosion Prevention and Sedimentation Control Plan to the City for approval.
4. All applicable System Development Charges (SDC) shall be due and payable upon building permit issuance.
5. A grading permit shall be obtained from Development Services for the on-site work.

ENGINEERING - UTILITIES

Streets

1. The proposed development includes an extension of Meyers Road, which is functionally classified as Minor Arterial. The existing right-of-way (ROW) is 80-feet and the pavement is 57-feet wide. The paved section includes a parking strip and bike lane on the both sides of the street, and two travel lanes and a turning lane. East of the intersection with High School Avenue the turning lane is transitioned into a median. The existing street improvements also include a 6-foot sidewalk, a 4-foot landscape strip on the south side, and a 6-foot curb tight sidewalk on the north side of the street. Curb, streetlights and trees are also installed.

2. The ROW requirement for a Residential Minor Arterial Minor classified street is 100-feet. The street section is 68-feet of pavement which includes the following: 6-feet bike lane (both sides) and 7-feet street parking (both sides), a 6-feet median, and three 12-feet travel

lanes. Requirements also include curb and gutter (both sides), 10.5-feet landscape strip (including curb, both sides), 5-feet sidewalk (both sides), 0.5-feet Public Access strip (both sides), and street trees and street lights (both sides).

3. Much of Meyers Road is build out already, and it would be reasonable to match existing conditions with the exception of adding a planter strip on the north side. However, this would be a modification to the code requirements and the applicant would need to address the criteria for modifications.

4. Fronting the property the property line between the School property and the Park property is not straight. In order to construct a reasonable street there will likely need to be cooperation with the Parks Department with regard to location, land dedication and construction.

5. The Meyers Road frontage would be required to be a half street improvement at a minimum. This would include a 6-foot sidewalk, 5-foot planter strip, curb & gutter, parking lane, bike lane, travel lane, median and a second travel lane.

6. The site also fronts High School Avenue which is a private street. It has 24-feet of pavement, curbs on both sides, a 5-foot sidewalk on the east side, lighting, and 90-degree parking in some locations on the east side. The curb on the west side appears to be very close to the property line.

7. High School Avenue that is south of the site and is a public street is a half street improvement with 22-feet of pavement, a 5-foot planter strip, 6-foot sidewalk and 34.5-foot ROW. When the street is completed the ROW would be 57-feet, the pavement 32-feet with a 5-foot planter strip and 6-foot sidewalk on both sides.

8. The City would like to have the portion of High School Avenue that is adjacent to the site (and currently a private street) become a public street that would eventually connect to Loder Road to the north. This would require a dedication of ROW across the School property for the existing improvements (approximately 36-feet), plus approximately 18-feet on the subject property. This would provide ROW for a standard local street. The street improvements would include 8-feet of pavement, curb & gutter, 5-foot plant strip and 5-foot sidewalk.

9. In the future, Loder Road is anticipated to be located across the north end of the subject property. It appears that the development has been laid out such that the extension of Loder Road could occur. It is possible that High School avenue could serve as the connection to Loder Road.

10. There would need a full traffic study as part of the application.

Stormwater

11. There is sufficient ne impervious area that both detention and treatment will be required. A preliminary storm report is required for the land use application.

12. The existing stormwater piping in High School Avenue south of the site and Meyers Road includes 12-inch piping, manholes, and curb inlets.

13. There is a detention pond at the corner of high School Avenue and Glen Oak Road. It was no likely sized to accommodate the flow from the proposed development. There is another detention pond near the north east corner of the site which is private and serves the school property. It is unclear if there is additional capacity in the pond.

Water

14. An existing 8-inch diameter water line is installed on Meyers Road and the public portion of High School Avenue.

15. Construction of new 12" water mains, water services, water meters and fire hydrants will be required on the proposed extension of Meyers Road for the new development. The larger pipe is required per the water master plan.

16. Construction of new 12" water mains, water services, water meters and fire hydrants will be required on the proposed extension of High School Avenue for the new development. The larger pipe is required per the water master plan.

Sanitary Sewer

17. An existing 12-inch diameter PVC sanitary sewer line and manholes are installed in Glen Oak Road on the south side of the Glen Oak Park site. The pipe is approximately 7-feet deep at that location, and the invert elevation is approximately 400-feet. The development site is in the elevation range of 405 to 420 feet. Therefore, it can potentially be served by gravity from this location. However, the pipe would have to cross the Park property. The applicant would need to coordinate with the Park Department to determine if this is acceptable.

18. An existing 8-inch diameter PVC sanitary sewer line and manholes are installed in Quaking Aspen Avenue. The nearest manhole to the site is at the intersection of Quaking Aspen Avenue and Meyers Road. The pipe is approximately 9-feet deep at that location, and the invert elevation is approximately 425-feet. The development site is in the elevation range of 405 to 420 feet. Therefore, the site cannot be served by gravity from this location, but could

be served by pumping.

19. Due to the local contours and the location of the other surrounding developable land, it does not appear that the sanitary sewer needs to be constructed along the Meyers Road extension unless a force main becomes part of the development.

Other

Any work done on City Park property that is other than Park improvements needs to be coordinated with the Parks department, and would be required to go to a vote of the public.

OREGON CITY

Public Works – Development Services

625 Center Street | Oregon City OR 97045
Ph (503) 657-0891 | Fax (503) 657-7829

PRE-APPLICATION MEETING NOTES

Project Number: PA 14-31
Project Name: OCSD Transportation Facility
Meeting Date: October 14, 2014

Proposed Project:
The applicant has proposed a new bus storage facility with 100 bus spaces, 104, small bus/van spaces, 139 standard parking spaces, and a 30,000 sf building for offices/support.

General Information:

- Location: 3-2E-09D-01400
- Zoning: Campus Industrial (CI)
- Applicable Overlay Districts: Natural Resource (NROD)
- Applications anticipated: Master Plan, Detailed Development Plan, NROD

Planning Comments:

- The application for a Master Plan is required per 17.65.030 *"A master plan shall be submitted for any institutional development on a site over ten acres in size."* The applicant may combine this with the detailed development application, meaning the Planning Commission will review the entire proposal together. The applications may instead be separated, with the Master Plan going before the Commission on its own prior to submittal of the detailed development plan and NROD applications.
- Master Plans allow for the application to request adjustments to standards. The Planning Commission will consider the adjustments requested. Adjustment requests must be accompanied by mitigation, and an analysis of the cumulative effect of all the adjustments and an explanation of how they meet the intent of the zone. You identified adjustments to the following standards:
    - Parking lot landscaping/tree requirement
    - Chain link fencing. Note chain link fencing is prohibited in "visible locations" and prohibited uses are not eligible for adjustments
    - Maximum building setback
    - Façade transparency
    - Number of driveways
    - Note: You may also need to request an adjustment for drive aisle widths and building buffer landscaping
- The use is considered an ancillary educational facility which is a permitted use in the zone.
- The building will be considered an institutional building and will be subject to the standards in Chapter 17.62.055 (with any approved adjustments).
- The site plan appears to meet standards with the following notes or changes:
    - Lighting: The submittal must include an exterior lighting plan with plans and specifications for streetlights, parking lot lights, and exterior building lights. The

specifications shall include details of the pole, fixture height and design, lamp type, wattage, and spacing of lights.

- Parking: Show total parking for entire campus using high school, office, storage, and perhaps light industrial uses in table 17.52.020. Assembly is not one of the uses. We do not have a good category for the bus barn, so you may want to look at other uses and jurisdictions and justify the number of parking spaces through the Traffic Impact Analysis.
- Bicycle parking will be required: two bicycle parking spaces per classroom and for office uses, one bicycle space per 20 vehicle parking spaces. 50% of spaces must be covered.
- A landscaping plan prepared by a registered landscape architect is required. For the Master Plan, the total landscaping for the entire site will be needed, and for the detailed development plan, 15% of developable area must be landscaped. Perimeter landscaping will be required for all parking areas.
- Tree removal: A mitigation plan will be required for all healthy trees greater than 6" DBH that are being removed. See Chapter 17.41 for mitigation requirements.
- Natural Resource Overlay District (NROD): A wetland delineation will be required. The current mapped overlay boundary is not ground-truthed and the correct boundary needs to be established.

Transportation:

TSP projects on site or in vicinity:

- D46 Meyers Road Extension - Extend Meyers Road from OR 213 to High School Avenue as an Industrial Minor Arterial. Create a local street connection to Douglas Loop.

- D64 Loder Road extension - Extend Loder Road from Beavercreek Road to Glen Oak Road as an Industrial Collector. Add a sidewalk and bike lane to the west side of the street, with a shared-use path to be added on east side per project S18. Create a local street connection to Douglas Loop. Install a roundabout at Meyers Road (per project D45).

- S18 Shared Use path - Add a shared-use path on the south/east side of the Loder Road extension between Glen Oak Road and the Holly Lane extension.

- D25 School Zone Flashers – Meyers Road near High School lane

Your application will be reviewed by John Replinger of Replinger and Associates, the City's transportation consultant. ODOT will also need to be contacted.

John reviewed the preapplication materials and sent the following comments:

The applicant will need to have a traffic engineer conduct a transportation study in conformance with the City's *Guidelines for Transportation Impact Analyses* available on the Oregon City website.

Based on the information provided by the applicant, it appears the trip generation exceeds the level at which the project's transportation analysis requirements can be satisfied by submittal of a Transportation Analysis Letter (TAL). A full Transportation Impact Analysis (TIA) will be required. Among other requirements, a full TIA includes conducting traffic counts and operational analysis of impacted intersections will be required. Intersections to be analyzed include the site access and intersections of collector/collector and higher where traffic volumes from the development exceed 20 peak hour trips.

The applicant and his traffic engineer should review the *Guidelines for Transportation Impact Analyses,* found on the Oregon City website.

Since trip generation rates are not readily available for this type of land use, the applicant will need to make special efforts to develop appropriate trip generation rates. This is most likely to be accomplished by analyzing the rates from the existing facility. This facility also has unique characteristics in terms of the inbound and outbound trips. These include; drivers arriving for work; buses outbound; buses inbound; drivers departing from work; (all of which occur in both the mornings and evenings); maintenance, clerical, and administrative staff arriving and departing from the facility; vendors and deliveries. The applicant should account for all of these activities and their timing to assess how these activities impact the peak periods of adjacent street traffic. Traffic impacts will need to be assessed for both the morning and end-of-school day peak hours and, perhaps, other periods depending on the trip generation rates and background traffic. After the applicant develops hourly trip generation rates, I will be glad to discuss the hours for the final analysis.

The applicant needs to assess the impact of the facility both with and without the completion of the Meyers Road Extension, a TSP project.

The applicant is advised to assess the impact in accordance with the new operational standards specified in the TSP. For regional facilities, these are based on the volume-to-capacity ratios.

The applicant's traffic engineer is welcome to contact the city's traffic engineering consultant, John Replinger, at Replinger-Associates@comcast.net or at 503-719-3383.

Clackamas County Fire:
Your application was reviewed by Mike Boumann, Lieutenant Deputy Fire Marshal of Clackamas County Fire District #1. You may contact Mr. Boumann at (503)742-2660 or michaelbou@ccfd1.com.

Notes:

- A neighborhood meeting is required with the Caufield Neighborhood Association.
    - For contact info, please see http://www.orcity.org/community/caufield-neighborhood-association
    - If the neighborhood cannot accommodate you at a meeting within 30 days of your contact, you may schedule your own meeting within the boundaries of the NA in the evening or weekend and you must provide public notice of the meeting (contact us for details)

625 Center Street | Oregon City OR 97045
Ph (503) 657-0891 | Fax (503) 657-7829

- The planning department will provide notice of your proposed development to the State Historic Preservation Office (SHPO) and all affected tribes per OCMC chapter 17.62.040.H. This notice requirement applies to any project that involves ground disturbance involving movement of native soils.

Planning Review and Application Fees:

The 2014 Planning applications and fees include-

- Site Plan and Design Review

Project Cost	Fee
Less than $500,000	$2022 plus 0.7% project cost
$500,000 to $3,000,000	$3368 plus 0.5% project cost
Over $3,000,000	$11,454 plus 0.3% project cost (Max $53,728)

- Master Plan $6,737
- Natural Resource Overlay District $411 (Type I) $1,915 (Type II/III)
- Transportation Study Impact Review: depends on scope, see fee sheet
- Mailing Labels: $15 – Optional

Pre-application conferences are required by Section 17.50.050 of the City Code, as follows:

A. Preapplication Conference. Prior to submitting an application for any form of permit, the applicant shall schedule and attend a preapplication conference with City staff to discuss the proposal. To schedule a preapplication conference, the applicant shall contact the Planning Division, submit the required materials, and pay the appropriate conference fee. At a minimum, an applicant should submit a short narrative describing the proposal and a proposed site plan, drawn to a scale acceptable to the City, which identifies the proposed land uses, traffic circulation, and public rights-of-way and all other required plans. The purpose of the preapplication conference is to provide an opportunity for staff to provide the applicant with information on the likely impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal. The Planning Division shall provide the applicant(s) with the identity and contact persons for all affected neighborhood associations as well as a written summary of the preapplication conference. Notwithstanding any representations by City staff at a preapplication conference, staff is not authorized to waive any requirements of this code, and any omission or failure by staff to recite to an applicant all relevant applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.

B. A preapplication conference shall be valid for a period of six months from the date it is held. If no application is filed within six months of the conference or meeting, the applicant must schedule and attend another conference before the City will accept a permit application. The community development director may waive the preapplication requirement if, in the Director's opinion, the development does not warrant this step. In no case shall a preapplication conference be valid for more than one year.

OREGON CITY

Public Works – Development Services

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Ph (503) 657-0891 | Fax (503) 657-7829

NOTICE TO APPLICANT: A property owner may apply for any permit they wish for their property. HOWEVER, THERE ARE NO GUARANTEES THAT ANY APPLICATION WILL BE APPROVED. No decisions are made until all reports and testimony have been submitted. This form will be kept by the Community Development Department. A copy will be given to the applicant. IF the applicant does not submit an application within six (6) months from the Pre-application Conference meeting date, a NEW Pre-Application Conference will be required.

Applicable Approval Code

We can email you Word versions of these code chapters: kmoosbrugger@orcity.org.

Chapter 17.37 - (CI) CAMPUS INDUSTRIAL DISTRICT
Chapter 17.62 - SITE PLAN AND DESIGN REVIEW
Chapter 17.50 - ADMINISTRATION AND PROCEDURES
Chapter 17.52 - OFF-STREET PARKING AND LOADING
Chapter 17.41 - TREE PROTECTION STANDARDS
Chapter 17.65 - MASTER PLANS
Chapter 17.49 - NATURAL RESOURCE OVERLAY DISTRICT
Chapter 12.04 - STREETS, SIDEWALKS AND PUBLIC PLACES
Chapter 12.08 - PUBLIC AND STREET TREES
Chapter 13.12 - STORMWATER MANAGEMENT

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM C – NEIGHBORHOOD ASSOCIATION CONCERNS/SIGN IN SHEET

The School District presented plans of the proposed Transportation Maintenance Facility to the Caufield Neighborhood Association meeting on Tuesday, 27 January 2015. Attached are the following:

Meeting Agenda
Sign-in Sheet
Meeting Notes
Letter from Mike Mermelstein – Chairman

OREGON CITY

Caufield Neighborhood Association

MEETING AGENDA
January 27, 2015
Presiding – MIKE MERMELSTEIN, chairman

Name tags – Role Sheet – Refreshments – Raffle Tickets

1. *DAN FOWLER – Maple Lane development (7:00-7:30)*
2. *WES ROGERS, OC School District – New bus yard / Meyers Road extension (7:30-8:00)*
3. *BRAD PAXTON – Clackamas Fire District bond issue*
4. *Business meeting*
   - *4.1. Minutes from October 28*
   - *4.2. Election of officers for 2015*
   - *4.3. CIC report – MIKE MITCHELL*
   - *4.4. Planning meeting report – MARY JOHNSON*
   - *4.5. Police activity – Matt Paschell*
   - *4.6. Other reports*
5. *Community Concerns / Announcements*
6. *Raffle drawings*
7. *NEXT MEETING– April 28, 2015 @ Beaver Creek Telephone Cooperative*

OREGON CITY

JAN. 27, 2015
Meeting Date

Caufield Neighborhood Association

NAME	ADDRESS	PHONE	EMAIL
JOE & MARY JOHNSON	19921 BEAVERCREEK RD		
Gary & Jeannine Davis	20102 Kimberly Rose Rd.		
Mike Mermelstein	20114 Kimberly Rose Dr		
Brandon Payton	CLACKAMAS FIRE		
Marylo & James Tyler	20006 Mossy Meadows		
Mike Fermicker	19028 Emerson Dr.		
Ronald Lee	200 No. State St. Lake Oswego		
Maggie Grant	14946 Coquille Ct		
Parker Verhaeghe	2133 NW York, 97210		
Dan Fowler	1300 John Adams St. OC		
Lloyd Hill	1750 Blankenship Rd. #400		
Mike Mitchell	14582 Walnut Grove Way		
Ricardo Becerril	6216 Nicklaus Loop N. Keizer OR		
Mark Foley	14725 S. Brunner Rd. OC		
Wes Rogers	906 Summit St O.C.		
Kurt & Jane Radtke	20023 Quinault Dr. O.C.		

DEAR MR. ROGERS,

HERE IS A COPY OF THE CNA ATTENDANCE REGISTER USED THE NIGHT OF YOUR PRESENTATION. THERE WERE ACTUALLY 30 NEIGHBORS PRESENT, AS SOME DID NOT GET THE CHANCE TO SIGN THE REGISTER. THANK YOU FOR LETTING US KNOW YOUR IDEAS FOR THE BUS BARN, AND FOR MEETING WITH ME PERSONALLY REGARDING THE TRANSFER OF SOME OAK TREES TO THE NEW GLEN OAK PARK.

CORDIALLY,

ROBERT MALCHOW
CNA SECRETARY

OREGON CITY

Jan. 27, 2015
Meeting Date

Caufield Neighborhood Association

NAME	ADDRESS	PHONE	EMAIL
WAYNE & LAVERNE BAUER	19921 CONNIE Ct O.C.		
LaRee Johnson	14980 Emerson Ct		
MATT PASCHALL	OREGON CITY PD		
Alex Bursheim	405 Linn Ave Oregon City		
Michael Ard	321 SW 4th Ave, Suite 400 Port		
ROBERT MALCHOW	20153 S. WOODGLEN WAY		

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

MEETING NOTES

1) ***Neighborhood Association attendees expressed concerns re: bus traffic during peak hours of the day. Mike Ard (Lancaster Engineering) shared that during peak hour there would be very few transportation vehicles in the area.***

2) ***Attendees were adamantly concerned about the lack of adequate parking at the High School and the resulting on-street spillover of parked vehicles. The District shared that part of the master planning was to look at non-conforming existing uses and that the City of Oregon City has not only a minimum standard but a maximum limit. We assured the neighborhood association that the District easily meets the minimum and if required to remove parking that parking far away from the houses on Meyers Road would be taken offline. The District has scheduled a meeting with the Meyers Road neighbors to examine the situation first hand, discuss possible solutions, and then meet with City of Oregon City staff to find agreeable actions.***

3) ***Attendees expressed concerns re: young drivers' sometimes careless entry onto Meyers Road. The District has scheduled a meeting with the Meyers Road neighbors to examine the situation first hand, discuss possible solutions, and then meet with City of Oregon City staff to find agreeable actions.***

Caufield Neighborhood Association
20114 Kimberly Rose Drive
Oregon City, OR 97045

Mike Mermelstein – Chairman
Gary Davis – Co-Chairman
Robert Malchow – Secretary

February 10, 2015

Wes Rogers, Director of Operations
Oregon City School District 62
P.O. Box 210
Oregon City, OR 97045

Dear Wes:

The Caufield Neighborhood Association and I want to thank you for your presentation at our association meeting on January 27, 2015. Your presentation was excellent and very informative.

Although you answered our questions about the Bus Barn project, we believe that it is too early in the process to give the project blanket support or rejection. Additionally, this was the first time we have seen the project and we do not know all of the implications at this time. As you know, projects have a way of changing from time to time and supporting or rejecting the project is not appropriate.

At the meeting, there were concerns about the increase of traffic on Glen Oaks Drive and on Myers Road. We believe that our concerns have not been answered. Another issue is the completion of Myers Road through to Hwy 213, which will alleviate some of our traffic concerns.

We would like to see what the Oregon City Planning Commission has to say about the Bus Barn project. Then we would like to review the completed plans and studies before we make a decision.

Sincerely,

Mike Mermelstein

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Exhibit G – Preliminary Storm Drain Detention & Water Quality Calculations

OCSD Transportation Facility

Oregon City, OR

Developer: Oregon City School District

J.O. SGL 14-070

November 3rd, 2014

PRELIMINARY STORM DRAIN DETENTION & WATER QUALITY CALCULATIONS

SISUL ENGINEERING
A Division of Sisul Enterprises, Inc.
375 Portland Avenue
Gladstone, OR 97027
phone: (503) 657-0188
fax: (503) 657-5779

Narrative:

The site is currently undeveloped with one existing shed among a heavily wooded area. The majority of the undeveloped portion of the site is forest land. The property fall towards the northwest anywhere between 2-5%. The site is surrounded on the north by Clackamas Community College, on the east by Oregon City High School, on the south by housing and a future City park currently being master planned by the City Parks Department, and on the west by an undeveloped property.

The site is located in the Caufield Drainage Basin.

The site is proposed to be developed into a new Oregon City School District Transportation Facility that will replace the existing one. The site which is currently all pervious will become mostly impervious area after development. Stormwater detention and water quality facility for storm runoff will be provided by detention ponds to be located on the north side of the property. The water quality requirement for the City of Oregon City is to have a minimum 48-hour retention time for 1/3 of a 2 year storm event. All of these requirements will be met with a detention/water quality pond. Roof drainage will be piped into the on-site system and routed to the detention ponds. A geotechnical infiltration test and report is being prepared by GRI. There memorandum regarding the testing is included as a part of this report.

Detention Requirements:
2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

Total Site Conditions & Design Values - Pre Development:

Area:

Total Area = 6.88 Acres
Pervious Area = 6.88 acres
Impervious Area = 0.00 acres

Existing Use: The site is currently undeveloped with one existing shed among a heavily wooded area. The majority of the undeveloped portion of the site is forest land.

Soil Type: This site has (1) soil type as identified by (Soil Survey Clackamas County Area, Oregon) (See Soil Survey Attachments)

Bornstedt silt loam 8B - Hydrologic Group 'C'

Runoff Curve Numbers: (per Table 4-3 MODIFIED CURVE NUMBERS, City of Oregon City Stormwater and Grading Design Standards)

Wood or forest land: established 2nd growth - Hydrologic Group 'C' => 78
Impervious Surfaces, AC, Roofs etc.-Hydrologic Group 'C' => 98

Rainfall Distribution: (per Table 4-1 TOTAL DEPTH, City of Oregon City Stormwater and Grading Design Standards)

2yr, 24-hour duration STD SCS Type 1A Storm => 2.6 inches
5yr, 24-hour duration STD SCS Type 1A Storm => 3.1 inches
10yr, 24-hour duration STD SCS Type 1A Storm => 3.4 inches

Time of Concentration – Pre Developed: (Design Values per Table 4-4 MANNING'S COEFFICIENTS/"K" FACTORS, City of Oregon City Stormwater and Grading Design Standards)

Sheet Flow: $T_1 = \frac{0.42\,(n_s L)^{0.8}}{(P_2)^{0.5} * (s_o)^{0.4}}$

$L = 220$ ft.
$P_2 = 2.6$ in.
$S_o = 0.0364$ ft./ft.
$n_s = 0.40$

Shallow Concentrated Flow: $T_1 = \frac{L}{60 * k * (S_o)^{0.5}}$

$L = 432$ ft.
$S_o = 0.0080$ ft./ft.
$k = 5$

Total Time of Concentration: $T_c = T_1 + T_2$

$T_1 = \frac{0.42\,(0.40 * 220)^{0.8}}{(2.6)^{0.5} * (0.0364)^{0.4}} = 35.23$ minutes

$T_2 = \frac{432}{60 * 5 * (0.0080)^{0.5}} = 16.10$ minutes

$T_c = 35.23 + 16.10 = \underline{51.33 \text{ minutes}}$

Pre Development Hydrographs:

The pre developed hydrographs will be generated using the Santa Barbara Urban Hydrograph (SBUH) Method. (KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division, HYDROGRAPH PROGRAMS Version 4.20)

The following pre-developed hydrographs have been broken up into two separate basins. Each basin will serve a detention pond on the northern part of the property. The basins will be broken into basin 'A' and basin 'B'. Refer to supporting pages to see separation of the basins on-site.

2 year Runoff Rate – Pre Development – Basin 'A'

```
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********    2-YEAR  24-HOUR STORM  ****  2.60" TOTAL PRECIP. *********

------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
4.15,78,0,0,51.33

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       4.2        4.2  78.0      .0    .0        51.3

  PEAK-Q(CFS)   T-PEAK(HRS)     VOL(CU-FT)
       .34          8.17          12766

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-2A.UND
```

5 year Runoff Rate – Pre Development – Basin 'A'

```
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********    5-YEAR  24-HOUR STORM  ****  3.10" TOTAL PRECIP. *********

------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
4.15,78,0,0,51.33

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       4.2        4.2  78.0      .0    .0        51.3

  PEAK-Q(CFS)   T-PEAK(HRS)     VOL(CU-FT)
       .55          8.00          17942

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-5A.UND
```

10 year Runoff Rate – Pre Development – Basin 'A'

```
---------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  10-YEAR  24-HOUR STORM  ****  3.40" TOTAL PRECIP. *********

---------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
4.15,78,0,0,51.33

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       4.2        4.2  78.0      .0    .0        51.3

  PEAK-Q(CFS)   T-PEAK(HRS)     VOL(CU-FT)
       .68          8.00           21254

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-10A.UND
```

2 year Runoff Rate – Pre Development – Basin 'B'

```
---------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   2-YEAR  24-HOUR STORM  ****  2.60" TOTAL PRECIP. *********

---------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
2.73,78,0,0,51.33

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       2.7        2.7  78.0      .0    .0        51.3

  PEAK-Q(CFS)   T-PEAK(HRS)     VOL(CU-FT)
       .22          8.17            8398

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-2B.UND
```

5 year Runoff Rate – Pre Development – Basin 'B'

```
---------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   5-YEAR  24-HOUR STORM  ****  3.10" TOTAL PRECIP. *********

---------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
2.73,78,0,0,51.33

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       2.7        2.7  78.0      .0    .0        51.3
```

```
  PEAK-Q(CFS)    T-PEAK(HRS)     VOL(CU-FT)
       .36           8.00          11803

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-5B.UND
```

10 year Runoff Rate – Pre Development – Basin 'B'

```
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  10-YEAR  24-HOUR STORM  ****  3.40" TOTAL PRECIP. *********

------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
2.73,78,0,0,51.33

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       2.7        2.7   78.0     .0    .0        51.3

  PEAK-Q(CFS)    T-PEAK(HRS)     VOL(CU-FT)
       .45           8.00          13982

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-10B.UND
```

Site Conditions & Design Values - Post Development:

Area: These calculations are for the area that drains into Detention Pond "A".

Total Area = 4.15 Acres

Total Area = 4.15acres
Pervious Area = 0.39 acres
Impervious Area = 3.76 acres

Area: These calculations are for the area that drains into Detention Pond "B".

Total Area = 2.73 Acres

Total Area = 2.73acres
Pervious Area = 0.33 acres
Impervious Area = 2.40 acres

Runoff Curve Numbers: (per Table 4-3 MODIFIED CURVE NUMBERS, City of Oregon City Stormwater and Grading Design Standards)

Wood or forest land: established 2nd growth - Hydrologic Group 'C' => 78
Impervious Surfaces, AC, Roofs etc.-Hydrologic Group 'C' => 98

Rainfall Distribution: (per Table 4-1 TOTAL DEPTH, City of Oregon City Stormwater and Grading Design Standards)

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5yr, 24-hour duration STD SCS Type 1A Storm => 3.1 inches
25yr, 24-hour duration STD SCS Type 1A Storm => 4.0 inches

Time of Concentration – Post Development:

Since a large portion of the site is impervious, the minimum time of concentration of 5 minutes will be used. Tc = 5 minutes

Post Developed Hydrographs:

The post developed hydrographs will be generated using the Santa Barbara Urban Hydrograph (SBUH) Method. (KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division, HYDROGRAPH PROGRAMS Version 4.20)

2 year Runoff Rate – Post Development – Basin 'A'

```
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********    2-YEAR  24-HOUR STORM  ****  2.60" TOTAL PRECIP. *********

------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
.39,78,3.76,98,5

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       4.2         .4  78.0    3.8  98.0        5.0

  PEAK-Q(CFS)   T-PEAK(HRS)     VOL(CU-FT)
      2.58          7.67          33558

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-2A.DEV
```

5 year Runoff Rate – Post Development – Basin 'A'

```
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********    5-YEAR  24-HOUR STORM  ****  3.10" TOTAL PRECIP. *********

------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
.39,78,3.76,98,5

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
```

```
        4.2          .4   78.0     3.8   98.0          5.0

   PEAK-Q(CFS)    T-PEAK(HRS)     VOL(CU-FT)
       3.13           7.67           40842

 ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
 14070-5A.DEV
```

25 year Runoff Rate – Post Development – Basin 'A'

```
 ------------------------------------------------------------------------
 ******************** S.C.S. TYPE-1A DISTRIBUTION ********************
 *********  25-YEAR  24-HOUR STORM  ****  4.00" TOTAL PRECIP. *********

 ------------------------------------------------------------------------
 ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
 .39,78,3.76,98,5

 DATA PRINT-OUT:

   AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                   A     CN     A     CN
        4.2         .4   78.0    3.8   98.0         5.0

   PEAK-Q(CFS)    T-PEAK(HRS)     VOL(CU-FT)
       4.12           7.67           54060

 ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
 14070-25A.DEV
```

2 year Runoff Rate – Post Development – Basin 'B'

```
 ------------------------------------------------------------------------
 ******************** S.C.S. TYPE-1A DISTRIBUTION ********************
 *********   2-YEAR  24-HOUR STORM  ****  2.60" TOTAL PRECIP. *********

 ------------------------------------------------------------------------
 ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
 .33,78,2.4,98,5

 DATA PRINT-OUT:

   AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                   A     CN     A     CN
        2.7         .3   78.0    2.4   98.0         5.0

   PEAK-Q(CFS)    T-PEAK(HRS)     VOL(CU-FT)
       1.66           7.67           21671

 ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
 14070-2B.DEV
```

5 year Runoff Rate – Post Development – Basin 'B'

```
---------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   5-YEAR  24-HOUR STORM  ****  3.10" TOTAL PRECIP. *********

---------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
.33,78,2.4,98,5

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       2.7         .3  78.0    2.4  98.0         5.0

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
      2.02          7.67          26423

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-5B.DEV
```

25 year Runoff Rate – Post Development – Basin 'B'

```
---------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  25-YEAR  24-HOUR STORM  ****  4.00" TOTAL PRECIP. *********

---------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
.33,78,2.4,98,5

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       2.7         .3  78.0    2.4  98.0         5.0

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
      2.67          7.67          35061

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-25B.DEV
```

Detention Area Routing – Basin 'A':

The detention area will be 2.00 feet deep with 0.50 feet of dead storage, 1.00 feet of detention storage and 0.50 feet of freeboard during a 25 year storm event. The flow control structure for the detention pipe will have one orifice and an overflow riser. The attached spreadsheet shows the detention area routing data.

The routing will be performed using the Santa Barbara Urban Hydrograph (SBUH) Method. (KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division, HYDROGRAPH PROGRAMS Version 4.20)

```
RESERVOIR ROUTING INFLOW/OUTFLOW ROUTINE
```

```
SPECIFY [d:][path]filename[.ext] OF ROUTING DATA
14070A.TXT
 DISPLAY ROUTING DATA (Y or N)?
Y

ROUTING DATA:

STAGE(FT)    DISCHARGE(CFS)    STORAGE(CU-FT)    PERM-AREA(SQ-FT)
    .00              .04           10092.4                  .0
    .25              .05           15299.8                  .0
    .50              .06           20615.9                  .0
    .75              .07           26041.6                  .0
   1.00              .36           31577.9                  .0
   1.25             2.47           37225.8                  .0

AVERAGE PERM-RATE:     .0 MINUTES/INCH
```

2 year Detention Routing:

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070-2A.DEV

INFLOW/OUTFLOW ANALYSIS:

  PEAK-INFLOW(CFS)    PEAK-OUTFLOW(CFS)    OUTFLOW-VOL(CU-FT)
        2.58                 .17                  19248

  INITIAL-STAGE(FT)   TIME-OF-PEAK(HRS)    PEAK-STAGE-ELEV(FT)
         .00               24.00                   .83

  PEAK STORAGE:     27890 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1470-2A.PND
```

5 year Detention Routing:

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070-5A.DEV

INFLOW/OUTFLOW ANALYSIS:

  PEAK-INFLOW(CFS)    PEAK-OUTFLOW(CFS)    OUTFLOW-VOL(CU-FT)
        3.13                 .28                  25982

  INITIAL-STAGE(FT)   TIME-OF-PEAK(HRS)    PEAK-STAGE-ELEV(FT)
         .00               23.83                   .93

  PEAK STORAGE:     29990 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1470-5A.PND
```

25 year Detention Routing:

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070-25A.DEV
```

```
INFLOW/OUTFLOW ANALYSIS:

  PEAK-INFLOW(CFS)     PEAK-OUTFLOW(CFS)     OUTFLOW-VOL(CU-FT)
        4.12                  .54                   38952

  INITIAL-STAGE(FT)   TIME-OF-PEAK(HRS)    PEAK-STAGE-ELEV(FT)
        .00                 14.50                  1.02

  PEAK STORAGE:     32060 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1470-25A.PND
```

Detention Summary – Basin 'A':

The detention requirements are to reduce the following design storm events:

2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

The detention area will be 2.00 feet deep with 0.50 feet of dead storage, 1.00 feet of detention storage and 0.50 feet of freeboard during a 25 year storm event. The flow control structure will have one orifice and an overflow riser. The bottom orifice will be 1-1/2 inches in diameter

The following tables show that the detention requirements have been met.

Minimum Peak Rate Stormwater Runoff Control Requirements.

2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

2-year allowable release rate (1/2 of the 2 year pre dev. runoff)	2-year post development release rate
0.17 cfs	0.17 cfs

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

5-year allowable release rate	5-year post development release rate

0.55 cfs	0.28 cfs

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

25-year allowable release rate	25-year post development release rate
0.68 cfs	0.54 cfs

Detention Area Routing – Basin 'B':

The detention area will be 3.25 feet deep with 0.50 feet of dead storage, 2.25 feet of detention storage and 0.50 feet of freeboard during a 25 year storm event. The flow control structure for the detention pipe will have one orifice and an overflow riser. The attached spreadsheet shows the detention area routing data.

The routing will be performed using the Santa Barbara Urban Hydrograph (SBUH) Method. (KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division, HYDROGRAPH PROGRAMS Version 4.20)

```
RESERVOIR ROUTING INFLOW/OUTFLOW ROUTINE

SPECIFY [d:][path]filename[.ext] OF ROUTING DATA
14070B.TXT
 DISPLAY ROUTING DATA (Y or N)?
Y

ROUTING DATA:

STAGE(FT)    DISCHARGE(CFS)    STORAGE(CU-FT)    PERM-AREA(SQ-FT)
    .00              .03            2753.4                .0
    .25              .04            4268.9                .0
    .50              .04            5879.5                .0
    .75              .05            7587.3                .0
   1.00              .05            9393.9                .0
   1.25              .06           10926.4                .0
   1.50              .06           12561.8                .0
   1.75              .06           14676.8                .0
   2.00              .07           16898.4                .0
   2.25              .07           19228.6                .0
   2.50             1.65           21669.3                .0
   2.75             4.54           24222.1                .0

AVERAGE PERM-RATE:     .0 MINUTES/INCH
```

2 year Detention Routing:

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070-2B.DEV

INFLOW/OUTFLOW ANALYSIS:
```

```
   PEAK-INFLOW(CFS)     PEAK-OUTFLOW(CFS)     OUTFLOW-VOL(CU-FT)
         1.66                  .07                  16154

   INITIAL-STAGE(FT)    TIME-OF-PEAK(HRS)     PEAK-STAGE-ELEV(FT)
         .00                  24.00                  2.04

   PEAK STORAGE:     17230 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1470-2B.PND
```

5 year Detention Routing:

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070-5B.DEV

INFLOW/OUTFLOW ANALYSIS:

   PEAK-INFLOW(CFS)     PEAK-OUTFLOW(CFS)     OUTFLOW-VOL(CU-FT)
         2.02                  .20                  19757

   INITIAL-STAGE(FT)    TIME-OF-PEAK(HRS)     PEAK-STAGE-ELEV(FT)
         .00                  23.33                  2.27

   PEAK STORAGE:     19420 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1470-5B.PND
```

25 year Detention Routing:

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070-25B.DEV

INFLOW/OUTFLOW ANALYSIS:

   PEAK-INFLOW(CFS)     PEAK-OUTFLOW(CFS)     OUTFLOW-VOL(CU-FT)
         2.67                  .44                  28301

   INITIAL-STAGE(FT)    TIME-OF-PEAK(HRS)     PEAK-STAGE-ELEV(FT)
         .00                  12.50                  2.31

   PEAK STORAGE:     19790 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
1470-25B.PND
```

Detention Summary – Basin 'B':

The detention requirements are to reduce the following design storm events:

2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

The detention area will be 3.25 feet deep with 0.50 feet of dead storage, 2.25 feet of detention storage and 0.50 feet of freeboard during a 25 year storm event. The flow control structure will have one orifice and an overflow riser. The orifice will be 1-1/4 inches in diameter.

The following tables show that the detention requirements have been met.

Minimum Peak Rate Stormwater Runoff Control Requirements.

2yr, 24-hour storm event must be controlled to 50% of the pre-developed runoff rate of a 2yr 24 hour storm event.

2-year allowable release rate (1/2 of the 2 year pre dev. runoff)	2-year post development release rate
0.11 cfs	0.07 cfs

5yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 5yr 24-hour storm event.

5-year allowable release rate	5-year post development release rate
0.36 cfs	0.20 cfs

25yr, 24-hour storm event must be controlled to the pre-developed runoff rate of a 10yr 24-hour storm event.

25-year allowable release rate	25-year post development release rate
0.45 cfs	0.44 cfs

Water Quality Analysis – Basin 'A':

The water quality requirements will be met by retaining the water quality storm event is 1/3 of a 2 year storm event for a minimum of 48 hours.

Water Quality – 1/3 of a 2 Year Storm Event – Basin 'A':

```
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   1-YEAR  24-HOUR STORM  ****   .87" TOTAL PRECIP. *********

------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.39,78,3.76,98,5

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       4.2         .4  78.0    3.8  98.0         5.0

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .72          7.67          9124

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070A.WQ
```

Water Quality – 1/3 of a 2 Year Storm Event—Basin 'A':

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070A.WQ

INFLOW/OUTFLOW ANALYSIS:

  PEAK-INFLOW(CFS)    PEAK-OUTFLOW(CFS)    OUTFLOW-VOL(CU-FT)
         .72                 .04                  9649

  INITIAL-STAGE(FT)   TIME-OF-PEAK(HRS)    PEAK-STAGE-ELEV(FT)
         .00                 .00                  .00

  PEAK STORAGE:      5900 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070A-WQ
```

Water Quality Summary – Basin 'A':

The hydraulic residence time for the water quality storm is 62.50 hours. This meets the required 48 hour hydraulic residence time.

Water Quality Analysis – Basin 'B':

The water quality requirements will be met by retaining the water quality storm event is 1/3 of a 2 year storm event for a minimum of 48 hours.

Water Quality – 1/3 of a 2 Year Storm Event – Basin 'B':

```
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********    1-YEAR  24-HOUR STORM  ****   .87" TOTAL PRECIP. *********

------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
.33,78,2.4,98,5

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       2.7         .3  78.0    2.4  98.0         5.0

  PEAK-Q(CFS)   T-PEAK(HRS)     VOL(CU-FT)
       .46          7.67           5832

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070-1B.WQ
```

Water Quality – 1/3 of a 2 Year Storm Event—Basin 'B':

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
14070B.WQ

INFLOW/OUTFLOW ANALYSIS:

  PEAK-INFLOW(CFS)    PEAK-OUTFLOW(CFS)    OUTFLOW-VOL(CU-FT)
         .46                 .03                 6130

  INITIAL-STAGE(FT)   TIME-OF-PEAK(HRS)    PEAK-STAGE-ELEV(FT)
         .00               24.00                 .12

  PEAK STORAGE:      3460 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
14070B-WQ
```

Water Quality Summary:

The hydraulic residence time for the water quality storm is 56.00 hours. This meets the required 48 hour hydraulic residence time.

Extended Project overview and Description:

The site will also include an extension of Meyers Road westerly. A future right-of-way width of 92' is being proposed though only 56' of the 92' will be constructed. Stormwater runoff will have to meet storm drain requirements.

A water quality and detention swale will be used to meet the storm drain requirements. The swales will be located on the north side of the road. The road will sheet flow towards the swale and enter through curb cuts in the curb. The runoff from the road will drain into a field inlet that will be tied into a storm drain system and will drain to an existing wetland northerly.

Areas:

Swale 'A'
- Impervious Area
  - Road & Sidewalk Area = 11,263 sf
- Total Impervious = 11,263 sf

Swale 'B'
- Impervious Area
  - Road & Sidewalk Area = 9,661 sf
- Total Impervious = 9,661 sf

Swale 'C'
- Impervious Area
  - Road & Sidewalk Area = 3,894 sf
- Total Impervious = 3,894 sf

Methodology:

Existing Drainage of the site:
The site currently undeveloped.

Proposed Drainage of the site:
The developed road extension will sheet flow towards the swale and enter through curb cuts in the curb. The runoff will drain into a field inlet that will be tied into a storm drain system and will drain to an existing wetland northerly.

Infiltration results:
With a flow through planter being used for water quality and detention on the site, an infiltration rate of 2 inches per hour was used for calculations.

Stormwater Hierarchy Category justification:
Hierarchy category 1, requires total on-site infiltration with vegetated infiltration facilities. Category 1 is not possible due to the low infiltration rate of 0.1 inches per hour.

Hierarchy category 2, requires total on-site infiltration with vegetated infiltration facilities that overflow to subsurface infiltration facilities. Category 2 is not possible due to the low infiltration rate of 0.1 inches per hour.

Hierarchy category 3, requires on-site detention with vegetated facilities that overflow to a drainageway, river or storm-only pipe. Category 3 will be used with a water quality and detention swale that drains into a field inlet that will be tied into a storm drain system and will drain to an existing wetland northerly.

Analysis:

Design Assumptions:

1.) The PAC calculator will be used to size the infiltration facilities.
2.) The time of concentration for post development is 5 minutes.
3.) A CN of 98 will be used for determination of post development peak flow.

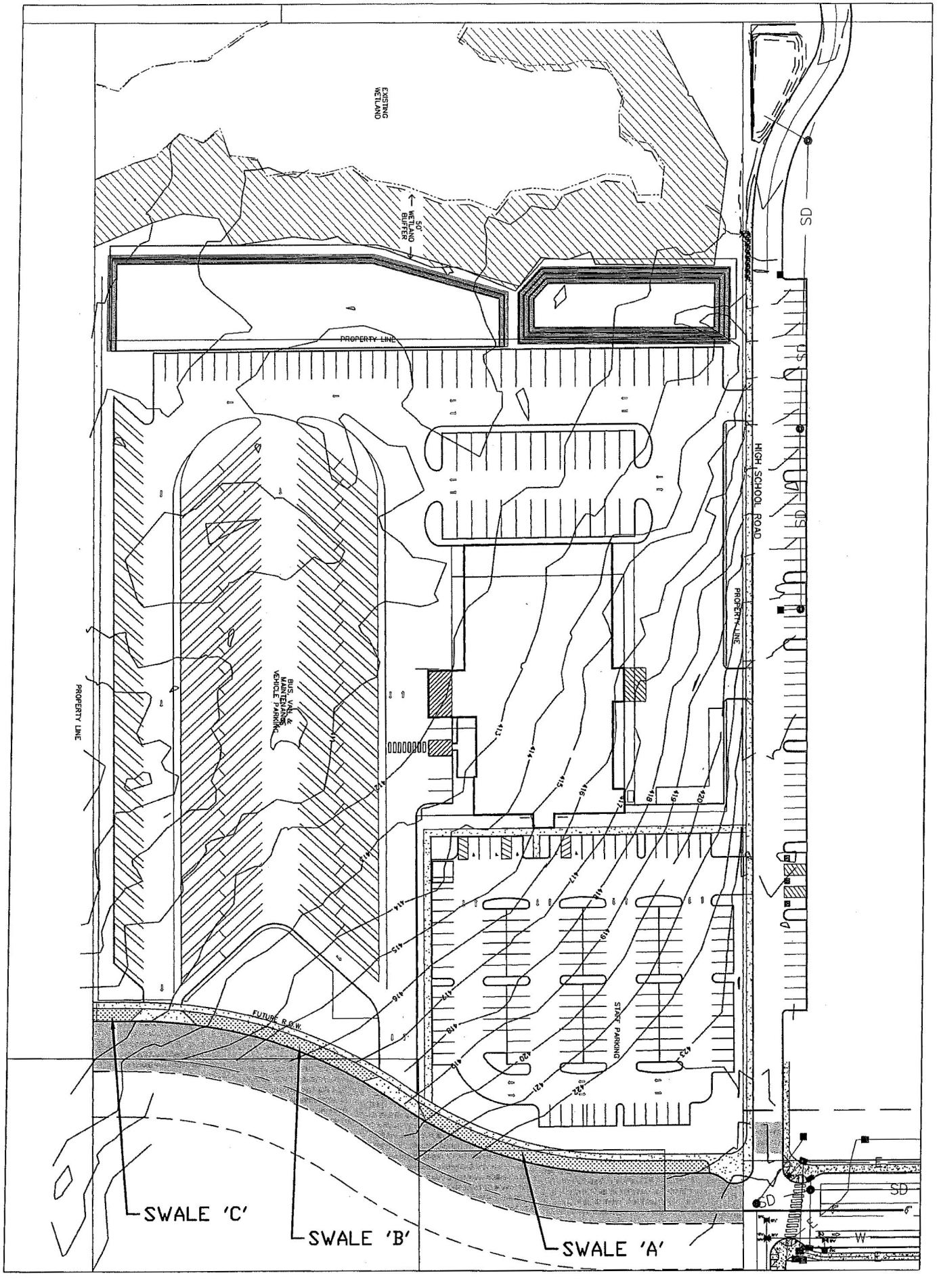
Escape Route:
Each basin will drain into a field inlet that will then be drained into storm drain system.

PAC Calculator Calculation Description:
The PAC Calculator will be used to size the water quality and detention swales. The planter will have 9" of surface storage and 5"" of freeboard. The growing medium will be 18" deep. The landscape width of the facilities are 9' wide and the bottom width of the swales are a 2' wide.

Engineering Conclusions

The proposed stormwater facilities has been designed in accordance with the 2014 Storm Water Management Manual. The storm water facilities have been designed to meet flow control and pollution control requirements according to the PAC Calculator. See the attached PAC calculations. With each planter meeting the criteria required in the PAC Calculator, the swales therefore meet the standards.

SUPPORTING PAGES


EXISTING WETLAND
50' WETLAND BUFFER
PROPERTY LINE
HIGH SCHOOL ROAD
PROPERTY LINE
PROPERTY LINE
BUS, VAN & MINIBUS PARKING
VEHICLE PARKING
STAFF PARKING
FUTURE R.O.W.
SWALE 'C'
SWALE 'B'
SWALE 'A'
SD
SD
SD
W

Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID:	**A**
Date:	**11/04/14**
Permit Number:	**0**
Run Time	11/4/2014 1:43:59 PM

Project Name:	**OCSD Transportation Facility**
Project Address:	**Oregon City School District**
	Oregon City, OR 97045
Designer:	**JVM**
Company:	**Sisul Engineering**

Drainage Catchment Information

Catchment ID	A	
	Catchment Area	
Impervious Area	11,263	SF
Impervious Area	0.26	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	

Correction Factor Component

CF_{test} (ranges from 1 to 3)	2	

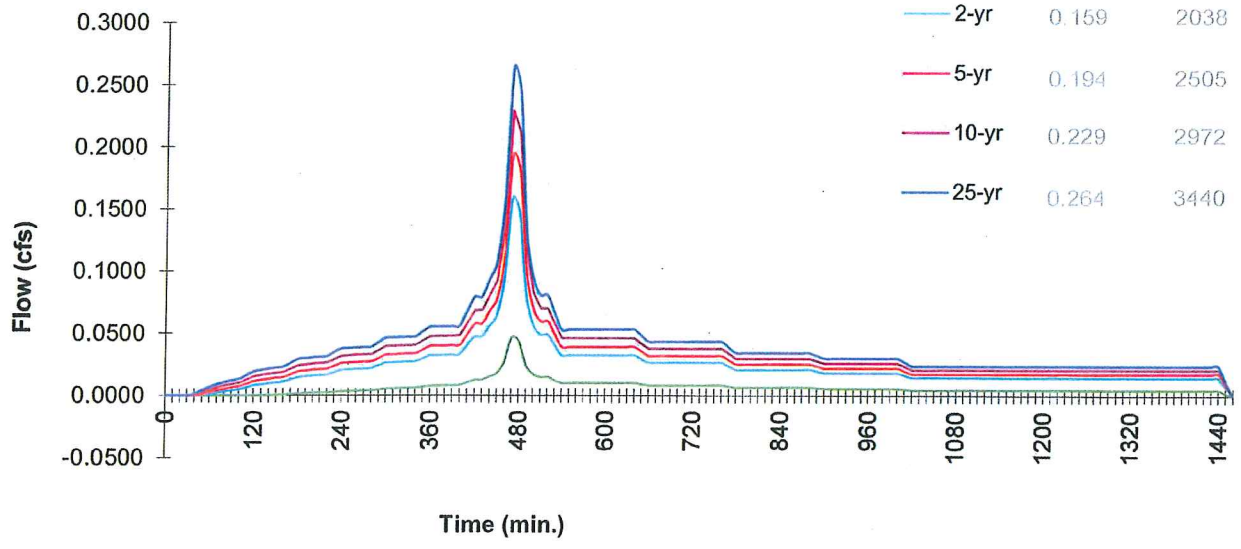
Design Infiltration Rates

I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH Calculations

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.046	589
2-yr	0.159	2038
5-yr	0.194	2505
10-yr	0.229	2972
25-yr	0.264	3440



Printed: 11/4/2014 1:44 PM

Presumptive Approach Calculator ver. 1.2

Catchment ID: A

Run Time 11/4/2014 1:43:59 PM

Project Name: OCSD Transportation Facility Catchment ID: A Date: 11/4/2014

Instructions:

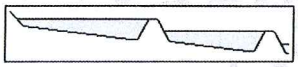
1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: 3

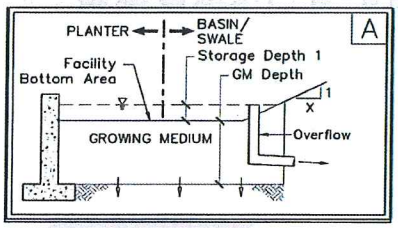
Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display .	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Swale



Facility Configuration: A



Refer to Sloped Facility Worksheet and enter Variable Parameters

Calculation Guide
Max. Rock Stor. Bottom Area
Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 356 sf
Surface Capacity Volume = 204.9 cf

BELOW GRADE STORAGE

Rock Storage Bottom Area = 356 sf
Rock Storage Depth = 0 in

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 205 cf
Infiltration Area at 75% Depth1 = -24 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.016 cfs

Rock Storage Capacity = 0 cf

Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.008 cfs

Native Infiltration Rate Used in P/

RESULTS

Pollution Reduction	Overflow Volume		
PASS	0 CF	56%	Surf. Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.151	0.186	0.221	0.256

FACILITY FACTS

Total Facility Area Including Freeboard = 2,097 SF
Sizing Ratio (Total Facility Area / Catchment Area) = 0.186

Presumptive Approach Calculator Ver 1.2

Instructions:

1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Project Name: OCSD Transportation Facility

Date: 11/4/2014

Run Time 11/4/2014 1:43:58 PM

Catchment ID: A

Data Entry

Parameters

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$
1	77.67	2.33	0.0175	2	3	3	9	9
2	77.67	2.33	0.0175	2	3	3	9	9
3	77.67	2.33	0.0175	2	3	3	9	9
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Rock Storage Parameters

Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v

Error Messages

facility segment with warning message not fully utilized. Create shorter facility segments to increase surface storage capacity and infiltration area.

Warning
Warning
Warning

Project Name: _____ Depth 2= Depth 3= _____

Worksheet Calculations

Parameters

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if $D_{up} = 0$ (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	Surface Capacity Volume (cf) $V_{surface}$	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max. Upstream Depth (inches) $D_{up75\%}$	75% of Max. Adjusted Length if $D_{up75\%} = 0$ (ft) $L_{adjust3}$	75% of Max. Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max. Upstream Top Width (ft) $W_{top\text{-}up75\%}$	Infiltration Area @ 75% Full (sf) $A_{75\%}$
1	76.51	42.86	0.00	6.50	2.00	3.19	0.00	68	6.75	0.00	32.14	5.38	2.00	119
2	76.51	42.86	0.00	6.50	2.00	3.19	0.00	68	6.75	0.00	32.14	5.38	2.00	119
3	76.51	42.86	0.00	6.50	2.00	3.19	0.00	68	6.75	0.00	32.14	5.38	2.00	119
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
								205	$V_{surface}$ @ Depth1					356

Rock Storage Parameters

Rock Storage Length (ft) L_{rock}	Rock Storage Bottom Area (sf) A_{rock}	Rock Storage Capacity Volume (cf) V_{rock}
78	119	0
78	119	0
78	119	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
356	0	

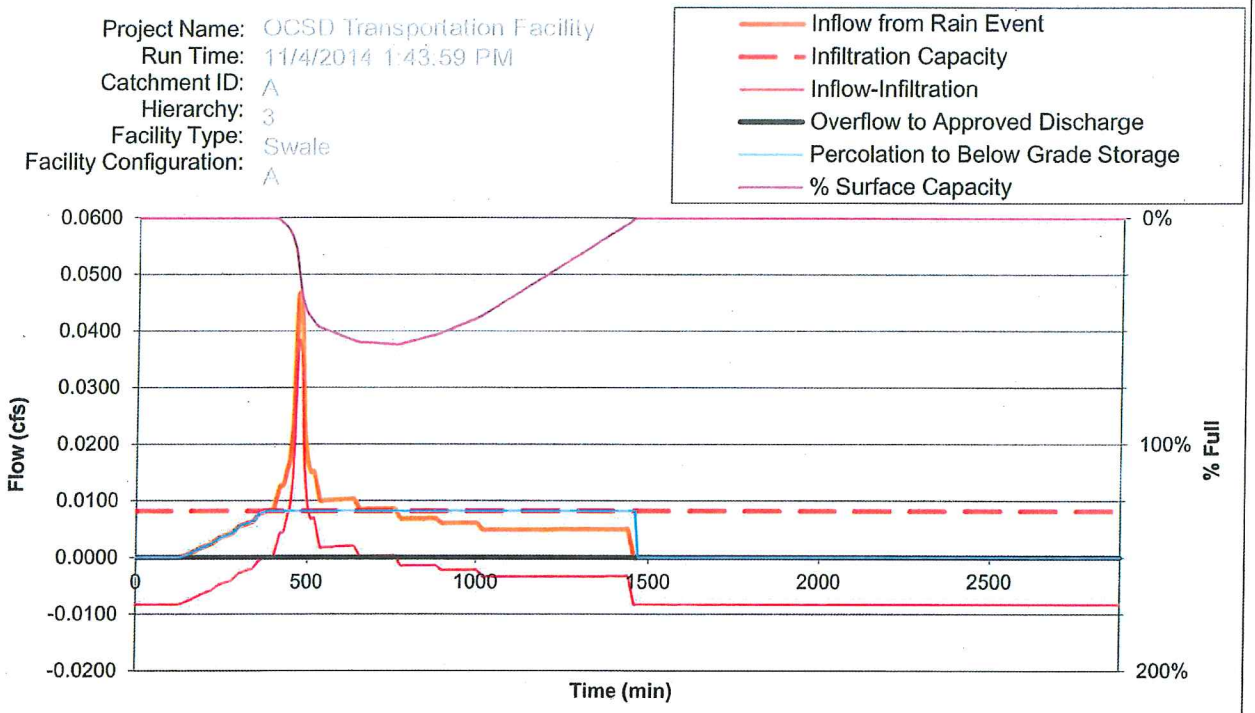
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BES - Presumptive Approach Calculator - Ver 1.2

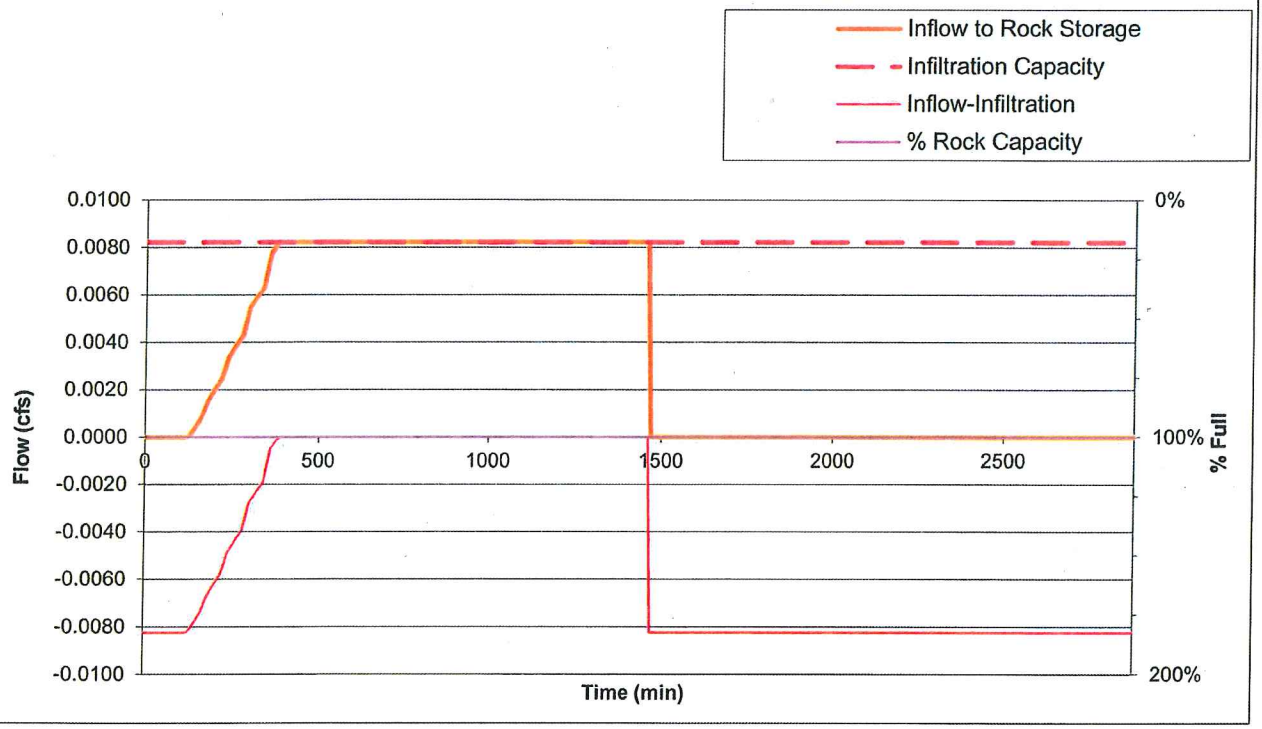
PR Con-A&B

Pollution Reduction Event
Surface Facility Modeling

Project Name: OCSD Transportation Facility
Run Time: 11/4/2014 1:43:59 PM
Catchment ID: A
Hierarchy: 3
Facility Type: Swale
Facility Configuration: A



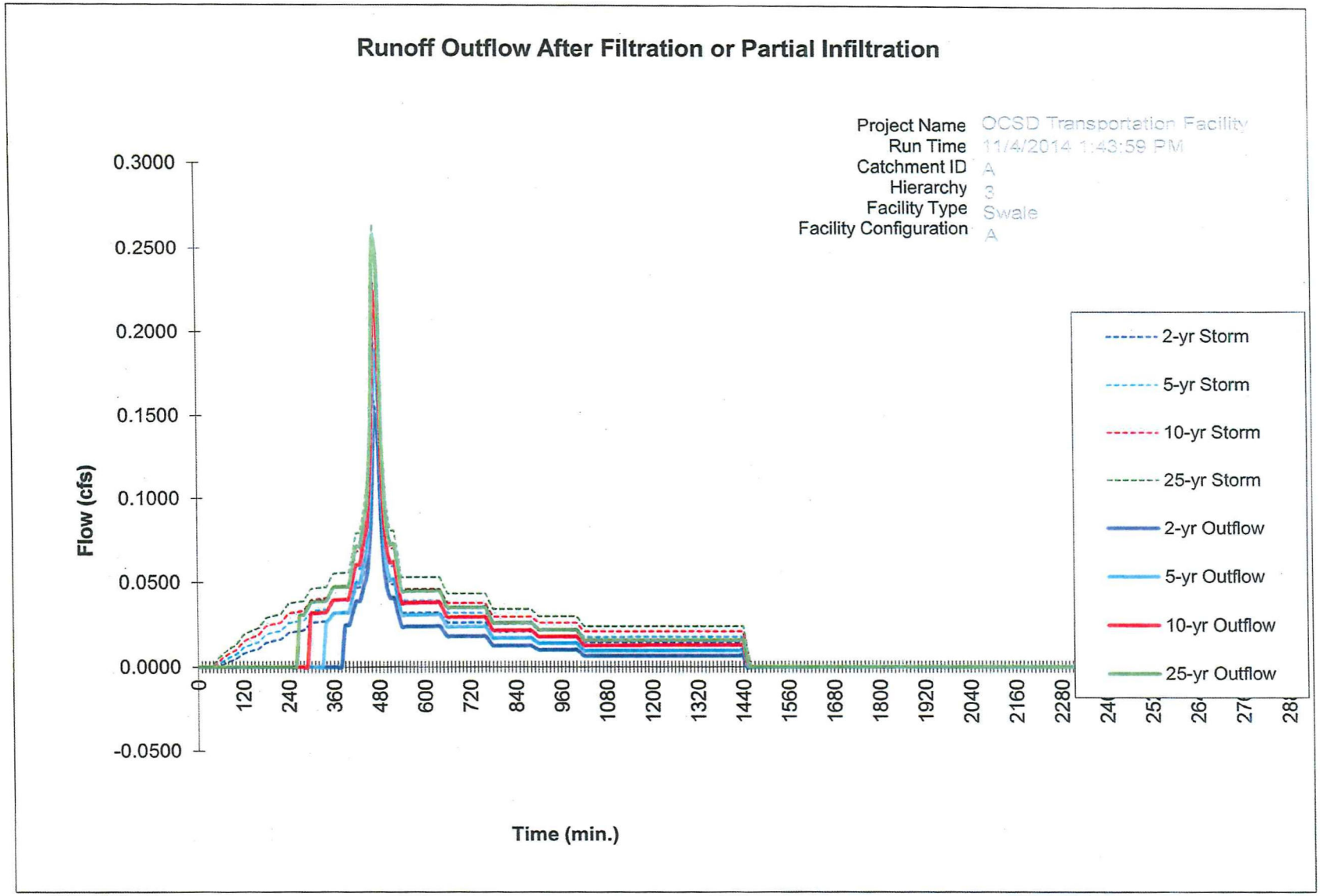
Pollution Reduction Event
Below Grade Modeling



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BES - Presumptive Approach Calculator - Ver 1.2

Output Chart



Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID: B

Project Name: OCSD Transportation Facility
Project Address: Oregon City School District
Oregon City, OR 97045
Designer: JVM
Company: Sisul Engineering

Date: 11/04/14
Permit Number: 0
Run Time 11/4/2014 1:44:53 PM

Drainage Catchment Information

Catchment ID	B	
	Catchment Area	
Impervious Area	9,661	SF
Impervious Area	0.22	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	

Correction Factor Component

CF_{test} (ranges from 1 to 3)	2	

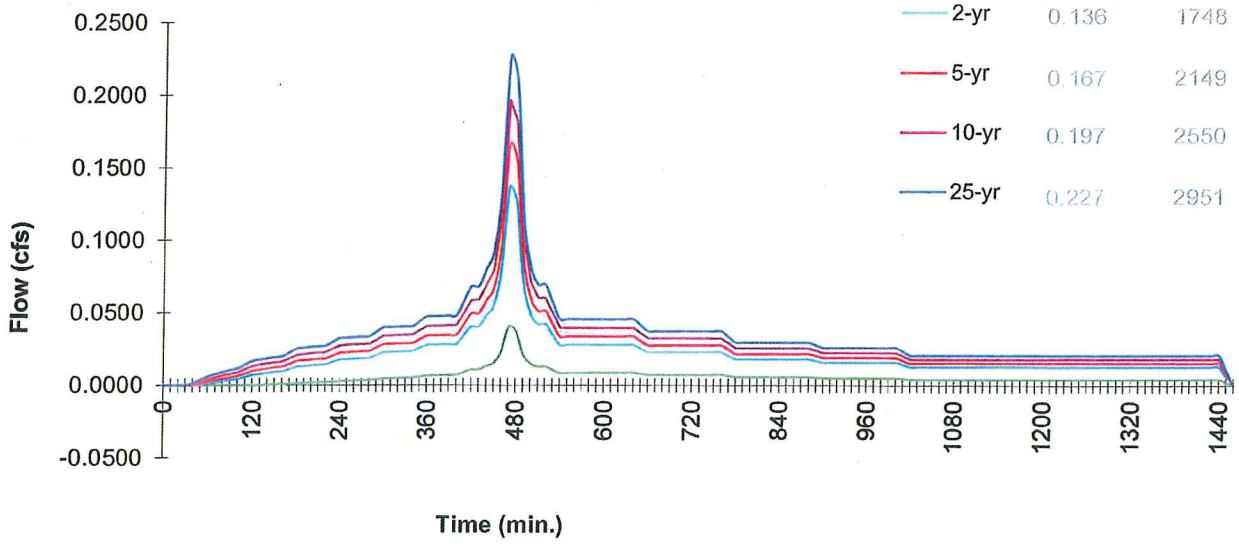
Design Infiltration Rates

I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH Calculations

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.04	505
2-yr	0.136	1748
5-yr	0.167	2149
10-yr	0.197	2550
25-yr	0.227	2951



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Presumptive Approach Calculator ver. 1.2

Catchment ID: B

Run Time 11/4/2014 1:48:48 PM

Project Name: OCSD Transportation Facility Catchment ID: B Date: 11/4/2014

Instructions:

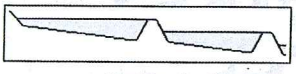
1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: 3

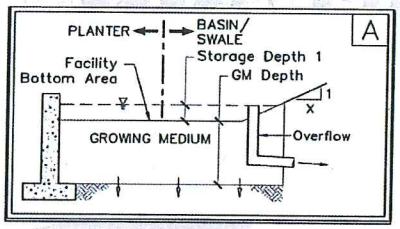
Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Swale



Facility Configuration: A



Refer to Sloped Facility Worksheet and enter Variable Parameters

Calculation Guide
Max. Rock Stor. Bottom Area Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 267 sf
Surface Capacity Volume = 153.9 cf

BELOW GRADE STORAGE

Rock Storage Bottom Area = 267 sf
Rock Storage Depth = 0 in

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 154 cf
Infiltration Area at 75% Depth1 = -18 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.012 cfs

Rock Storage Capacity = 0 cf

Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.006 cfs

Native Infiltration Rate Used in P/

RESULTS

Pollution Reduction	Overflow Volume		Run PAC
PASS	0 CF	78% Surf. Cap. Used	

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.130	0.160	0.190	0.220

FACILITY FACTS

Total Facility Area Including Freeboard = 1,350 SF
Sizing Ratio (Total Facility Area / Catchment Area) = 0.140

Presumptive Approach Calculator Ver 1.2

Instructions:

1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Project Name: OCSD Transportation Facility

Date: 11/4/2014

Run Time 11/4/2014 1:44:53 PM

Catchment ID: B

Data Entry

Parameters

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$
1	50	2.33	0.0233	2	3	3	9	9
2	50	2.33	0.0233	2	3	3	9	9
3	50	2.33	0.0233	2	3	3	9	9
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Rock Storage Parameters

Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v

Error Messages

facility segment with warning message not fully utilized. Create shorter facility segments to increase surface storage capacity and infiltration area.

Warning
Warning
Warning

Project Name: _____ Depth 2= Depth 3= _____

Worksheet Calculations

Parameters

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if $D_{up} = 0$ (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	Surface Capacity Volume (cf) $V_{surface}$	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max. Upstream Depth (inches) $D_{up75\%}$	75% of Max. Adjusted Length if $D_{up75\%} = 0$ (ft) $L_{adjust3}$	75% of Max. Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max. Upstream Top Width (ft) $W_{top\text{-}up75\%}$	Infiltration Area @ 75% Full (sf) $A_{75\%}$
1	48.84	32.19	0.00	6.50	2.00	3.19	0.00	51	6.75	0.00	24.14	5.38	2.00	89
2	48.84	32.19	0.00	6.50	2.00	3.19	0.00	51	6.75	0.00	24.14	5.38	2.00	89
3	48.84	32.19	0.00	6.50	2.00	3.19	0.00	51	6.75	0.00	24.14	5.38	2.00	89
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
								154	$V_{surface}$ @ Depth1					267

Rock Storage Parameters

Rock Storage Length (ft) L_{rock}	Rock Storage Bottom Area (sf) A_{rock}	Rock Storage Capacity Volume (cf) V_{rock}
50	89	0
50	89	0
50	89	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
267	267	0

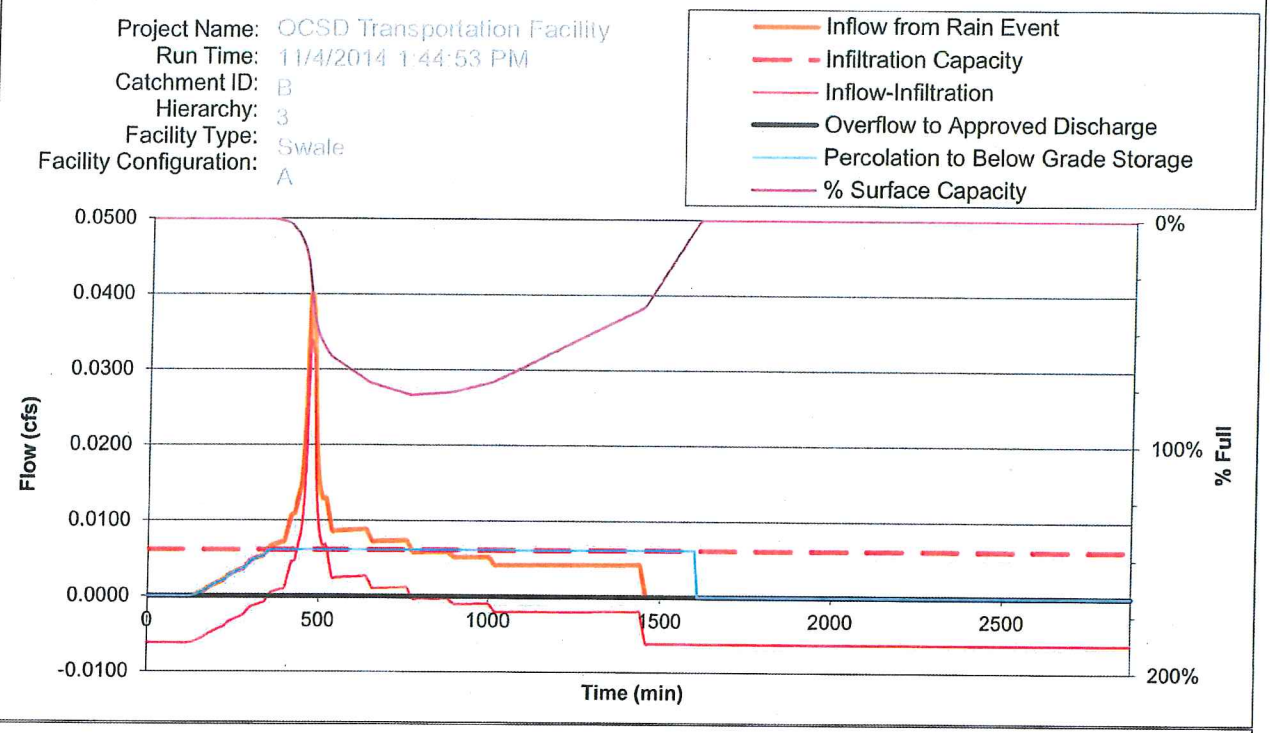
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BES - Presumptive Approach Calculator - Ver 1.2

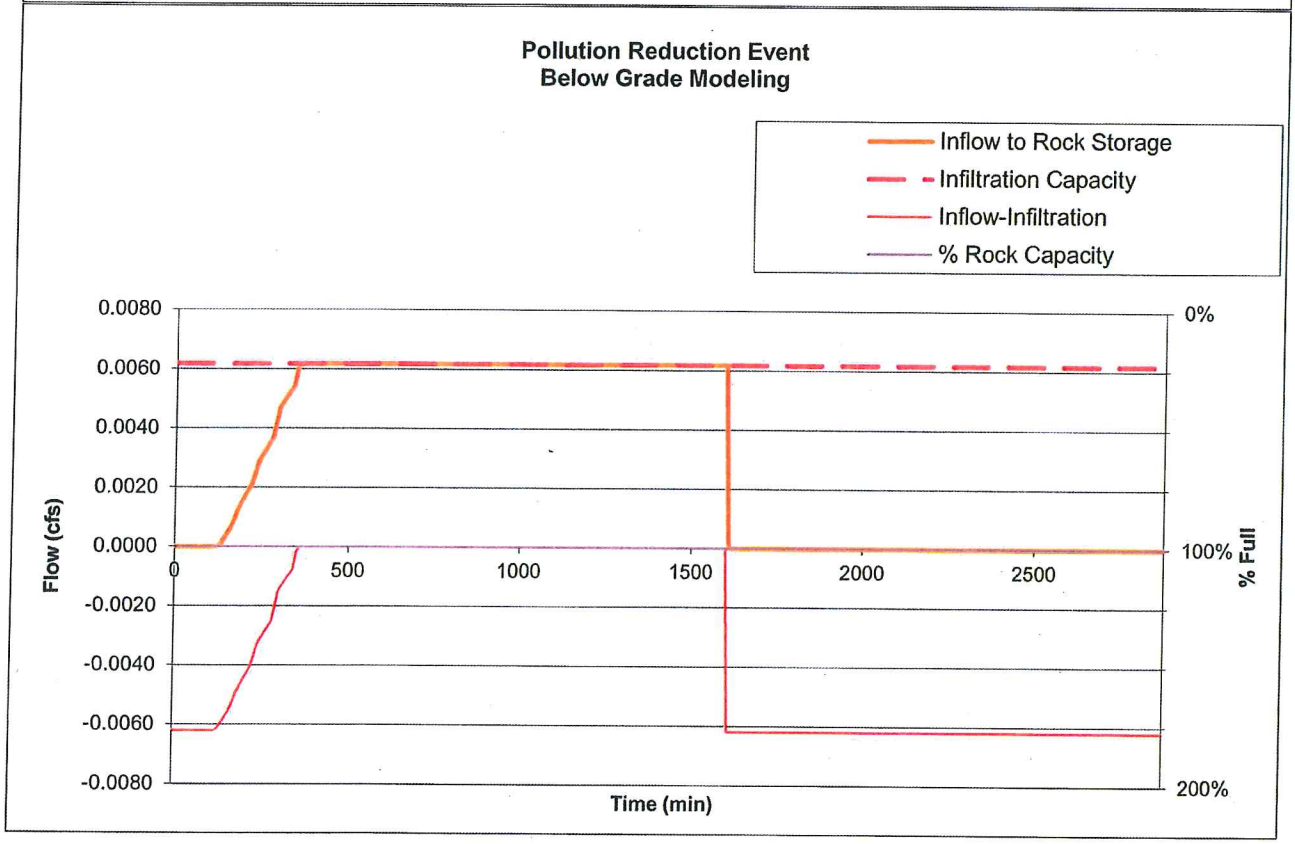
PR Con-A&B

Pollution Reduction Event
Surface Facility Modeling

Project Name: OCSD Transportation Facility
Run Time: 11/4/2014 1:44:53 PM
Catchment ID: B
Hierarchy: 3
Facility Type: Swale
Facility Configuration: A



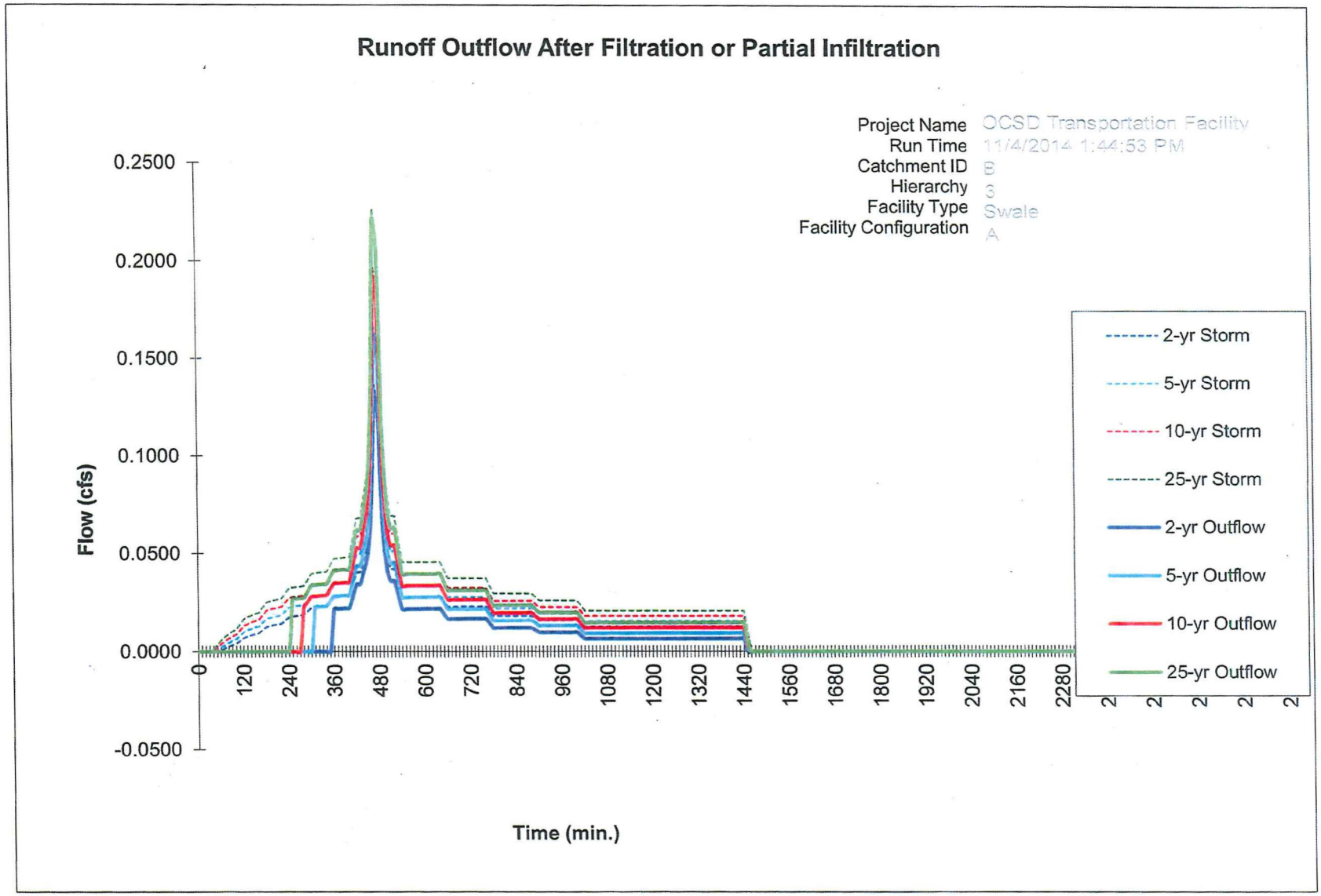
Pollution Reduction Event
Below Grade Modeling



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BES - Presumptive Approach Calculator - Ver 1.2

Output Chart



Presumptive Approach Calculator ver. 1.2

Catchment Data

Catchment ID:	**C**
Project Name:	**OCSD Transportation Facility**
Project Address:	**Oregon City School District**
	Oregon City, OR 97045
Date:	**11/04/14**
Permit Number:	**0**
Designer:	**JVM**
Company:	**Sisul Engineering**
Run Time	11/4/2014 1:45:58 PM

Drainage Catchment Information

Catchment ID	C	
	Catchment Area	
Impervious Area	3,894	SF
Impervious Area	0.09	ac
Impervious Area Curve Number, CN_{imp}	98	
Time of Concentration, Tc, minutes	5	min.

Site Soils & Infiltration Testing Data

Infiltration Testing Procedure:	Open Pit Falling Head	
Native Soil Field Tested Infiltration Rate (I_{test}):	2	in/hr
Bottom of Facility Meets Required Separation From High Groundwater Per BES SWMM Section 1.4:	Yes	

Correction Factor Component

CF_{test} (ranges from 1 to 3)	2	

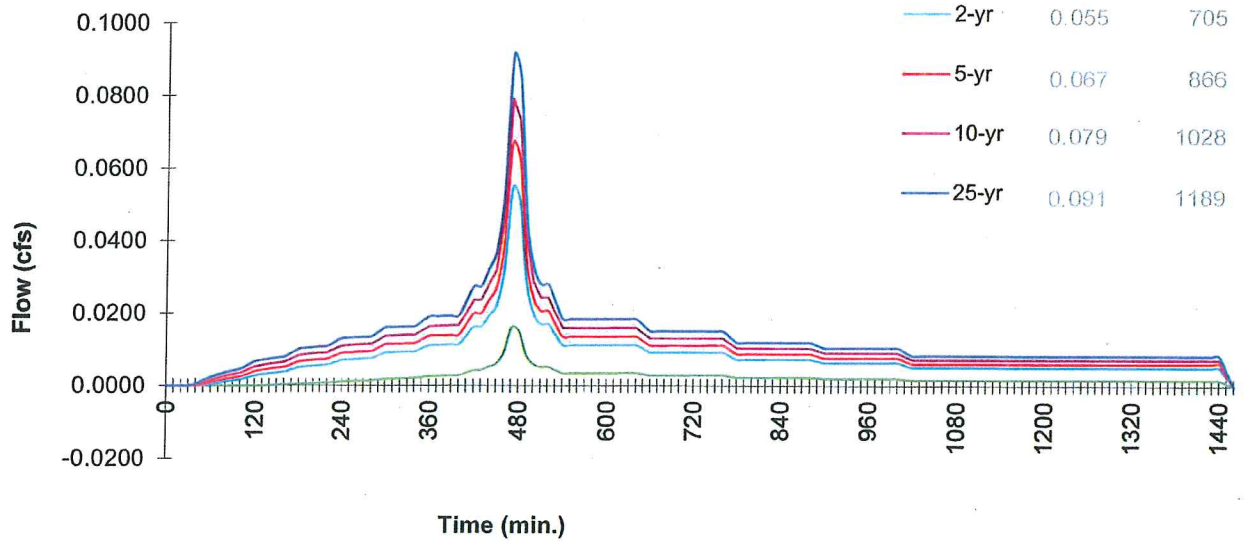
Design Infiltration Rates

I_{dsgn} for Native (I_{test} / CF_{test}):	1.00	in/hr
I_{dsgn} for Imported Growing Medium:	2.00	in/hr

Execute SBUH Calculations

SBUH Results

	Peak Rate (cfs)	Volume (cf)
PR	0.016	203
2-yr	0.055	705
5-yr	0.067	866
10-yr	0.079	1028
25-yr	0.091	1189



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Presumptive Approach Calculator ver. 1.2

Catchment ID: C

Run Time 11/4/2014 1:47:44 PM

Project Name: OCSD Transportation Facility Catchment ID: C Date: 11/4/2014

Instructions:

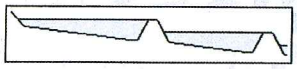
1. Identify which Stormwater Hierarchy Category the facility.
2. Select Facility Type.
3. Identify facility shape of surface facility to more accurately estimate surface volume, except for Swales and sloped planters that use the PAC Sloped Facility Worksheet to enter data.
4. Select type of facility configuration.
5. Complete data entry for all highlighted cells.

Catchment facility will meet Hierarchy Category: 3

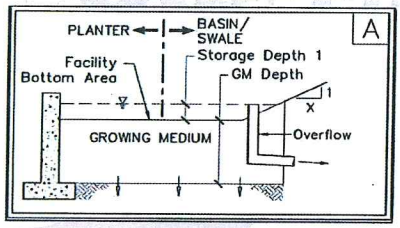
Goal Summary:

Hierarchy Category	SWMM Requirement	RESULTS box below needs to display...	
		Pollution Reduction as a	10-yr (aka disposal) as a
3	Off-site flow to drainageway, river, or storm-only pipe system.	PASS	N/A

Facility Type = Swale



Facility Configuration: A



Refer to Sloped Facility Worksheet and enter Variable Parameters

Calculation Guide: Max. Rock Stor. Bottom Area Per Swale Dims

DATA FOR ABOVE GRADE STORAGE COMPONENT

Infiltration Area = 104 sf
Surface Capacity Volume = 56.0 cf

BELOW GRADE STORAGE

Rock Storage Bottom Area = 104 sf
Rock Storage Depth = 0 in

Growing Medium Depth = 18 in
Freeboard Depth = N/A in

Surface Capacity at Depth 1 = 56 cf
Infiltration Area at 75% Depth1 = -9 SF
GM Design Infiltration Rate = 2.00 in/hr
Infiltration Capacity = 0.005 cfs

Rock Storage Capacity = 0 cf

Native Design Infiltration Rate = 1.00 in/hr
Infiltration Capacity = 0.002 cfs

Native Infiltration Rate Used in PA

RESULTS

Pollution Reduction: PASS

Overflow Volume: 0 CF

90% Surf. Cap. Used

Run PAC

Output File

	2-yr	5-yr	10-yr	25-yr
Peak cfs	0.053	0.065	0.077	0.089

FACILITY FACTS

Total Facility Area Including Freeboard = 297 SF
Sizing Ratio (Total Facility Area / Catchment Area) = 0.076

Presumptive Approach Calculator Ver 1.2

Instructions:
1. Refer to facility graphics on the Graphics tab, then fill in all relevant facility parameters in the Data Entry table below. Data entry cells vary based on Facility Configuration selected on Facility Design Data tab.
2. Delete all facility parameters that may have been entered by the previous iteration that are no longer applicable.

Project Name: OCSD Transportation Facility

Date: 11/4/2014

Run Time 11/4/2014 1:45:58 PM

Catchment ID: C

Data Entry

Parameters

Facility Segment	Length of facility segment (ft) $L_{segment}$	Downstream Check Dam Length (ft) L_{dam}	Longitudinal Facility Slope (ft/ft) S	Bottom Width (ft) W_{bottom}	Side Slope Right X_{right}:1	Side Slope Left X_{left}:1	Downstream Depth (inches) D_{ds}	Landscape Width (ft) $W_{landscape}$
1	33	0	0.02	2	3	3	9	9
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

Rock Storage Parameters

Rock Storage Width (ft) W_{rock}	Rock Storage Depth (inches) D_{rock}	Rock Void Ratio v

Error Messages

Project Name:

Depth 2=

Depth 3=

Worksheet Calculations

Parameters

Facility Segment	Adjusted Length of facility segment (ft) L_{adjust}	Adjusted Length if $D_{up} = 0$ (ft) $L_{adjust2}$	Upstream Depth (inches) D_{up}	Downstream Top Width (ft) $W_{top\text{-}ds}$	Upstream Top Width (ft) $W_{top\text{-}up}$	Downstream Cross-sectional Area (sf) A_{ds}	Upstream Cross-sectional Area (sf) A_{up}	Surface Capacity Volume (cf) $V_{surface}$	75% of Max. Downstream Depth (inches) $D_{ds75\%}$	75% of Max. Upstream Depth (inches) $D_{up75\%}$	75% of Max. Adjusted Length if $D_{up75\%} = 0$ (ft) $L_{adjust3}$	75% of Max. Downstream Top Width (ft) $W_{top\text{-}ds75\%}$	75% of Max. Upstream Top Width (ft) $W_{top\text{-}up75\%}$	Infiltration Area @ 75% Full (sf) $A_{75\%}$
1	33.00	N/A	1.08	6.50	2.54	3.19	0.20	56	6.75	0.00	28.13	5.38	2.00	104
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0
								56	$V_{surface}$ @ Depth1					104

Rock Storage Parameters

Rock Storage Length (ft) L_{rock}	Rock Storage Bottom Area (sf) A_{rock}	Rock Storage Capacity Volume (cf) V_{rock}
33	104	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
	104	0

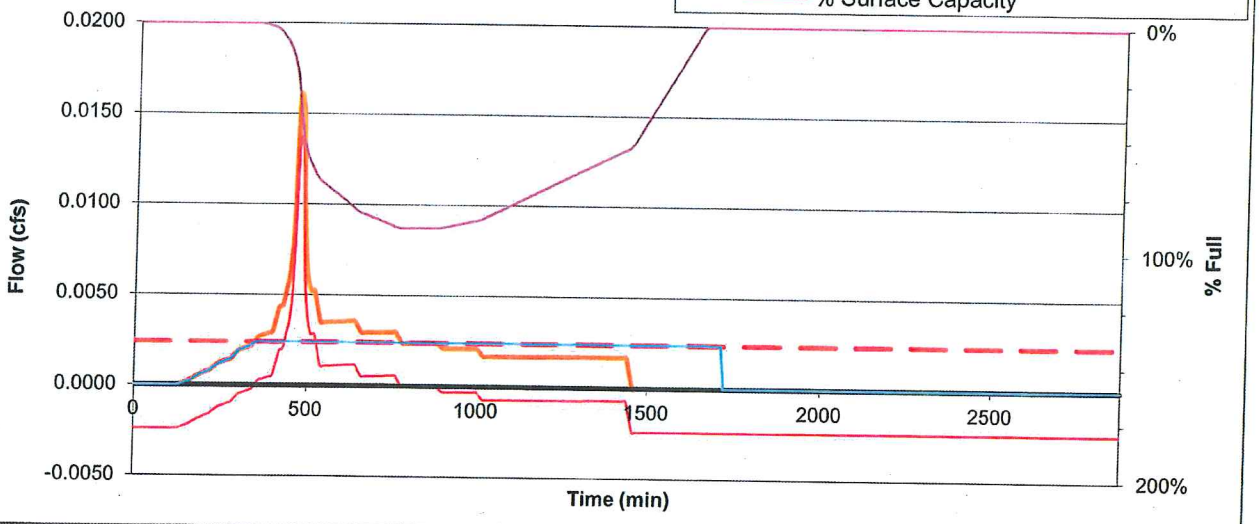
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BES - Presumptive Approach Calculator - Ver 1.2

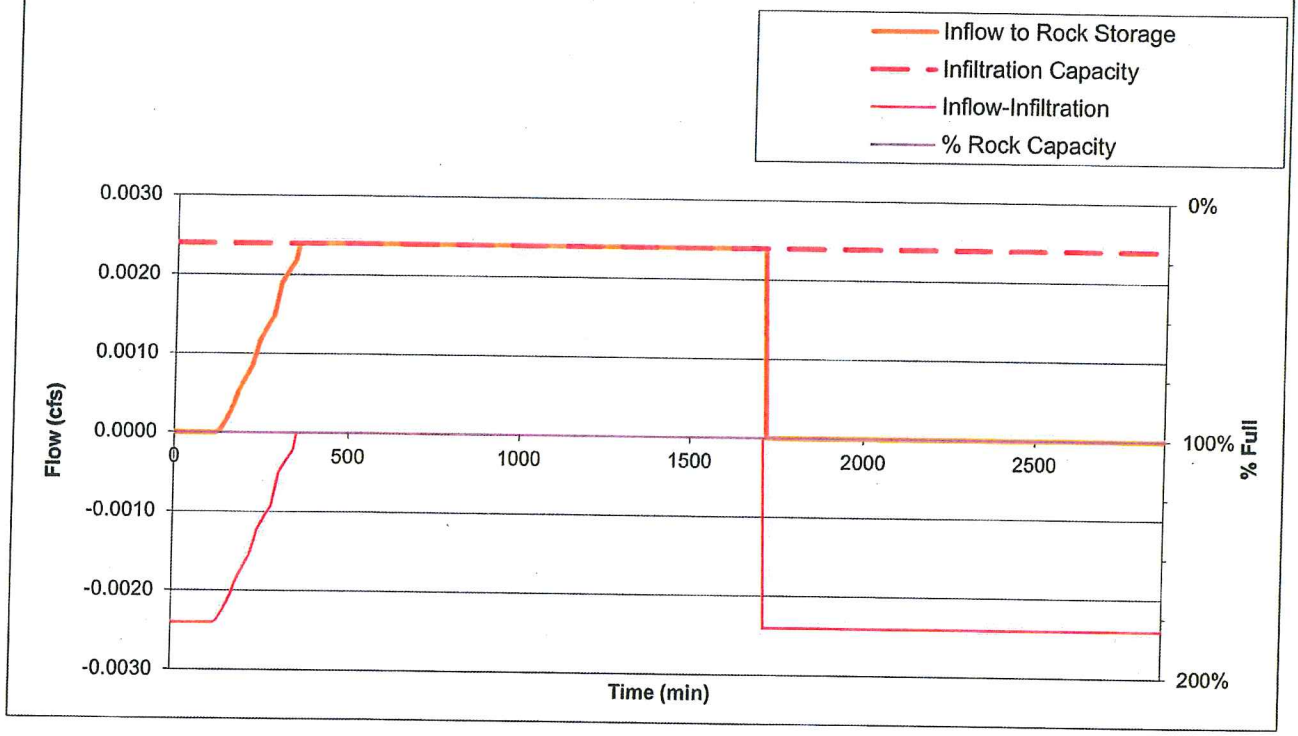
PR Con-A&B

Pollution Reduction Event
Surface Facility Modeling

Project Name: OCSD Transportation Facility
Run Time: 11/4/2014 1:45:58 PM
Catchment ID: C
Hierarchy: 3
Facility Type: Swale
Facility Configuration: A



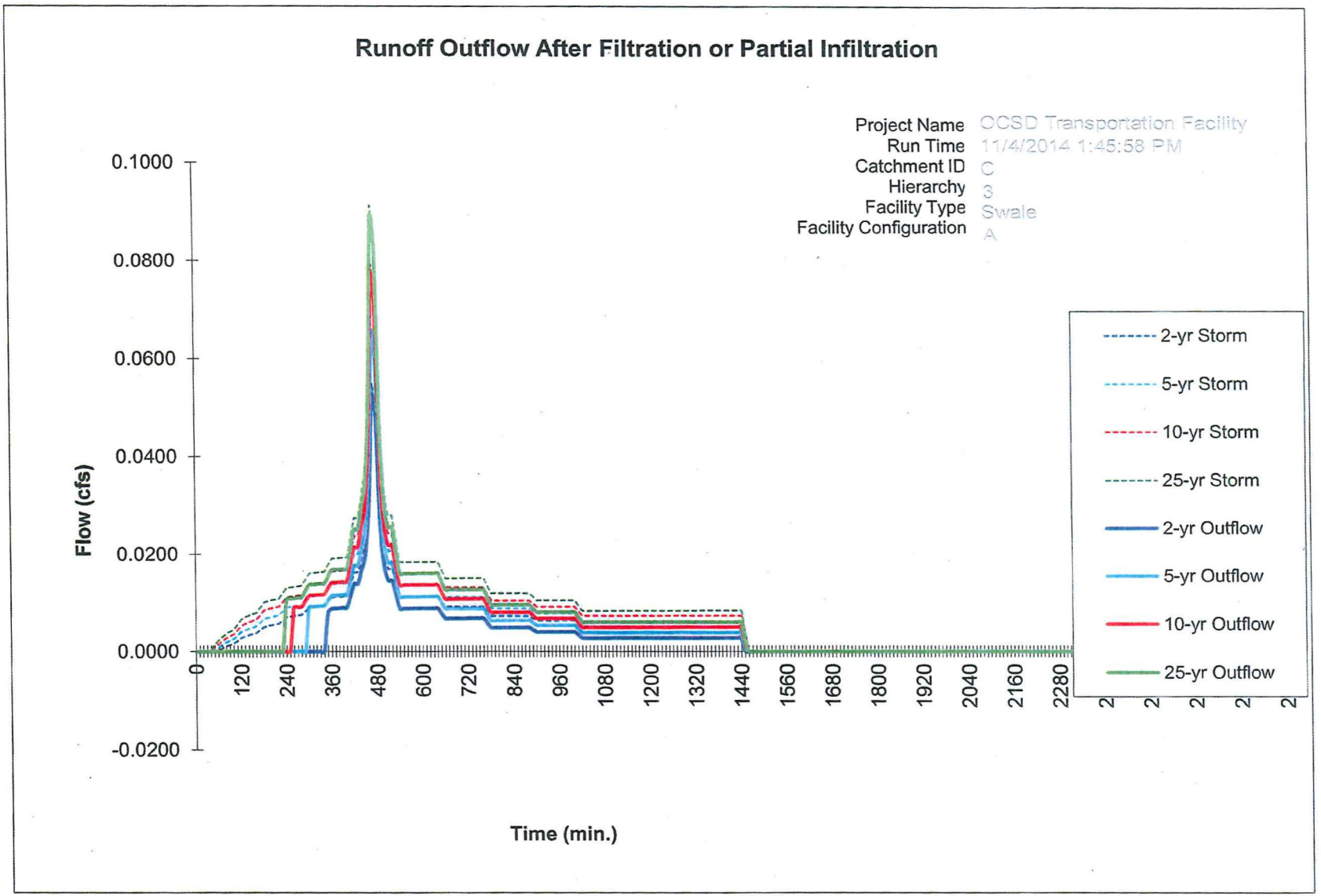
Pollution Reduction Event
Below Grade Modeling



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BES - Presumptive Approach Calculator - Ver 1.2

Output Chart



DETENTION POND ROUTING DATA

OCSD Transportation Facility (SGL14-070)

Orifice #1 Diameter:	1 1/2	inches	Overflow Riser Dia:	18	inches	
Orifice #1 Elevation:	0.00	feet	Overflow elevation:	1.42	ft	
Orifice #2 Diameter:	0	inches				
Orifice #2 Elevation:	0.00	feet	Infiltration Rate:	0.0	in/hr =	0.0000000 cfs
Orifice #3 Diameter:	0	inches				
Orifice #3 Elevation:	0.00	feet				

	B	C	D	E	F	G	H	I	J					
			Surface	Storage	Orifice #1	Orifice #2	Orifice #3	Overflow	Actual					
	Stage	Elevation	Area	Volume	Discharge	Discharge	Discharge	Discharge	Discharge					
		(ft)	(sq.ft)	(cu.ft.)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)					
	1	0.00	19758	0	0.000	0.000	0.000	0.000	0.000	<= Orifice Outflow	0.00	0.000	0.0	0.00
	2	0.25	20184	4993	0.031	0.000	0.000	0.000	0.031		0.25	0.031	4992.8	0.00
Wat. Quality =>	3	0.50	20613	10092	0.043	0.000	0.000	0.000	0.043		0.50	0.043	10092.4	0.00
& Detention	4	0.75	21046	15300	0.053	0.000	0.000	0.000	0.053		0.75	0.053	15299.8	0.00
Storage	5	1.00	21483	20616	0.061	0.000	0.000	0.000	0.061		1.00	0.061	20615.9	0.00
	6	1.25	21923	26042	0.068	0.000	0.000	0.000	0.068		1.25	0.068	26041.6	0.00
	7	1.50	22367	31578	0.075	0.000	0.000	0.286	0.361		1.50	0.361	31577.9	0.00
	8	1.75	22816	37226	0.081	0.000	0.000	2.394	2.475		1.75	2.475	37225.8	0.00

B	Stage Number
C	Water Surface Elevation.
D	Water Surface Area @ given Elevation
E	Storage Volume = [(Average Area) x (d Elevation)] + Previous Volume
ORIFCE	$Q = 0.62 \times (\text{area}) \times (2 \times g \times h)^{1/2}$
F	Q = Orifice Eq.
G	Q = Orifice Eq.
H	Q = Orifice Eq.
I	Overflow Riser as a Weir $Q = 2.68 \times L \times H^{3/2}$
	$L = 2*pi*r$
J	F+G+H+I

DETENTION POND ROUTING DATA

OCSD Transportation Facility (SGL14-070)

Orifice #1 Diameter:	1 1/4	inches	Overflow Riser Dia:	18	inches	
Orifice #1 Elevation:	0.00	feet	Overflow elevation:	2.75	ft	
Orifice #2 Diameter:	0	inches				
Orifice #2 Elevation:	0.00	feet	Infiltration Rate:	0.0	in/hr =	0.0000000 cfs
Orifice #3 Diameter:	0	inches				
Orifice #3 Elevation:	0.00	feet				

	B	C	D	E	F	G	H	I	J					
	Stage	Elevation	Surface Area	Storage Volume	Orifice #1 Discharge	Orifice #2 Discharge	Orifice #3 Discharge	Overflow Discharge	Actual Discharge					
		(ft)	(sq.ft)	(cu.ft.)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)					
	1	0.00	5143	0	0.000	0.000	0.000	0.000	0.000	<= Orifice Outflow	0.00	0.000	0.0	0.00
	2	0.25	5505	1331	0.021	0.000	0.000	0.000	0.021		0.25	0.021	1331.0	0.00
Wat. Quality =>	3	0.50	5874	2753	0.030	0.000	0.000	0.000	0.030		0.50	0.030	2753.4	0.00
& Detention	4	0.75	6250	4269	0.037	0.000	0.000	0.000	0.037		0.75	0.037	4268.9	0.00
Storage	5	1.00	6635	5880	0.042	0.000	0.000	0.000	0.042		1.00	0.042	5879.5	0.00
	6	1.25	7027	7587	0.047	0.000	0.000	0.000	0.047		1.25	0.047	7587.3	0.00
	7	1.50	7426	9394	0.052	0.000	0.000	0.000	0.052		1.50	0.052	9393.9	0.00
	8	1.75	4834	10926	0.056	0.000	0.000	0.000	0.056		1.75	0.056	10926.4	0.00
	9	2.00	8249	12562	0.060	0.000	0.000	0.000	0.060		2.00	0.060	12561.8	0.00
	10	2.25	8671	14677	0.064	0.000	0.000	0.000	0.064		2.25	0.064	14676.8	0.00
	11	2.50	9102	16898	0.067	0.000	0.000	0.000	0.067		2.50	0.067	16898.4	0.00
	12	2.75	9540	19229	0.070	0.000	0.000	0.000	0.070		2.75	0.070	19228.6	0.00
	13	3.00	9985	21669	0.073	0.000	0.000	1.579	1.652		3.00	1.652	21669.3	0.00
	14	3.25	10438	24222	0.076	0.000	0.000	4.465	4.542		3.25	4.542	24222.1	0.00

B	Stage Number
C	Water Surface Elevation.
D	Water Surface Area @ given Elevation
E	Storage Volume = [(Average Area) x (d Elevation)] + Previous Volume
ORIFCE	$Q = 0.62 \times (\text{area}) \times (2 \times g \times h)^{1/2}$
F	Q = Orifice Eq.
G	Q = Orifice Eq.
H	Q = Orifice Eq.
I	Overflow Riser as a Weir $Q = 2.68 \times L \times H^{3/2}$
	$L = 2*pi*r$
J	F+G+H+I


EXISTING WETLAND
50' WETLAND BUFFER
BASIN 'A'
BASIN 'B'
PROPERTY LINE
HIGH SCHOOL ROAD
SD
BASIN 'A'
BASIN 'B'
PROPERTY LINE
BUS AND MAINTENANCE VEHICLE PARKING
PROPERTY LINE
STAFF PARKING
SD
W

Soil Map—Clackamas County Area, Oregon



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 9, Sep 19, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2010—Sep 4, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Clackamas County Area, Oregon (OR610)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
8B	Bornstedt silt loam, 0 to 8 percent slopes	10.2	100.0%
Totals for Area of Interest		**10.2**	**100.0%**

Physical Soil Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Reference:

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (http://soils.usda.gov)

Report—Physical Soil Properties

Physical Soil Properties–Clackamas County Area, Oregon														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
8B—Bornstedt silt loam, 0 to 8 percent slopes														
Bornstedt	0-8	- 9-	-67-	20-24- 27	1.30-1.50	4.00-14.00	0.15-0.17	0.0-2.9	3.0-4.0	.37	.37	5	6	48
	8-33	- 7-	-62-	27-31- 35	1.40-1.60	4.00-14.00	0.13-0.17	0.0-2.9	1.0-3.0	.37	.37			
	33-71	- 7-	-48-	40-45- 50	1.30-1.50	0.42-1.40	0.12-0.15	0.0-2.9	0.5-1.0	.32	.32			

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 9, Sep 19, 2014

FIGURE 4-1

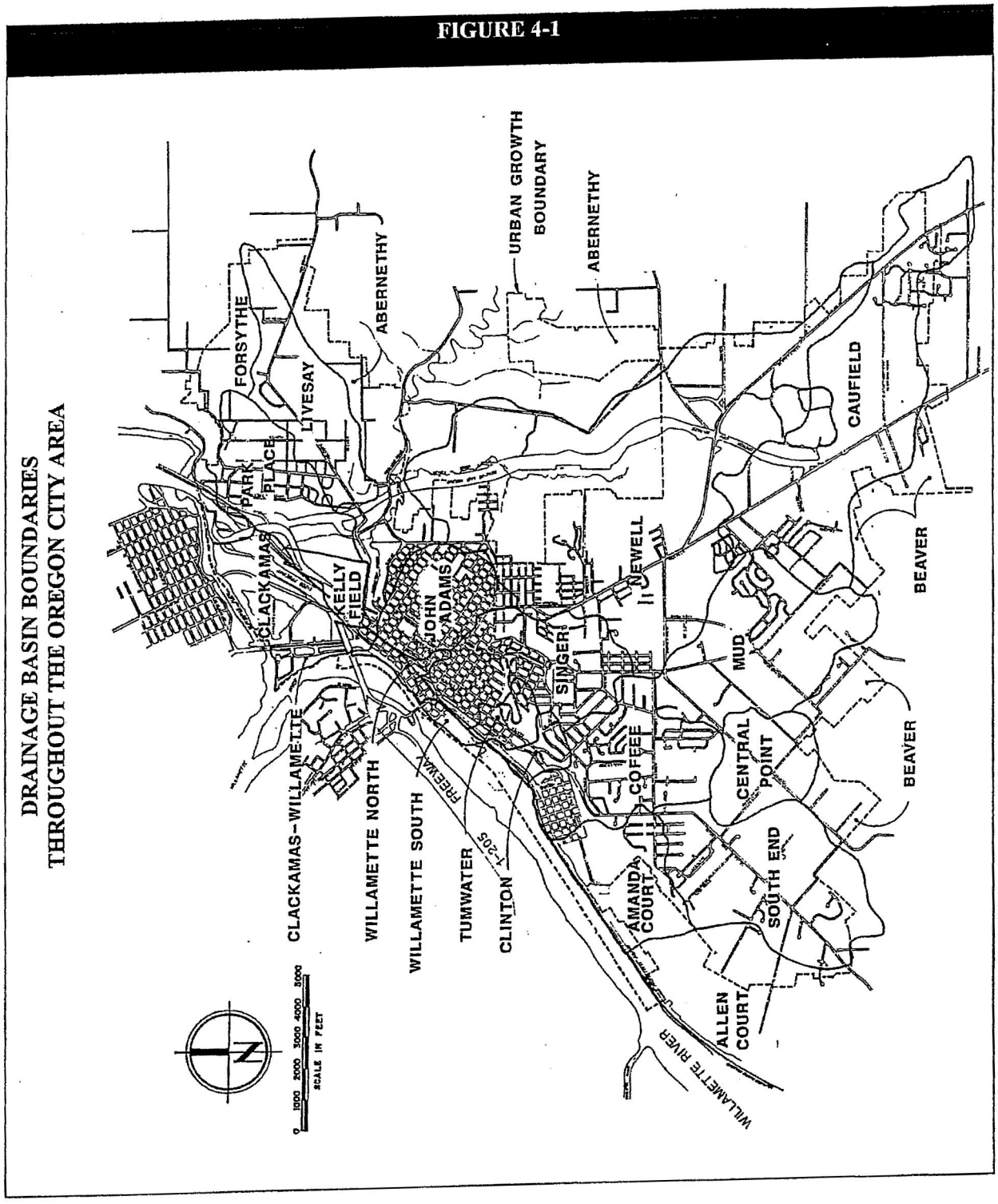

DRAINAGE BASIN BOUNDARIES
THROUGHOUT THE OREGON CITY AREA
URBAN GROWTH BOUNDARY
ABERNETHY
ABERNETHY
FORSYTHE
LIVESAY
PARK PLACE
CLACKAMAS
KELLY FIELD
JOHN ADAMS
SINGER
NEWELL
CAUFIELD
BEAVER
MUD
BEAVER
CENTRAL POINT
SOUTH END
COFEE
AMANDA COURT
ALLEN COURT
CLACKAMAS-WILLAMETTE
WILLAMETTE NORTH
WILLAMETTE SOUTH
TUMWATER
CLINTON
I-205
FREEWAY
WILLAMETTE RIVER
N
0 1000 2000 3000 4000 5000
SCALE IN FEET

Table 4-3 MODIFIED CURVE NUMBERS

SCS Western Washington Runoff Curve Numbers

Runoff curve numbers for selected agricultural, suburban, and urban land use for Type 1A rainfall distribution, 24-hour storm duration. (Published by SCS in 1982)

LAND USE DESCRIPTION		CURVE NUMBERS BY HYDROLOGIC SOIL GROUP			
		A	B	C	D
Cultivated land[1]	Winter Condition	86	91	94	95
Mountain Open Areas:	Low growing brush and grassland.	74	82	89	92
Meadow or pasture:		65	78	85	89
Wood or forest land:	Undisturbed	42	64	76	81
	Established second growth[2]	48	68	78	83
	Young second growth or brush	55	72	81	86
Orchard:	With over crop	81	88	92	94
Open spaces, lawns, parks, golf courses, cemeteries, landscaping					
Good Condition:	Grass cover on > =75% of area	68	80	86	90
Fair Condition:	Grass cover on 50-75% of area	77	85	90	92
Gravel Roads and Parking Lots:		76	85	89	91
Dirt Roads and Parking Lots:		72	82	87	89
Impervious surfaces, pavement, roofs, etc.		98	98	98	98
Open water bodies:	Lakes, wetlands, ponds, etc.	100	100	100	100

Single Family Residential [3]: Dwelling unit/gross acre	% Impervious[4]	
1.0 DU/GA	15	Select a separate curve number for pervious and impervious portions of the site or basin.
1.5 DU/GA	20	
2.0 DU/GA	25	
2.5 DU/GA	30	
3.0 DU/GA	34	
3.5 DU/GA	38	
4.0 DU/GA	42	
4.5 DU/GA	46	
5.0 DU/GA	48	
5.5 DU/GA	50	
6.0 DU/GA	52	
6.5 DU/GA	54	
7.0 DU/GA	56	
Planned Unit Developments, condominiums, apartments, commercial businesses & industrial areas[3]	% impervious[4] Must be computed	Select a separate curve number for pervious and impervious portions of the site or basin.

[1] For a more detailed description of agricultural land use curve numbers, refer to National Engineering Handbook, Sec. 4, Hydrology, Chapter 9, August 1972.

[2] Modified by KCFW, 1995.

[3] Assumes roof and driveway runoff is directed into street/storm system.

[4] The remaining pervious areas (lawn) are considered to be in good condition for these curve numbers.

Table 4-4 MANNING'S COEFFICIENTS/"K" FACTORS

"n" AND "k" Value Used in Time Calculations for Hydrographs "n_s" Sheet Flow Equation Manning's Values (for initial 300 ft. of travel)		n_s
Smooth surfaces (concrete, asphalt, gravel, or bare hand packed soil)		0.01
Fallow fields or loose soil surface (no residue)		0.05
Cultivated soil with residue cover (s # 0.20 ft/ft)		0.06
Cultivated soil with residue cover (s > 0.20 ft/ft)		0.17
Short prairie grass and lawns		0.15
Dense grasses		0.24
Bermuda grass		0.41
Range (natural)		0.13
Woods or forest with light underbrush		0.40
Woods or forest with dense underbrush		0.80
* Manning values for sheet flow only, from Overton and Meadows 1976 (See SCS's TR-55, 1986) "k" Values Used in Travel Time/Time of Concentration Calculations Shallow Concentrated Flow (After the initial 300 ft. of sheet flow, R = 0.1)		k_s
1.	Forest with heavy ground litter and meadows (n = 0.10)	3
2.	Brushy ground with some trees (n = 0.060)	5
3.	Fallow or minimum tillage cultivation (n=0.040)	8
4.	High grass (n=0.035)	9
5.	Short grass, pasture, and lawns (n=0.030)	11
6.	Nearly bare ground (n=0.025)	13
7.	Paved and gravel areas (n=0.012)	27
** Channel flow (intermittent) (At beginning of visible channels R=0.2)		k_c
1.	Forested swale with heavy ground litter (n=0.10)	5
2.	Forested drainage course/ravine with defined channel bed (n=0.050)	10
3.	Rock-lined waterway (n=0.035)	15
4.	Grassed waterway (n=0.030)	17
5.	Earth-lined waterway (n=0.025)	20
6.	CMP pipe (n=0.024)	21
7.	Concrete pipe (0.012)	42
8.	Other waterways and pipe 0.508/n	
Channel flow (Continuous stream, R=0.4)		k_c
9.	Meandering stream with some pools (n=0.040)	20
10.	Rock-lined stream (n=0.035)	23
11.	Grass-lined stream (n=0.030)	27
12.	Other streams, man-made channels and pipe 0.807/n **	
** See Table 6-3 for additional Mannings "n" values for open channels.		

GRI
9750 SW Nimbus Avenue
Beaverton, OR 97008-7172
p| 503-641-3478 f| 503-644-8034

MEMORANDUM

To: Ronald Lee / BBL Architects

Date: October 30, 2014

GRI Project No.: 5635

From: Wesley Spang, PhD, PE, GE

Re: Preliminary Design Recommendations
Oregon City School District Transportation Maintenance Facility
Meyers Road and High School Avenue
Oregon City, Oregon

At your request, GRI is completing a geotechnical investigation for the Oregon City School District transportation maintenance facility in Oregon City. Our field investigation was recently completed, and we are in the process of completing the laboratory testing and engineering analyses for the project. This memorandum provides our preliminary conclusions and recommendations regarding seismic considerations and foundation support.

Project Description

We understand the project will consist of grading the site in preparation for construction of a new transportation/maintenance facility. The structure will be two stories tall and include storage, offices, and a bus maintenance area on the lower floor, and a partial second-story mezzanine with offices. A staff parking lot will be constructed in the southern portion of the property; the western half of the site will be used for bus parking.

Field Investigation

Our field investigation consisted of four borings drilled with a trailer-mounted drill rig and five test pits excavated with a track-mounted backhoe. The borings were advanced to a maximum depth of 21.5 ft, and the test pits were excavated to a maximum depth of 10 ft. Soil conditions disclosed by the borings and test pits generally consist of stiff silt that becomes more stiff with depth. Highly weathered basalt, consisting of very stiff to hard silt with gravel-size pieces of weathered basalt, was encountered at depths of 5 to 10 ft and is present to the maximum depth of exploration.

Preliminary Conclusions and Recommendations

Seismic Considerations. Based on our review of the 2012 International Building Code (IBC) and 2014 Oregon Structural Specialty Code, which incorporates recommendations from ASCE 7-10, Minimum Design Loads for Building and Other Structures, and the results of our subsurface explorations, we recommend using Site Class D to evaluate the seismic design of the structure. The maximum horizontal direction spectral response accelerations were obtained from the USGS Seismic Design Maps for the coordinates of 45.32° N latitude and 122.57° W longitude. The S_S and S_1 values identified for the site are 0.89 and 0.38 g, respectively. These bedrock spectral ordinates are adjusted for Site Class with the short- and long-period site coefficients, F_a and F_v, based on subsurface conditions or with a site-specific response

analysis. The short- and long-period site coefficients, F_a and F_v, are 1.14 and 1.63, respectively, for Site Class D. The design-level response spectrum is calculated as two-thirds of the Site Class-adjusted Risk-Targeted Maximum Considered Earthquake (MCE_R) level spectrum.

Based on the results of our preliminary analyses, the cyclic softening potential at the site is considered low for both crustal earthquake and Cascadia Subduction Zone earthquake. The potential for earthquake-induced ground rupture, landslides, liquefaction, and subsidence is low, and the potential for damage by tsunami and/or seiche at the site is absent.

Foundation Support. Discussions with Andrew Leichty of Miller Consulting Engineers, the project structural engineer, indicate the maximum column and wall load will be about 80 kips and 8 kips/ft, respectively. In our opinion, foundation support for the building can be provided by conventional column-type and continuous wall footings founded in the underlying firm, native soils and designed using an allowable bearing value of up to 2,500 psf. This value applies to the total of dead load and/or frequently applied live loads and can be increased by one-half for the total of all loads; dead, live, and wind or seismic.

We recommend establishing all footings in firm, undisturbed native soil or compacted structural fill at a minimum depth of 1.5 ft below the lowest adjacent finished grade. The footing width should not be less than 18 in. for wall footings and 24 in. for column footings. Excavations for all foundations should be made with a smooth-edge bucket, and all footing excavations should be observed by a qualified geotechnical engineer. Soft or otherwise unsuitable material encountered at foundation subgrade level should be overexcavated and backfilled with granular structural fill.

We estimate the total settlement of continuous wall and column footings will be less than 1 in. for footings supporting the loads referenced above. Differential settlement between adjacent comparably loaded footings should be less than half the total settlement.

Limitations

The preliminary information provided in this memorandum is not intended for final design of the project. Additional details regarding site conditions and recommendations for design and construction of the proposed improvements will be provided in our forthcoming geotechnical report.

Submitted for GRI,



A. Wesley Spang, PhD, PE, GE *Renews 6/2016*
Principal

This document has been submitted electronically.

GRI

SISUL ENGINEERING

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March 17, 2015

City of Oregon City
Community Development – Planning
221 Molalla Avenue, Suite 200
Oregon City, OR 97045

ATTN: Kelly Moosbrugger

RE: Oregon City Schools Transportation Facility (CP 14-03, DP 14-04, and NR 14-10)

Dear Kelly:

In response to your item of incompleteness dated 3-11-2015, after discussing the item with Gordon Munro, consultant for the City, we respond with the following.

EXISTING DRAINAGE PATTERN

The proposed transportation facility site generally drains east to west. Some of the site falls towards the on-site wetland but most of the site drains towards a neighboring parcel west of the site (TL 200). Of the related Meyers Road right-of-way extension, a small easterly portion of the future right-of-way falls back towards High School Avenue, but most of the proposed right-of-way currently falls towards the west and towards a neighboring, largely undeveloped, parcel (TL 200).

Eventually, overland flow draining westerly would reach a small seasonal tributary of Caulfield Creek, including that portion of the site that may drain towards the on-site wetland. Runoff from the small portion of the future Meyers Road right-of-way that falls easterly towards High School Avenue is collected by the drainage system in High School Avenue. This drainage is directed towards the storm detention pond at the intersection of High School Avenue and Glen Oak Road and eventually is discharged into Caulfield Creek.

PROPOSED DRAINAGE PATTERN WITH IMPROVEMENTS

Runoff from the proposed transportation facility will be directed towards the on-site wetland at the north end of the site. The discharge point towards the wetland from the proposed transportation facility improvements would be near the west property line of the transportation facility, and within the wetland buffer.

Most of the runoff draining from the proposed Meyers Road extension would be directed to Caulfield Creek. Runoff off the most easterly portion of the Meyers Road extension would drain back towards High School Avenue.

RUNOFF IMPACTS

Runoff from all improvements will have to meet the City of Oregon City's storm drainage requirements. Such requirements require water quality and water quantity control measures.

All proposed improvements (both public and private) will meet the City's standards for water quality and runoff quantity. Different techniques will be used on site from those in the public right-of-way, but the City standards will be met.

Caulfield Creek Impact

Runoff that would be rerouted to drain directly towards Caulfield Creek, would be from a contributing area of approximately 0.95 acres, all from the proposed right-of-way extension of Meyers Road. This compares to the total upstream area of Caulfield Creek of approximately 330 acres. Therefore, the propose drainage adjustment would increase the basin size 0.3%, at the point of discharge where the street runoff would be directed. But as pointed out above, the natural runoff drainage direction is such that the flows combines with the main stem of Caulfield Creek 1400 feet downstream from where the new outlet is proposed. This small change would not significantly impact Caulfield Creek as a whole nor the small section of the creek length where the Meyers Road extension runoff will be re-directed upstream of the natural confluence point.

An energy dissipater will be used at the pipe outfall at the creek, to reduce flow velocities. However the design of a green street facility for the Meyers Road extension will mitigate runoff peak flows and the conveyance pipe from Meyers Road to the creek will be designed so runoff flows will remain below erosive velocities, but above necessary cleaning velocity for the pipe itself.

Glen Oak Road Park Wetland Impact

Based on the recommendations from the wetland scientist that is providing services to both the Parks Department and the School District, John van Staveren of Pacific Habitat Services, we will not discharge directly to the low grade wetland that exists on the Park site in what has been a horse pasture area. Rather we will carry the pipe conveyance past the wetland area directly to the edge of Caulfield Creek. Mr. van Staveren believes that discharging the Meyers Road runoff to the wetland would not benefit that wetland area and could damage it, and thus recommends it be carried to Caulfield Creek.

Transportation Facility Site Wetland Impact

All runoff from the transportation facility will be directed to two large storm detention facilities at the north end of the improvement area on the transportation facility site. The controlled flow releases from the detention basins will outfall near the western edge of the existing wetland on the Transportation Facility site. This wetland, unlike the degraded wetland on the Park site, is in good condition and surrounded by and has large trees within it.

In discussion with Mr. van Staveren about the discharge point for this wetland, which would be within the wetland buffer, the level of concern that controlled release flows from the site's detention ponds would negatively impact this wetland is much lower. Mr. van Staveren believes the wetland on the Transportation site is likely kept wet by groundwater as well as surface water flows and a point discharge into would not be as harmful. We did discuss if some sort of perforated pipe outlet system might be beneficial, but because of the large and numerous trees in and around the wetland area, a perforated pipe system would be more harmful to the mature trees than a point discharge to the wetland. We both had experience and concerns that in the long term perforated pipe outlets tend to plug and become ineffective, another reason to not use such a system.

The wetland on the Transportation Facility site does drain, southwesterly across the neighboring parcel in a seasonal drainageway. This seasonal drainage connects to the main stem of Caulfield Creek approximately 1400 linear feet from the westerly edge of the wetland on the Transportation Facility site.

Impacts to Adjoining Parcels to the West

The beneficiary of the localized rerouting of the runoff from the Transportation Facility site and the Meyer Road extension area will be the parcel immediately west of the Transportation Facility (Tax Lot 200). Existing sheet-flow drainage and shallow concentrated flows that originates on the Transportation Facility, in its existing condition, will largely be redirected to either Caulfield Creek or the wetland area at the north of the Transportation Facility site. While both Caulfield Creek and wetlands' seasonal downstream drainageway cross TL 200, the runoff will be directed away from potential developable areas of the parcel and concentrated in the resource areas on the parcel instead.

CONCLUSION

The proposed drainage redirection towards Caulfield Creek from the Meyers Road extension will have insignificant impact on Caulfield Creek flows, as the redirected area is only 0.3% of the upstream basin area, and approximately only 1400 linear feet upstream from where the runoff would have entered the main stem of Caulfield Creek anyway.

The impacts to the wetland on the Transportation Facility site will be relatively minor as it appears groundwater is what keeps the on-site wetland charged. We believe that flow spreading through the use of a perforated pipe or other methods would create more harm to the existing mature trees in and around the wetland than the proposed point discharge near the western edge of the wetland.

Sincerely,

Thomas J. Sisul, P.E.

OREGON CITY SCHOOL DISTRICT

SITE PLAN AND DESIGN REVIEW

PROPOSED TRANSPORTATION MAINTENANCE FACILITY

Exhibit G - Wetlands Delineation Report

Refer to attached Wetlands Delineation Report prepared by Pacific Habitat.

Wetland Delineation for the Oregon City High School Property in Oregon City, Oregon

(Township 3 South, Range 2 East, Section 9D, tax lot 1400)

Prepared for

BBL Architects
Attn: Ronald R. Lee
200 North State Street
Lake Oswego, OR 97034

Prepared by

Tina Farrelly
Craig Tumer
John van Staveren
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PHS Project Number: 5481

October 23, 2014



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APPENDIX B: Wetland Delineation Data Sheets
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I. INTRODUCTION

Pacific Habitat Services, Inc. (PHS) conducted a wetland delineation for the portion of an Oregon City School District property that will be used for a new transportation/maintenance facility. The study area is located in Oregon City, OR (Township 3 South, Range 2 East, Section 9D, tax lot 1400).

This report presents the results of PHS's wetland delineation within the study area. Figures, including a map depicting the location of wetlands within the study area, are located in Appendix A. Data sheets documenting on-site conditions are provided in Appendix B. Ground-level photographs documenting site conditions are provided in Appendix C. A discussion of the wetland delineation methodology is provided for the client in Appendix D.

II. RESULTS AND DISCUSSION

A. Landscape Setting and Land Use

The study area is located approximately one-quarter mile northeast of the intersection of Oregon Highway 213 and Glen Oak Road in Oregon City. The study area consists of one tax lot (1400) as shown in the attached figures (Appendix A). The parcel is zoned as "Industrial Campus" (ORWAP Reporter). Surrounding parcels are zoned as residential, industrial, commercial, and public and semi-public.

Site topography slopes down to the northwest. The study area is within the Beaver Creek watershed (HUC 170900070403); Caufield Creek flows west approximately 600 feet south of the study area.

Dominant vegetation in the southern portion of the study area includes primarily weedy forbs and pasture grasses. The northern portion of the study area is forested, with upland Douglas-fir/oak woodland transitioning to an Oregon ash forest in the north. Vegetation observed within the study area includes the species listed in Table 1 below.

Table 1. Vegetation within the Study Area.

Common Name	Latin Name	Wetland Indicator Status
Colonial bentgrass	*Agrostis capillaris*	FAC
Spreading bentgrass	*Agrostis stolonifera*	FAC
Service-berry	*Amelanchier alnifolia*	FACU
Sweet vernalgrass	*Anthoxanthum odoratum*	FACU
Taper-fruit short-scale sedge	*Carex leptopoda*	FAC
Slough sedge	*Carex obnupta*	OBL
Chicory	*Cichorium intybus*	FACU
Hazelnut	*Corylus cornuta*	FACU
English hawthorn	*Crataegus monogyna*	FAC
Scotch broom	*Cytisus scoparius*	UPL
Orchard grass	*Dactylus glomerata*	FACU

Common Name	Latin Name	Wetland Indicator Status
Queen Anne's lace	*Daucus carota*	FACU
Tall fescue	*Festuca arundinacea*	FAC
Cascara	*Frangula purshiana*	FAC
Oregon ash	*Fraxinus latifolia*	FACW
Salal	*Gaultheria shallon*	FACU
Velvetgrass	*Holcus lanatus*	FAC
St. Johnswort	*Hypericum perforatum*	FACU
Hairy cat's-ear	*Hypochaeris radicata*	FACU
English Holly	*Ilex aquifolium*	FACU
Ox-eye daisy	*Leucanthemum vulgare*	FACU
English plantain	*Plantago lanceolata*	FACU
Bluegrass	*Poa* species	FAC
Sword fern	*Polystichum munitum*	FACU
Sweet cherry	*Prunus avium*	FACU
Douglas-fir	*Pseudotsuga menziesii*	FACU
Bracken fern	*Pteridium aquilinum*	FACU
Oregon white oak	*Quercus garryana*	FACU
Oak	*Quercus* species	FACU or UPL
Clustered rose	*Rosa pisocarpa*	FAC
Rose	*Rosa* species	assumed FAC
Himalayan blackberry	*Rubus armeniacus*	FACU
Trailing blackberry	*Rubus ursinus*	FACU
Scouler's willow	*Salix scouleriana*	FAC
Snowberry	*Symphoricarpos albus*	FACU
Western red cedar	*Thuja plicata*	FAC
Pacific poison-oak	*Toxicodendron diversilobum*	FAC
Clover	*Trifolium* species	FAC or FACU

B. Site Alterations

The study area itself has been relatively undisturbed since before July of 2000, the earliest year aerial imagery is available through Google Earth. Several features surrounding the site, which may have affected site drainage, have been developed since 2000. To the east, a tree farm was cleared between 2000 and 2001, making way for the construction of High School Road and a stormwater catch basin northeast of the tax lot. These features were constructed by May 2002. In this time period, an unpaved path paralleling the northern boundary of the parcel was graveled.

There is no evidence of recent fill or site alterations beyond those described above.

C. Precipitation Data and Analysis

The wetland delineation was conducted on September 10, 2014. No rain fell during the field investigation; 1.08 inches was recorded during the two previous weeks (National Weather Service).

Precipitation for the water year (October 1, 2013 through August 31, 2014) was 33.01 inches, which is 75 percent of normal. Most of the fall and winter months of the 2013/14 water year were well below the normal range. However, March 2014 was exceptionally wet, bringing the precipitation for the water year into the normal range, though still below the average.

Table 1 shows the average monthly precipitation in Oregon City for the three months prior to the site visit, as well as the upper and lower values considered within normal ranges for the period of record (NRCS WETS table for Oregon City, 2002).

Table 2. Average Monthly Precipitation (NRCS WETS Table for Oregon City) and Observed Monthly Precipitation for the 2013/2014 water year.

Month	Average*	2 Years in 10 Will Have		Observed Precipitation**
		Less than	More than	
October 2013	3.48	1.85	4.25	1.05
November 2013	6.79	4.43	8.16	3.94
December 2013	7.23	4.85	8.65	2.08
January 2014	6.59	4.23	7.94	3.21
February 2014	5.51	3.83	6.56	3.83
March 2014	4.70	3.54	5.49	9.02
April 2014	3.46	2.44	4.10	3.93
May 2014	2.70	1.72	3.26	2.59
June 2014	1.83	1.11	2.22	1.33
July 2014	0.83	0.29	1.00	0.91
August 2014	1.00	0.21	1.16	1.12
TOTALS	**44.12**	**28.5**	**52.79**	**33.01**

*Average Monthly Rainfall (NRCS WETS Table for Oregon City, Oregon)
**Recorded monthly rainfall for Oregon City, Oregon (National Weather Service)

The precipitation fluctuations are not expected to have affected the 2014 wetland delineation, as the wetlands were clearly defined by topography, hydrophytic vegetation, and indicators of wetland hydrology. Although upland areas occasionally satisfied the hydric soils criteria, they lacked hydrophytic vegetation and indicators of wetland hydrology, and were topographically higher than the wetland area.

D. Methods

PHS delineated the limits of the wetlands on the site based on the presence of wetland hydrology, hydric soils, and hydrophytic vegetation, in accordance with the Routine On-site Determination, as described in the *Corps of Engineers Wetland Delineation Manual, Wetlands Research Program Technical Report Y-87-1* ("The 1987 Manual") and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*. The delineation was conducted on September 10, 2014.

The study area was investigated for the presence of wetlands or other waters. The wetland boundary for Wetland A was determined based upon a shift in vegetation from a predominance of FAC or wetter species in the wetland to a predominance of FAC or drier species in the upland, the presence/absence of sediment deposits, and the presence/absence of hydric soils. Vegetation in some portions of the wetland passed the FAC-neutral test, whereas vegetation in upland areas never passed the FAC-neutral test.

In addition to the six paired sample points collected to document wetland boundaries, numerous pits were excavated across the site to determine if soils were hydric. This included areas near wetland boundaries and areas where more than 50 percent of the dominant vegetation was FAC or wetter. Two upland sample points were taken to document non-wetland areas within the study area (sample points 7 and 8).

E. Description of all Wetlands and Other Non-Wetland Waters

PHS identified one wetland within the study area. It was determined that other than the wetland area described below, the site does not contain hydrophytic vegetation or wetland hydrology. Some upland areas near the wetland boundary satisfied the hydric soil criterion. However, this may be due to historic conditions and not reflective of the current hydrological regime.

Wetland A

Wetland A is approximately 44,906 square feet (1.03 acre) within the study area. The Cowardin class is palustrine forested, seasonally flooded (PFOC), the Hydrogeomorphic (HGM) class is Slope. Wetland A continues offsite to the north and west.

Vegetation within Wetland A (Sample Points 1, 3, and 5) is dominated by Oregon ash, English hawthorn, rose, and slough sedge. Oregon white oak, Himalayan blackberry, snowberry, and taper-fruit short-scale sedge were also dominant in some areas very near the wetland boundary. Soils within the wetland met the definition for redox dark surface (F6) and are considered hydric. The wetland area had sediment deposits (a primary indicator of wetland hydrology) and often had vegetation that passed the FAC-neutral test (a secondary indicator of wetland hydrology).

Vegetation in the upland adjacent to Wetland A (Sample Points 2, 4, and 6) is dominated by Douglas-fir, Oregon white oak, Oregon ash, Western red cedar, Scouler's willow, service-berry, English holly, English hawthorn, hazelnut, cascara, salal, Himalayan blackberry, snowberry,

rose, trailing blackberry, sword fern, and taper-fruit short-scale sedge. Vegetation in the open area in the southern portion of the study area is dominated by mixed pasture grasses and forbs, including orchard grass, sweet vernal grass, and tall fescue. Scattered English hawthorn and small bracken fern stands are also present in this portion of the study area. Soils in some upland locations near the wetland boundary met the definition for redox dark surface (F6). There were no indicators of wetland hydrology.

As stated above, Wetland A continues to the north and west outside the study area. It appears that the wetland ultimately drains to Caufield Creek, southwest of the study area.

F. Deviation from LWI or NWI

The City of Oregon City Local Wetland Inventory (LWI) maps a swale-wetland complex that passes through the northern portion of the study area. Wetland A, as delineation by PHS, is consistent with the LWI map.

G. Mapping Method

PHS flagged the boundary of Wetland A with blue flagging tape and sample points with lime-green flagging tape. Westlake Consultants, Inc. then performed a professional land survey of the delineated boundaries and six of the eight sample points. The accuracy of the boundary survey and sample points is sub-centimeter. Two of the sample point flags were not surveyed due to missing flags. These sample points (Sample Points 3 and 7) were hand drawn in CAD based on field notes and measured distances from known points. The estimated accuracy of these sample points is +/- three feet.

H. Additional Information

Caufield Creek drains to Beaver Creek, a tributary to the Willamette River. StreamNet does not map ESA-listed fish in Caufield Creek. Listed salmonids are present downstream at the confluence of Beaver Creek and the Willamette River, approximately 4.5 miles southwest of the study area.

I. Results and Conclusions

PHS delineated Wetland A within the study area. The total area of wetlands within the study area boundary is 44,906 square feet (1.03 acres).

J. Required Disclaimer

This report documents the investigation, best professional judgment and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

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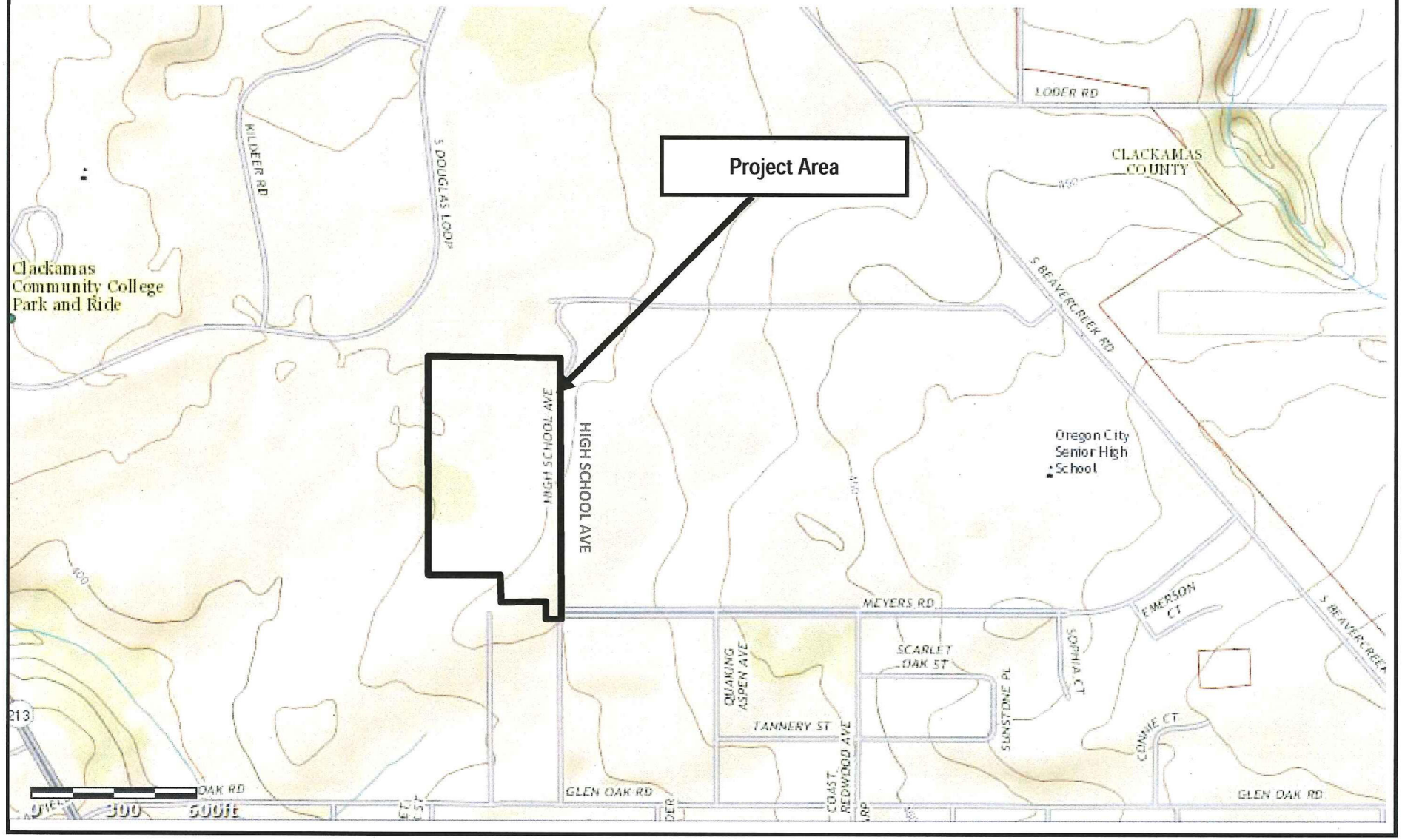
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Appendix A

Figures



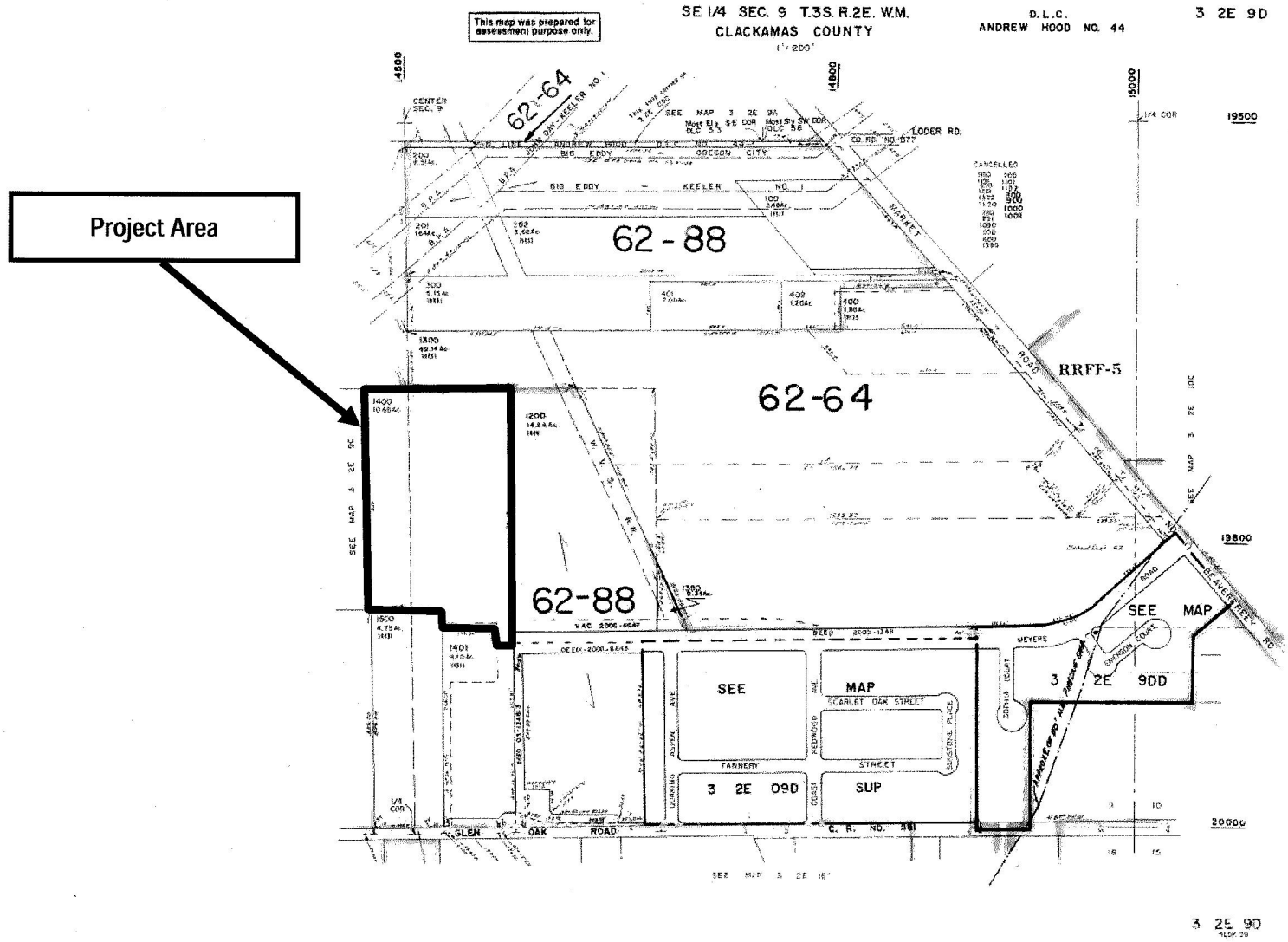


5481
9/26/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Location and General topography
Oregon City High School, Oregon City, Oregon
(USGS The National Map Viewer, Oregon City, Oregon quadrangle, 2014)

FIGURE
1

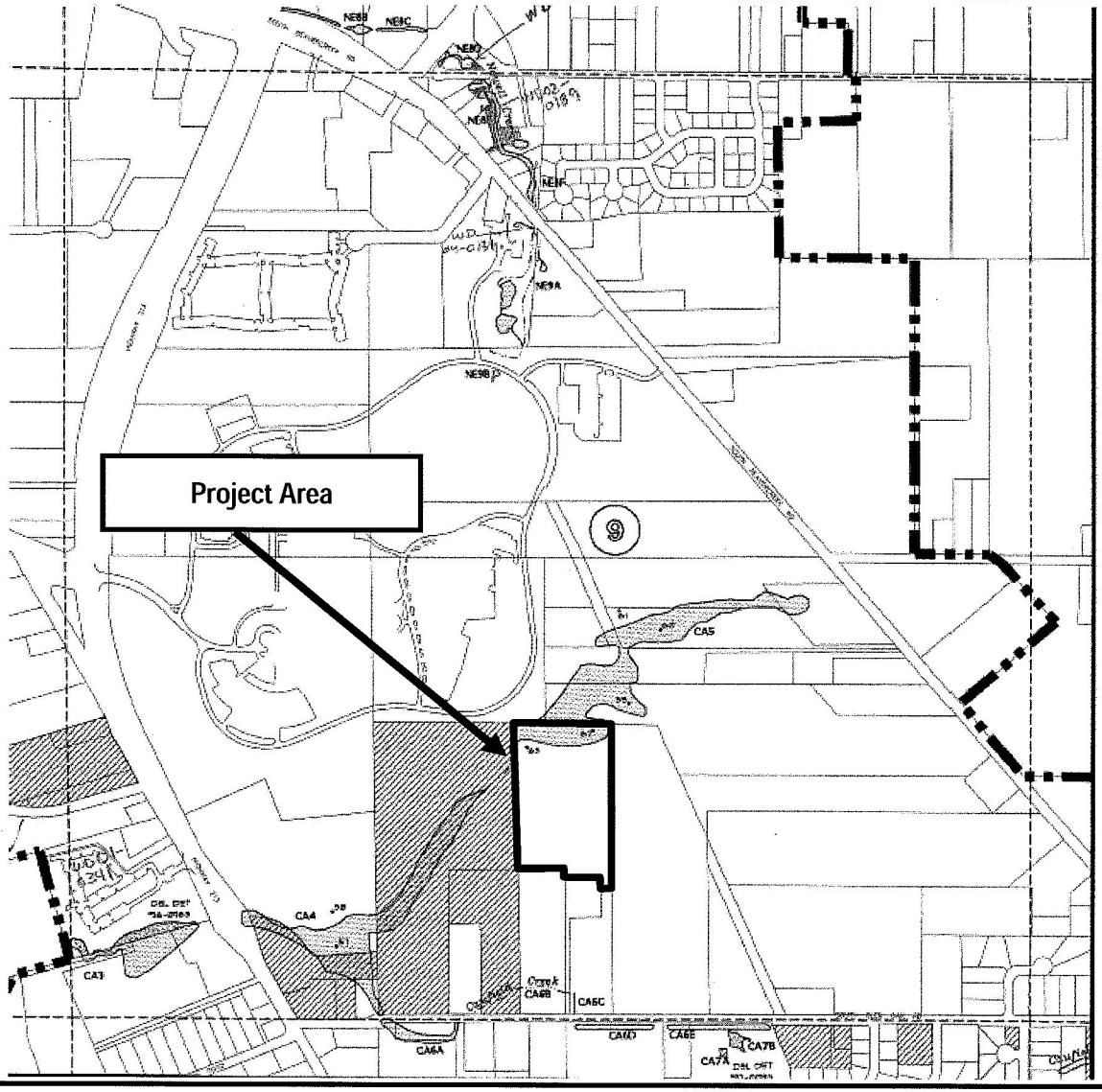


5481
9/26/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Tax Lot map 3 2E 9D, lot 1400, Clackamas County Oregon
Oregon City High School, Oregon City, Oregon
(ormap.net, 2014)

FIGURE
2

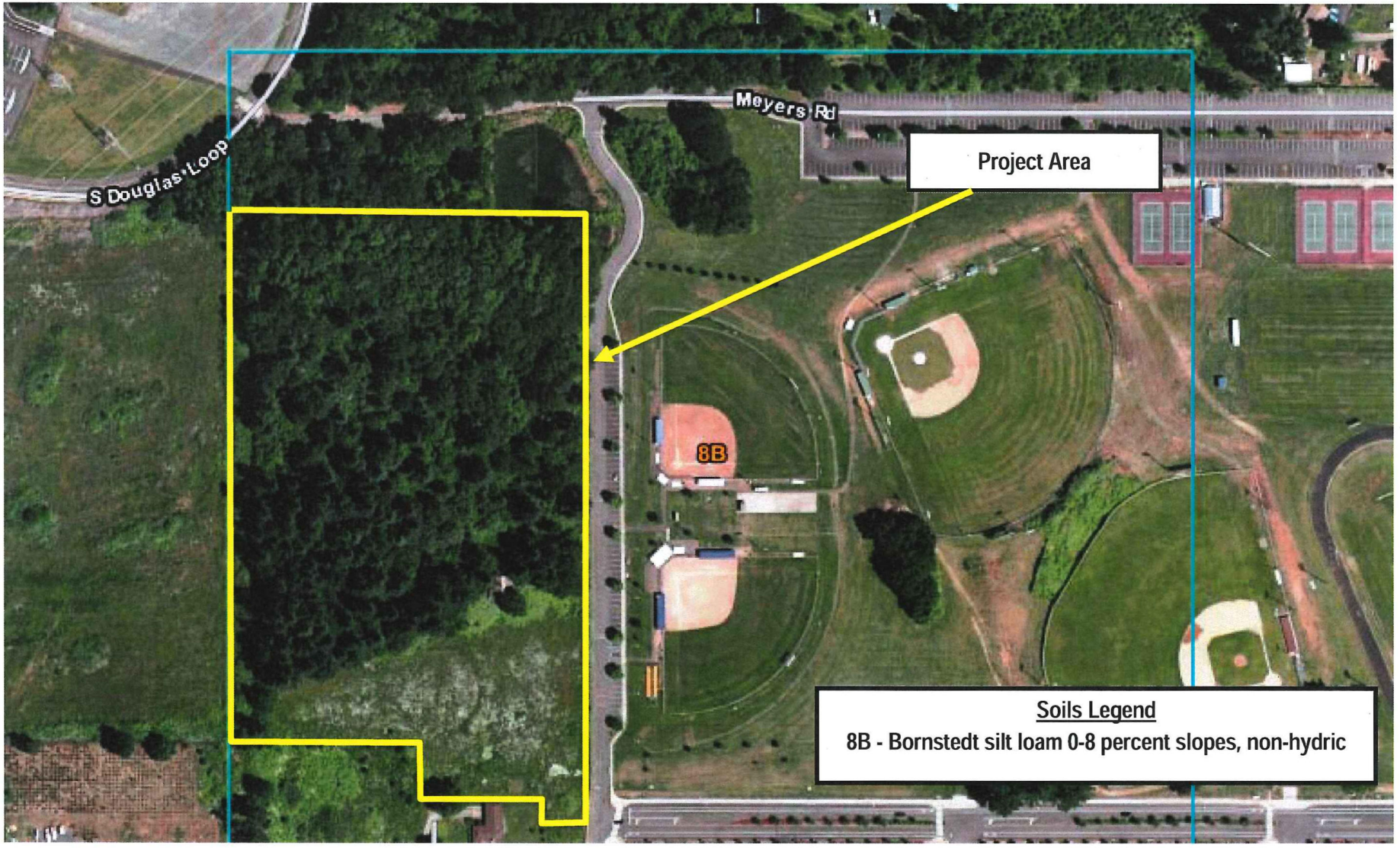


5481
9/26/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Local Wetlands Inventory map
Oregon City High School, Oregon City, Oregon
(Shapiro and Associates, Inc., 9/1/1999)

FIGURE
3



5481
9/26/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Soils map
Oregon City High School, Oregon City, Oregon
(NRCS Web Soil Survey, 2014)

FIGURE
4



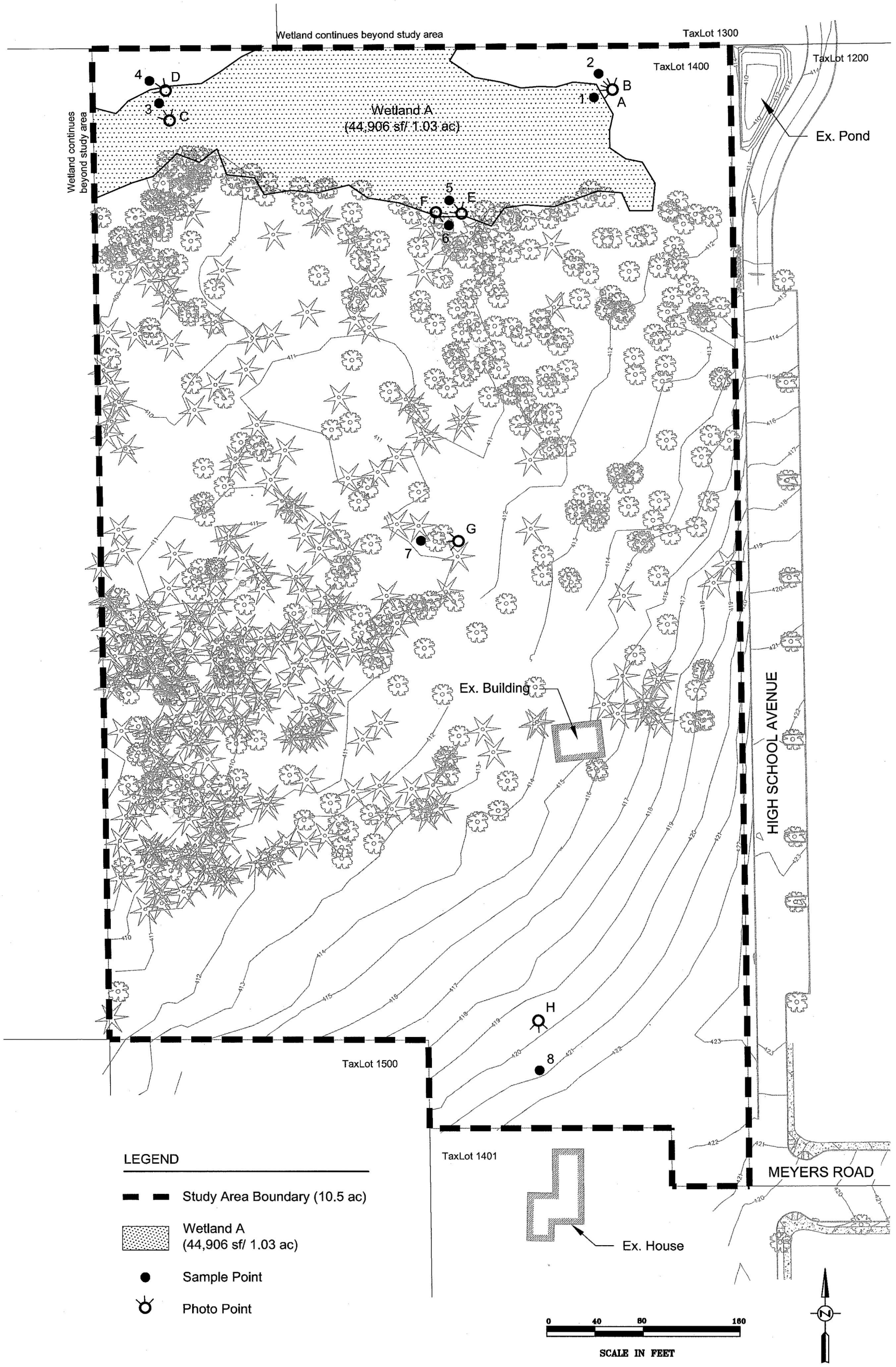
5481
9/26/14

PHS

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Aerial photo
Oregon City High School, Oregon City, Oregon
(Google Earth, 2014)

FIGURE
5



LEGEND

- Study Area Boundary (10.5 ac)
- Wetland A (44,906 sf/ 1.03 ac)
- Sample Point
- Photo Point

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Survey provided by Westlake Consultants, Inc.
Survey and Sample point accuracy is sub-centimeter, except Sample points 3 and 7 with accuracy of +/-3 feet.

Wetland Delineation
Oregon City High School - Oregon City, OR

FIGURE 6

10-13-2014

X:\Project Directories\5400\5481 Oregon City HS\AutoCAD\PlotDwgs\Fig 6 WetDel.dwg, 10/22/2014 10:12:22 AM, PDFCreator

Appendix B

Wetland Determination Data Sheets



PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 1

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.:) slope | Local relief (concave, convex, none): none | Slope (%): <1

Subregion (LRR): LRR A | Lat: 45.321304 | Long: -122.568066 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes	X	No	

Is Sampled Area within a Wetland? Yes X No ____

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)			
1 *Fraxinus latifolia*	70	X	FACW
2 *Quercus sp.*	20	X	(FACU)
3			
4			
	90	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Crataegus monogyna*	30	X	FAC
2 *Rubus armeniacus*	20	X	FACU
3 *Rosa sp.*	20	X	(FAC)
4 *Symphoricarpos albus*	5		FACU
5			
	75	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Carex obnupta*	80	X	OBL
2 *Rubus ursinus*	15		FACU
3 *Polystichum munitum*	5		FACU
4			
5			
6			
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

X 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL PHS # 5481 Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	99	10YR 3/6	1	C	M	Silt Loam	Fine
7-16	10YR 3/2	80	10YR 4/6	15	C	M	Silt Loam	Coarse
			10YR 3/6	4	C	M		Medium
			10YR 3/6	1	C	PL		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

	Histosol (A1)		Sandy Redox (S5)
	Histic Epipedon (A2)		Stripped Matrix (S6)
	Black Histic (A3)		Loamy Mucky Mineral (F1) **(except MLRA 1)**
	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
	Depleted Below Dark Surface (A11)		Depleted Matrix (F3)
	Thick Dark Surface (A12)	X	Redox Dark Surface (F6)
	Sandy Mucky Mineral (S1)		Depleted Dark Surface (F7)
	Sandy Gleyed Matrix (S4)		Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

	2 cm Muck (A10)
	Red Parent Material (TF2)
	Very Shallow Dark Surface (TF12)
	Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

	Surface Water (A1)		Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**		Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
	High Water Table (A2)		Salt Crust (B11)		Drainage Patterns (B10)
	Saturation (A3)		Aquatic Invertebrates (B13)		Dry-Season Water Table (C2)
	Water Marks (B1)		Hydrogen Sulfide Odor (C1)		Saturation Visible on Aerial Imagery (C9)
X	Sediment Deposits (B2)		Oxidized Rhizospheres along Living Roots (C3)		Geomorphic Position (D2)
	Drift Deposits (B3)		Presence of Reduced Iron (C4)		Shallow Aquitard (D3)
	Algal Mat or Crust (B4)		Recent Iron Reduction in Plowed Soils (C6)		Fac-Neutral Test (D5)
	Iron Deposits (B5)		Stunted or Stressed Plants (D1) **(LRR A)**		Raised Ant Mounds (D6) **(LRR A)**
	Surface Soil Cracks (B6)		Other (Explain in Remarks)		Frost-Heave Hummocks (D7)
	Inundation Visible on Aerial Imagery (B7)				
	Sparsely Vegetated Concave Surface (B8)				

Field Observations:

Surface Water Present?	Yes		No X	Depth (inches):	
Water Table Present?	Yes		No X	Depth (inches):	>16
Saturation Present? (includes capillary fringe)	Yes		No X	Depth (inches):	>16

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Faint sediment deposits on leaf litter

PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 2

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.): slope | Local relief (concave, convex, none): none | Slope (%): <1

Subregion (LRR): LRR A | Lat: 45.321304 | Long: -122.568066 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present?	Yes		No	X	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)			
1 *Pseudotsuga menziesii*	5		FACU
2 *Fraxinus latifolia*	35	X	FACW
3 *Quercus garryana*	35	X	FACU
4			
	75	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Ilex aquifolium*	20	X	FACU
2 *Crataegus monogyna*	40	X	FAC
3 *Thuja plicata*	5		FAC
4 *Symphoricarpos albus*	10		FACU
5 *Rosa pisocarpa*	10		FAC
	90	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Polystichum munitum*	5	X	FACU
2 *Carex leptopoda*	5	X	FAC
3			
4			
5			
6			
7			
8			
	10	= Total Cover	
Woody Vine Stratum (plot size: 5)			
1 *Rubus ursinus*	40	X	FACU
2			
	40	= Total Cover	

% Bare Ground in Herb Stratum 50

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 43% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

Also in Sapling/Shrub Stratum - Frangula purshiana (5%) - Total Shrub Stratum = 90%

SOIL PHS # 5481 Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	100					Silt Loam	
8-18	10YR 3/2	90	7.5YR 4/6	10	C	M	Silt Loam	Medium

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Fac-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No X	Depth (inches):	___
Water Table Present?	Yes	___	No X	Depth (inches):	>18
Saturation Present? (includes capillary fringe)	Yes	___	No X	Depth (inches):	>18

Wetland Hydrology Present?

Yes ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators observed

PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 3

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.): slope | Local relief (concave, convex, none): none | Slope (%): <1

Subregion (LRR): LRR A | Lat: 45.32133 | Long: -122.569295 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No		
Hydric Soil Present?	Yes	X	No	**Is Sampled Area within a Wetland?**	Yes X No
Wetland Hydrology Present?	Yes	X	No		

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)			
1 *Fraxinus latifolia*	60	X	FACW
2 *Quercus garryana*	10		FACU
3			
4			
	70	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Rosa sp.*	10	X	(FAC)
2			
3			
4			
5			
	10	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Carex obnupta*	40	X	OBL
2 *Carex leptopoda*	10	X	FAC
3			
4			
5			
6			
7			
8			
	50	= Total Cover	
Woody Vine Stratum (plot size: 5)			
1 *Rubus ursinus*	60	X	FACU
2			
	60	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

X 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL PHS # 5481 Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	98	10YR 4/6	2	C	M	Silt Loam	Fine
4-16	10YR 3/2	80	10YR 4/6	20	C	M	Silty Clay Loam	Medium

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Fac-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): >16
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): >16

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sediment deposits on leaves suggest water sits on surface

PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 4

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.): slope | Local relief (concave, convex, none): none | Slope (%): <1

Subregion (LRR): LRR A | Lat: 45.32133 | Long: -122.569295 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is Sampled Area within a Wetland? Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)			
1 *Quercus sp.*	30	X	(FACU)
2 *Fraxinus latifolia*	15	X	FACW
3 *Pseudotsuga menziesii*	15	X	FACU
4 *Crataegus monogyna*	15	X	FAC
	90	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Corylus cornuta*	15	X	FACU
2 *Frangula purshiana*	15	X	FAC
3 *Gaultheria shallon*	10	X	FACU
4 *Symphoricarpos albus*	10	X	FACU
5 *Rubus armeniacus*	10	X	FACU
	60	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Polystichum munitum*	30	X	FACU
2 *Carex leptopoda*	5		FAC
3 *Rubus ursinus*	20	X	FACU
4			
5			
6			
7			
8			
	55	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum 45

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 27% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

Also in Tree Stratum - Amelanchier alnifolia 5%, Prunus avium 10%; Total Tree Stratum = 90%

SOIL PHS # 5481 Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	98	10YR 3/3	2	C	M	Silt Loam	Fine
4-9	10YR 3/2	95	10YR 3/3	2	C	M	Silt Loam	Fine
			7.5YR 2.5/3	3	C	M	Silt Loam	Medium
9-16	10YR 3/2	88	10YR 3/6	10	C	M	Silt Loam	Coarse
			10YR 3/3	2				Fine

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ **No** X

Remarks:

Mottles are faint in the upper 9 inches, so soils do not meet definition for Redox Dark Surface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Fac-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No X	Depth (inches):	___
Water Table Present?	Yes	___	No X	Depth (inches):	>16
Saturation Present? (includes capillary fringe)	Yes	___	No X	Depth (inches):	>16

Wetland Hydrology Present?

Yes ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 5

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.:) slope | Local relief (concave, convex, none): none | Slope (%): <1

Subregion (LRR): LRR A | Lat: 45.321112 | Long: -122.568728 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes	X	No	

Is Sampled Area within a Wetland? Yes X No ____

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)			
1 *Fraxinus latifolia*	75	X	FACW
2 *Quer sp.*	10		(FACU)
3			
4			
	85	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Frangula purshiana*	5		FAC
2 *Fraxinus latifolia*	15	X	FACW
3 *Symphoricarpos albus*	30	X	FACU
4 *Crataegus monogyna*	15	X	FAC
5 *Rosa sp.*	15	X	(FAC)
	80	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Rubus ursinus*	10		FACU
2 *Carex obnupta*	80	X	OBL
3			
4			
5			
6			
7			
8			
	90	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

X 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL PHS # 5481 Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	99	10YR 3/4	1	C	M	Silt Loam	Fine
4-6	10YR 3/2	96	10YR 3/4	4	C	M	Silt Loam	Fine
6-12	10YR 3/2	90	10YR 3/6	5	C	M	Silt Loam	Fine
			10YR 3/4	3	C	M		Fine
			7.5YR 2.5/3	2	C	M		Medium
12-16	10YR 3/2	85	10YR 3/6	10	C	M	Silt Loam	Medium
			7.5YR 2.5/3	5	C	M		Medium

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Fac-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): >16
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): >16

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 6

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.:) slope | Local relief (concave, convex, none): none | Slope (%): <1

Subregion (LRR): LRR A | Lat: 45.321112 | Long: -122.568728 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X	**Is Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes	X	No		
Wetland Hydrology Present?	Yes		No	X	

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)			
1 *Quercus garryana*	25	X	FACU
2 *Thuja plicata*	25	X	FAC
3 *Pseudotsuga menziesii*	25	X	FACU
4 *Salix scouleriana*	5		FAC
	80	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Gaultheria shallon*	50	X	FACU
2 *Corylus cornuta*	20	X	FACU
3 *Symphoricarpos albus*	5		FACU
4			
5			
	75	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Polystichum munitum*	20	X	FACU
2			
3			
4			
5			
6			
7			
8			
	20	= Total Cover	
Woody Vine Stratum (plot size:)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 17% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL PHS # 5481 Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/2	100					Silt Loam	
4-16	10YR 3/2	85	10YR 3/4	15	C	M	Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Fac-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): >16
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): >16

Wetland Hydrology Present? Yes ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators observed

PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 7

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.): slope | Local relief (concave, convex, none): none | Slope (%): 1

Subregion (LRR): LRR A | Lat: 45.32012 | Long: -122.568792 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is Sampled Area within a Wetland? Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

		absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: 30)				
1	*Pseudotsuga menziesii*	50	X	FACU
2	*Salix scouleriana*	20	X	FAC
3				
4				
		70	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)				
1	*Amelanchier alnifolia*	30	X	FACU
2	*Corylus cornuta*	30	X	FACU
3	*Gaultheria shallon*	20	X	FACU
4	*Rosa sp.*	2		(FAC)
5	*Symphoricarpos albus*	5		FACU
		87	= Total Cover	
Herb Stratum (plot size: 5)				
1	*Carex leptopoda*	5	X	FAC
2				
3				
4				
5				
6				
7				
8				
		5	= Total Cover	
Woody Vine Stratum (plot size: 5)				
1	*Rubus ursinus*	15	X	FACU
2				
		15	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 29% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL PHS # 5481 Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3/2	100					Silt Loam	
4-18	7.5YR 3/3	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10)
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

Hydric Soil Present? Yes ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Surface Soil Cracks (B6)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ____ Salt Crust (B11)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soils (C6)
- ____ Stunted or Stressed Plants (D1) **(LRR A)**
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ____ Drainage Patterns (B10)
- ____ Dry-Season Water Table (C2)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Fac-Neutral Test (D5)
- ____ Raised Ant Mounds (D6) **(LRR A)**
- ____ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	____	No X	Depth (inches):	____
Water Table Present?	Yes	____	No X	Depth (inches):	>18
Saturation Present? (includes capillary fringe)	Yes	____	No X	Depth (inches):	>18

Wetland Hydrology Present?

Yes ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PHS # 5481

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys, and Coast Region

Project/Site: Oregon City High School | City/County: Oregon City/Clackamas | Sampling Date: 9/10/2014

Applicant/Owner: Oregon City School District | State: OR | Sampling Point: 8

Investigator(s): TF/CET | Section, Township, Range: S9D T3S R2E

Landform (hillslope, terrace, etc.): Slope | Local relief (concave, convex, none): None | Slope (%): 1

Subregion (LRR): LRR A | Lat: 45.319085 | Long: -122.568236 | Datum:

Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI Classification: upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No ____ (if no, explain in Remarks)

Are vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? (Y/N) Y

Are vegetation ____ Soil ____ or Hydrology ____ naturally problematic? If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	X
Hydric Soil Present?	Yes		No	X
Wetland Hydrology Present?	Yes		No	X

Is Sampled Area within a Wetland? Yes ____ No X

Remarks:

VEGETATION - Use scientific names of plants.

	absolute % cover	Dominant Species?	Indicator Status
Tree Stratum (plot size: ____)			
1			
2			
3			
4			
	0	= Total Cover	
Sapling/Shrub Stratum (plot size: 5)			
1 *Crataegus monogyna*	5	X	FAC
2			
3			
4			
5			
	5	= Total Cover	
Herb Stratum (plot size: 5)			
1 *Pteridium aquilinum*	35	X	FACU
2 *Dactylis glomerata*	20	X	FACU
3 *Anthoxanthum odoratum*	20	X	FACU
4 *Hypericum perforatum*	5		FACU
5 *Leucanthemum vulgare*	10		FACU
6 *Festuca arundinacea*	10		FAC
7			
8			
	100	= Total Cover	
Woody Vine Stratum (plot size: ____)			
1			
2			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index Worksheet:

Total % Cover of		Multiply by:	
OBL Species		x 1 =	0
FACW species		x 2 =	0
FAC Species		x 3 =	0
FACU Species		x 4 =	0
UPL Species		x 5 =	0
Column Totals	0 (A)		0 (B)

Prevalence Index =B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

____ 2- Dominance Test is >50%

____ 3-Prevalence Index is ≤ 3.0[1]

____ 4-Morphological Adaptations[1] (provide supporting data in Remarks or on a separate sheet)

____ 5- Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL PHS # 5481 Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(Inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ____ Histosol (A1)
- ____ Histic Epipedon (A2)
- ____ Black Histic (A3)
- ____ Hydrogen Sulfide (A4)
- ____ Depleted Below Dark Surface (A11)
- ____ Thick Dark Surface (A12)
- ____ Sandy Mucky Mineral (S1)
- ____ Sandy Gleyed Matrix (S4)
- ____ Sandy Redox (S5)
- ____ Stripped Matrix (S6)
- ____ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ____ Loamy Gleyed Matrix (F2)
- ____ Depleted Matrix (F3)
- ____ Redox Dark Surface (F6)
- ____ Depleted Dark Surface (F7)
- ____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ____ 2 cm Muck (A10)
- ____ Red Parent Material (TF2)
- ____ Very Shallow Dark Surface (TF12)
- ____ Other (explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ____

Depth (inches): ____

Hydric Soil Present? Yes ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Surface Soil Cracks (B6)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Water stained Leaves (B9) **(Except MLRA 1, 2, 4A, and 4B)**
- ____ Salt Crust (B11)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Plowed Soils (C6)
- ____ Stunted or Stressed Plants (D1) **(LRR A)**
- ____ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ____ Water stained Leaves (B9) **(MLRA1, 2, 4A, and 4B)**
- ____ Drainage Patterns (B10)
- ____ Dry-Season Water Table (C2)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Fac-Neutral Test (D5)
- ____ Raised Ant Mounds (D6) **(LRR A)**
- ____ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	____	No X	Depth (inches):	____
Water Table Present?	Yes	____	No X	Depth (inches):	>16
Saturation Present? (includes capillary fringe)	Yes	____	No X	Depth (inches):	>16

Wetland Hydrology Present?

Yes ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix C

Site Photos





Photo A:

Looking southwest at Wetland A and Data Point 1.

Photo B:

Looking northwest at Data Point 2.



Project # 5481
10/2/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation Oregon City School District Property, Oregon City, Oregon
Both photo points taken on September 10, 2014.



Photo C:

Looking northwest at the Wetland A boundary and Data Point 3.

Photo D:

Looking northwest at Data Point 4.



Project # 5481
10/214

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation Oregon City School District Property, Oregon City, Oregon
Both photo points taken on September 10, 2014.



Photo E:

Looking north at Wetland A and Data Point 5.

Photo F:

Looking south at Data Point 6.



Project # 5481
10/2/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation Oregon City School District Property, Oregon City, Oregon
Both photo points taken on September 10, 2014.



Photo G:

Looking west at Data Point 7.

Photo H:

Looking south at Data Point 8.



Project # 5481
10/2/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation Oregon City School District Property, Oregon City, Oregon
Both photo points taken on September 10, 2014.

Appendix D

Wetland Definitions and Methodology and References



WATERS OF THE STATE AND WETLAND DEFINITION AND CRITERIA

Regulatory Jurisdiction

Wetlands and water resources in Oregon are regulated by the Oregon Department of State Lands (DSL) under the Removal-Fill Law (ORS 196.800-196.990) and by the U.S. Army Corps of Engineers (COE) through Section 404 of the Clean Water Act.

The primary source documents for wetland delineations within Oregon is the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (U.S. Army Corps of Engineers, 2010), which are required by both DSL and COE.

Waters of This State and Wetland Definition

Waters of This State are defined as "all natural waterways, tidal and non-tidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, that portion of the Pacific Ocean that is in the boundaries of this state, all other navigable and nonnavigable bodies of water in this state and those portions of the ocean shore ..." (DSL, 2009).

Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (DSL 2009).

Wetland Criteria

Based on the above definition, three major factors characterize a wetland: hydrology, substrate, and biota.

Wetland Hydrology

Wetland hydrology is related to duration of saturation, frequency of saturation, and critical depth of saturation. The 1987 manual defines wetland hydrology as inundation or saturation within a major portion of the root zone (usually above 12 inches), typically for at least 12.5% of the growing season. The wetland hydrology criterion can be met, however, if saturation within the major portion of the root zone is present for only 5% of the growing season, depending on other evidence.

The growing season is defined as the portion of the year when soil temperatures at 12.0 inches below the soil surface are higher than biological zero (41 degrees Fahrenheit, 5 degrees Celsius), but also allows approximation from frost free days, based on air temperature. The growing season for any given site or location is determined from US Natural Resources Conservation Service, (formerly Soil Conservation Service) data and information.

Wetland hydrologic indicators include the following: visual observation of inundation or saturation, watermarks, drift lines, sediment deposits, and/or oxidized rhizospheres with living roots. Oxidized rhizospheres are defined as yellowish-red zones around the roots and rhizomes of some plants that grow in frequently saturated soils. Other indicators of hydrology, including algal mats or crust, iron deposits, surface soil cracks, sparsely vegetated concave surface, salt crust, aquatic invertebrates, hydrogen sulfide odor, reduced iron, iron reduction in tilled soils, and stunted or stressed plants can also be used to determine the presence of wetland hydrology.

Wetland Substrate (Soils)

Most wetlands are characterized by hydric soils. Hydric soils are those that are ponded, flooded, or saturated for long enough during the growing season to develop anaerobic conditions. Periodic saturation of soils causes alternation of reduced and oxidized conditions, which leads to the formation of redoximorphic features (gleying and mottling). Mineral hydric soils will be either gleyed or will have bright mottles and/or low matrix chroma. The redoximorphic feature known as gley is a result of greatly reduced soil conditions, which result in a characteristic grayish, bluish or greenish soil color. The term mottling is used to describe areas of contrasting color within a soil matrix. The soil matrix is the portion of the soil layer that has the predominant color. Soils that have brightly colored mottles and a low matrix chroma are indicative of a fluctuating water table.

Hydric soil indicators include: organic content of greater than 50% by volume, and/or presence of redoximorphic features and dark soil matrix, as determined by the use of a Munsell Soil Color Chart. This chart establishes the chroma, value and hue of soils based on comparison with color chips. Mineral hydric soil must meet one of the 16 definitions for hydric soil indicators, or be classified as a "problem soil" in the Interim Regional Supplement.

Wetland Biota (Vegetation)

Wetland biota is defined as hydrophytic vegetation. A hydrophyte is a plant species that is capable of growing in substrates that are periodically deficient in oxygen as a result of saturated soil conditions. The U.S. Fish and Wildlife Service, in the *National List of Plant Species that Occur in Wetlands*, has established five basic groups of vegetation based on their frequency of occurrence in wetlands. These categories, referred to as the "wetland indicator status", are as follows: obligate wetland plants (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and obligate upland (UPL). Table 1 gives a definition of the plant indicator codes.

Table 1. Description of Wetland Plant Indicator Status Codes

Indicator Code	Status
OBL	Obligate wetland. Estimated to occur almost exclusively in wetlands (>99%)
FACW	Facultative wetland. Estimated to occur 67-99% of the time in wetlands.
FAC	Facultative. Occur equally in wetlands and non-wetlands (34-66%).
FACU	Facultative upland. Usually occur in non-wetlands (67-99%).
UPL	Obligate upland. Estimated to occur almost exclusively in non-wetlands (>99%). If a species is not assigned to one of the four groups described above it is assumed to be obligate upland.
NI	Has not yet received a wetland indicator status, but is probably not obligate upland.

Observations of hydrology, soils, and vegetation, were made using the "Routine On-site" delineation method as defined in the 1987 manual and the Interim Regional Supplement for areas that were not currently in agricultural production. One-foot diameter soil pits were excavated to 20 inches and soil profiles were examined for hydric soil and wetland hydrology field indicators. In addition, a visual absolute-cover estimate of the dominant species of the plant community was performed using soil pit locations as a center of reference. Dominant plant species are based on estimates of absolute cover for herbaceous, and shrub species within a 5 foot radius of the sample point, and basal area cover for tree and woody vine species within a 30 foot radius of the sample point. Plant species in each vegetative layer, which are estimated at less than 20% of the total cover, are not considered to be dominant. The wetland indicator status is then used to determine if there is an overall dominance (greater than 50%) of wetland or upland plant species. If less than 50% of the dominant species are hydrophytic, then the prevalence index may be used to determine if the subdominant species are hydrophytic. If the prevalence index is less than or equal to 3, hydrophytic vegetation criterion is met.

During data collection, the soil profiles were examined for hydric soil and wetland hydrology field indicators. Plant species and cover were recorded. Data was recorded on standard data sheets which contain the information specified in the 1987 Corps Manual and the Interim Regional Supplement.

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

This form must be included with any wetland delineation report submitted to the Department of State Lands for review and approval. A wetland delineation report submittal is not "complete" unless the fully completed and signed report cover form and the required fee are submitted. Attach this form to the front of an unbound report or include a hard copy of the completed form with a CD/DVD that includes a single PDF file of the report cover form and report (minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.** A single PDF attachment of the completed cover from and report may be e-mailed to **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail instructions on how to access the file from your ftp or other file sharing website. Fees can be paid by check or credit card. Make the check payable to the Oregon Department of State Lands. To pay the fee by credit card, call 503-986-5200.

☒ Applicant ☐ Owner Name, Firm and Address: **BBL Architects** **Attn: Ronald R. Lee** **200 North State Street** **Lake Oswego, OR 97034**	Business phone # **503-635-4425** Mobile phone # (optional) E-mail: **ron@bblarchitects.com**
☐ Authorized Legal Agent, Name and Address:	Business phone # Mobile phone # E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: _____ Signature: _____

Date: Special instructions regarding site access:

Project and Site Information (using decimal degree format for lat/long.,enter centroid of site or start & end points of linear project)

Project Name: **OCHS Transportation Facility**	Latitude: **45.320357** Longitude: **-122.568612**
Proposed Use: **Oregon City High School transportation maintenance facility.**	Tax Map **3 South, 2 East, Section 9D, tax lot 1400**
Project Street Address (or other descriptive location): **High School Ave, northwest of intersection with Meyers Road** City: **Oregon City** County: **Clackamas**	Township **3 S** Range **2 E** Section **9D** QQ Tax Lot(s) **1400** Waterway: **N/A** River Mile: **N/A** NWI Quad(s): **Oregon City**

Wetland Delineation Information

Wetland Consultant Name, Firm and Address: **Pacific Habitat Services** **Attn: Tina Farrelly** **9450 SW Commerce Circle, Suite 180** **Wilsonville, OR 97070**	Phone # **503-.570-0800** Mobile phone # E-mail: **tf@pacifichabitat.com**

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: Date:

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No | Study Area size: **11 acres** Total Wetland Acreage: **1.03 acres**

Check Box Below if Applicable:	**Fees:**
☐ R-F permit application submitted	☒ Fee payment submitted **$ 396**
☐ Mitigation bank site	☐ Fee ($100) for resubmittal of rejected report
☐ Wetland restoration/enhancement project (not mitigation)	☐ No fee for request for reissuance of an expired report
☐ Industrial Land Certification Program Site	
☐ Reissuance of a recently expired delineation Previous DSL # Expiration date _____	

Other Information:	Y	N	
Has previous delineation/application been made on parcel?	☐	☒	If known, previous DSL #
Does LWI, if any, show wetland or waters on parcel?	☒	☐	

For Office Use Only

DSL Reviewer: _____ Fee Paid Date: ____ / ____ / ____ DSL WD # _____

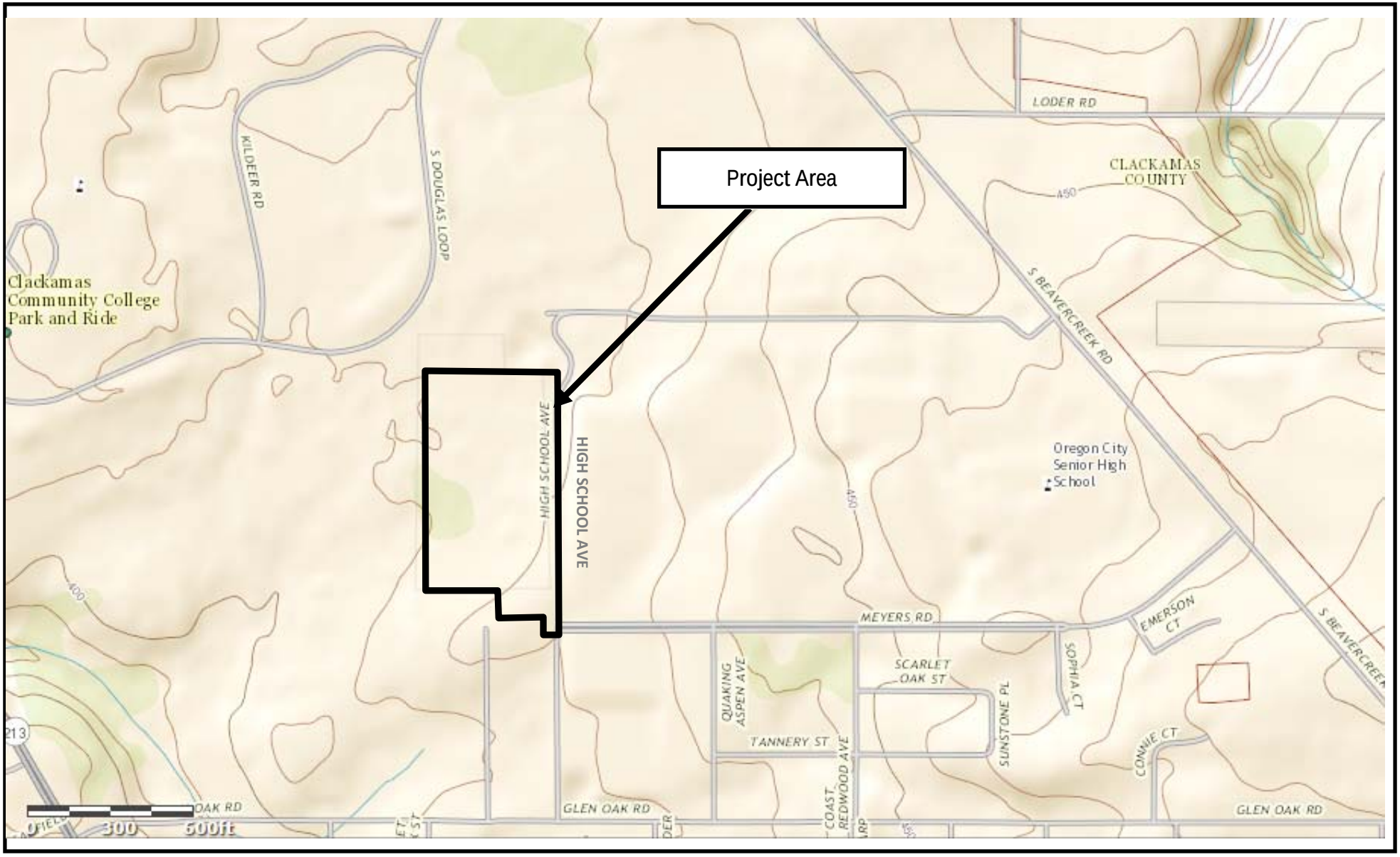
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Scanned: ☐ Final Scan: ☐ DSL WN # _____ DSL App. # _____

Appendix A

Figures



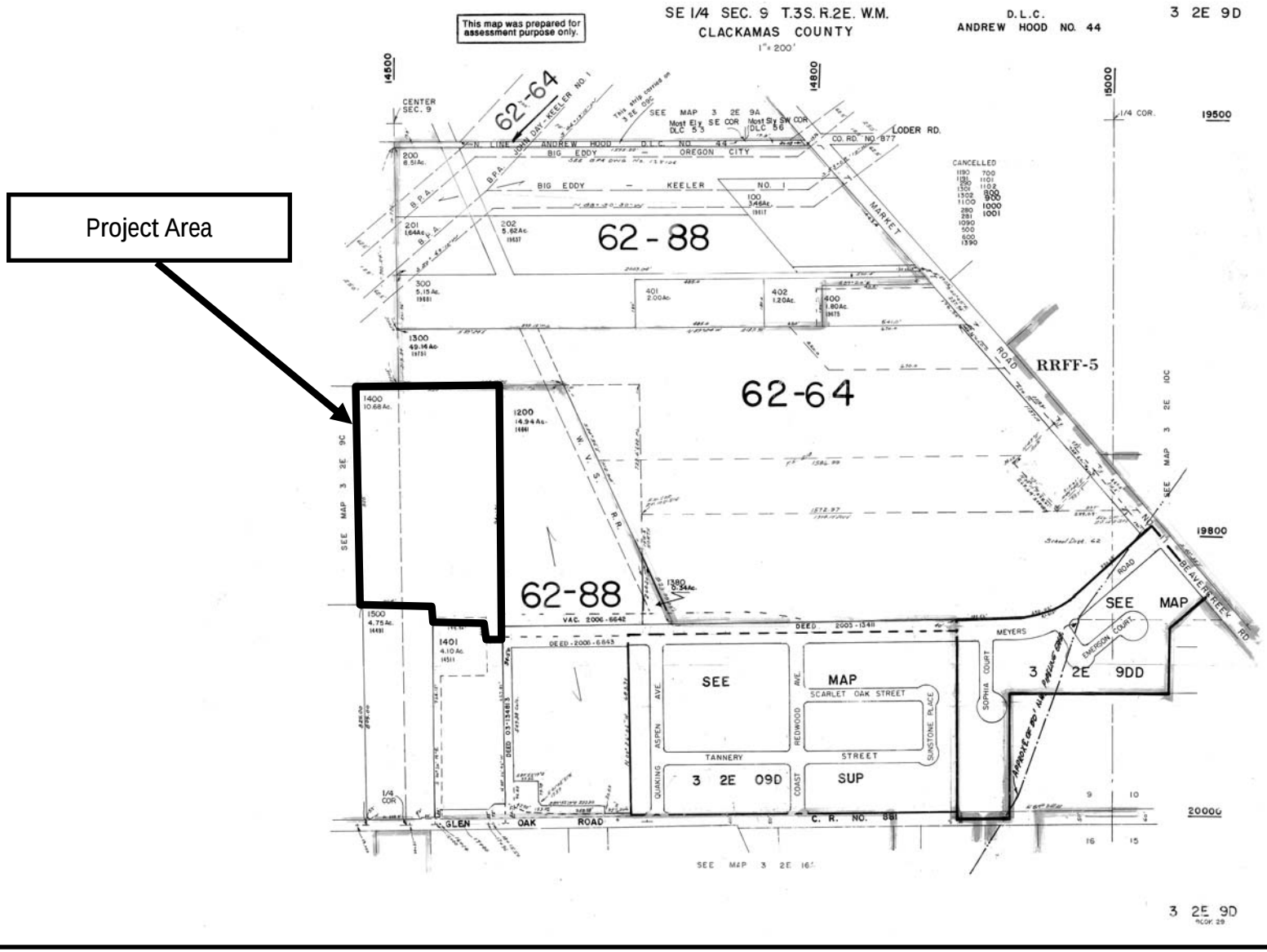


5481
9/26/14

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Wilsonville, OR 97070

Location and General topography
Oregon City High School, Oregon City, Oregon
(USGS The National Map Viewer, Oregon City, Oregon quadrangle, 2014)

FIGURE
1

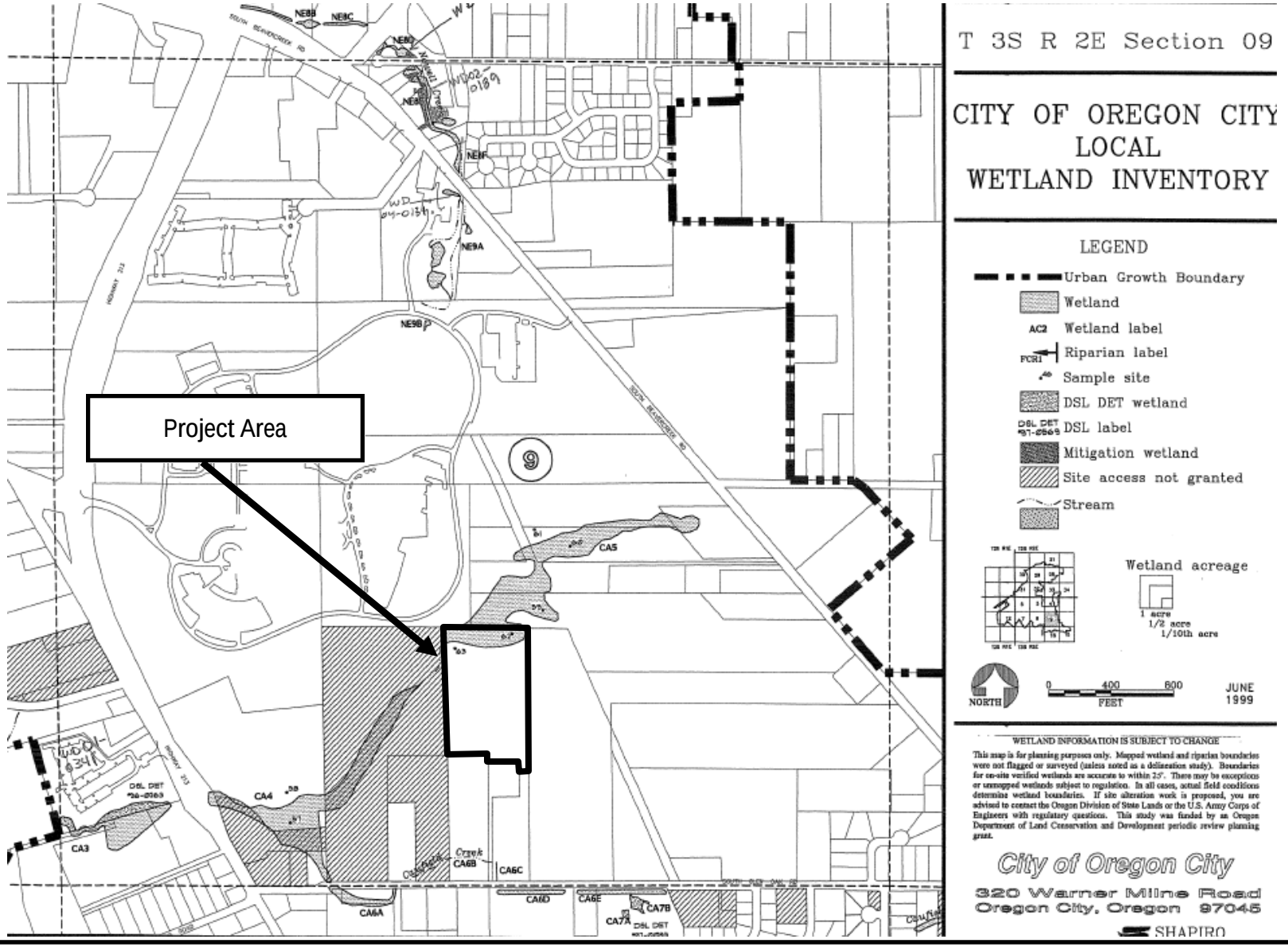


5481
9/26/14

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Wilsonville, OR 97070

Tax Lot map 3 2E 9D, lot 1400, Clackamas County Oregon
Oregon City High School, Oregon City, Oregon
(ormap.net, 2014)

FIGURE
2

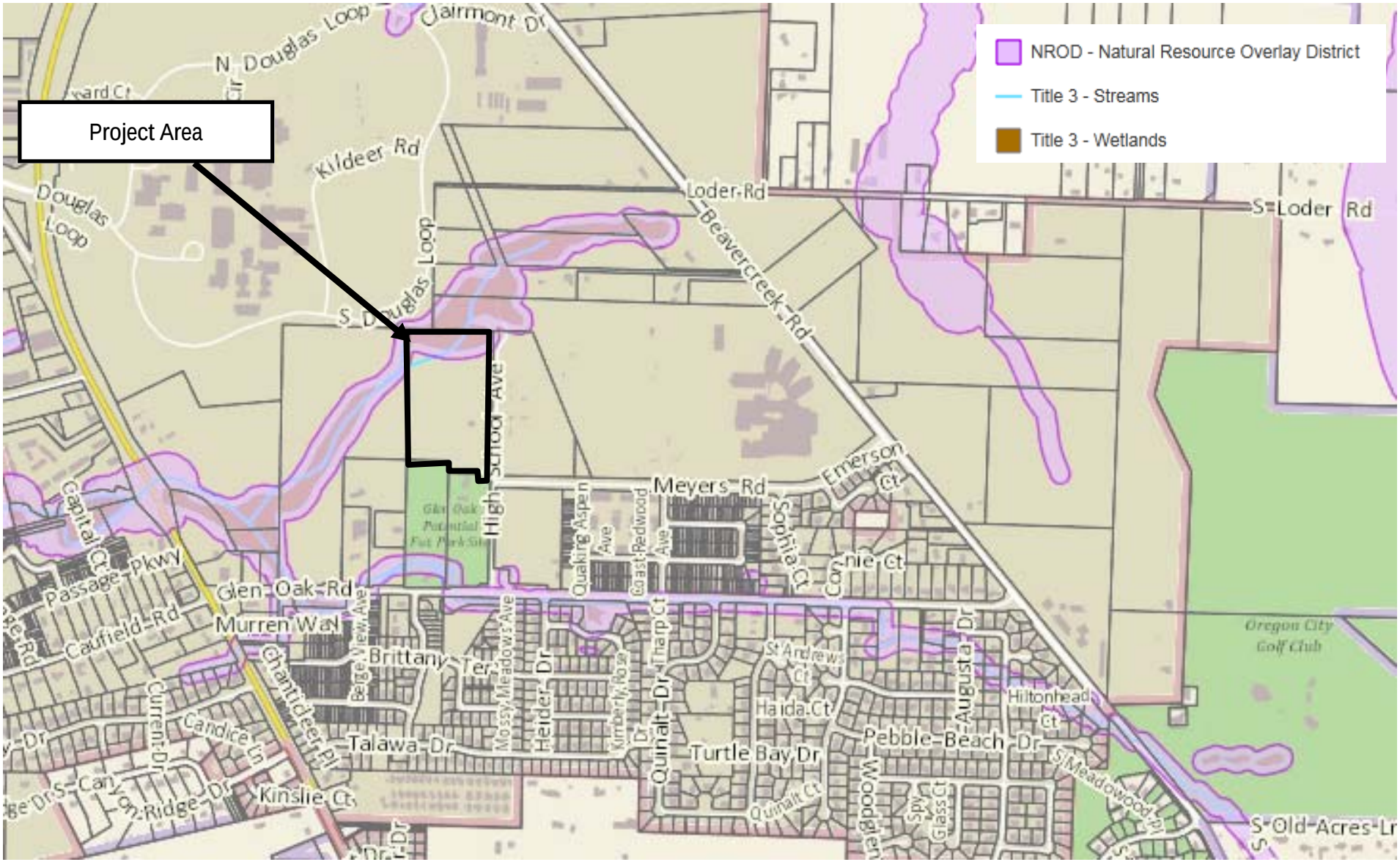


5481
9/26/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Local Wetlands Inventory map
Oregon City High School, Oregon City, Oregon
(Shapiro and Associates, Inc., 9/1/1999)

FIGURE
3A

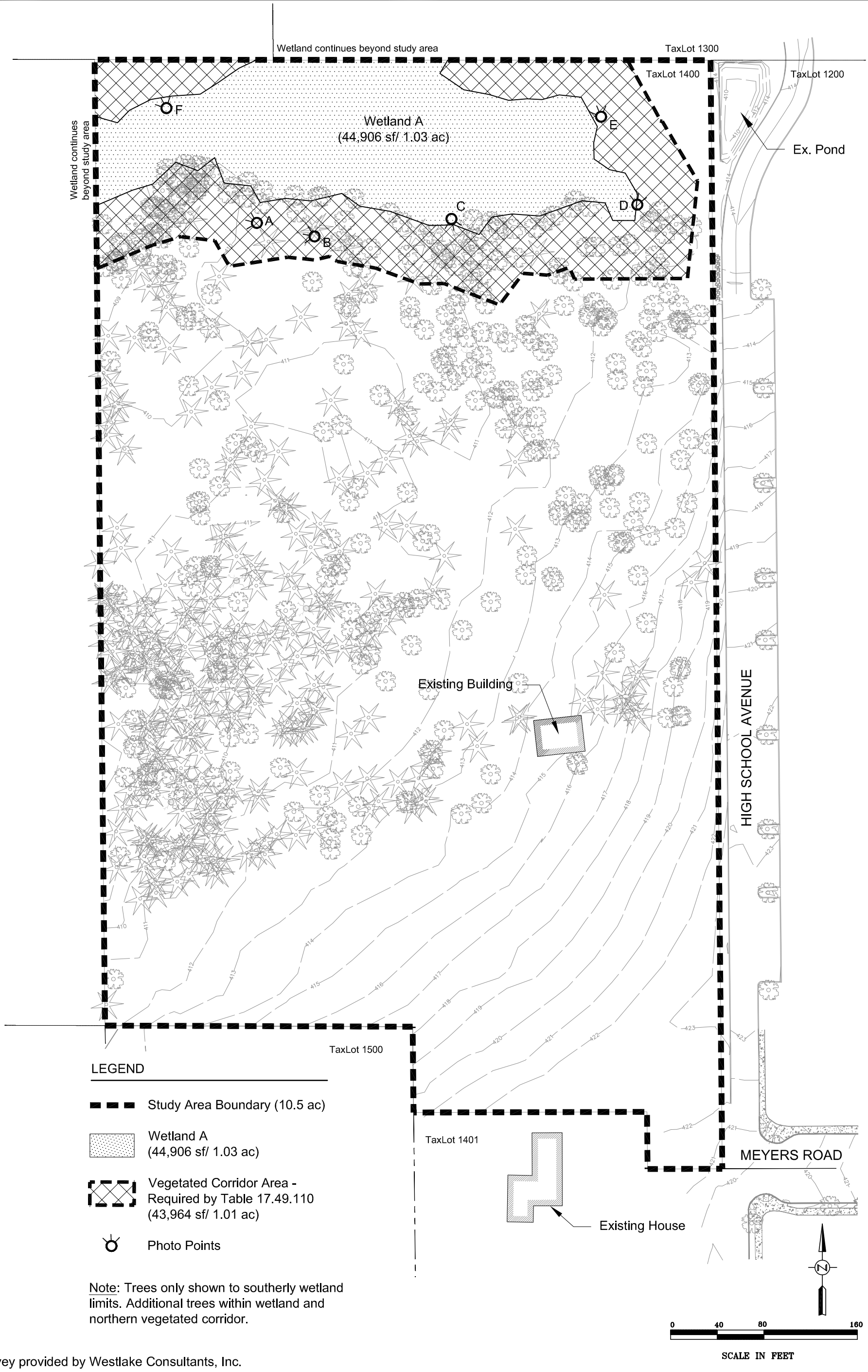


5481
2/16/15

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Wilsonville, OR 97070

Natural Resources Overlay District map
Oregon City High School, Oregon City, Oregon
(Oregon City Web Maps, 2015)

FIGURE
3B



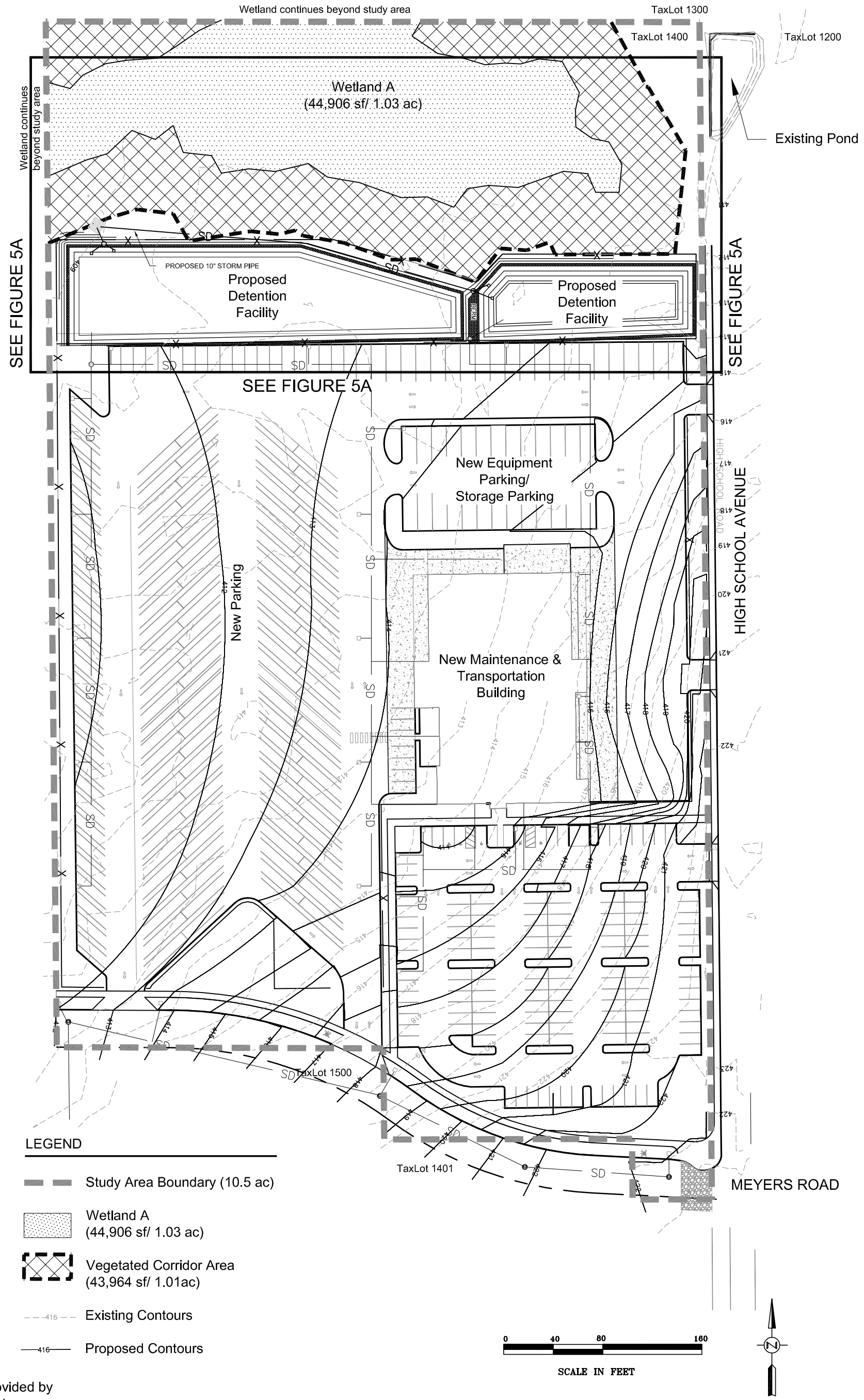
Survey provided by Westlake Consultants, Inc.

PHS
Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Existing Conditions
Natural Resource Overlay District Report
Oregon City High School - Oregon City, OR

FIGURE
4

02-17-15



Site Plan provided by BBL Architects.

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Site Plan Overview / Sheet Index

Natural Resource Overlay District Report

Oregon City High School - Oregon City, OR

FIGURE 5

02-17-15

X:\Project Directories\5400\5481 Oregon City HS\AutoCAD\PlotDwgs\OCSD Figs\Fig5 Site Plan-OV.dwg, 2/19/2015 12:29:43 PM, CutePDF Writer

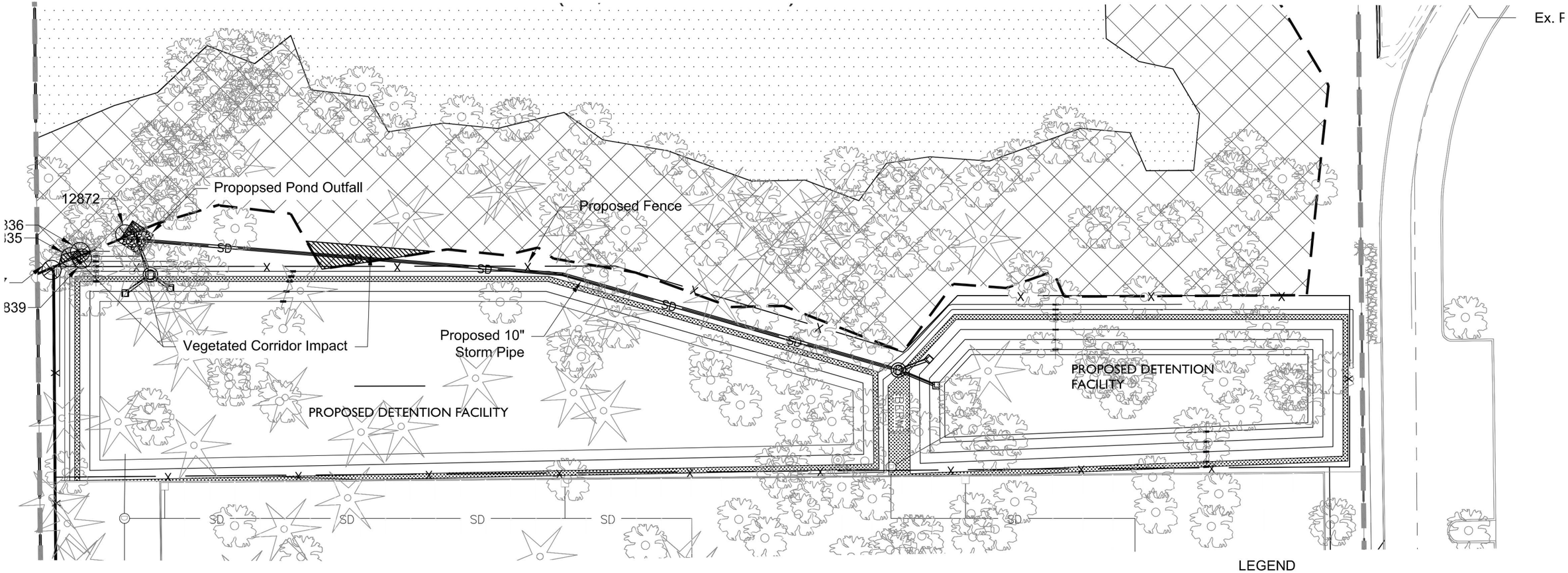
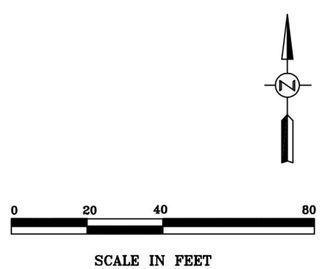


Table 1: Quality and diameter of trees to be removed from the NROD and required mitigation plantings.

Tree ID	Tree Quality	Tree Diameter[a]	Replacement Trees	Replacement Shrubs
12835	Moderate	12, 12	2, 2	3, 3
12836	Moderate	14	3	6
12837	Poor	10	N/A	N/A
12839	Moderate	20	5	12
12872	Moderate	10, 6	2, 2	3, 3
			Total = 16	**Total = 30**

[a]When more than one tree diameter is referenced, it is indicative of a multi-trunked tree. The diameters of all major leads are listed if greater than 6 inches each.



LEGEND

- Study Area Boundary (10.5 ac)
- Wetland A (44,906 sf/ 1.03 ac)
- Vegetated Corridor Area (43,964 sf/ 1.01ac)
- Trees to be removed
- Vegetated Corridor Impact (325 sf/ 0.007 ac)
- Proposed Fence

Site Plan provided by BBL Architects

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax: (503) 570-0855

Site Plan
Natural Resource Overlay District Report
Oregon City High School - Oregon City, OR

FIGURE 5A

02-18-15

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Wetland continues beyond study area

TaxLot 1300

TaxLot 1400

Wetland A
(44,906 sf/ 1.03 ac)

(3) FRLA
(2) THPL

(2) FRLA
(3) QUGA

(2) THPL
(1) QUGA

(3) FRLA

PROPOSED DETENTION FACILITY

PROPOSED DETENTION FACILITY

LEGEND

- Study Area Boundary (10.5 ac)
- Wetland A (44,906 sf/ 1.03 ac)
- 50' Vegetated Corridor Planting
- Existing Trees

NOTE:
See Figure 6A for
Mitigation Planting Schedule

0 20 40 80

SCALE IN FEET

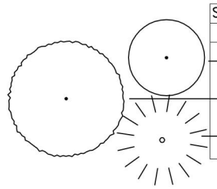
Plan provided by Walker Macy

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Mitigation Planting Plan
Natural Resource Overlay District Report
Oregon City High School - Oregon City, OR

FIGURE
6

02-19-15



PLANT SCHEDULE

SYMBOL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QUANTITY
		TREES				
	FRLA	FRAXINUS LATIFOLIA	OREGON ASH	2" CAL.	AS SHOWN	8
	QUGA	QUERCUS GARRYANA	OREGON WHITE OAK	2" CAL.	AS SHOWN	4
	THPL	THUJA PLICATA	WESTERN RED CEDAR	6–8FT.	AS SHOWN	4

SHRUBS: (Minimum of 30 plantings)
The owner's representative will approve individual plant material and location of plant material prior to installation.

Symbol	Botanical Name	Common Name	Minimum Size	Spacing
	Amelanchier alnifolia	Service-berry	1 gallon	4-5' O.C. individual, 8-10' O.C. clustered
	Cornus alba	Red-osier dogwood	1 gallon	4-5' O.C. individual, 8-10' O.C. clustered
	Gaultheria shallon	Salal	1 gallon	4-5' O.C. individual, 8-10' O.C. clustered
	Rosa nutkana	Nootka rose	1 gallon	4-5' O.C. individual, 8-10' O.C. clustered
	Symphoricarpos albus	Snowberry	1 gallon	4-5' O.C. individual, 8-10' O.C. clustered

SEED MIX
Broadcast or hydroseed application to bare soil areas in early fall.

Botanical Name	Common Name	USFWS Rating	SEEDING RATES (lbs./ac. PLS*)
Bromus carinatus	California brome-grass	UPL	10
Bromus sitchensis	Alaska brome	UPL	10
Elymus glaucus	Blue wildrye	FACU	15
Elymus trachycaulus	Slender wildrye	FAC	15
Festuca subulata	Bearded fescue	FACU	10
		Total Seeding Rate = 60 lbs/ac	

*PLS = pure live seed; depends on assessed purity and germination rates.

Plant Schedule Provided by Walker Macy

Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax: (503) 570-0855

Mitigation Planting Schedule
Natural Resource Overlay District Report
Oregon City High School - Oregon City, OR

FIGURE 6A

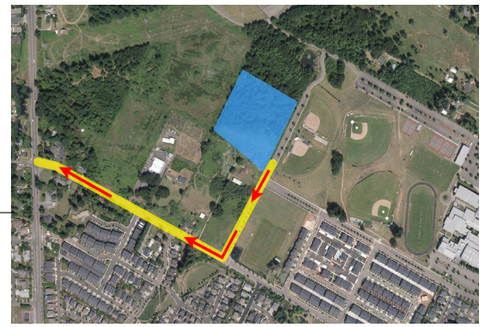
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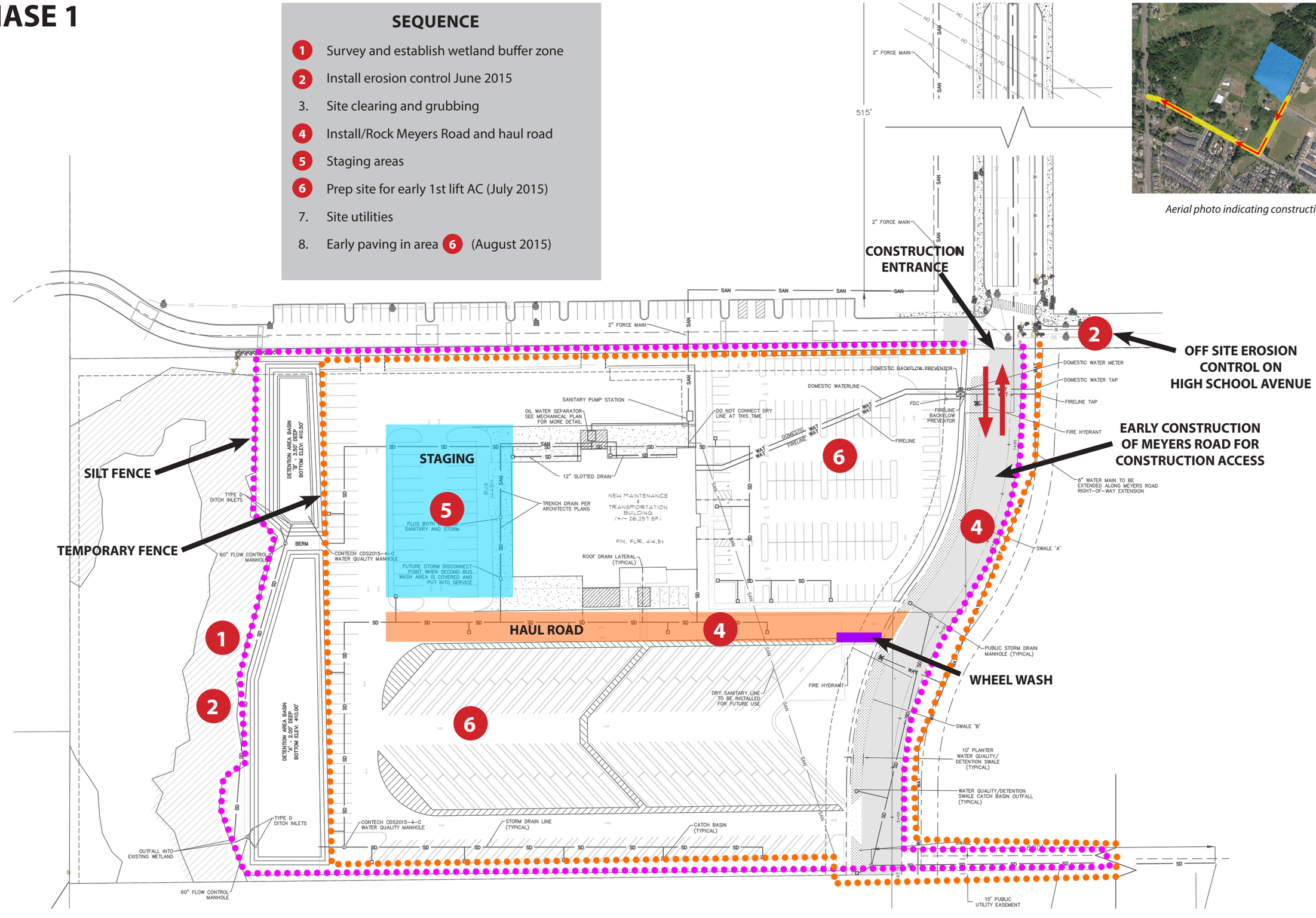
PHASE 1

SEQUENCE

1. Survey and establish wetland buffer zone
2. Install erosion control June 2015
3. Site clearing and grubbing
4. Install/Rock Meyers Road and haul road
5. Staging areas
6. Prep site for early 1st lift AC (July 2015)
7. Site utilities
8. Early paving in area 6 (August 2015)

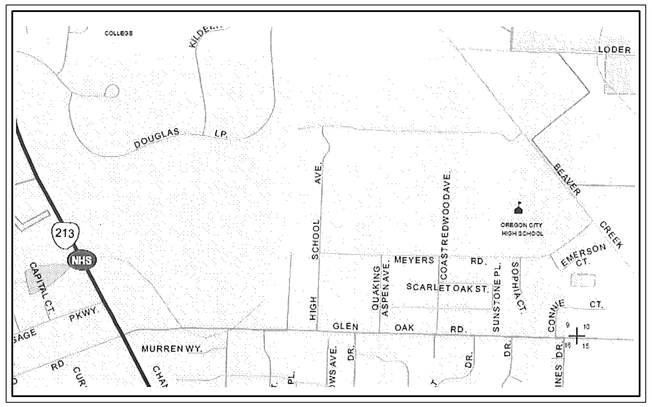


Aerial photo indicating construction traffic flow

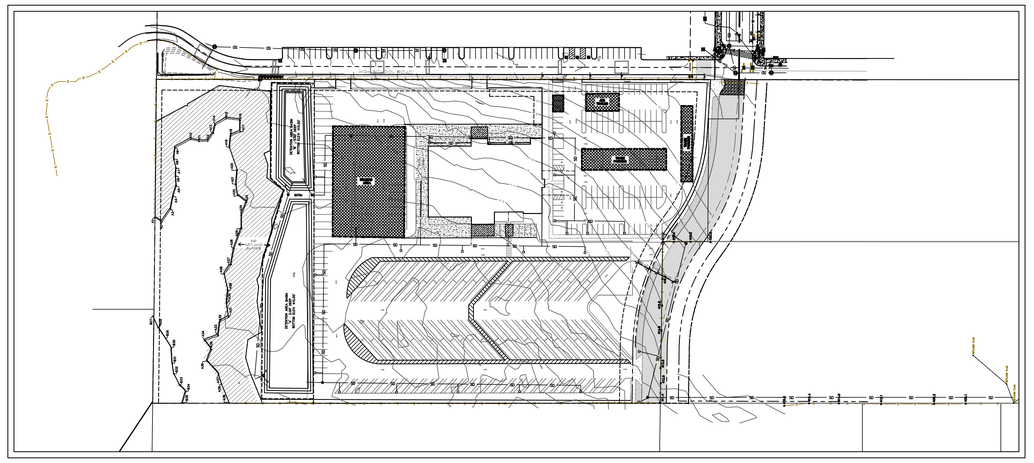


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EROSION AND SEDIMENT CONTROL PLANS



VICINITY MAP
NTS



SITE MAP
NTS

NARRATIVE DESCRIPTIONS

PROPERTY DESCRIPTION

SITE LOCATION:
LOCATED NORTHWESTERLY OF THE INTERSECTION OF MEYERS ROAD AND HIGH SCHOOL AVENUE IN OREGON CITY, OREGON
LATITUDE: 45.3202, LONGITUDE: -122.5686

LEGAL: MAP T3S-R2E-9D, TAX LOT 1400

EXISTING SITE CONDITIONS

THE SITE IS CURRENTLY UNDEVELOPED WITH ONE EXISTING SHED. THE PROPERTY ENCOMPASSES APPROXIMATELY 15 ACRES OR VACANT LAND. THE SOUTHERN PORTION OF THE SITE IS COVERED WITH GRASS, AND THE NORTHERN PORTION OF THE PROPERTY HAS HEAVY TREE COVER.

DEVELOPED CONDITIONS

THE SITE IS TO BE DEVELOPED INTO A NEW OREGON CITY SCHOOL DISTRICT TRANSPORTATION AND MAINTENANCE FACILITY THAT WILL REPLACE THE EXISTING ONE.

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

CLEAR AND GRUB OF THE SITE, REMOVE MARKED TREES, REGRADE THE SITE, CONSTRUCT TRANSPORTATION AND MAINTENANCE FACILITY, ALONG WITH PARKING AND LANDSCAPE AREAS, AND APPROPRIATE UTILITIES. CONSTRUCTION POSSIBLE FROM MARCH 2015 THROUGH SEPTEMBER 2015.

SITE SOIL CLASSIFICATION:

BORNSTEDT SILT LOAM (88):
BORNSTEDT SILT LOAM IS A MODERATELY WELL DRAINED SOIL. THIS SOIL IS FOUND ON HIGH TERRACES AND ROLLING UPLANDS IN ELEVATION RANGE 400-650 FEET.

FILL MATERIAL WILL BE FROM OFF-SITE.

SITE AREA:

TOTAL AREA (APPROXIMATE): 3.40 ACRES
TOTAL DISTURBED AREA (APPROXIMATE):3.10 ACRES

RECEIVING BODY OF WATER:

CAUFIELD CREEK

DEVELOPED BY:

OREGON CITY SCHOOL DISTRICT
CONTACT:
1417 12TH ST.
OREGON CITY, OR 97045
PHONE: 503-785-8000

ENGINEERING FIRM:

SISUL ENGINEERING
CONTACT: TOM SISUL
375 PORTLAND AVENUE
GLADSTONE, OR 97027
PHONE: (503) 657-0188

PERMITTEE'S ESC SITE INSPECTOR:

NAME:
COMPANY/AGENCY:
PHONE:
FAX:
EMAIL:
DESCRIPTION OF TRAINING:
DESCRIPTION OF EXPERIENCE:

INSPECTION FREQUENCY

Site condition	Minimum Frequency
1. Active Period	Daily when stormwater runoff, including runoff from snowmelt, is occurring. At least once every two weeks, regardless of whether or not runoff is occurring.
2. Prior to the site becoming inactive or in anticipation of site inaccessibility.	Once to ensure that erosion and sediment control measures are in working order. Any necessary maintenance and repair must be made prior to leaving the site.
3. Inactive periods greater than fourteen (14) calendar days.	Once every two (2) weeks.
4. Periods during which the site is inaccessible due to inclement weather.	If practical, inspections must occur daily at a relevant and accessible discharge point or downstream location.

BMP MATRIX

	YEAR:	2015									2016	
BMP's	MONTH:	3	4	5	6	7	8	9	10	11	12	1	2
Construction Entrance		X	X	X	X	X	X	X					
Sediment Fencing		X	X	X	X	X	X	X					
Storm Drain Inlet Protection		X	X	X	X	X	X	X	X	X	X	X	X
Concrete Truck Washout		X	X	X	X	X	X						
Permanent Landscaping								X	X	X			

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:

1. HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.I.(3))
2. ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION. (SCHEDULE B.2.A)
5. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A.8.A)
6. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS. (SCHEDULE A.8.C.II.(3)(C))
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT. (SCHEDULE A.12.C.III)
8. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A.8.C.II.(1)(D))
9. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SCHEDULE A.8.C.I.(1) & (2))
10. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.B.III(1) AND A.7.B.III(3))
11. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS. (SCHEDULE A.7.D.1 AND A.8.C)
12. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
13. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS. (SCHEDULE A.8.C.II.(2))
14. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.I.(7))
15. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SCHEDULE A.7.D.II.(1) AND A.8.C.II(4))
16. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II.(3))
17. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2))
18. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SCH A 7.E.III.)
19. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SCHEDULE A 7.B.II)
20. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.III)
21. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D)
22. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A 7.B)
23. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SCHEDULE A 7.E.II.(2))
24. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER. (SCHEDULE A.7.A.I)
25. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
26. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT. AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.II)
27. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.III & IV)
28. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.I)
29. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
30. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
31. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.II)
32. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS. (SCHEDULE A.7.B.III(2) AND A.8.C.III)

SEDIMENT FENCE:

1. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.
2. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS, WHERE FEASIBLE. THEN FENCE POSTS SHALL BE SPACED A MAXIMUM OF SIX FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 18 INCHES.
3. A TRENCH SHALL BE EXCAVATED, ROUGHLY 6 INCHES WIDE BY 6 INCHES DEEP, DOWNSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED. BURY THE BOTTOM OF THE FABRIC 6" VERTICALLY BELOW FINISHED GRADE. ALL AREAS OF FILTER FABRIC TRENCH SHALL BE COMPACTED.
4. THE FILTER FABRIC SHALL BE INSTALLED WITH STITCHED LOOPS OVER FENCE POSTS. THE FENCE POST SHALL BE CONSTRUCTED OF 2" X 2" FIR, PINE, OR STEEL. THE FENCE POST MUST BE A MINIMUM OF 48" LONG. THE FILTER FABRIC SHALL NOT BE STAPLED OR ATTACHED TO EXISTING TREES.
5. SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
6. SEDIMENT FENCES SHALL BE INSPECTED BY ESCP INSPECTOR BEFORE, DURING & AFTER EACH SIGNIFICANT RAINFALL, AND DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

ATTENTION EXCAVATORS: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

THE PERMITTEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200-C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200-C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200-C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ's GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP's WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

SHEET INDEX

EROSION AND SEDIMENT CONTROL PLANS

C6.1 EROSION & SEDIMENT CONTROL COVER SHEET
C6.2 EARLY CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN
C6.3 LATE CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN
C6.4 EROSION & SEDIMENT CONTROL DETAILS

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING: SGL14-070 ESCP-1.dwg

REGISTERED PROFESSIONAL ENGINEER 12,820 PREMININARY OREGON FEB 14, 1985 THOMAS J. SISUL
EXPIRES: 6/30/16

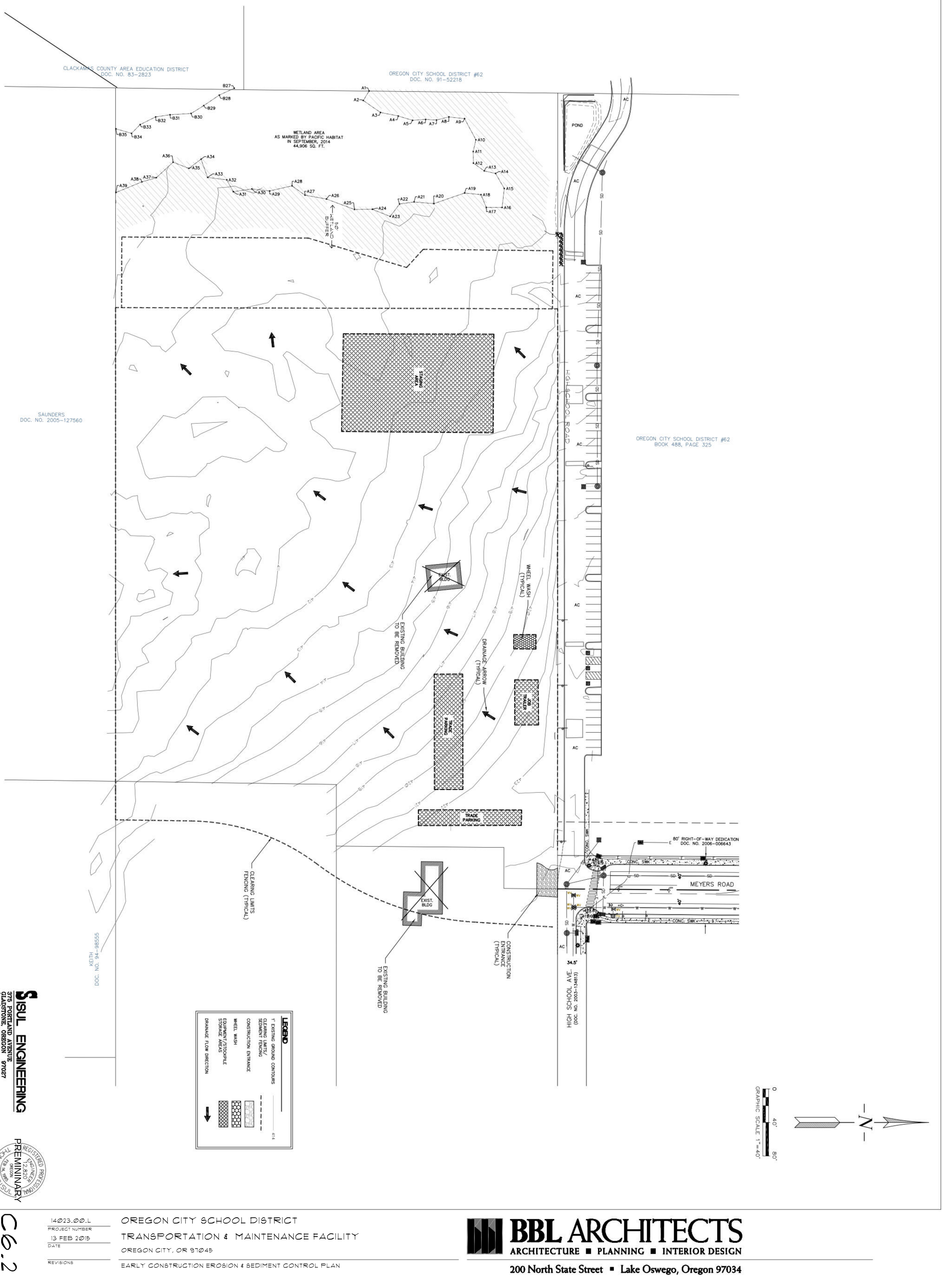
BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045
EROSION & SEDIMENT CONTROL COVER SHEET

14023.00L PROJECT NUMBER
13 FEB 2015 DATE
REVISIONS

C6.1
50% REVIEW SET

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SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING: SQL14-070 ESCP-2.dwg

REGISTERED PROFESSIONAL ENGINEER
12,820
OREGON
FEB. 14, 1985
THOMAS J. SISUL

PRELIMINARY

EXPIRES: 6/30/16

C6.2

50% REVIEW SET

14023.00.L
PROJECT NUMBER

13 FEB 2015
DATE

REVISIONS

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

EARLY CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

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CLACKAMAS COUNTY AREA EDUCATION DISTRICT
DOC. NO. 83-2823

OREGON CITY SCHOOL DISTRICT #62
DOC. NO. 91-52218

SAUNDERS
DOC. NO. 2005-127560

OREGON CITY SCHOOL DISTRICT #62
BOOK 488, PAGE 325

KEITH
DOC. NO. 94-98555

WETLAND AREA
AS MARKED BY PACIFIC HABITAT
IN SEPTEMBER, 2014
44,906 SQ. FT.

DETENTION AREA BASIN
'A' = 2.00' DEEP
BOTTOM ELEV: 410.00'

DETENTION AREA BASIN
'B' = 3.50' DEEP
BOTTOM ELEV: 410.50'

BERM

SEDIMENT FENCE (TYPICAL)

POND

STAGING AREA

BUS WASH

INLET PROTECTION (TYPICAL)

WHEEL WASH (TYPICAL)

FINISH GRADE CONTOURS (TYPICAL)

EXISTING GRADE CONTOURS (TYPICAL)

TRADE PARKING

JOB TRAILER

TRADE PARKING

CLEARING LIMITS FENCING (TYPICAL)

EXISTING BUILDING TO BE REMOVED

CONSTRUCTION ENTRANCE (TYPICAL)

80' RIGHT-OF-WAY DEDICATION
DOC. NO. 2006-006643

CONC. SWK

MEYERS ROAD

HIGH SCHOOL AVE.
(DOC. NO. 2003-134813)

HIGH SCHOOL ROAD

LEGEND

- 1' PROPOSED GROUND CONTOURS
- 1' EXISTING GROUND CONTOURS
- CLEARING LIMITS/ SEDIMENT FENCING
- CONSTRUCTION ENTRANCE
- WHEEL WASH
- EQUIPMENT/STOCKPILE STORAGE AREAS
- DRAINAGE FLOW DIRECTION
- BIOFILTER BAG INLET PROTECTION

GRAPHIC SCALE 1" = 40'

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING: SQL14-070 ESCP-364.dwg

REGISTERED PROFESSIONAL ENGINEER
12,820
OREGON
FEB. 14, 1985
THOMAS J. SISUL

PREMININARY

EXPIRES: 6/30/16

C6.3

50% REVIEW SET

14023.00.L
PROJECT NUMBER

13 FEB 2015
DATE

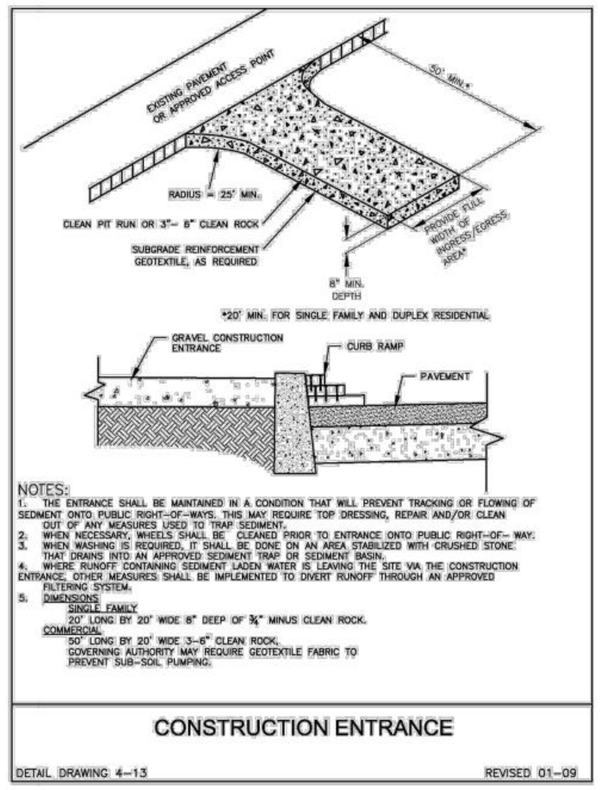
REVISIONS

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

LATE CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN

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200 North State Street ■ Lake Oswego, Oregon 97034

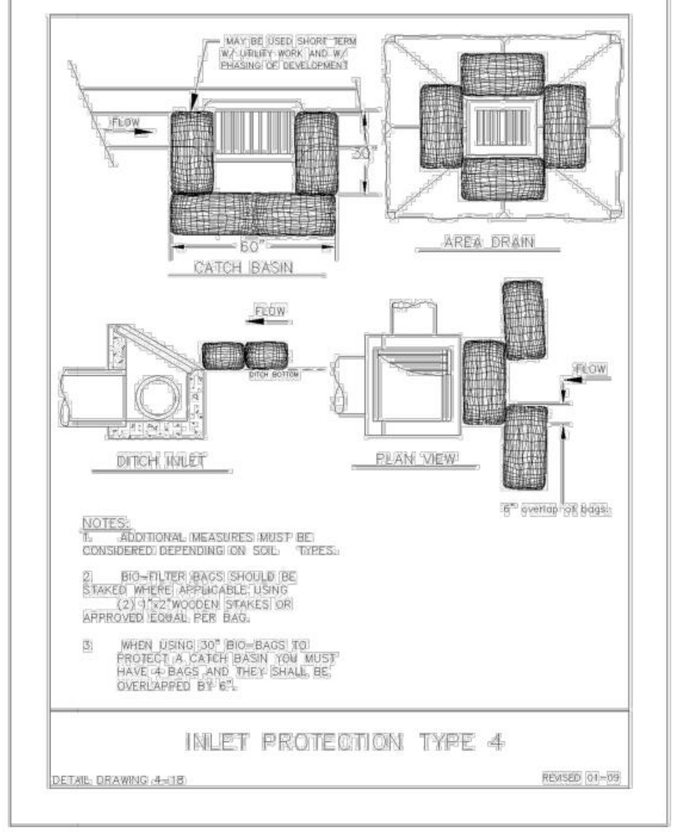
©COPYRIGHT BBL ARCHITECTS



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL
   50' LONG BY 20' WIDE 3–6" CLEAN ROCK.
   GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

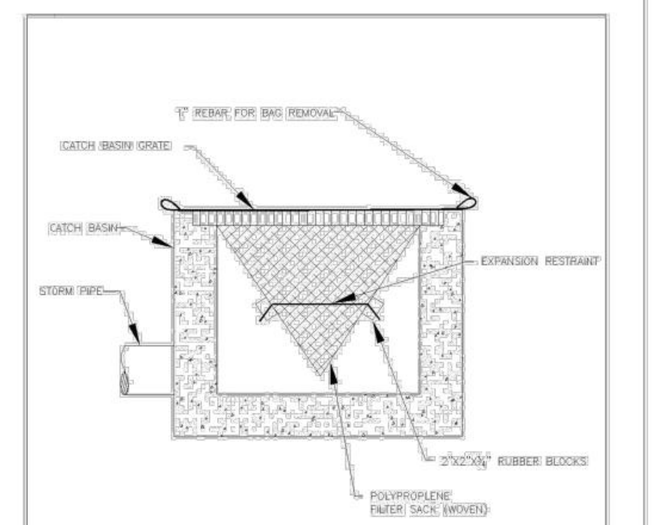
DETAIL DRAWING 4-13 REVISED 01-09



NOTES:
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"X2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

INLET PROTECTION TYPE 4

DETAIL DRAWING 4-18 REVISED 01-09

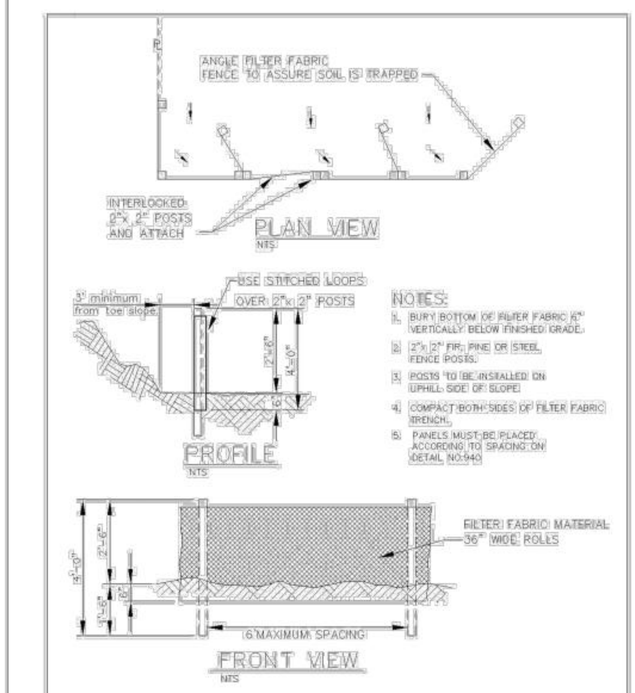


WOVEN POLYPROPLENE SACK

NOTE:
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

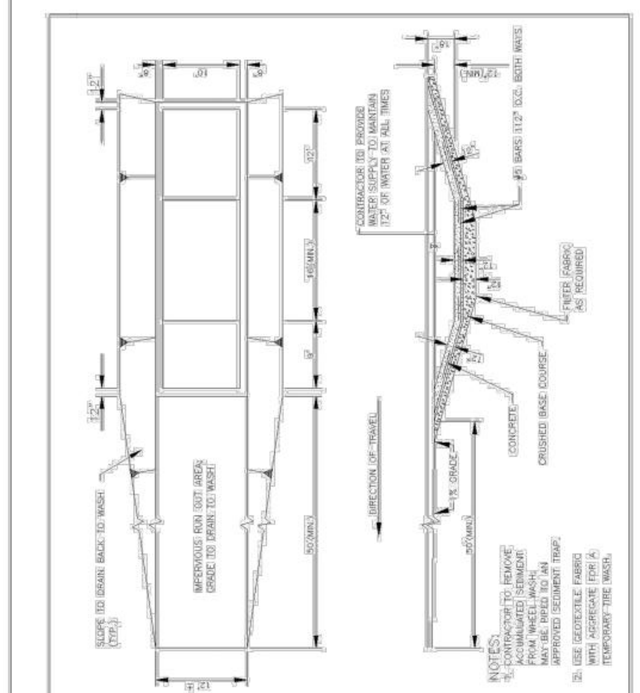
INLET PROTECTION TYPE 5

DETAIL DRAWING 4-19 REVISED 01-09



SEDIMENT FENCE

DETAIL DRAWING 4-23 REVISED 01-09



NOTES:

TIRE WASH

DETAIL DRAWING 4-26 REVISED 01-09

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION & MAINTENANCE FACILITY
OREGON CITY, OR 97045

EROSION & SEDIMENT CONTROL DETAILS

14023.00.L	PROJECT NUMBER
13 FEB 2015	DATE
	REVISIONS

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188
DRAWING SGL14-070 ESCP-3&4.dwg

REGISTERED PROFESSIONAL ENGINEER 12,820 PREMININARY OREGON FEB 14, 1985 THOMAS J. SISUL
EXPIRES: 6/30/16

C6.4

50% REVIEW SET

Appendix B

Wetland Delineation Concurrence Letters



Oregon
John A. Kitzhaber, MD, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregonstatelands.us

State Land Board

John A. Kitzhaber, MD
Governor

Kate Brown
Secretary of State

Ted Wheeler
State Treasurer

December 11, 2014

BBL Architects
Attn: Ronald R. Lee
200 North State St.
Lake Oswego, OR 97034

Re: WD #2014-0496 Wetland Delineation Report for OCHS Transportation Facility
Clackamas County; T3S R2E Sec. 9D, Tax Lot 1400
Oregon City Local Wetland Inventory CA-5

Dear Mr. Lee:

The Department of State Lands has reviewed the wetland delineation report prepared by Pacific Habitat Services for the site referenced above. Based upon the information presented in the report, we concur with the wetland boundary as mapped in Figure 6 of the report. Please replace all copies of the preliminary wetland map with this final Department-approved map. Within the study area, one wetland (totaling approximately 1.03 acres) was identified.

The wetland is subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in the wetland or below the ordinary high water line (OHWL) of a waterway (or the 2 year recurrence interval flood elevation if OHWL cannot be determined).

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will review the report and make a determination of jurisdiction for purposes of the Clean Water Act at the time that a permit application is submitted. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5246 if you have any questions.

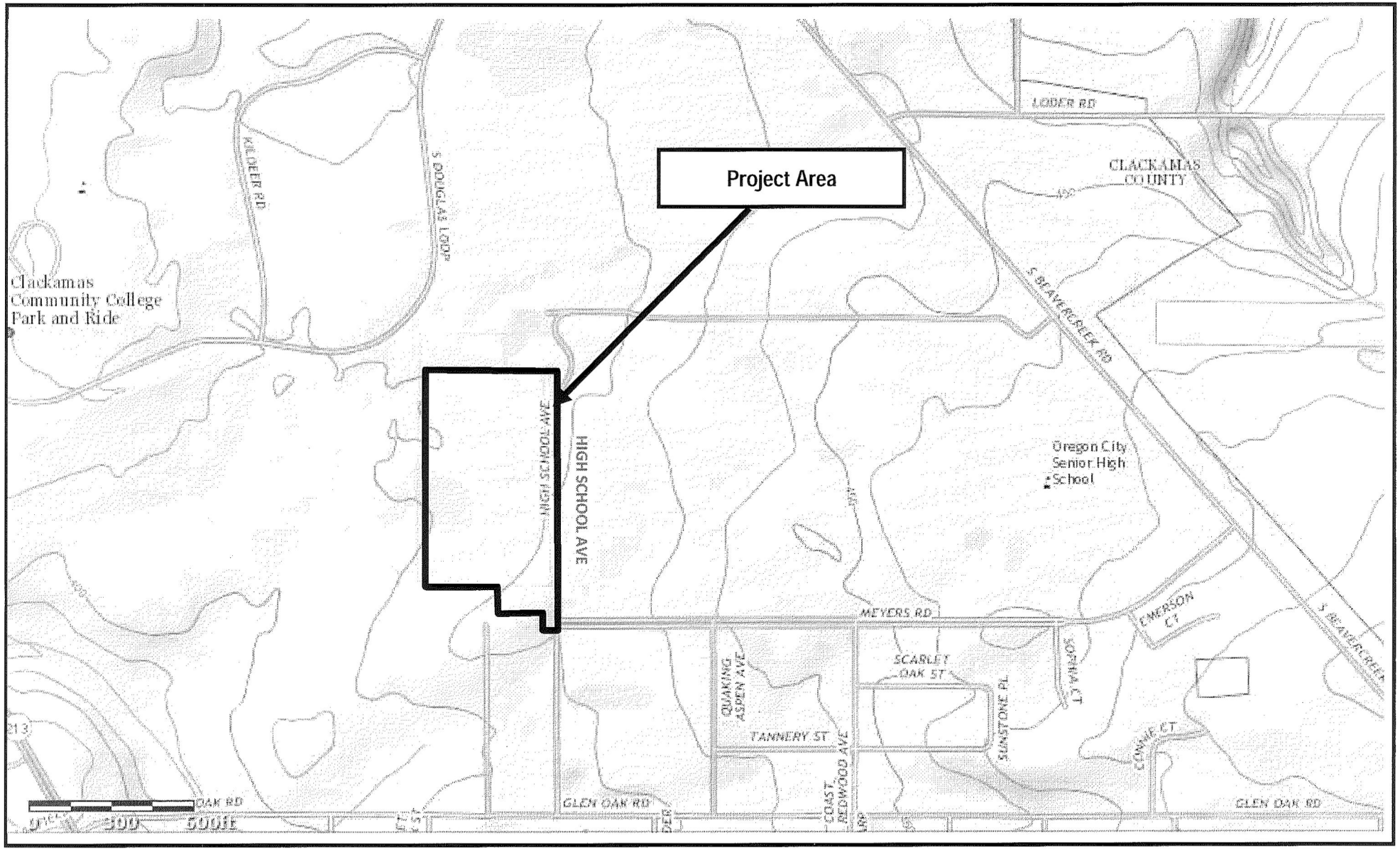
Sincerely,

Chris Stevenson
Jurisdiction Coordinator

Approved by _____
Kathy Verble, CPSS
Aquatic Resource Specialist

Enclosures

ec: Tina Farrelly, Pacific Habitat Services
City of Oregon City Planning Department (Maps enclosed for updating LWI)
Steve Gagnon, Corps of Engineers
Anita Huffman, DSL



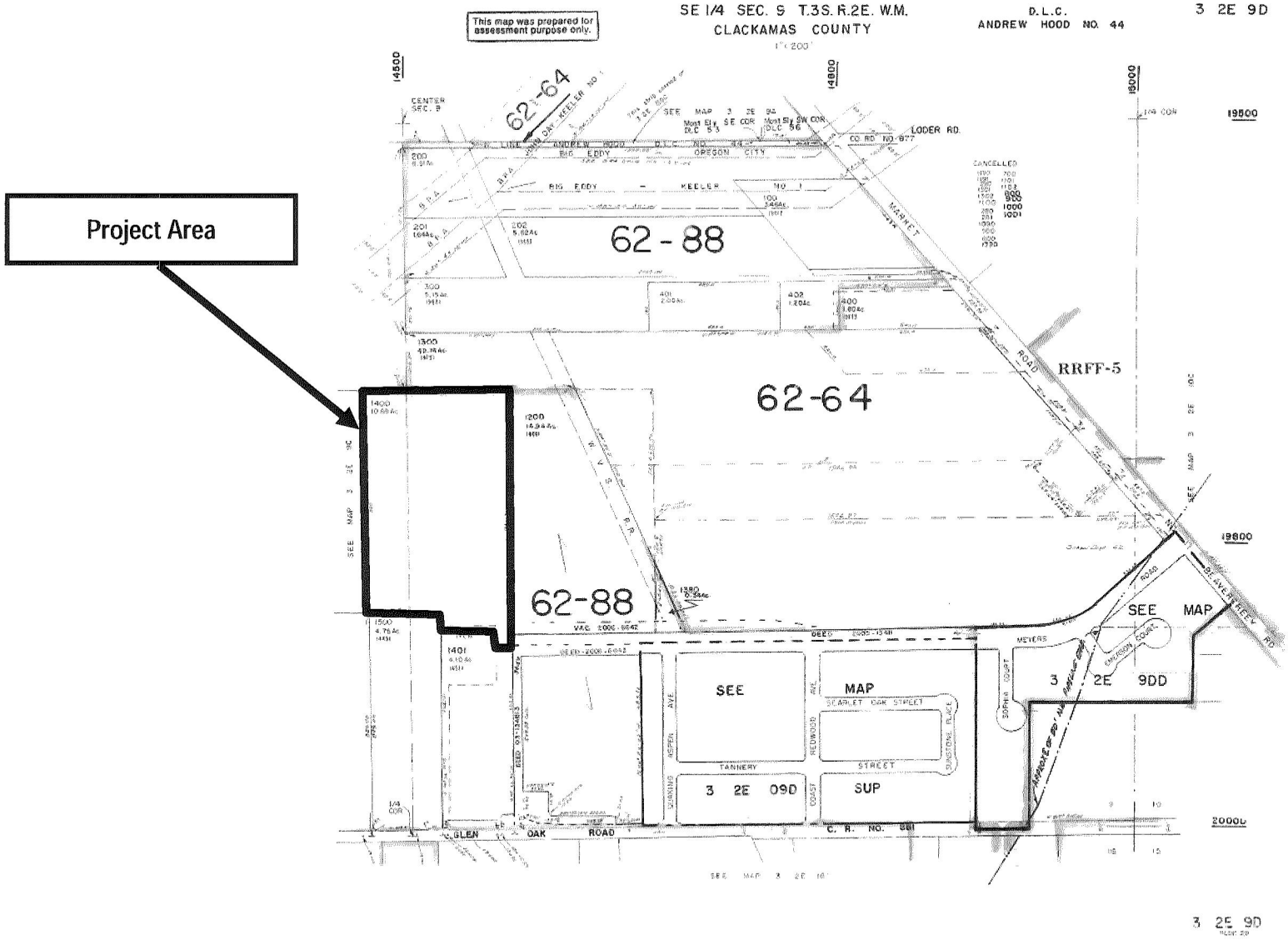
5481
9/26/14

PHS

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Location and General topography
Oregon City High School, Oregon City, Oregon
(USGS The National Map Viewer, Oregon City, Oregon quadrangle, 2014)

FIGURE
1



5481
9/26/14

PHS

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Tax Lot map 3 2E 9D, lot 1400, Clackamas County Oregon
Oregon City High School, Oregon City, Oregon
(ormap.net, 2014)

FIGURE
2

Wetland continues beyond study area

TaxLot 1300

TaxLot 1400

TaxLot 1200

Wetland continues beyond study area

Wetland A
(44,906 sf/ 1.03 ac)

Ex. Pond

Ex. Building

HIGH SCHOOL AVENUE

TaxLot 1500

TaxLot 1401

MEYERS ROAD

Ex. House

LEGEND

- Study Area Boundary (10.5 ac)
- Wetland A (44,906 sf/ 1.03 ac)
- Sample Point
- Photo Point

DSL WD # 2014-0496
Approval Issued 12-11-14
Approval Expires 12-11-19

0 40 80 160
SCALE IN FEET

N

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Survey provided by Westlake Consultants, Inc.
Survey and Sample point accuracy is sub-centimeter, except Sample points 3 and 7 with accuracy of +/-3 feet.

Wetland Delineation
Oregon City High School - Oregon City, OR

FIGURE 6

10-13-2014

X:\Project Directories\5400\5481 Oregon City HS\AutoCAD\PlotDwgs\Fig 6 WetDel.dwg, 10/22/2014 10:12:22 AM, PDFCreator

Oregon
John A. Kitzhaber, MD, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregonstatelands.us

State Land Board

John A. Kitzhaber, MD
Governor

Kate Brown
Secretary of State

Ted Wheeler
State Treasurer

January 12, 2015

City of Oregon City
Attn: Scott Archer
Parks and Recreation Department
625 Center Street
Oregon City, OR 97045

Re: WD #2014-0434 Wetland Delineation Report for Glen Oak Park and Filbert Run Park; Clackamas County;
T 3N R 2E S 9D TL 1500 & 1401; S 12DB TL 8000 & 8100

Dear Mr. Archer:

The Department of State Lands has reviewed the wetland delineation report prepared by Pacific Habitat Services, Inc. for the two sites referenced above. Based upon the information presented in the report and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in revised Figures 6A and 6B of the report. Please replace all copies of the preliminary wetland map with these final Department-approved maps. Within the Glen Oak Park study area, one wetland (totaling approximately 0.45 acres) and one waterway (Caufield Creek) were identified on Figure 6A. Within the Filbert Run Park one waterway was identified on Figure 6B.

The wetland and waterway on Figure 6A are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in the wetlands or below the ordinary high water line (OHWL) of a waterway (or the 2 year recurrence interval flood elevation if OHWL cannot be determined). The waterway (ephemeral swale) on Figure 6B is not jurisdictional per OAR 141-085-0515(3).

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will review the report and make a determination of jurisdiction for purposes of the Clean Water Act at the time that a permit application is submitted. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. Please phone me at 503-986-5218 if you have any questions.

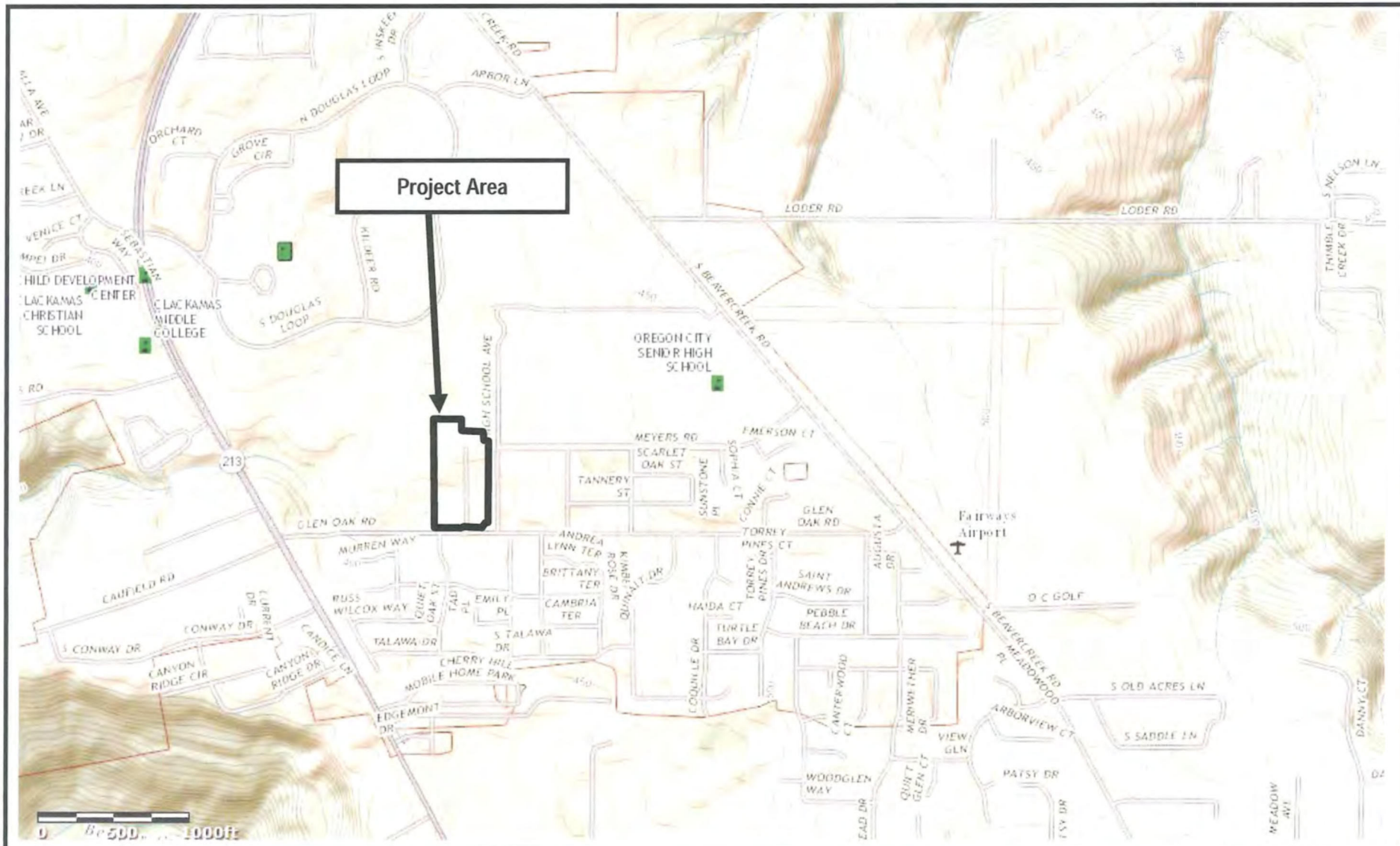
Sincerely,

Lauren Brown
Jurisdiction Coordinator

Approved by
Kathy Verble, CPSS
Aquatic Resource Specialist

Enclosures

ec: Amy Hawkins, Pacific Habitat Services, Inc.
Planning Department (Maps enclosed for updating LWI)
Dominic Yballe, Corps of Engineers
Anita Huffman, DSL
Peter Ryan, DSL



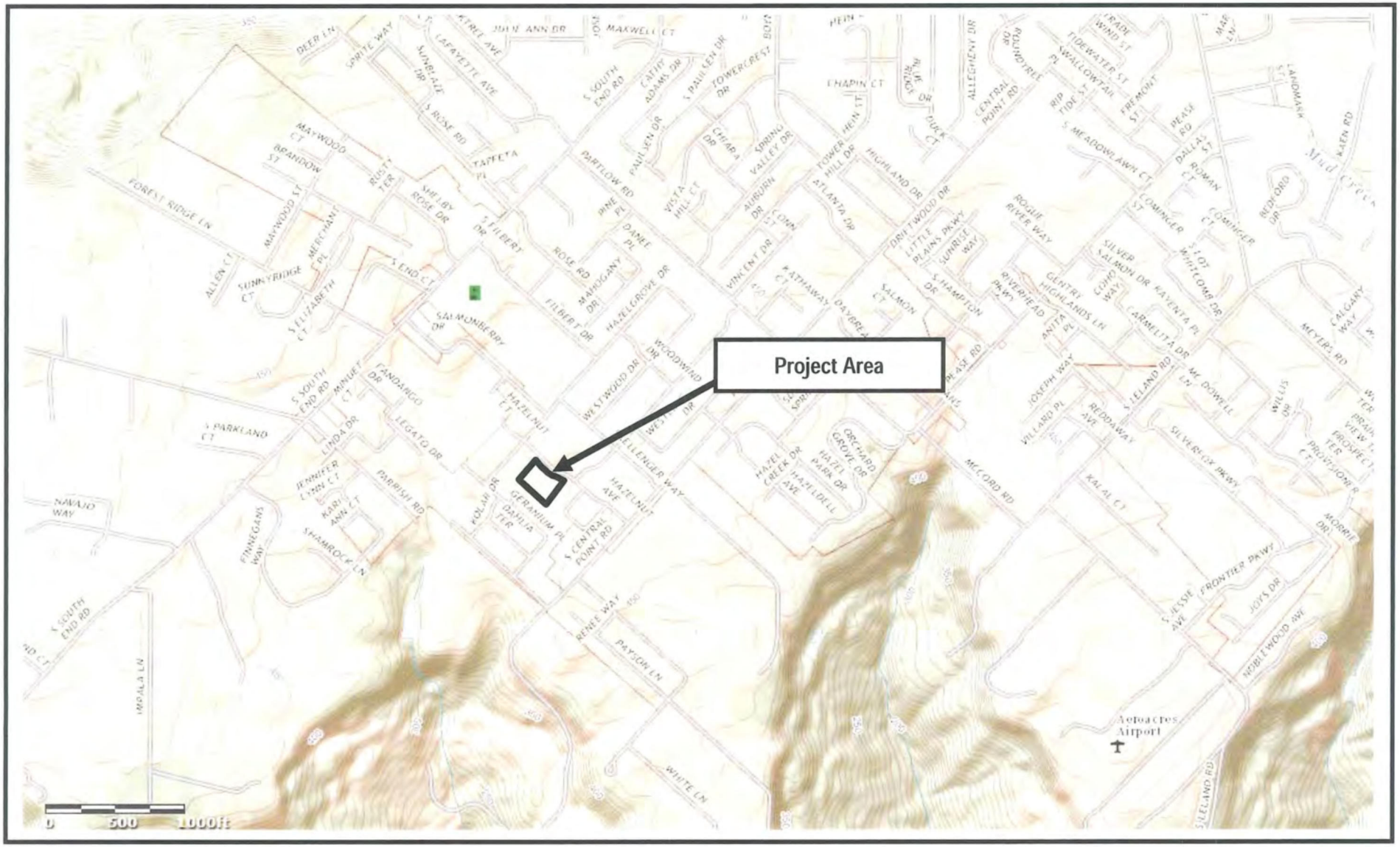
5431
8/19/14

PHS

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Location and General topography
Glen Oak Park Project, Oregon City, Oregon
(USGS The National Map Viewer, 2014 - Oregon City, Oregon Quadrangle)

FIGURE
1A

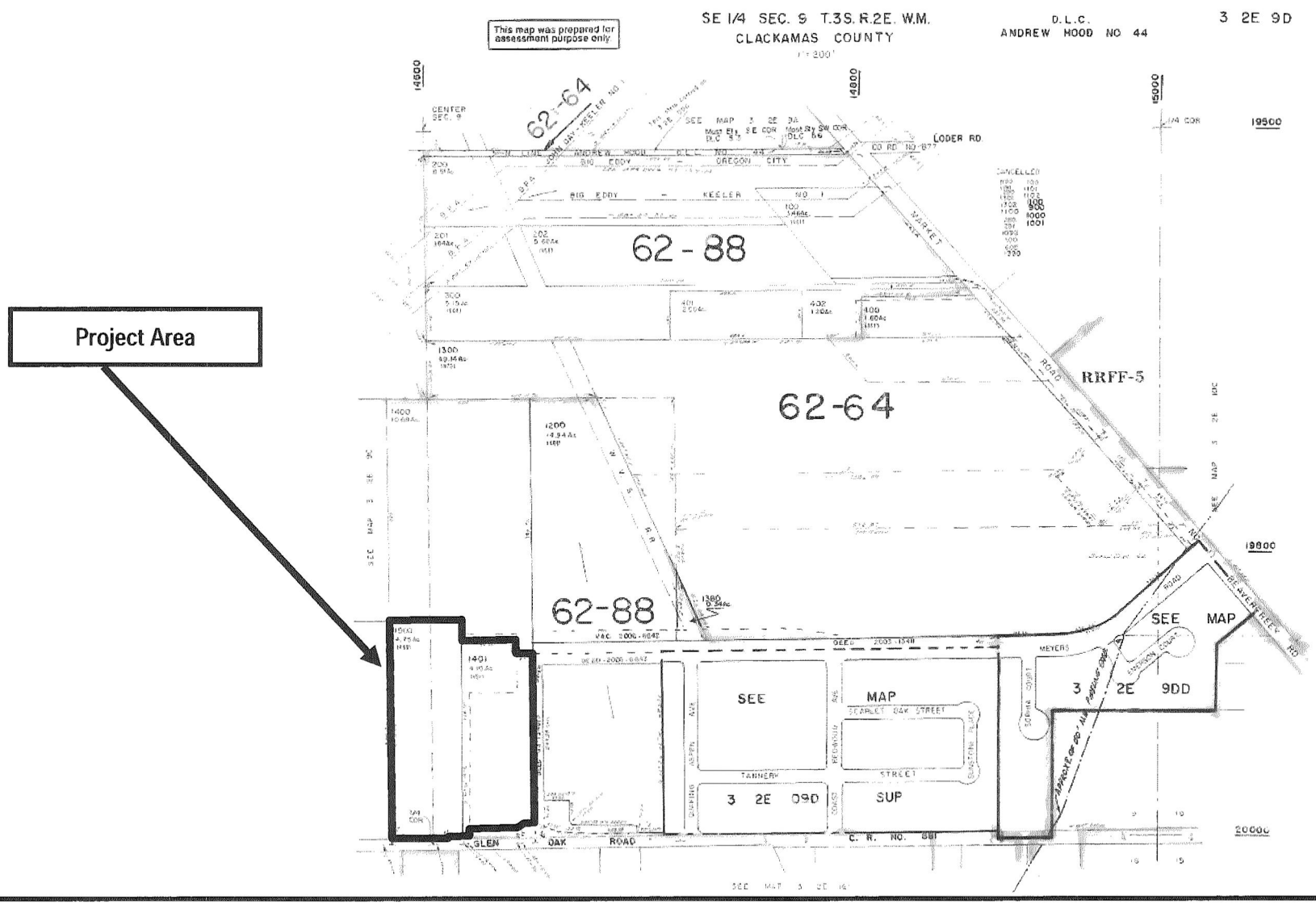


5431
8/19/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Location and General topography
Filbert Run Park Project, Oregon City, Oregon
(USGS The National Map Viewer, 2014-Oregon City, Oregon Quadrangle)

FIGURE
1B



5431
8/19/14

PHS

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Tax Lot map 3 2E 9D, tax lots 1500 & 1401, Clackamas County
Glen Oak Park Project, Oregon City, Oregon
(ormap.net, 2014)

FIGURE
2A

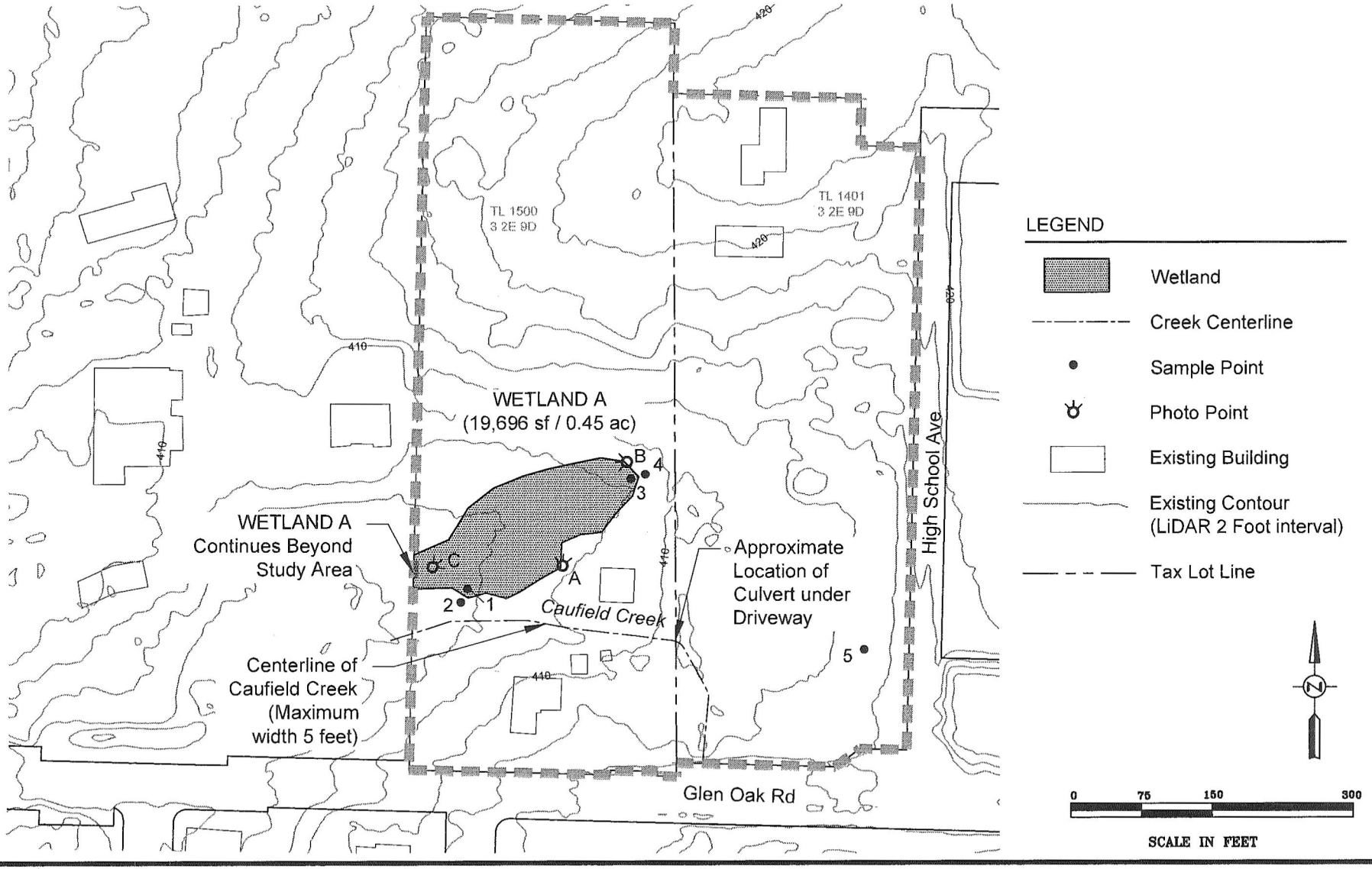


5431
8/19/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Tax Lot map 3 1E 12DB tax lots 8000 & 8100, Clackamas County
Filbert Run Park Project, Oregon City, Oregon
(ormap.net, 2014)

FIGURE
2B



Pacific Habitat Services,Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Base map data source: Regional Land Information System (RLIS).
GPS of wetland boundaries and creek centerline by Pacific Habitat Service Inc. GPS and sample point accuracy is ± 3 feet.

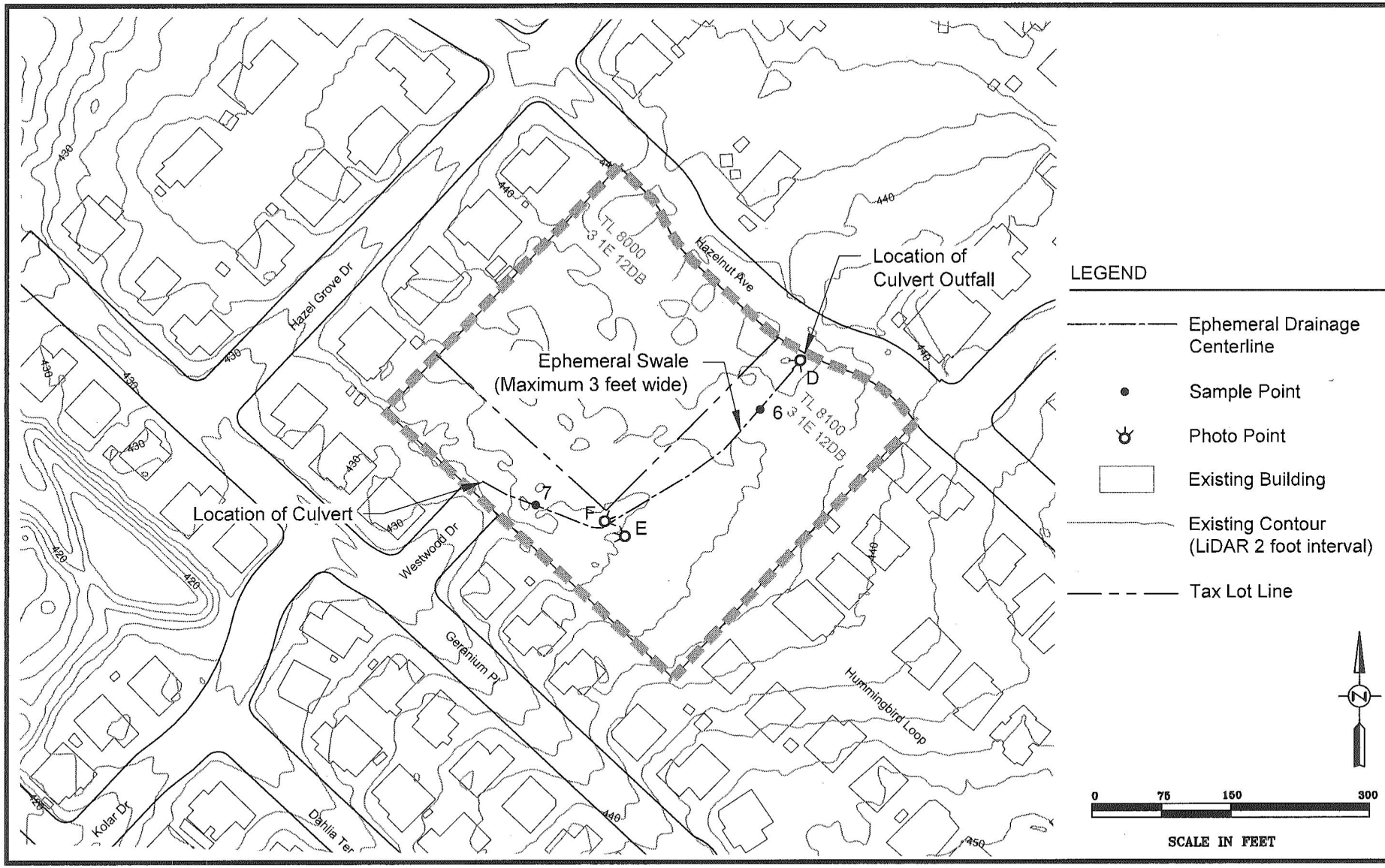
DSL WD # 2014-0434
Approval Issued 01/12/2015
Approval Expires 01/12/2020

Wetland Delineation
Glen Oak Park Site - Oregon City, Oregon

FIGURE
6A

01-07-15

X:\Project Directories\5400\5431 Glenn Oak Rd Filbert Run\AUTOCAD\Plot Dwgs\Fig6A GlenOak WetDel.dwg, 1/7/2015 10:24:17 AM, DWG To PDF.pc3



PHS
Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180 Wilsonville, Oregon 97070
Phone: (503) 570-0800 Fax (503) 570-0855

Base map data source Regional Land Information System (RLIS)
GPS of Ephemeral Swale centerline by Pacific Habitat Service Inc. GPS and sample point accuracy is ± 3 feet.

DSL WD # 2014-0434
Approval Issued 01/12/2015
Approval Expires 01/12/2020

Wetland Delineation
Filbert Run Park Site - Oregon City, Oregon

FIGURE 6B

01-07-15

X:\Project Directories\5400\5431 Glenn Oak Rd Filbert Run\AUTOCAD\Plot Dwgs\Fig6B FilbertRun WetDel.dwg, 1/9/2015 8:45:11 AM, DWG To PDF.pc3

Appendix C

Vegetated Corridor Data Sheets and Site Photos



Vegetated Corridor Sample Sites

Plant Community	A			
Sample Point	**2**	**4**	**6**	
TREES				
Native				
Acer macrophyllum				
Alnus rubra				
Fraxinus latifolia	35	15		
Pseudotsuga menziesii	5	15	25	
Quercus garryana	35	30	25	
Salix scouleriana			5	
Thuja plicata			25	
Nuisance Plant				
Crataegus monogyna		15		
Prunus avium		10		
SHRUBS & SAPLINGS				
Native				
Acer circinatum				
Amelanchier alnifolia		5		
Berberis aquifolium				
Corylus cornuta		15	20	
Crataegus douglasii				
Frangula purshiana	5	15		
Gaultheria shallon		10	50	
Mahonia aquifolium				
Oomleria cerasiformis				
Physocarpus capitatus				
Pseudotsuga menziesii				
Rubus ursinus				
Rosa gymnocarpa				
Rosa pisocarpa	10			
Rubus ursinus				
Sambucus racemosa				
Symphoricarpos albus	10	10	5	
Thuja plicata	5			
Nuisance Plant				
Ilex aquifolium	20	10		
Crataegus monogyna	40			
Rubus armeniacus				
HERBS				
Native				
Carex leptopoda	5	5		
Equisetum arvense				
Galium aparine				
Geum macropyllum				
Impatiens noli-tangere				
Juncus effusus				
Juncus tenuis				
Polystichum munitum	5	30	20	
Pteridium aquilinum				
Rubus ursinus		20		
Urica dioica				
Nuisance Plant				
Cirsium arvense				
Cirsium vulgare				
Clematis ligusticifolia				
Clematis vitabla				
Convolvulus sp.				
Cytsus scoparius				
Dipsacus fullonum				
Hedera Helix				
Heracleum mantegazzianum				
Lythrum salicaria				
Phalaris arundinacea				
Polygonum cuspidatum				
Solanum dulcamara				
	A			Average
Canopy cover	**75**	**85**	**80**	**80**
% Native Species	**66**	**83**	**100**	**83**
% Invasive Species	**34**	**17**	**0**	**17**



Photo A:

Looking west at the Vegetated Corridor near proposed stormwater outfall location.

Photo B:

Looking west at Vegetated Corridor with Himalayan blackberry present.



Project # 5481
2/16/15

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation Oregon City School District Property, Oregon City, Oregon
Both photo points taken on February 9, 2015.



Photo C:

Looking south at the Vegetated Corridor.

Photo D:

Looking north at the wetland (left frame) and the Vegetated Corridor (right frame). English holly has greater than 10 percent coverage in this area.



Project # 5481
2/16/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation Oregon City School District Property, Oregon City, Oregon
Photo C taken on September 10, 2014; Photo D taken on February 9, 2015.



Photo E:

Looking north at the Vegetated Corridor in the northeastern portion of the site. English holly has greater than 10 percent coverage in this area.

Photo F:

Looking northwest at the Vegetated Corridor in the northwestern portion of the site.



Project # 5481
10/2/14

Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Photo documentation Oregon City School District Property, Oregon City, Oregon
Both photos taken on September 10, 2014.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Exhibit F – Arborist Report/Tree Inventory

Refer also to Addendum E – TREE MITIGATION TABLE



ARBORIST REPORT/TREE INVENTORY

PREPARED FOR:

Tom Sisul

(503) 657-0188

DATE PREPARED:

October 29, 2014

SITE ADDRESS:

14511 Glen Oak Rd.

Oregon City, OR 97045

PREPARED BY:

Rachel Marchello

ISA Certified Arborist # PN-7767A

Alive Arboriculture

503-387-3035

This arborist report is being prepared to address the future land development at 14511 Glen Oak Rd. in Oregon City, OR, in order to prepare for pre-construction tree removal and possible tree preservation, in accordance with City guidelines and requirements.

Alive Arboriculture was retained by Mr. Tom Sisul of Sisul Engineering to complete the following tasks:

1. Conduct a site visit to inventory all trees on-site 6" DBH or greater in size, according to City of Oregon City guidelines. (Trees had already been tagged with metal tree tags by land surveyors, so this firm used existing tags and numbers for uniformity). Each tree would be documented with the following information: Species, Size, Condition, Dead/Alive, Disease Notes, Hazardous Status, Heritage Status, and Native/Invasive/ or Ornamental.
2. Inspect all trees 6" DBH or greater to determine overall health and likelihood for future retention. It is the understanding of this firm that future development is primarily parking with several larger structures on-site. Area will be maximized for development and many, if not most trees are planned for removal. Grading and excavation will be necessary at most spots throughout the current plot to achieve these goals, which could potentially affect all of the trees.

Site visits were conducted by two arborists within this firm on several days between Monday, October 13th and Friday, October 24th, 2014, in order to find and inspect each tagged tree, confirm and/or gather measurements for size and species, and examine their current state of health.

The site is slightly more than 7 acres of a typical deciduous forested wetlands and floodplains area. The dominant trees are Black cottonwood, Oregon ash, various willows, and Red alder, all of which can quickly recover from periodic flooding. On higher ground which floods less frequently Big Leaf maple and Oregon White oak are common. Western Red cedars appear in the transition zones. Plants are typically fast growing and can readily reestablish themselves after a disturbance.

Trees inventoried consist primarily of Oregon White oak and Douglas fir, with a few Big Leaf maples, Sweet cherry, Oregon ash, Western Red cedar, Black cottonwood, Pacific willow, Black hawthorn, and some ornamentals such as European Hornbeam, Hedge maple, and Norway maple mixed in.

Most of the trees inventoried were of native varieties. Native is defined as species that were likely to be found historically in the area.

- Oregon ash
- Douglas fir
- Oregon White oak
- Western Red cedar
- Black cottonwood
- Pacific willow
- Black Hawthorne
- Big Leaf maple

A couple varieties are considered invasive, defined as species that spread at such a rate that they displace native plants and become the dominant species in that vegetation layer.

- Sweet cherry
- Norway maple

A couple varieties found on-site are ornamental in nature, meaning that they were planted intentionally for their various qualities that were desired within an arranged landscape.

- Hedge maple
- European hornbeam

There were no current heritage trees found on-site and according to what we inspected, nothing found comes close to current heritage sizes. The two largest species that were documented on-site were the Douglas fir and the Oregon White oak, and both registered heritage trees for these varieties are substantially larger than anything located on this site.

Following is a table detailing each tree's assigned identification number, species common name, species scientific (botanical) name, size (DBH), condition, specific notes about defects noted, whether or not the tree is considered hazardous in its present state, and whether it should be retained or removed, if notable. Note: When more than one DBH is referenced, it is indicative of a multi-trunked tree, therefore the DBH's of all major leads are listed if greater than 6" each.

The table identifies whether the tree is recommended for removal. Some trees are obviously hazardous and should be removed due to their current state of decline. At this time they are not necessarily dangerous because there are no potential targets around them, but as soon as that changes, they should not be considered sound or safe. Other trees are recommended for removal because although they are not currently hazardous it is not expected that they would thrive after the construction process should they be left in place. Trees listed with moderate health would likely fall into this category at completion of construction.

Although this firm is not privy to what the eventual plan is for how many trees will be retained and which ones, if any will be kept, we are providing a professional opinion regarding retention of trees on this site. Generally speaking, for any trees that are intended for retention, it would be best for the trees identified in this report if the ones left standing could be retained in groups because that is how they have grown up to this point and removing only some of them will expose the retained trees to environmental stresses that they may not have grown accustomed to, such as wind and temperature changes. Potential for future failure will be increased. The best candidates for retention as individuals are trees that have grown singly or widely spaced from neighboring trees for most of their lives, but that is not the case with many of the trees listed here.

Healthy, vigorous trees are better able than non-vigorous trees to tolerate the impacts of construction such as changes in soil grade and moisture, root injury, and soil compaction. Trees that contain extensive decayed wood, weak branch attachments (included bark), and cracks and other structural defects that may lead to failure should not be preserved in areas where damage to people or property could occur. Mature and over mature trees are less able to tolerate construction impacts than are young and semi-mature trees.

The trees at this site were inspected and inventoried as follows, with the definitions of "Good", "Moderate", and "Poor" defined by Trees and Development: A Technical Guide to the Preservation of Trees During Land Development by Nelda Matheny and James R. Clark. The definitions are as follows:

- **Good: Tree with good health and structural stability that has the potential for longevity at the site.**
- **Moderate: Tree with fair health and/or structural defects that can be abated with treatment; tree will require more intense management and monitoring and may have a shorter lifespan than those in the "Good" category.**
- **Poor: Tree in poor health or with significant defects that cannot be mitigated; Tree is expected to continue to decline, regardless of treatment; The species or individual may have characteristics undesirable for landscape and is generally unsuitable for use areas**

It's important to note that the conditions listed on the spreadsheet for the trees inventoried at this site are accurate only as their current state, not the state that they are likely to be in once any trees are removed or any additional construction takes place, including land clearing. In order to adequately protect and preserve any trees to be retained, the decision about which ones will be saved should be made prior to the commencement of any more construction on the land so that if desired, design changes can be made in order to save and protect the healthiest trees. Soil compaction is one of the largest factors in future tree health, as it impacts root activity, moisture management, and stability, among other things.

Please feel free to direct any questions or concerns regarding the information contained in this report to my office at 503-387-3035 or via e-mail to info@alivearboriculture.com.

Sincerely,

Rachel D. Marchello

Rachel Marchello

ISA Certified Arborist #PN-7767A

Alive Arboriculture

ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance their health and beauty, and attempt to reduce the risk of living near them. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to a structural failure of a tree. Trees are living organisms, and as such, fail in ways that we do not fully understand. Conditions are often hidden within trees or below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services, such as property boundaries, property ownership, site lines, disputes between neighbors, and other such issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be only expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

ASSUMPTIONS AND LIMITING CONDITIONS

1. This consultant does not take any responsibility for the inactions of others in dealing with the matter contained in this report.
2. Any legal description provided to the consultant is assumed to be correct.
3. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
4. The consultant cannot be responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
5. Loss or alteration of any part of this report invalidates the entire report.

CERTIFICATION OF PERFORMANCE

I, Rachel D. Marchello, (PN-7767A), certify:

- That I have personally inspected the tree (s) and / or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and / or appraisal is stated in the attached report and assumptions and limiting conditions;
- That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions, and conclusions stated herein are my own, and are based on current scientific procedures and facts;
- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;
- That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices;
- That no one provided significant professional assistance to the consultant, except as indicated within the report.

I further certify that I am a member of the International Society of Arboriculture, and am a Certified Arborist.

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features
11247	Sweet cherry	Prunus avitum	T-EG 6	Good			
11248	Sweet cherry	Prunus avitum	T-EG 6	Good			
11315	Norway maple	Acer platanoides	T-DC 6	Good			
11316	Norway maple	Acer platanoides	T-DC 6	Good			
11317	Norway maple	Acer platanoides	T-DC 6	Good			
11318	Norway maple	Acer platanoides	T-DC 6	Good			
11734	European Hornbeam	Carpinus betulus	T-DC 5	Good			
11735	Norway maple	Acer platanoides	T-DC 5	Moderate			
11858	Norway maple	Acer platanoides	T-DC 5	Moderate			
11859	Norway maple	Acer platanoides	T-DC 5	Moderate			
11867	Norway maple	Acer platanoides	T-DC 3	Moderate			
11868	Hedge maple	Acer campestre	T-DC 2	Moderate			
11869	Hedge maple	Acer campestre	T-DC 2	Moderate			
12151	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12152	Oregon White oak	Quercus garryana	T-DC 18	Good			Very nice specimen
12153	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12154	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12155	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12156	Oregon White oak	Quercus garryana	T-DC 24	Moderate			
12157	Oregon White oak	Quercus garryana	T-DC 18	Moderate			
12158	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12159	Oregon White oak	Quercus garryana	T-DC 18	Moderate			
12160	Oregon White oak	Quercus garryana	T-DC 16	Moderate			
12161	Oregon White oak	Quercus garryana	T-DC 18	Good			Potential for long-term retention. Slight lean is away from target and is near a perimeter.
12162	Oregon White oak	Quercus garryana	T-DC 20	Moderate			
12163	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12164	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12165	Oregon White oak	Quercus garryana	T-DC 28	Good			
12166	Douglas fir	Pseudotsuga menziesii	T-DC 12	Poor			
12167	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12168	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12169	Oregon White oak	Quercus garryana	T-DC 6	Moderate			
12170	Oregon ash	Fraxinus latifolia	T-DC 14	Poor			
12171	Oregon White oak	Quercus garryana	T-DC 20	Moderate			
12172	Oregon White oak	Quercus garryana	T-DC 24	Poor			
12173	Oregon White oak	Quercus garryana	T-DC 28	Moderate			
12174	Oregon White oak	Quercus garryana	T-DC 20	Moderate			
12175	Oregon White oak	Quercus garryana	T-DC 28	Good			
12176	Oregon White oak	Quercus garryana	T-DC 18	Good			
12177	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12178	Black cottonwood	Populus balsamifera ssp. Trichocarpa	T-DC 22	Poor			
12179	Black cottonwood	Populus balsamifera ssp. Trichocarpa	T-DC 26	Moderate			
12180	Sweet cherry	Prunus avitum	T-DC 17	Poor			
12181	Oregon White oak	Quercus garryana	T-DC 11	Moderate			
12236	Oregon ash	Fraxinus latifolia	T-DC 8	Poor			
12237	Oregon White oak	Quercus garryana	T-DC 16 16	Moderate			
12238	Oregon ash	Fraxinus latifolia	T-DC 12	Poor			
12239	Oregon ash	Fraxinus latifolia	T-DC 8	Poor			
12240	Oregon White oak	Quercus garryana	T-DC 10	Poor			

12241	Oregon White oak	Quercus garryana	T-DC 12 8 6	Moderate			
12242	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12243	Oregon ash	Fraxinus latifolia	T-DC 12	Poor			
12244	Oregon ash	Fraxinus latifolia	T-DC 12	Poor			
12245	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12246	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12247	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12248	Western Red cedar	Thuja plicata	T-EG 14	Good			Young tree, good root flare, nice foliage - good for retention
12249	Douglas fir	Pseudotsuga menziesii	T-DC 10	Poor	*		Extreme lean
12250	Douglas fir	Pseudotsuga menziesii	T-EG 14	Poor			
12251	Oregon White oak	Quercus garryana	T-DC 20	Good			
12252	Oregon White oak	Quercus garryana	T-DC 24	Moderate			
12253	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12254	Oregon White oak	Quercus garryana	T-DC 16 16	Good			
12255	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12256	Unidentifiable		T-DD 12 12	Dead		*	
12257	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12258	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12259	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12260	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12261	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12262	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12263	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12264	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12265	Black Hawthorne	Crataegus suksdorfii	T-DC 6 8 10 18	Poor			
12266	Black Hawthorne	Crataegus suksdorfii	T-DC 12 12 12 12	Poor			
12267	Sweet cherry	Prunus avitum	T-DC 10	Poor			
12268	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12269	Sweet cherry	Prunus avitum	T-DC 10	Poor			
12270	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12271	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12278	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12279	Oregon White oak	Quercus garryana	T-DC 18	Moderate			
12281	Oregon White oak	Quercus garryana	T-DC 8 10 10	Moderate			
12282	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12283	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12284	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12285	Oregon White oak	Quercus garryana	T-DC 11 8	Moderate			
12286	Douglas fir	Pseudotsuga menziesii	T-DC 15	Poor			
12287	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12288	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12289	Oregon ash	Fraxinus latifolia	T-DC 12 12 12 12	Poor			
12290	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12291	Oregon White oak	Quercus garryana	T-DC 6 6 6 8	Moderate			
12292	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12293	Sweet cherry	Prunus avitum	T-DC 6	Poor			

12294	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12295	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12296	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12297	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12298	Sweet cherry	Prunus avitum	T-DC 9	Poor			
12300	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12301	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12302	Oregon White oak	Quercus garryana	T-DC 16	Moderate			
12303	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12304	Oregon White oak	Quercus garryana	T-DC 10 10	Moderate			
12305	Oregon White oak	Quercus garryana	T-DC 10 7 7	Poor			
12306	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12307	Oregon ash	Fraxinus latifolia	T-DC 14	Moderate			
12308	Oregon White oak	Quercus garryana	T-DC 12	Poor			
12309	Oregon White oak	Quercus garryana	T-DC 8 6	Poor			
12310	Oregon White oak	Quercus garryana	T-DC 7	Poor			
12311	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12312	Oregon White oak	Quercus garryana	T-DC 6	Moderate			
12313	Oregon White oak	Quercus garryana	T-DC 7	Moderate			
12314	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12315	Oregon White oak	Quercus garryana	T-DC 10 12 12	Moderate			
12316	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12317	Oregon White oak	Quercus garryana	T-DC 8 10 12	Moderate			
12318	Oregon White oak	Quercus garryana	T-DC 6 6	Poor			
12320	Pacific Willow	Salix lucida ssp. Lasiandra	T-DC 16	Moderate			
12321	Oregon White oak	Quercus garryana	T-DC 16	Moderate			
12322	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12323	Oregon ash	Fraxinus latifolia	T-DC 10 10	Poor			
12324	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12325	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12326	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12327	Oregon ash	Fraxinus latifolia	T-DC 12 8	Poor			
12328	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12329	Oregon White oak	Quercus garryana	T-DC 18	Moderate			
12330	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12331	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12332	Big Leaf maple	Acer macrophyllum	T-DC 8	Moderate			
12333	Sweet cherry	Prunus avitum	T-EG 8	Good			
12334	Oregon White oak	Quercus garryana	T-DC 10 10	Moderate			
12335	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12336	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12337	Oregon ash	Fraxinus latifolia	T-DC 10	Poor			
12338	Oregon White oak	Quercus garryana	T-DC 9	Poor			
12339	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor			
12340	Oregon ash	Fraxinus latifolia	T-EG 8	Dead		*	no foliage
12341	Douglas fir	Pseudotsuga menziesii	T-DC 6	Poor			
12342	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12343	Oregon White oak	Quercus garryana	T-DC 15	Moderate			

12344	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12345	Oregon White oak	Quercus garryana	T-DC 28	Good			Nice specimen for retention
12346	Oregon White oak	Quercus garryana	T-DC 18 12	Good			
12348	Oregon White oak	Quercus garryana	T-DC 28	Good			
12349	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12350	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12351	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12352	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor	*		Visible Conks, which indicate internal decay. Should be removed.
12353	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor			
12354	Douglas fir	Pseudotsuga menziesii	T-EG 14	Poor			
12355	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			
12356	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12357	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12358	Oregon ash	Fraxinus latifolia	T-DC 12	Poor			
12359	Oregon ash	Fraxinus latifolia	T-DC 30	Moderate			
12360	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12361	Douglas fir	Pseudotsuga menziesii	T-EG 6	Good			
12363	Sweet cherry	Prunus avitum	T-DC 12	Poor			
12364	Sweet cherry	Prunus avitum	T-DC 22	Moderate			
12365	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12366	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12367	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12368	Sweet cherry	Prunus avitum	T-DC 15	Moderate			
12369	Sweet cherry	Prunus avitum	T-DC 8	Poor			
12370	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12371	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12372	Douglas fir	Pseudotsuga menziesii	T-EG 36	Good			Nice specimen for retention
12373	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12374	Sweet cherry	Prunus avitum	T-DC 10	Dead			
12377	Black Hawthorne	Crataegus suksdorfii	T-DC 7 6	Poor			
12378	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12379	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12383	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12385	Sweet cherry	Prunus avitum	T-DC 10	Poor			
12389	Sweet cherry	Prunus avitum	T-DC 18	Moderate			
12393	Oregon White oak	Quercus garryana	T-DC 16	Good			
12394	Oregon White oak	Quercus garryana	T-DC 16	Good			
12417	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12418	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			

12421	Douglas fir	Pseudotsuga menziesii	T-EG 26	Good			
12422	Douglas fir	Pseudotsuga menziesii	T-EG 24	Good			
12423	Big Leaf maple	Acer macrophyllum	T-DC 28	Good			Nice specimen for retention
12424	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12425	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12426	Sweet cherry	Prunus avitum	T-DC 6	Moderate			
12427	Sweet cherry	Prunus avitum	T-DC 8	Moderate			
12428	Douglas fir	Pseudotsuga menziesii	T-EG 26	Good			Nice specimen for retention
12429	Sweet cherry	Prunus avitum	T-DC 6 5	Poor	*		Significant defect in co-dominant stem. Included bark makes weak attachment point.
12430	Douglas fir	Pseudotsuga menziesii	T-EG 22	Good			Nice specimen for retention
12431	Oregon White oak	Quercus garryana	T-DC 15	Good			Nice specimen for retention
12432	Oregon White oak	Quercus garryana	T-DC 20	Good			Nice specimen for retention
12435	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12436	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12437	Douglas fir	Pseudotsuga menziesii	T-EG 19	Moderate			
12438	Douglas fir	Pseudotsuga menziesii	T-EG 7	Poor			
12440	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12443	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12444	Oregon White oak	Quercus garryana	T-DC 14	Good			
12446	Oregon White oak	Quercus garryana	T-DC 14 12	Good			
12447	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12448	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor			
12449	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12450	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12451	Oregon White oak	Quercus garryana	T-DC 12	Poor			
12452	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12453	Oregon ash	Fraxinus latifolia	T-DC 16	Moderate			
12454	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			Rated as such because of location in midst of stand
12455	Oregon ash	Fraxinus latifolia	T-DC 12 12	Poor			Little live foliage
12456	Oregon ash	Fraxinus latifolia	T-DC 16 16	Poor			Included bark
12457	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12458	Oregon White oak	Quercus garryana	T-DC 12	Poor			
12461	Oregon White oak	Quercus garryana	T-DC 12	Poor			
12462	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			

12463	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12464	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12465	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12466	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12467	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12468	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate			
12469	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12470	Oregon White oak	Quercus garryana	T-DC 11	Poor			
12471	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12472	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12473	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12474	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12475	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12476	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12477	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12478	Douglas fir	Pseudotsuga menziesii	T-EG 12	Poor			
12479	Douglas fir	Pseudotsuga menziesii	T-EG 28	Moderate			
12480	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12481	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12482	Oregon White oak	Quercus garryana	T-DD 10	Dead		*	
12483	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor			
12484	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12485	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor	*		Visible conks. Should be removed due to internal decay.
12486	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate			
12487	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12488	Oregon White oak	Quercus garryana	T-DC 14	Poor			
12489	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12490	Oregon White oak	Quercus garryana	T-DC 12 6	Poor			
12491	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12492	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12493	Oregon White oak	Quercus garryana	T-DC 12 12 8	Moderate			
12494	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12495	Oregon White oak	Quercus garryana	T-DC 8	Dead		*	
12496	Oregon White oak	Quercus garryana	T-DC 9	Poor			

12497	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12498	Oregon White oak	Quercus garryana	T-DC 10 10 12	Moderate			
12499	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12500	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12501	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			Weakly attached co-dominant stems.
12502	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12503	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12504	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12505	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			
12507	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12508	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12509	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12510	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12512	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12513	Douglas fir	Pseudotsuga menziesii	T-EG 36	Moderate			
12514	Oregon White oak	Quercus garryana	T-DC 16 10	Moderate			
12515	Oregon White oak	Quercus garryana	T-DC 7 7 7 7	Moderate			
12517	Oregon ash	Fraxinus latifolia	T-DC 7	Moderate			
12520	Douglas fir	Pseudotsuga menziesii	T-EG 28	Good			
12521	Douglas fir	Pseudotsuga menziesii	T-EG 36	Good			Great specimen for retention.
12522	Sweet cherry	Prunus avitum	T-DC 18	Moderate			
12524	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12525	Oregon White oak	Quercus garryana	T-DC 20	Poor			
12526	Douglas fir	Pseudotsuga menziesii	T-EG 14	Poor			
12527	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12528	Oregon White oak	Quercus garryana	T-DC 12 6	Moderate			
12529	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12530	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12531	Douglas fir	Pseudotsuga menziesii	T-EG 9	Moderate			
12532	Douglas fir	Pseudotsuga menziesii	T-EG 26	Moderate			
12533	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12534	Oregon White oak	Quercus garryana	T-DC 16 12	Moderate			
12536	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			

12537	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12538	Oregon White oak	Quercus garryana	T-DC 8 9	Moderate			
12539	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12540	Sweet cherry	Prunus avitum	T-EG 6 6	Dead		*	
12541	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12542	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12543	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12544	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12545	Oregon White oak	Quercus garryana	T-DC 6 6	Moderate			
12549	Oregon White oak	Quercus garryana	T-DC 10 12	Moderate			
12551	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12552	Oregon ash	Fraxinus latifolia	T-DC 8	Poor	*		Extreme lean. Should be removed.
12553	Oregon ash	Fraxinus latifolia	T-DC 8 6 10	Poor	*		Same as above - excessive lean and should be removed.
12554	Oregon ash	Fraxinus latifolia	T-EG 22	Moderate			
12555	Douglas fir	Pseudotsuga menziesii	T-DC 8	Poor	*		Extreme lean. Should be removed.
12556	Oregon ash	Fraxinus latifolia	T-DC 8		*		Extreme lean. Should be removed.
12557	Oregon ash	Fraxinus latifolia	T-EG 30	Moderate			
12558	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			Trees 12558 - 12574 were rated as moderate or poor individually, but all could be upgraded to moderate or good if retained as an entire grouping and would be a nice stand together.
12559	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12560	Douglas fir	Pseudotsuga menziesii	T-EG 30	Moderate			
12561	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor			
12562	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12563	Douglas fir	Pseudotsuga menziesii	T-EG 15	Poor			
12565	Douglas fir	Pseudotsuga menziesii	T-EG 30	Poor			
12566	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			
12567	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			
12568	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor			
12569	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12570	Douglas fir	Pseudotsuga menziesii	T-EG 30	Poor			
12571	Douglas fir	Pseudotsuga menziesii	T-EG 15	Poor			

12572	Douglas fir	Pseudotsuga menziesii	T-EG 26	Poor			
12573	Douglas fir	Pseudotsuga menziesii	T-EG 40	Moderate			
12574	Douglas fir	Pseudotsuga menziesii	T-EG 20 8	Moderate			
12575	Oregon White oak	Quercus garryana	T-EG 7	Poor			
12576	Douglas fir	Pseudotsuga menziesii	T-EG 24	Poor			Odd curve to trunk that could result in future failure.
12577	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor			
12578	Douglas fir	Pseudotsuga menziesii	T-EG 12	Good			
12579	Oregon White oak	Quercus garryana	T-DC 18	Good			
12580	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor			
12581	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor			
12582	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12583	Douglas fir	Pseudotsuga menziesii	T-EG 22	Poor			Significant wound on side of tree.
12584	Oregon White oak	Quercus garryana	T-DC 12	Good			Healthy tree near perimeter. Would be good for retention.
12585	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12586	Big Leaf maple	Acer macrophyllum	T-DC 6	Poor			
12587	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12588	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate			
12589	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12590	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12591	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			
12592	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor			
12593	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12594	Oregon White oak	Quercus garryana	T-DC 9 6	Moderate			
12595	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate			
12596	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12597	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12598	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12599	Douglas fir	Pseudotsuga menziesii	T-EG 24	Poor	*		Visible conks - internal decay. Should be removed.
12600	Douglas fir	Pseudotsuga menziesii	T-DD 6	Dead		*	
12601	Oregon White oak	Quercus garryana	T-DC 12	Poor			

12602	Oregon White oak	Quercus garryana	T-DC 12	Poor			
12603	Oregon White oak	Quercus garryana	T-DC 15	Poor			
12604	Douglas fir	Pseudotsuga menziesii	T-EG 12	Poor			
12605	Oregon White oak	Quercus garryana	T-DC 10 10	Poor			
12606	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			
12607	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12608	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12609	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12610	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12611	Douglas fir	Pseudotsuga menziesii	T-EG 7	Poor			
12612	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12613	Oregon White oak	Quercus garryana	T-DC 6	Moderate			
12614	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12615	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate			
12616	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12617	Douglas fir	Pseudotsuga menziesii	T-EG10	Moderate			
12618	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12619	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate			
12620	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12621	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12622	Douglas fir	Pseudotsuga menziesii	T-EG 9	Moderate			
12623	Oregon White oak	Quercus garryana	T-DC 8 8	Moderate			
12624	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12625	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12626	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12627	Douglas fir	Pseudotsuga menziesii	T-EG 7	Moderate			
12628	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12629	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12630	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12631	Douglas fir	Pseudotsuga menziesii	T-EG 14	Poor			
12632	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12633	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12634	Douglas fir	Pseudotsuga menziesii	T-EG 14	Poor			
12635	Douglas fir	Pseudotsuga menziesii	T-EG 32	Good			

12636	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12637	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12638	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12639	Douglas fir	Pseudotsuga menziesii	T-EG 12	Poor			Very little live foliage
12640	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12641	Douglas fir	Pseudotsuga menziesii	T-EG 14	Dead		*	
12642	Douglas fir	Pseudotsuga menziesii	T-EG 32	Good			
12643	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12644	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12645	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor			
12646	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12647	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12648	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12649	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12650	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12651	Oregon White oak	Quercus garryana	T-DC 16 8	Moderate			
12652	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12653	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12654	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12655	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12656	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12657	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12658	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12659	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12660	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12661	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12662	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12663	Oregon White oak	Quercus garryana	T-DC 6 8	Poor			
12664	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12665	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor			
12666	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12667	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			

12668	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12669	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12670	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12671	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12672	Oregon White oak	Quercus garryana	T-DC 12 12 12 10	Moderate			
12673	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate			
12674	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate			
12675	Oregon White oak	Quercus garryana	T-DC 8 8	Poor			
12676	Oregon White oak	Quercus garryana	T-DC 9	Poor			
12677	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12678	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12679	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12680	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12681	Oregon White oak	Quercus garryana	T-DD 10	Dead		*	
12682	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12683	Oregon White oak	Quercus garryana	T-DC 10 10 6	Moderate			
12684	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12685	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate			
12686	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12687	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12688	Douglas fir	Pseudotsuga menziesii	T-EG 30	Moderate			
12689	Oregon ash	Fraxinus latifolia	T-DC 8	Poor			
12690	Douglas fir	Pseudotsuga menziesii	T-EG 7	Moderate			
12691	Douglas fir	Pseudotsuga menziesii	T-DC 8	Poor			
12692	Oregon White oak	Quercus garryana	T-DC 6 6	Poor			
12693	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12694	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12695	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12696	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12697	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12698	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12699	Oregon White oak	Quercus garryana	T-DD 14	Dead		*	
12700	Oregon White oak	Quercus garryana	T-DC 14	Poor			
12701	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			

12702	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor	*		Substantial lean and uprooting. Roots damaged from clearing machinery.
12703	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12704	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12705	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12706	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12707	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12708	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12709	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12710	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12711	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12712	Oregon White oak	Quercus garryana	T-DC 10 8	Poor			
12713	Douglas fir	Pseudotsuga menziesii	T-EG 12	Poor			
12714	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12715	Oregon White oak	Quercus garryana	T-DC 12	Poor			
12716	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12717	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12718	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12719	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12720	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12721	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12722	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12723	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12724	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12725	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12726	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			
12727	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12728	Oregon White oak	Quercus garryana	T-DC 6 6	Poor			
12729	Douglas fir	Pseudotsuga menziesii	T-EG 30	Moderate			
12730	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12731	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			

12733	Douglas fir	Pseudotsuga menziesii	T-EG 22	Good			
12734	Sweet cherry	Prunus avitum	T-DC 6	Moderate			
12749	Oregon White oak	Quercus garryana	T-DC 16	Moderate			
12750	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12751	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12752	Oregon White oak	Quercus garryana	T-DC 8 8	Poor			
12753	Oregon White oak	Quercus garryana	T-DC 12 6	Poor			
12754	Oregon White oak	Quercus garryana	T-DC 18	Moderate			
12755	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12756	Oregon White oak	Quercus garryana	T-DC 9	Moderate			
12757	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12758	Unidentifiable		T-DD 8	Dead		*	
12759	Oregon ash	Fraxinus latifolia	T-DC 8	Moderate			
12760	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12761	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12762	Oregon White oak	Quercus garryana	T-DC 20	Moderate			
12763	Oregon White oak	Quercus garryana	T-DC 6	Moderate			
12764	Oregon White oak	Quercus garryana	T-DC 9	Moderate			
12765	Oregon ash	Fraxinus latifolia	T-DC 14	Poor			
12766	Oregon White oak	Quercus garryana	T-DC 6	Moderate			
12767	Oregon White oak	Quercus garryana	T-DC 6 8	Good			Good root flare, strong upper canopy spread, no obvious defects. Good for retention.
12768	Black Hawthorne	Crataegus suksdorfii	T-DC 10	Moderate			
12769	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor			
12770	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12772	Oregon White oak	Quercus garryana	T-DC 8 8	Moderate			
12773	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate			
12775	Douglas fir	Pseudotsuga menziesii	T-EG 26	Good			Both 12775 and 12776 should be retained together, if either will be, which will upgrade the status of 12776 to Good.
12776	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12777	Oregon White oak	Quercus garryana	T-DC 14 10	Poor			
12778	Oregon White oak	Quercus garryana	T-DC 15	Poor			
12779	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12780	Oregon White oak	Quercus garryana	T-DC 24	Good			Nice, broad canopy. Good for retention.
12781	Douglas fir	Pseudotsuga menziesii	T-EG 12	Poor			
12782	Oregon White oak	Quercus garryana	T-DC 12 12 8	Moderate			
12783	Oregon White oak	Quercus garryana	T-DC 8 8 8 8	Poor			
12784	Oregon White oak	Quercus garryana	T-DC 8	Poor			
12785	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12786	Oregon White oak	Quercus garryana	T-DC 14	Moderate			

12787	Oregon White oak	Quercus garryana	T-DC 24	Good			Beautiful specimen, even canopy. Less likely to be susceptible to wind throw. Shades itself.
12788	Oregon ash	Fraxinus latifolia	T-DC 10	Poor			
12789	Oregon ash	Fraxinus latifolia	T-DC 8	Poor			
12790	Oregon ash	Fraxinus latifolia	T-DC 6	Poor			
12791	Oregon ash	Fraxinus latifolia	T-DC 9	Poor			
12792	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12793	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12794	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12795	Douglas fir	Pseudotsuga menziesii	T-DC 10	Good			
12796	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12797	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12798	Oregon ash	Fraxinus latifolia	T-DC 12 12	Poor	*	*	Half of the tree is dead and fallen over already. Rest of the tree should be removed.
12816	Oregon ash	Fraxinus latifolia	T-DC 22	Moderate			
12817	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12818	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12819	Oregon White oak	Quercus garryana	T-DC 18	Moderate			
12820	Douglas fir	Pseudotsuga menziesii	T-EG 24	Good			Should acclimate well to construction stress. Has good lower foliage and nice percentage of live crown growth.
12821	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12822	Oregon White oak	Quercus garryana	T-DC 10 10	Poor			
12823	Oregon White oak	Quercus garryana	T-DC 9	Moderate			
12824	Oregon ash	Fraxinus latifolia	T-DC 10	Poor			
12825	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12826	Oregon ash	Fraxinus latifolia	T-DC 10	Poor			
12827	Oregon ash	Fraxinus latifolia	T-DC 10	Poor			
12828	Oregon ash	Fraxinus latifolia	T-DC 10 10	Poor			
12829	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12830	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12831	Oregon White oak	Quercus garryana	T-DC 24	Moderate			
12833	Oregon White oak	Quercus garryana	T-DC 16	Moderate			
12834	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12835	Oregon White oak	Quercus garryana	T-DC 12 12	Moderate			
12836	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12837	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12838	Oregon White oak	Quercus garryana	T-DC 20	Moderate			
12839	Oregon White oak	Quercus garryana	T-DC 20	Moderate			
12840	Oregon White oak	Quercus garryana	T-DC 6 12 12 8 16	Moderate			
12842	Douglas fir	Pseudotsuga menziesii	T-EG 12	Poor			
12843	Oregon White oak	Quercus garryana	T-DC 16 9	Good			Great for retention.
12844	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor	*		Broken lead. Should be removed.

12845	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12847	Douglas fir	Pseudotsuga menziesii	T-EG 16	Good			
12848	Oregon White oak	Quercus garryana	T-DC 10 12 14 14 14	Moderate			
12849	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12850	Oregon White oak	Quercus garryana	T-DC 18	Good			
12851	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12852	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate			
12853	Oregon White oak	Quercus garryana	T-DC 16	Moderate			If 12853 and 12854 were retained together, both would be upgraded to Good status and would be nice specimens for retention.
12854	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12855	Douglas fir	Pseudotsuga menziesii	T-DC 16	Poor			
12856	Sweet cherry	Prunus avitum	T-DC 6	Poor			
12857	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12858	Sweet cherry	Prunus avitum	T-DC 10	Poor			Would not fare well alone. Would be susceptible to construction stress/damage. Has visible signs of shot hole fungus.
12859	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate			
12860	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate			
12861	Douglas fir	Pseudotsuga menziesii	T-EG 20	Poor			
12862	Douglas fir	Pseudotsuga menziesii	T-EG 12	Poor			
12863	Douglas fir	Pseudotsuga menziesii	T-EG 7	Moderate			
12864	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12865	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12866	Oregon White oak	Quercus garryana	T-DC 16 8	Moderate			
12867	Oregon White oak	Quercus garryana	T-DC 8 15	Moderate			
12868	Douglas fir	Pseudotsuga menziesii	T-EG 8	Poor			
12870	Oregon White oak	Quercus garryana	T-DC 8 12	Moderate			
12871	Oregon White oak	Quercus garryana	T-DC 8 10	Moderate			
12872	Oregon White oak	Quercus garryana	T-DC 10 6	Moderate			
12873	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12874	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12875	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12876	Oregon White oak	Quercus garryana	T-DC 10	Poor			
12877	Oregon White oak	Quercus garryana	T-DC 6	Poor			
12878	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor			
12879	Oregon ash	Fraxinus latifolia	T-DC 10	Moderate			

12880	Oregon White oak	Quercus garryana	T-DC 15	Moderate			
12881	Oregon ash	Fraxinus latifolia	T-DC 6	Poor			
12882	Oregon White oak	Quercus garryana	T-DC 6	Moderate			
12883	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12884	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12885	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12886	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12887	Oregon White oak	Quercus garryana	T-DC 12	Moderate			
12888	Oregon White oak	Quercus garryana	T-DC 8	Moderate			
12889	Oregon White oak	Quercus garryana	T-DC 10 8	Moderate			
12890	Oregon White oak	Quercus garryana	T-DC 6 8 8	Moderate			
12891	Oregon ash	Fraxinus latifolia	T-DC 14	Moderate			
12892	Oregon White oak	Quercus garryana	T-DC 14	Moderate			
12893	Oregon ash	Fraxinus latifolia	T-DC 8	Poor			
12894	Oregon White oak	Quercus garryana	T-DC 10	Moderate			
12895	Oregon ash	Fraxinus latifolia	T-DC 10	Moderate			
12896	Oregon ash	Fraxinus latifolia	T-DC10	Poor			
12897	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			12897 and 12898 should only be retained if they can both be kept.
12898	Douglas fir	Pseudotsuga menziesii	T-EG 16	Good			
12899	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12900	Douglas fir	Pseudotsuga menziesii	T-EG 20	Good			
12901	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate			
12902	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate			
12903	Douglas fir	Pseudotsuga menziesii	T-EG 26	Moderate			
12904	Douglas fir	Pseudotsuga menziesii	T-EG 18	Poor			Near edge and has been topped already or top broke out. Should be removed.
12905	Douglas fir	Pseudotsuga menziesii	T-EG 10	Good			
12906	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			
12907	Douglas fir	Pseudotsuga menziesii	T-EG 7	Poor			
12908	Douglas fir	Pseudotsuga menziesii	T-EG 8 8 10	Moderate			
12909	Oregon White oak	Quercus garryana	T-DC 16	Poor			
12910	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12911	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate			
12912	Oregon White oak	Quercus garryana	T-DC 10 12	Moderate			
12913	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12914	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12915	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate			
12916	Douglas fir	Pseudotsuga menziesii	T-EG 9	Moderate			

12917	Douglas fir	Pseudotsuga menziesii	T-EG 10	Poor	*		Mushrooms on trunk indicate interior decay. Should be removed.
12918	Douglas fir	Pseudotsuga menziesii	T-EG 11	Moderate			12918 and 12919 would be good to retain together. Healthy and near perimeter.
12919	Douglas fir	Pseudotsuga menziesii	T-EG 22	Good			
12920	Oregon White oak	Quercus garryana	T-DC 10 8	Moderate			
12921	Oregon White oak	Quercus garryana	T-DC 12 12 12 15 7	Good			
12922	Oregon White oak	Quercus garryana	T-DC10	Moderate			
12923	Douglas fir	Pseudotsuga menziesii	T-EG14	Moderate			
12924	Douglas fir	Pseudotsuga menziesii	T-EG12	Moderate			
12925	Oregon White oak	Quercus garryana	T-DC16	Poor			
12926	Oregon White oak	Quercus garryana	T-DC14	Moderate			
12927	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate			
12928	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12929	Douglas fir	Pseudotsuga menziesii	T-EG 24	Good			
12930	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate			
12931	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate			
12932	Oregon White oak	Quercus garryana	T-DC 12 20	Good			
12933	Black Hawthorne	Crataegus suksdorfii	T-DC 6	Poor			
12934	Oregon White oak	Quercus garryana	T-DC 10	Good			
12961	Oregon White oak	Quercus garryana	T-DC 24	Good			
12962	Douglas fir	Pseudotsuga menziesii	T-EG 18 DR20	Moderate			
12963	Douglas fir	Pseudotsuga menziesii	T-EG 15 DR20	Moderate			
12964	Oregon White oak	Quercus garryana	T-DC 24 DR30	Good			
12965	Oregon White oak	Quercus garryana	T-DC 24 DR40	Good			
20172	Norway Maple	Acer platanoides	T-DC 6	Moderate			
20259	Norway Maple	Acer platanoides	T-DC 6	Moderate			
20261	Norway Maple	Acer platanoides	T-DC 8	Moderate			
20271	Norway Maple	Acer platanoides	T-DC 8	Moderate			
20281	Norway Maple	Acer platanoides	T-DC 6	Poor			
20282	Norway Maple	Acer platanoides	T-DC 4	Moderate			
20283	European Hornbeam	Carpinus betulus	T-DC 4	Good			
20331	Norway Maple	Acer platanoides	T-DC 8	Moderate			
20337	Norway Maple	Acer platanoides	T-DC 8	Moderate			
20343	Norway Maple	Acer platanoides	T-DC 6	Moderate			
20347	Norway Maple	Acer platanoides	T-DC 8	Moderate			
20351	Norway Maple	Acer platanoides	T-DC 6	Moderate			

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM E – TREE MITIGATION TABLE

Refer to the following Tree Mitigation Table summarizing trees (and their sizes) which are being removed (excluding those deemed hazardous, diseased, dying, or dead by the project arborist) and listing the number of mitigation trees that are required.

OREGON CITY SCHOOL DISTRICT

TRANSPORTATION & MAINTENANCE FACILITY TREE MITIGATION TABLE

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12157	Oregon White oak	Quercus garryana	T-DC 18	Moderate				18	2
12158	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12165	Oregon White oak	Quercus garryana	T-DC 28	Good				28	4
12167	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12168	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12169	Oregon White oak	Quercus garryana	T-DC 6	Moderate				6	1
12171	Oregon White oak	Quercus garryana	T-DC 20	Moderate				20	3
12173	Oregon White oak	Quercus garryana	T-DC 28	Moderate				28	4
12174	Oregon White oak	Quercus garryana	T-DC 20	Moderate				20	3
12175	Oregon White oak	Quercus garryana	T-DC 28	Good				28	4
12176	Oregon White oak	Quercus garryana	T-DC 18	Good				18	2
12177	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12179	Black cottonwood	Populus balsamifera ssp. Trichocarpa	T-DC 26	Moderate				26	4
12181	Oregon White oak	Quercus garryana	T-DC 11	Moderate				11	1
12252	Oregon White oak	Quercus garryana	T-DC 24	Moderate				24	3
12253	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12254	Oregon White oak	Quercus garryana	T-DC 16 16	Good				32	5
12255	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12257	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12258	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12261	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12262	Oregon White oak	Quercus garryana	T-DC 10	Moderate				10	1
12263	Oregon White oak	Quercus garryana	T-DC 10	Moderate				10	1
12278	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12284	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12285	Oregon White oak	Quercus garryana	T-DC 11 8	Moderate				19	3
12288	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12290	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12291	Oregon White oak	Quercus garryana	T-DC 6 6 6 8	Moderate				26	4
12300	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12301	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12302	Oregon White oak	Quercus garryana	T-DC 16	Moderate				16	2
12303	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12304	Oregon White oak	Quercus garryana	T-DC 10 10	Moderate				20	3
12307	Oregon ash	Fraxinus latifolia	T-DC 14	Moderate				14	2
12311	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12312	Oregon White oak	Quercus garryana	T-DC 6	Moderate				6	1
12313	Oregon White oak	Quercus garryana	T-DC 7	Moderate				7	1
12314	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12315	Oregon White oak	Quercus garryana	T-DC 10 12 12	Moderate				34	5
12317	Oregon White oak	Quercus garryana	T-DC 8 10 12	Moderate				30	4
12326	Oregon White oak	Quercus garryana	T-DC 10	Moderate				10	1
12328	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12329	Oregon White oak	Quercus garryana	T-DC 18	Moderate				18	2
12330	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12342	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12343	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12344	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12345	Oregon White oak	Quercus garryana	T-DC 28	Good			Nice specimen for retention	28	4
12346	Oregon White oak	Quercus garryana	T-DC 18 12	Good				30	4
12348	Oregon White oak	Quercus garryana	T-DC 28	Good				28	4
12349	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12350	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12351	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12356	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12357	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12359	Oregon ash	Fraxinus latifolia	T-DC 30	Moderate				30	4
12360	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12361	Douglas fir	Pseudotsuga menziesii	T-EG 6	Good				6	1
12365	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12372	Douglas fir	Populus balsamifera ssp. Trichocarpa	T-EG 36	Good			Nice specimen for retention	36	5

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12373	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12383	Douglas fir	Populus balsamifera ssp. Trichocarpa	T-EG 16	Moderate				16	2
12393	Oregon White oak	Populus balsamifera ssp. Trichocarpa	T-DC 16	Good				16	2
12394	Oregon White oak	Quercus garryana	T-DC 16	Good				16	2
12417	Douglas fir	Quercus garryana	T-EG 18	Moderate				18	2
12418	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12421	Douglas fir	Pseudotsuga menziesii	T-EG 26	Good				26	4
12422	Douglas fir	Pseudotsuga menziesii	T-EG 24	Good				24	4
12423	Big Leaf maple	Pseudotsuga menziesii	T-DC 28	Good			Nice specimen for retention	28	4
12424	Oregon White oak	Acer macrophyllum	T-DC 14	Moderate				14	2
12425	Douglas fir	Quercus garryana	T-EG 18	Moderate				18	2
12428	Douglas fir	Pseudotsuga menziesii	T-EG 26	Good			Nice specimen for retention	26	4
12430	Douglas fir	Pseudotsuga menziesii	T-EG 22	Good			Nice specimen for retention	22	3
12431	Oregon White oak	Quercus garryana	T-DC 15	Good			Nice specimen for retention	15	2
12432	Oregon White oak	Quercus garryana	T-DC 20	Good			Nice specimen for retention	20	3
12435	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12436	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12437	Douglas fir	Pseudotsuga menziesii	T-EG 19	Moderate				19	3
12440	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12443	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12444	Oregon White oak	Quercus garryana	T-DC 14	Good				14	2
12446	Oregon White oak	Quercus garryana	T-DC 14 12	Good				26	4
12447	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12449	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12452	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12453	Oregon ash	Fraxinus latifolia	T-DC 16	Moderate				16	2
12457	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12462	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12463	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12464	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12465	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12467	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12468	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate				8	1
12469	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12471	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12472	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12473	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12474	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12475	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12477	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12479	Douglas fir	Pseudotsuga menziesii	T-EG 28	Moderate				28	4
12480	Oregon White oak	Quercus garryana	T-DC 10	Moderate				10	1
12481	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12484	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12486	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate				6	1
12487	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12491	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12492	Oregon White oak	Quercus garryana	T-DC 14	Moderate				24	3
12493	Oregon White oak	Quercus garryana	T-DC 12 12 8	Moderate				32	5
12494	Oregon White oak	Quercus garryana	T-DC 10	Moderate				10	1
12497	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12498	Oregon White oak	Quercus garryana	T-DC 10 10 12	Moderate				32	5
12499	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate				10	1
12500	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12502	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12503	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12507	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12508	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12509	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12510	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12512	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12513	Douglas fir	Pseudotsuga menziesii	T-EG 36	Moderate				36	5
12514	Oregon White oak	Quercus garryana	T-DC 16 10	Moderate				26	4
12515	Oregon White oak	Quercus garryana	T-DC 7 7 7 7	Moderate				28	4
12517	Oregon ash	Fraxinus latifolia	T-DC 7	Moderate				7	1
12520	Douglas fir	Pseudotsuga menziesii	T-EG 28	Good				28	4
12521	Douglas fir	Pseudotsuga menziesii	T-EG 36	Good			Great specimen for retention.	36	5
12524	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12527	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12528	Oregon White oak	Quercus garryana	T-DC 12 6	Moderate				18	2
12529	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12530	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12531	Douglas fir	Pseudotsuga menziesii	T-EG 9	Moderate				9	1
12532	Douglas fir	Pseudotsuga menziesii	T-EG 26	Moderate				26	4
12534	Oregon White oak	Quercus garryana	T-DC 16 12	Moderate				28	4
12536	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12537	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12538	Oregon White oak	Quercus garryana	T-DC 8 9	Moderate				17	2
12541	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12542	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12543	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12544	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12545	Oregon White oak	Quercus garryana	T-DC 6 6	Moderate				12	1
12549	Oregon White oak	Quercus garryana	T-DC 10 12	Moderate				22	3
12551	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12554	Oregon ash	Fraxinus latifolia	T-EG 22	Moderate				22	3
12557	Oregon ash	Fraxinus latifolia	T-EG 30	Moderate				30	4
12558	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate			Trees 12558 - 12574 were rated as moderate or poor individually, but all could be upgraded to moderate or good if retained as an entire grouping and would be a nice stand together.	24	3

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12559	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12560	Douglas fir	Pseudotsuga menziesii	T-EG 30	Moderate				30	4
12562	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12573	Douglas fir	Pseudotsuga menziesii	T-EG 40	Moderate				40	5
12574	Douglas fir	Pseudotsuga menziesii	T-EG 20 8	Moderate				28	4
12578	Douglas fir	Pseudotsuga menziesii	T-EG 12	Good				12	1
12579	Oregon White oak	Quercus garryana	T-DC 18	Good				18	2
12582	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12584	Oregon White oak	Quercus garryana	T-DC 12	Good			Healthy tree near perimeter. Would be good for retention.	12	1
12587	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12588	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate				8	1
12589	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12590	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12593	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12594	Oregon White oak	Quercus garryana	T-DC 9 6	Moderate				15	2
12595	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate				8	1
12596	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12597	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12598	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12607	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12609	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12610	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12612	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12613	Oregon White oak	Quercus garryana	T-DC 6	Moderate				6	1
12614	Oregon White oak	Quercus garryana	T-DC 10	Moderate				10	1
12615	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate				8	1
12616	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12617	Douglas fir	Pseudotsuga menziesii	T-EG10	Moderate				10	1
12618	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12619	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate				6	1
12620	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12621	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12622	Douglas fir	Pseudotsuga menziesii	T-EG 9	Moderate				9	1
12623	Oregon White oak	Quercus garryana	T-DC 8 8	Moderate				16	2
12626	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12627	Douglas fir	Pseudotsuga menziesii	T-EG 7	Moderate				7	1
12628	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12629	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12630	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12632	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12633	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12635	Douglas fir	Pseudotsuga menziesii	T-EG 32	Good				32	5

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12636	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12637	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12638	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12640	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate				10	1
12642	Douglas fir	Pseudotsuga menziesii	T-EG 32	Good				32	5
12643	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12644	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12647	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12650	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12651	Oregon White oak	Quercus garryana	T-DC 16 8	Moderate				24	3
12652	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12653	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12654	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12655	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12656	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12657	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12658	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12659	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12660	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12661	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12662	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12664	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12666	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12667	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12668	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12669	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12670	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12671	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12672	Oregon White oak	Quercus garryana	T-DC 12 12 12 10	Moderate				46	5
12673	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate				6	1
12674	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate				8	1
12677	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate				10	1
12678	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12679	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12680	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12682	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12683	Oregon White oak	Quercus garryana	T-DC 10 10 6	Moderate				26	4
12685	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate				6	1
12687	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12688	Douglas fir	Pseudotsuga menziesii	T-EG 30	Moderate				30	4
12690	Douglas fir	Pseudotsuga menziesii	T-EG 7	Moderate				7	1

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12693	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12694	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12695	Oregon White oak	Quercus garryana	T-DC 12	Moderate				12	1
12697	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12701	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12703	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12704	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12705	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12706	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12707	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12708	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12709	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12710	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12711	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12716	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12718	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12719	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate				10	1
12720	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12721	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12722	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12724	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12725	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12726	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12727	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12729	Douglas fir	Pseudotsuga menziesii	T-EG 30	Moderate				30	4
12730	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12731	Douglas fir	Pseudotsuga menziesii	T-EG 24	Moderate				24	3
12733	Douglas fir	Pseudotsuga menziesii	T-EG 22	Good				22	3
12754	Oregon White oak	Quercus garryana	T-DC 18	Moderate				18	2
12755	Oregon White oak	Quercus garryana	T-DC 14	Moderate				14	2
12756	Oregon White oak	Quercus garryana	T-DC 9	Moderate				9	1
12759	Oregon ash	Fraxinus latifolia	T-DC 8	Moderate				8	1
12762	Oregon White oak	Quercus garryana	T-DC 20	Moderate				20	2
12763	Oregon White oak	Quercus garryana	T-DC 6	Moderate				6	1
12764	Oregon White oak	Quercus garryana	T-DC 9	Moderate				9	1
12766	Oregon White oak	Quercus garryana	T-DC 6	Moderate				6	1
12767	Oregon White oak	Quercus garryana	T-DC 6 8	Good			Good root flare, strong upper canopy spread, no obvious defects. Good for retention.	14	2
12768	Black Hawthorne	Crataegus suksdorfii	T-DC 10	Moderate				10	1
12772	Oregon White oak	Quercus garryana	T-DC 8 8	Moderate				16	2
12773	Douglas fir	Pseudotsuga menziesii	T-EG 14	Moderate				14	2
12775	Douglas fir	Pseudotsuga menziesii	T-EG 26	Good			Both 12775 and 12776 should be retained together, if either will be, which will upgrade the status of 12776 to Good.	26	4
12776	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12780	Oregon White oak	Quercus garryana	T-DC 24	Good			Nice, broad canopy. Good for retention.	24	3
12782	Oregon White oak	Quercus garryana	T-DC 12 12 8	Moderate				34	5
12795	Douglas fir	Pseudotsuga menziesii	T-DC 10	Good				10	1
12796	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12797	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12838	Oregon White oak	Quercus garryana	T-DC 20	Moderate				20	3
12839	Oregon White oak	Quercus garryana	T-DC 20	Moderate				20	3
12840	Oregon White oak	Quercus garryana	T-DC 6 12 12 8 16	Moderate				54	5
12843	Oregon White oak	Quercus garryana	T-DC 16 9	Good			Great for retention.	25	4
12845	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12847	Douglas fir	Pseudotsuga menziesii	T-EG 16	Good				16	2
12848	Oregon White oak	Quercus garryana	T-DC 10 12 14 14 14	Moderate				64	5
12849	Oregon White oak	Quercus garryana	T-DC 8	Moderate				8	1
12850	Oregon White oak	Quercus garryana	T-DC 18	Good				18	2
12851	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12852	Douglas fir	Pseudotsuga menziesii	T-EG 22	Moderate				22	3
12853	Oregon White oak	Quercus garryana	T-DC 16	Moderate			If 12853 and 12854 were retained together, both would be upgraded to Good status and would be nice specimens for retention.	16	2
12854	Oregon White oak	Quercus garryana	T-DC 15	Moderate				15	2
12859	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate				20	3
12860	Douglas fir	Pseudotsuga menziesii	T-EG 6	Moderate				6	1
12863	Douglas fir	Pseudotsuga menziesii	T-EG 7	Moderate				7	1
12866	Oregon White oak	Quercus garryana	T-DC 16 8	Moderate				24	3
12867	Oregon White oak	Quercus garryana	T-DC 8 15	Moderate				23	3
12870	Oregon White oak	Quercus garryana	T-DC 8 12	Moderate				20	3
12871	Oregon White oak	Quercus garryana	T-DC 8 10	Moderate				18	2
12897	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good			12897 and 12898 should only be retained if they can both be kept.	30	4
12898	Douglas fir	Pseudotsuga menziesii	T-EG 16	Good				16	2
12899	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate				10	1
12900	Douglas fir	Pseudotsuga menziesii	T-EG 20	Good				20	3
12901	Douglas fir	Pseudotsuga menziesii	T-EG 15	Moderate				15	2
12902	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate				8	1
12903	Douglas fir	Pseudotsuga menziesii	T-EG 26	Moderate				26	4
12905	Douglas fir	Pseudotsuga menziesii	T-EG 10	Good				10	1
12906	Douglas fir	Pseudotsuga menziesii	T-EG 30	Good				30	4
12908	Douglas fir	Pseudotsuga menziesii	T-EG 8 8 10	Moderate				26	4
12910	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12911	Douglas fir	Pseudotsuga menziesii	T-EG 8	Moderate				8	1
12912	Oregon White oak	Quercus garryana	T-DC 10 12	Moderate				22	3
12913	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate				10	1
12914	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12915	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate				10	1
12916	Douglas fir	Pseudotsuga menziesii	T-EG 9	Moderate				9	1

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12918	Douglas fir	Pseudotsuga menziesii	T-EG 11	Moderate			12918 and 12919 would be good to retain together. Healthy and near perimeter.	11	1
12919	Douglas fir	Pseudotsuga menziesii	T-EG 22	Good				22	3
12920	Oregon White oak	Quercus garryana	T-DC 10 8	Moderate				18	2
12921	Oregon White oak	Quercus garryana	T-DC 12 12 12 15 7	Good				58	5
12922	Oregon White oak	Quercus garryana	T-DC10	Moderate				10	1
12923	Douglas fir	Pseudotsuga menziesii	T-EG14	Moderate				14	2
12924	Douglas fir	Pseudotsuga menziesii	T-EG12	Moderate				12	1
12926	Oregon White oak	Quercus garryana	T-DC14	Moderate				14	2
12927	Douglas fir	Pseudotsuga menziesii	T-EG 16	Moderate				16	2
12928	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12929	Douglas fir	Pseudotsuga menziesii	T-EG 24	Good				24	3
12930	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate				12	1
12931	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate				18	2
12932	Oregon White oak	Quercus garryana	T-DC 12 20	Good				32	5
12934	Oregon White oak	Quercus garryana	T-DC 10	Good				10	1
12961	Oregon White oak	Quercus garryana	T-DC 24	Good				24	3
12962	Douglas fir	Pseudotsuga menziesii	T-EG 18 DR20	Moderate				38	5
12963	Douglas fir	Pseudotsuga menziesii	T-EG 15 DR20	Moderate				35	5
12964	Oregon White oak	Quercus garryana	T-DC 24 DR30	Good				54	5
12965	Oregon White oak	Quercus garryana	T-DC 24 DR40	Good				64	5
								6170	791
Omitted Due to Size/Condition/Invasive									
~~11247~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-EG 6~~	~~Good~~			~~Invasive~~		
~~11248~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-EG 6~~	~~Good~~			~~Invasive~~		
~~11315~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Good~~			~~Invasive~~		
~~11316~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Good~~			~~Invasive~~		
~~11317~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Good~~			~~Invasive~~		
~~11318~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Good~~			~~Invasive~~		
~~11734~~	~~European Hornbeam~~	~~Carpinus betulus~~	~~T-DC 5~~	~~Good~~					
~~11735~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 5~~	~~Moderate~~					
~~11858~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 5~~	~~Moderate~~					
~~11859~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 5~~	~~Moderate~~					
~~11867~~	~~Norway maple~~	~~Acer platanoides~~	~~T-DC 3~~	~~Moderate~~					
~~11868~~	~~Hedge maple~~	~~Acer campestre~~	~~T-DC 2~~	~~Moderate~~					
~~11869~~	~~Hedge maple~~	~~Acer campestre~~	~~T-DC 2~~	~~Moderate~~					
~~12151~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 8~~	~~Poor~~					
~~12166~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-DC 12~~	~~Poor~~					
~~12170~~	~~Oregon ash~~	~~Fraxinus latifolia~~	~~T-DC 14~~	~~Poor~~					
~~12172~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 24~~	~~Poor~~					
~~12178~~	~~Black cottonwood~~	~~Populus balsamifera ssp. Trichocarpa~~	~~T-DC 22~~	~~Poor~~					
~~12180~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 17~~	~~Poor~~					
~~12256~~	~~Unidentifiable~~		~~T-DD 12 12~~	~~Dead~~		~~*~~			
~~12256~~	~~Unidentifiable~~		~~T-DD 12 12~~	~~Dead~~		~~*~~			
~~12259~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 8~~	~~Poor~~					
~~12260~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 8~~	~~Poor~~					
~~12264~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 6~~	~~Poor~~					
~~12265~~	~~Black Hawthorne~~	~~Crataegus suksdorfii~~	~~T-DC 6 8 10 18~~	~~Poor~~					
~~12266~~	~~Black Hawthorne~~	~~Crataegus suksdorfii~~	~~T-DC 12 12 12 12~~	~~Poor~~					
~~12267~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 10~~	~~Poor~~					
~~12268~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 8~~	~~Poor~~					
~~12269~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 10~~	~~Poor~~					
~~12270~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 8~~	~~Poor~~					
~~12271~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 8~~	~~Poor~~					
~~12286~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-DC 15~~	~~Poor~~					
~~12287~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 10~~	~~Poor~~					

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12289	Oregon ash	Fraxinus latifolia	T DC 12 12 12 12	Poor					
12292	Sweet cherry	Prunus avitum	T DC 8	Poor					
12293	Sweet cherry	Prunus avitum	T DC 6	Poor					
12294	Sweet cherry	Prunus avitum	T DC 6	Poor					
12295	Sweet cherry	Prunus avitum	T DC 8	Poor					
12296	Sweet cherry	Prunus avitum	T DC 6 6	Poor					
12297	Sweet cherry	Prunus avitum	T DC 8	Poor					
12298	Sweet cherry	Prunus avitum	T DC 9	Poor					
12305	Oregon White oak	Quercus garryana	T DC 10 7 7	Poor					
12306	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12308	Oregon White oak	Quercus garryana	T DC 12	Poor					
12309	Oregon White oak	Quercus garryana	T DC 8 6	Poor					
12310	Oregon White oak	Quercus garryana	T DC 7	Poor					
12316	Oregon White oak	Quercus garryana	T DC 8	Poor					
12318	Oregon White oak	Quercus garryana	T DC 6 6	Poor					
12327	Oregon ash	Fraxinus latifolia	T DC 12 8	Poor					
12340	Oregon ash	Fraxinus latifolia	T EG 8	Dead		*	no foliage		
12352	Douglas fir	Pseudotsuga menziesii	T EG 16	Poor	*		Visible Conks, which indicate internal decay. Should be removed.		
12353	Douglas fir	Pseudotsuga menziesii	T EG 16	Poor					
12354	Douglas fir	Pseudotsuga menziesii	T EG 14	Poor					
12355	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor					
12358	Oregon ash	Fraxinus latifolia	T DC 12	Poor					
12363	Sweet cherry	Prunus avitum	T DC 12	Poor					
12364	Sweet cherry	Prunus avitum	T DC 22	Moderate			Invasive		
12366	Sweet cherry	Prunus avitum	T DC 6	Poor					
12367	Sweet cherry	Prunus avitum	T DC 8	Poor					
12368	Sweet cherry	Prunus avitum	T DC 15	Moderate			Invasive		
12369	Sweet cherry	Prunus avitum	T DC 8	Poor					
12370	Sweet cherry	Prunus avitum	T DC 6	Poor					
12371	Sweet cherry	Prunus avitum	T DC 6	Poor					
12374	Sweet cherry	Prunus avitum	T DC 10	Dead					
12374	Sweet cherry	Prunus avitum	T DC 10	Dead					
12377	Black Hawthorne	Populus balsamifera ssp. Trichocarpa	T DC 7 6	Poor					
12378	Sweet cherry	Prunus avitum	T DC 6	Poor					
12379	Sweet cherry	Prunus avitum	T DC 6	Poor					
12385	Sweet cherry	Prunus avitum	T DC 10	Poor					
12389	Sweet cherry	Prunus avitum	T DC 18	Moderate			Invasive		
12426	Sweet cherry	Prunus avitum	T DC 6	Moderate			Invasive		
12427	Sweet cherry	Prunus avitum	T DC 8	Moderate			Invasive		
12429	Sweet cherry	Prunus avitum	T DC 6 5		*		Significant defect in co-dominant stem. Included bark makes weak attachment point.		
12438	Douglas fir	Pseudotsuga menziesii	T EG 7	Poor					
12448	Douglas fir	Pseudotsuga menziesii	T EG 10	Poor					
12450	Oregon White oak	Quercus garryana	T DC 10	Poor					
12451	Oregon White oak	Quercus garryana	T DC 12	Poor					
12454	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor			Rated as such because of location in midst of stand		
12455	Oregon ash	Fraxinus latifolia	T DC 12 12	Poor			Little live foliage		
12456	Oregon ash	Fraxinus latifolia	T DC 16 16	Poor			Included bark		
12458	Oregon White oak	Quercus garryana	T DC 12	Poor					
12461	Oregon White oak	Quercus garryana	T DC 12	Poor					
12466	Douglas fir	Pseudotsuga menziesii	T EG 8	Poor					
12470	Oregon White oak	Quercus garryana	T DC 11	Poor					
12476	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12478	Douglas fir	Pseudotsuga menziesii	T EG 12	Poor					
12482	Oregon White oak	Quercus garryana	T DD 10	Dead		*			
12482	Oregon White oak	Quercus garryana	T DD 10	Dead		*			
12483	Douglas fir	Pseudotsuga menziesii	T EG 10	Poor					

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12485	Douglas fir	Pseudotsuga menziesii	T EG 16	Poor	*		Visible conks. Should be removed due to internal decay.		
12488	Oregon White oak	Quercus garryana	T DC 14	Poor					
12489	Oregon White oak	Quercus garryana	T DC 10	Poor					
12490	Oregon White oak	Quercus garryana	T DC 12 6	Poor					
12495	Oregon White oak	Quercus garryana	T DC 8	Dead		*			
12495	Oregon White oak	Quercus garryana	T DC 8	Dead		*			
12496	Oregon White oak	Quercus garryana	T DC 9	Poor					
12501	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor			Weakly attached co-dominant stems.		
12504	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12505	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor					
12522	Sweet cherry	Prunus avitum	T DC 18	Moderate			Invasive		
12525	Oregon White oak	Quercus garryana	T DC 20	Poor					
12526	Douglas fir	Pseudotsuga menziesii	T EG 14	Poor					
12533	Oregon White oak	Quercus garryana	T DC 6	Poor					
12539	Oregon White oak	Quercus garryana	T DC 6	Poor					
12540	Sweet cherry	Prunus avitum	T EG 6 6	Dead		*			
12540	Sweet cherry	Prunus avitum	T EG 6 6	Dead		*			
12552	Oregon ash	Fraxinus latifolia	T DC 8	Poor	*		Extreme lean. Should be removed.		
12553	Oregon ash	Fraxinus latifolia	T DC 8 6 10	Poor	*		Same as above - excessive lean and should be removed.		
12555	Douglas fir	Pseudotsuga menziesii	T DC 8	Poor	*		Extreme lean. Should be removed.		
12556	Oregon ash	Fraxinus latifolia	T DC 8		*		Extreme lean. Should be removed.		
12561	Douglas fir	Pseudotsuga menziesii	T EG 10	Poor					
12563	Douglas fir	Pseudotsuga menziesii	T EG 15	Poor					
12565	Douglas fir	Pseudotsuga menziesii	T EG 30	Poor					
12566	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor					
12567	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor					
12568	Douglas fir	Pseudotsuga menziesii	T EG 10	Poor					
12569	Douglas fir	Pseudotsuga menziesii	T EG 8	Poor					
12570	Douglas fir	Pseudotsuga menziesii	T EG 30	Poor					
12571	Douglas fir	Pseudotsuga menziesii	T EG 15	Poor					
12572	Douglas fir	Pseudotsuga menziesii	T EG 26	Poor					
12575	Oregon White oak	Quercus garryana	T EG 7	Poor					
12576	Douglas fir	Pseudotsuga menziesii	T EG 24	Poor			Odd curve to trunk that could result in future failure.		
12577	Douglas fir	Pseudotsuga menziesii	T EG 10	Poor					
12580	Douglas fir	Pseudotsuga menziesii	T EG 16	Poor					
12581	Douglas fir	Pseudotsuga menziesii	T EG 10	Poor					
12583	Douglas fir	Pseudotsuga menziesii	T EG 22	Poor			Significant wound on side of tree.		
12585	Douglas fir	Pseudotsuga menziesii	T EG 8	Poor					
12586	Big Leaf maple	Acer macrophyllum	T DC 6	Poor					
12591	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor					
12592	Douglas fir	Pseudotsuga menziesii	T EG 16	Poor					
12599	Douglas fir	Pseudotsuga menziesii	T EG 24	Poor	*		Visible conks - internal decay. Should be removed.		
12600	Douglas fir	Pseudotsuga menziesii	T DD 6	Dead		*			

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12600	Douglas fir	Pseudotsuga menziesii	T DD 6	Dead		*			
12601	Oregon White oak	Quercus garryana	T DC 12	Poor					
12602	Oregon White oak	Quercus garryana	T DC 12	Poor					
12603	Oregon White oak	Quercus garryana	T DC 15	Poor					
12604	Douglas fir	Pseudotsuga menziesii	T EG 12	Poor					
12605	Oregon White oak	Quercus garryana	T DC 10 10	Poor					
12606	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor					
12608	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12611	Douglas fir	Pseudotsuga menziesii	T EG 7	Poor					
12624	Oregon White oak	Quercus garryana	T DC 6	Poor					
12625	Douglas fir	Pseudotsuga menziesii	T EG 8	Poor					
12631	Douglas fir	Pseudotsuga menziesii	T EG 14	Poor					
12634	Douglas fir	Pseudotsuga menziesii	T EG 14	Poor					
12639	Douglas fir	Pseudotsuga menziesii	T EG 12	Poor			Very little live foliage		
12641	Douglas fir	Pseudotsuga menziesii	T EG 14	Dead		*			
12641	Douglas fir	Pseudotsuga menziesii	T EG 14	Dead		*			
12645	Douglas fir	Pseudotsuga menziesii	T EG 10	Poor					
12646	Douglas fir	Pseudotsuga menziesii	T EG 8	Poor					
12648	Douglas fir	Pseudotsuga menziesii	T EG 8	Poor					
12649	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12663	Oregon White oak	Quercus garryana	T DC 6 8	Poor					
12665	Douglas fir	Pseudotsuga menziesii	T EG 16	Poor					
12675	Oregon White oak	Quercus garryana	T DC 8 8	Poor					
12676	Oregon White oak	Quercus garryana	T DC 9	Poor					
12681	Oregon White oak	Quercus garryana	T DD 10	Dead		*			
12681	Oregon White oak	Quercus garryana	T DD 10	Dead		*			
12684	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12686	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12689	Oregon ash	Fraxinus latifolia	T DC 8	Poor					
12691	Douglas fir	Pseudotsuga menziesii	T DC 8	Poor					
12692	Oregon White oak	Quercus garryana	T DC 6 6	Poor					
12696	Oregon White oak	Quercus garryana	T DC 8	Poor					
12698	Oregon White oak	Quercus garryana	T DC 10	Poor					
12699	Oregon White oak	Quercus garryana	T DD 14	Dead		*			
12699	Oregon White oak	Quercus garryana	T DD 14	Dead		*			
12700	Oregon White oak	Quercus garryana	T DC 14	Poor					
12702	Douglas fir	Pseudotsuga menziesii	T EG 18	Poor	*		Substantial lean and uprooting. Roots damaged from clearing machinery.		
12712	Oregon White oak	Quercus garryana	T DC 10 8	Poor					
12713	Douglas fir	Pseudotsuga menziesii	T EG 12	Poor					
12714	Oregon White oak	Quercus garryana	T DC 8	Poor					
12715	Oregon White oak	Quercus garryana	T DC 12	Poor					
12717	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12723	Douglas fir	Pseudotsuga menziesii	T EG 6	Poor					
12728	Oregon White oak	Quercus garryana	T DC 6 6	Poor					
12734	Sweet cherry	Prunus avitum	T DC 6	Moderate			Invasive		
12753	Oregon White oak	Quercus garryana	T DC 12 6	Poor					
12757	Oregon White oak	Quercus garryana	T DC 6	Poor					
12758	Unidentifiable		T DD 8	Dead		*			
12758	Unidentifiable		T DD 8	Dead		*			
12760	Oregon White oak	Quercus garryana	T DC 8	Poor					
12761	Oregon White oak	Quercus garryana	T DC 8	Poor					
12765	Oregon ash	Fraxinus latifolia	T DC 14	Poor					

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
~~12769~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 16~~	~~Poor~~					
~~12770~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 6~~	~~Poor~~					
~~12777~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 14 10~~	~~Poor~~					
~~12778~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 15~~	~~Poor~~					
~~12779~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 8~~	~~Poor~~					
~~12781~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 12~~	~~Poor~~					
~~12782~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 8 8 8 8~~	~~Poor~~					
~~12798~~	~~Oregon ash~~	~~Fraxinus latifolia~~	~~T-DC 12 12~~	~~Poor~~	~~*~~	~~*~~	~~Half of the tree is dead and fallen over already. Rest of the tree should be removed.~~		
~~12837~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 10~~	~~Poor~~					
~~12842~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 12~~	~~Poor~~					
~~12844~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 10~~	~~Poor~~	~~*~~		~~Broken lead. Should be removed.~~		
~~12855~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-DC 16~~	~~Poor~~					
~~12856~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 6~~	~~Poor~~					
~~12857~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 6~~	~~Poor~~					
~~12858~~	~~Sweet cherry~~	~~Prunus avitum~~	~~T-DC 10~~	~~Poor~~			~~Would not fare well alone. Would be susceptible to construction stress/damage. Has visible signs of shot hole fungus.~~		
~~12861~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 20~~	~~Poor~~					
~~12862~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 12~~	~~Poor~~					
~~12864~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 6~~	~~Poor~~					
~~12865~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 10~~	~~Poor~~					
~~12868~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 8~~	~~Poor~~					
~~12904~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 18~~	~~Poor~~			~~Near edge and has been topped already or top broke out. Should be removed.~~		
~~12907~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 7~~	~~Poor~~					
~~12909~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC 16~~	~~Poor~~					
~~12917~~	~~Douglas fir~~	~~Pseudotsuga menziesii~~	~~T-EG 10~~	~~Poor~~	~~*~~		~~Mushrooms on trunk indicate interior decay. Should be removed.~~		
~~12925~~	~~Oregon White oak~~	~~Quercus garryana~~	~~T-DC16~~	~~Poor~~					
~~12933~~	~~Black Hawthorne~~	~~Crataegus suksdorfii~~	~~T-DC 6~~	~~Poor~~					
~~20172~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Moderate~~			~~Invasive~~		
~~20259~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Moderate~~			~~Invasive~~		
~~20261~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 8~~	~~Moderate~~			~~Invasive~~		
~~20271~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 8~~	~~Moderate~~			~~Invasive~~		
~~20281~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Poor~~					
~~20282~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 4~~	~~Moderate~~					
~~20283~~	~~European Hornbeam~~	~~Carpinus betulus~~	~~T-DC 4~~	~~Good~~					
~~20331~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 8~~	~~Moderate~~			~~Invasive~~		
~~20337~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 8~~	~~Moderate~~			~~Invasive~~		
~~20343~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Moderate~~			~~Invasive~~		
~~20347~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 8~~	~~Moderate~~			~~Invasive~~		
~~20351~~	~~Norway Maple~~	~~Acer platanoides~~	~~T-DC 6~~	~~Moderate~~			~~Invasive~~		
Omitted: Located Outside Construction Area (within 50'-0" Wetland Buffer)									
12152	Oregon White oak	Quercus garryana	T-DC 18	Good			Very nice specimen		
12153	Oregon White oak	Quercus garryana	T-DC 6	Poor					
12154	Oregon White oak	Quercus garryana	T-DC 14	Moderate					
12155	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12156	Oregon White oak	Quercus garryana	T-DC 24	Moderate					
12159	Oregon White oak	Quercus garryana	T-DC 18	Moderate					
12160	Oregon White oak	Quercus garryana	T-DC 16	Moderate					

Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12161	Oregon White oak	Quercus garryana	T-DC 18	Good			Potential for long-term retention. Slight lean is away from target and is near a perimeter.		
12162	Oregon White oak	Quercus garryana	T-DC 20	Moderate					
12163	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12164	Oregon White oak	Quercus garryana	T-DC 10	Poor					
12236	Oregon ash	Fraxinus latifolia	T-DC	Poor					
12237	Oregon White oak	Quercus garryana	T-DC 16 16	Moderate					
12238	Oregon ash	Fraxinus latifolia	T-DC 12	Poor					
12239	Oregon ash	Fraxinus latifolia	T-DC 8	Poor					
12240	Oregon White oak	Quercus garryana	T-DC 10	Poor					
12241	Oregon White oak	Quercus garryana	T-DC 12 8 6	Moderate					
12242	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12243	Oregon ash	Fraxinus latifolia	T-DC 12	Poor					
12244	Oregon ash	Fraxinus latifolia	T-DC 12	Poor					
12245	Oregon White oak	Quercus garryana	T-DC 10	Poor					
12246	Oregon White oak	Quercus garryana	T-DC 15	Moderate					
12247	Oregon White oak	Quercus garryana	T-DC 15	Moderate					
12248	Western Red cedar	Thuja plicata	T-EG 14	Good			Young tree, good root flare, nice foliage - good for retention		
12249	Douglas fir	Pseudotsuga menziesii	T-DC 10	Poor	*		Extreme lean		
12250	Douglas fir	Pseudotsuga menziesii	T-EG 14	Poor					
12251	Oregon White oak	Quercus garryana	T-DC 20	Good					
12279	Oregon White oak	Quercus garryana	T-DC 18	Moderate					
12281	Oregon White oak	Quercus garryana	T-DC 8 10 10	Moderate					
12282	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12283	Oregon White oak	Quercus garryana	T-DC 14	Moderate					
12320	Pacific Willow	Salix lucida ssp. Lasiandra	T-DC 16	Moderate					
12321	Oregon White oak	Quercus garryana	T-DC 16	Moderate					
12322	Oregon White oak	Quercus garryana	T-DC 6	Poor					
12323	Oregon ash	Fraxinus latifolia	T-DC 10 10	Poor					
12324	Oregon White oak	Quercus garryana	T-DC 6	Poor					
12325	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12331	Douglas fir	Pseudotsuga menziesii	T-EG 18	Moderate					
12332	Big Leaf maple	Acer macrophyllum	T-DC 8	Moderate					
12333	Sweet cherry	Prunus avitum	T-EG 8	Good					
12334	Oregon White oak	Quercus garryana	T-DC 10 10	Moderate					
12335	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor					
12336	Oregon White oak	Quercus garryana	T-DC 8	Poor					
12337	Oregon ash	Fraxinus latifolia	T-DC 10	Poor					
12338	Oregon White oak	Quercus garryana	T-DC 9	Poor					
12339	Douglas fir	Pseudotsuga menziesii	T-EG 16	Poor					
12340	Oregon ash	Fraxinus latifolia	T-EG 8	Dead		*	no foliage		
12341	Douglas fir	Pseudotsuga menziesii	T-DC 6	Poor					
12749	Oregon White oak	Quercus garryana	T-DC 16	Moderate					
12750	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12751	Douglas fir	Pseudotsuga menziesii	T-EG 12	Moderate					
12752	Oregon White oak	Quercus garryana	T-DC 8 8	Poor					
12784	Oregon White oak	Quercus garryana	T-DC 8	Poor					
12785	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate					
12786	Oregon White oak	Quercus garryana	T-DC 14	Moderate					
12787	Oregon White oak	Quercus garryana	T-DC 24	Good			Beautiful specimen, even canopy. Less likely to be susceptible to wind throw. Shades itself.		
12788	Oregon ash	Fraxinus latifolia	T-DC 10	Poor					
12789	Oregon ash	Fraxinus latifolia	T-DC 8	Poor					
12790	Oregon ash	Fraxinus latifolia	T-DC 6	Poor					
12791	Oregon ash	Fraxinus latifolia	T-DC 9	Poor					
12792	Oregon White oak	Quercus garryana	T-DC 14	Moderate					
12793	Douglas fir	Pseudotsuga menziesii	T-EG 20	Moderate					
12794	Douglas fir	Pseudotsuga menziesii	T-EG 10	Moderate					
12816	Oregon ash	Fraxinus latifolia	T-DC 22	Moderate					

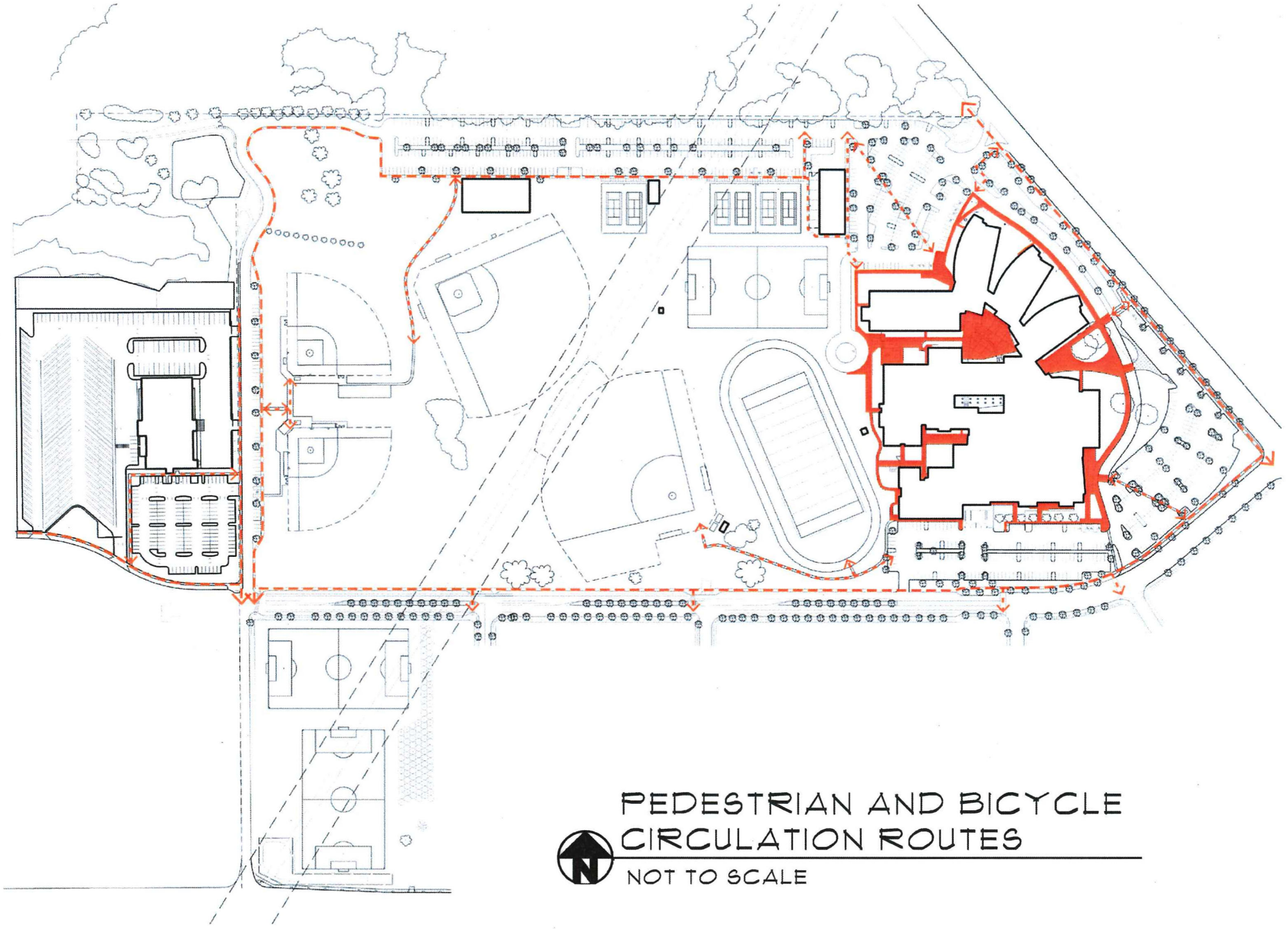
Tree ID #	Common Name	Scientific Name	Size (DBH)	Condition	Haz	Dead	Notable Features	Cal. "	# of Mitigation Trees
12817	Oregon White oak	Quercus garryana	T-DC 6	Poor					
12818	Oregon White oak	Quercus garryana	T-DC 10	Moderate					
12819	Oregon White oak	Quercus garryana	T-DC 18	Moderate					
12820	Douglas fir	Pseudotsuga menziesii	T-EG 24	Good			Should acclimate well to construction stress. Has good lower foliage and nice percentage of live crown growth.		
12821	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12822	Oregon White oak	Quercus garryana	T-DC 10 10	Poor					
12823	Oregon White oak	Quercus garryana	T-DC 9	Moderate					
12824	Oregon ash	Fraxinus latifolia	T-DC 10	Poor					
12825	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12826	Oregon ash	Fraxinus latifolia	T-DC 10	Poor					
12827	Oregon ash	Fraxinus latifolia	T-DC 10	Poor					
12828	Oregon ash	Fraxinus latifolia	T-DC 10 10	Poor					
12829	Oregon White oak	Quercus garryana	T-DC 15	Moderate					
12830	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12831	Oregon White oak	Quercus garryana	T-DC 24	Moderate					
12833	Oregon White oak	Quercus garryana	T-DC 16	Moderate					
12834	Oregon White oak	Quercus garryana	T-DC 10	Moderate					
12835	Oregon White oak	Quercus garryana	T-DC 12 12	Moderate					
12836	Oregon White oak	Quercus garryana	T-DC 14	Moderate					
12872	Oregon White oak	Quercus garryana	T-DC 10 6	Moderate					
12873	Oregon White oak	Quercus garryana	T-DC 10	Moderate					
12874	Oregon White oak	Quercus garryana	T-DC 14	Moderate					
12875	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12876	Oregon White oak	Quercus garryana	T-DC 10	Poor					
12877	Oregon White oak	Quercus garryana	T-DC 6	Poor					
12878	Douglas fir	Pseudotsuga menziesii	T-EG 6	Poor					
12879	Oregon ash	Fraxinus latifolia	T-DC 10	Moderate					
12880	Oregon White oak	Quercus garryana	T-DC 15	Moderate					
12881	Oregon ash	Fraxinus latifolia	T-DC 6	Poor					
12882	Oregon White oak	Quercus garryana	T-DC 6	Moderate					
12883	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12884	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12885	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12886	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12887	Oregon White oak	Quercus garryana	T-DC 12	Moderate					
12888	Oregon White oak	Quercus garryana	T-DC 8	Moderate					
12889	Oregon White oak	Quercus garryana	T-DC 10 8	Moderate					
12890	Oregon White oak	Quercus garryana	T-DC 6 8 8	Moderate					
12891	Oregon ash	Fraxinus latifolia	T-DC 14	Moderate					
12892	Oregon White oak	Quercus garryana	T-DC 14	Moderate					
12893	Oregon ash	Fraxinus latifolia	T-DC 8	Poor					
12894	Oregon White oak	Quercus garryana	T-DC 10	Moderate					
12895	Oregon ash	Fraxinus latifolia	T-DC 10	Moderate					
12896	Oregon ash	Fraxinus latifolia	T-DC10	Poor					

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Exhibit H- Pedestrian and Bicycle Circulation Routes



PEDESTRIAN AND BICYCLE CIRCULATION ROUTES

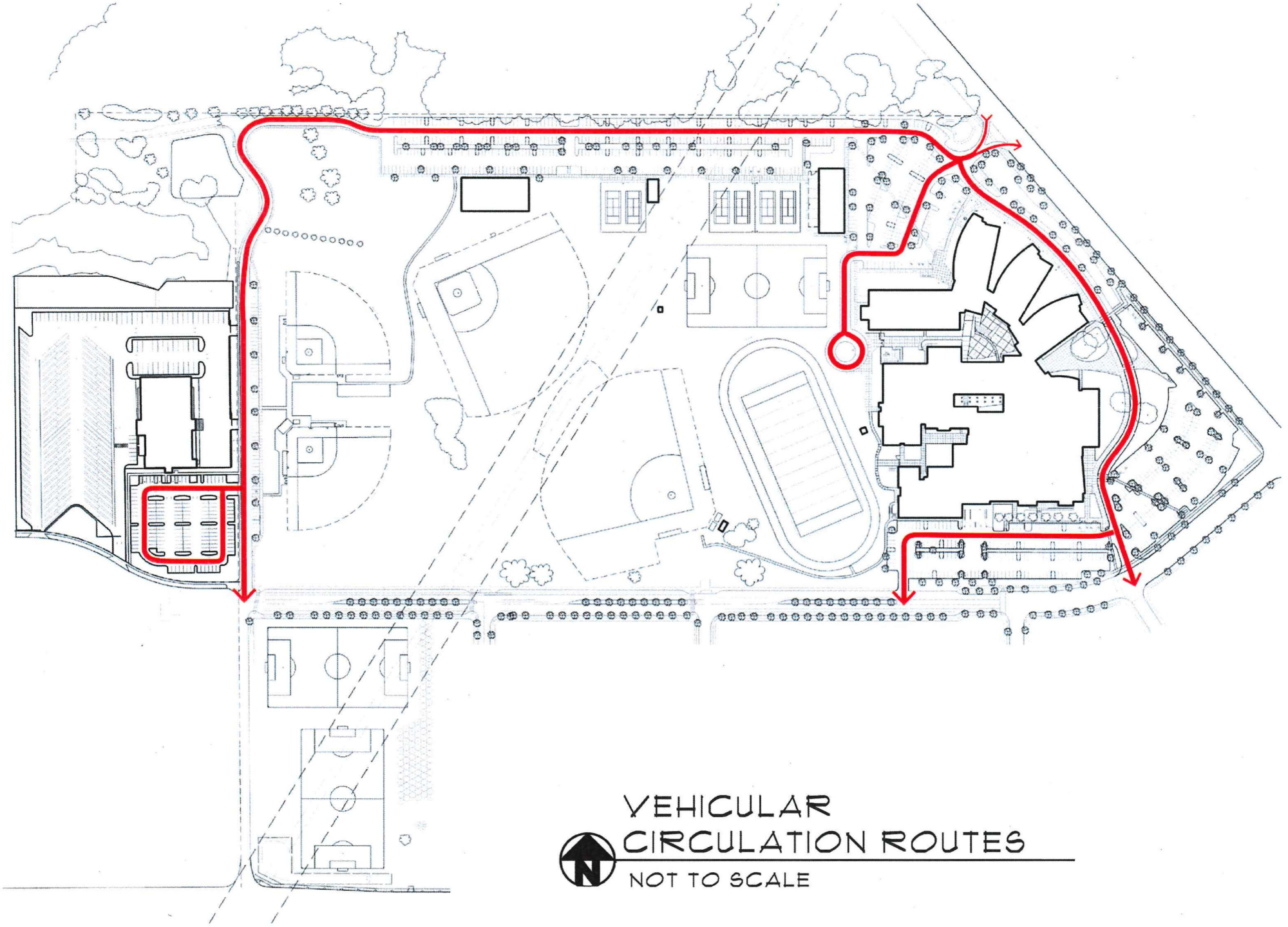
NOT TO SCALE

OREGON CITY SCHOOL DISTRICT

MASTER PLAN

OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

Exhibit I – Vehicular Circulation Routes



VEHICULAR CIRCULATION ROUTES

NOT TO SCALE

OREGON CITY SCHOOL DISTRICT

SITE PLAN AND DESIGN REVIEW

PROPOSED TRANSPORTATION MAINTENANCE FACILITY

Exhibit D - Meyers Road Extension

Chapter 12.04 – Streets, Sidewalks and Public Places
12.04.007 - Modifications

Finding: **This section contains five (5) criteria that must be suitably addressed in order for a modification of streets standards to be granted.** ***The modification request in this regards is to allow the Meyers Road extension across the Oregon City School Transportation Facility frontage to largely match in terms of elements and width those frontage improvements that currently exist for Meyers Road along the remainder of the School's frontage. Specifically the following modifications to minor arterial street standard are requested: A reduced right-of-way width from the standard of 118 feet to 92 feet (46 foot half right-of-way width); pavement width from the standard of 86 feet to 60 feet (via having a 3 lane section rather than a 5 lane section); and reduce the width of the travel lanes to 11 feet to match the existing lane widths on the existing portion of Meyers. The criteria for modifications are noted below:***

A. **Modification meets the intent of the standard.** ***The main adjustment to the standard (Industrial Minor Arterial) is the elimination of two travel lanes, reducing the number of travel lanes from 4 to 2. While this particular section of Meyers Road may be labeled as an Industrial Minor Arterial, that portion from Beavercreek Road to the current east line of Oregon City High School site, on the north side, and through the future Glen Oak Park, on the south side, is noted as a Residential Minor Arterial area according Figure 8 (Multi-Modal Street System) per the Oregon City Transportation Master Plan. As all of Meyers Road constructed thus far, from Beavercreek west to the east lines of the School District Transportation facility site and the future Glen Oak park site, is currently either 3 lane, or 2 lanes with a median, having 3 lanes across the frontage of the Transportation facility site better matches the existing section of Meyers Road and provides all the elements of the Minor Arterial Street less the two extra lanes noted for an Industrial Minor Arterial. The other adjustment would be to reduce the width of each travel lane by one foot. The existing section of Meyers Road along the High School frontage has three 11 foot wide travel and turn lanes, 5 foot wide bike lanes and 8 foot wide parallel parking stalls for a total of 59 feet. Per the new standard the parallel parking stalls would be reduced to 7 feet and the extra foot added to the bike lanes. The travel lanes would be 11 feet and the turn lane 12 feet wide. The intent would be from curb to curb to closely match the present width of Meyers Road along the High School ball fields where parallel parking on both sides of the street currently exists, although the new extension would be a foot wider. The right-of-way for Meyers Road though will be significantly wider than exists along the ball fields, as street planter strip between the curb and sidewalk will be provided. The proposed modifications will meet the intent of the standard while better matching the existing Meyers Road improvements.***

B. **The modification provides safe and efficient movement of pedestrians, motor vehicles, bicyclist and freight.** ***The modification will provide safe movement for all elements although the travel lanes would be one foot slimmer than the standard, but matching what presently exists along Meyers Road.***

C. **The modification is consistent with an adopted plan;** ***The Transportation Master Plan notes that this section of Meyers Road as being on the border between Residential and Industrial street types. While a section of the TSP notes that this section of street improvement as an Industrial Minor Street (per TM #11 Planned and Financially Constrained Transportation Systems – Table 1 Item D-46), Figure 8 (Multi-Modal Street System) of the TSP provides some argument that the Residential Minor Arterial street section is more appropriate.***

Other than the street being 3 lane rather than 5 lane and the travel lanes being a foot narrower all the elements of the street standards for a public street are to be installed and thus will be consistent the Transportation Master Plan.

D. The modification is complementary with a surrounding street design. *The reason of the modification in large part is make the street more complementary with the previously constructed portion of Meyers Road. To construct a 5 lane wide street section that would then reduce to a 3 lane section at High School Avenue would seem to work against the intent of Item B above with respect to safe movement of vehicles, as merging lanes would be necessary for traffic proceeding east on Meyers Road, if such a condition existed.*

E. If a modification is requested for constitutional reasons... *A modification for constitutional reasons is not requested.*

The intent of the request is to have a street section more in fitting with the existing section of the Meyers Road to the east where the High School lies to the north and residential areas and ball fields lie to the south. This portion of Meyers Road will have a City Park to the south and the proposed School District Transportation Facility to the north, more in character with the existing section of Meyers Road than an Industrial use area.

We cannot predict what may eventually develop to the west of City Park and the proposed Transportation Facility but if a 5 lane wide street seems appropriate to for the future development between west boundaries of the City Park and School District site to Hwy 213 the City will have means to require it. However, in terms of impacts to the street system of the proposed use of this application, the future City Park improvements immediately to the south, and current uses to the east, it does not seem appropriate, nor safe, to have such a wide street section for this approximately 500 foot extension of Meyers Road.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM H – LODER ROAD

The City of Oregon City plans to extend Loder Road to Glen Oak Road in order to link up to Highway 213.

The exact routing of this extension of Loder Road has not been finalized, but City Planners have suggested that one possibility is to improve the District's private driveway on High School Avenue as a part of the Loder Road Extension.

While the proposed development of the new Transportation Maintenance Facility would not impede this possibility, the routing of Loder Road in this location would result in significant public traffic through the School District's campus. The resulting loss of the District's control over entry into the campus would be counterproductive to the District's mandate to provide a safe and secure environment for its students. In addition there would be negative impacts and increased pedestrian risk on the use of the current athletic fields as hundreds of spectators would be crossing a busy public road instead of a private driveway. Thus the District does not endorse this routing option for Loder Road.

It is the District's view that a better routing of the Loder Road extension would be on the other (west) side of the District's Transportation Maintenance Facility site. Refer to the attached suggested routing. The attached drawing is diagrammatic and it should be noted that the exact location of the Loder Road extension may need to be adjusted further west to address the exact boundaries of the Natural Resource Overlay District. In addition to avoiding security impacts and increased pedestrian risk at the High School campus, this location may be of some benefit for accessing Campus Industrial properties to the west depending upon final layouts of those future developments. Finally, the District has not received nor solicited any indication from Clackamas Community College as to their preferred routing of the Loder Road extension.

MEYERS ROAD & LODER ROAD EXTENSION ALIGNMENT

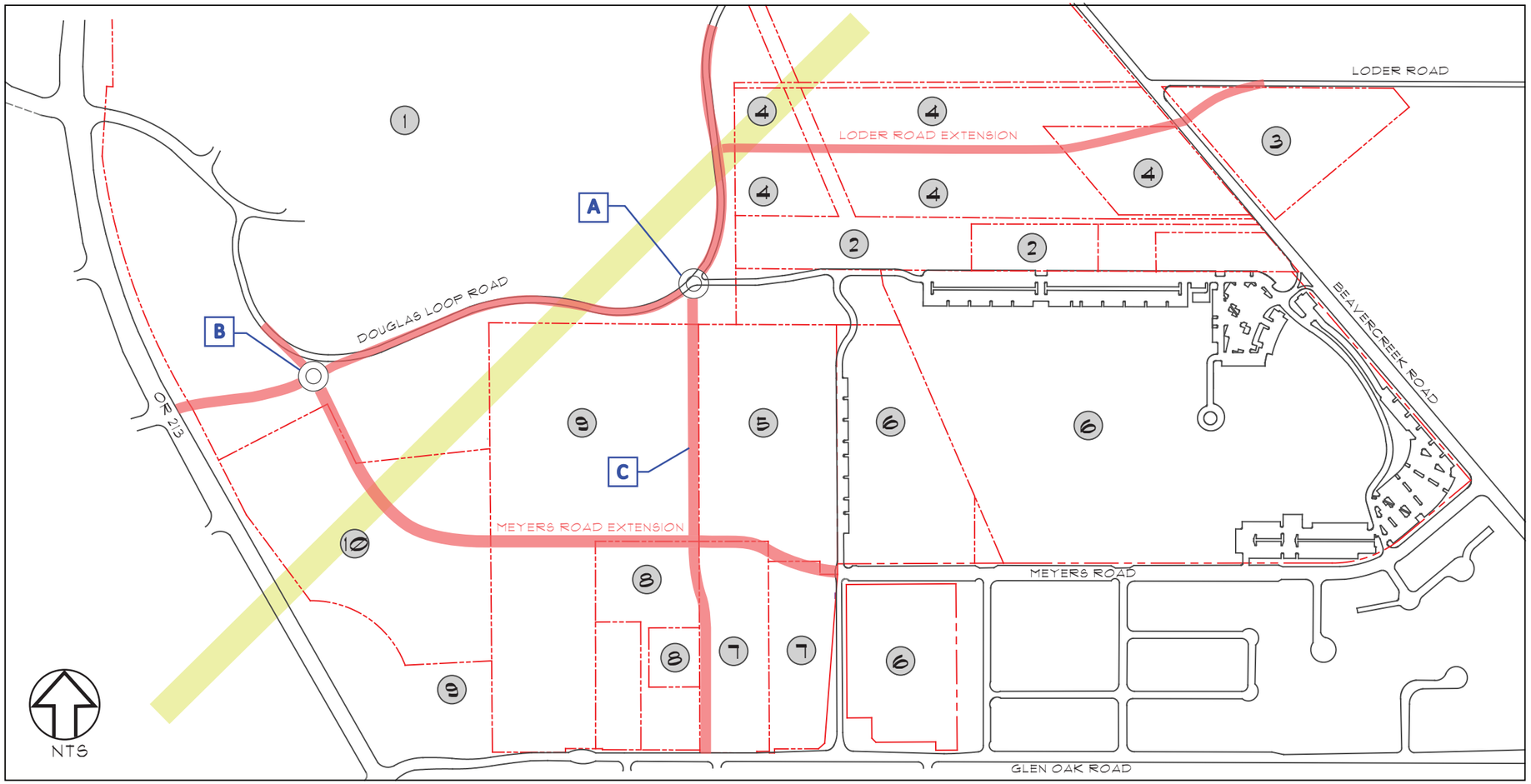
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AFFECTED PROPERTY OWNERS

1. CLACKAMAS COMMUNITY COLLEGE
2. NUTT
3. HALL
4. EELLS
5. OREGON CITY SCHOOL DISTRICT
6. OREGON CITY HIGH SCHOOL
7. OREGON CITY PARKS
8. KEITH
9. SAUNDERS
10. BERGE

LEGEND

- ROADWAY
- BPA RIGHT-OF-WAY
- ROUNDABOUT
- PROPERTY LINES OF AFFECTED PROPERTY OWNERS



DESIGN FEATURES

- A — 3 OR 4-WAY ROUNDABOUT
- B — 4- WAY ROUNDABOUT
- C — POSSIBLE FUTURE ROAD CONNECTION

BBL ARCHITECTS
ARCHITECTURE ■ PLANNING ■ INTERIOR DESIGN
200 North State Street ■ Lake Oswego, Oregon 97034

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS
▪
SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM B - BUILDING OFFICIAL ISSUES

Pedestrian access meeting the requirements of ANSI 117.9 and Chapter 11 from the Oregon Structural Specialty Code from the building to the public way is required (not just the project boundaries).

Pedestrian access to and from the Main building entrance at the south face of the new proposed Transportation Maintenance Facility will conform to ANSI 117.9 and OSSC Chapter 11. The sidewalk runs parallel to the south face of the building and connects to the east with the sidewalk along the western edge of High School Avenue. The on-site sidewalk also continues to the west, turns south and connects to the new public sidewalk along the north side of the Meyers Road extension.

• Was not sure if the parking strip to the East is existing and if so the accessible parking might need to be relocated to meet the requirements of Chapter 11 of the Oregon Structural Specialty Code.

The parking at the east side of High School Avenue is existing and serves the High School Play Fields. The existing accessible parking spaces are directly adjacent to play fields.

• The elevator marked as future might be required to be installed at the time of construction depending on use of the upper level.

The upper level is currently slated as storage of inactive files only. Future offices are envisioned, at which time the elevator would need to be installed.

• It is possible that additional comments will be forth coming once the Building Application is made and the construction documents are reviewed for the applicable specialty codes.

Building permit applications will address and meet applicable codes.

OREGON CITY SCHOOL DISTRICT

SITE PLAN AND DESIGN REVIEW

PROPOSED TRANSPORTATION MAINTENANCE FACILITY

Exhibit F - Phase 1 Environmental Site Assessment

Refer to attached Phase I Environmental Site Assessment prepared by GeoDesign Inc. (dated September 24, 2014).

GeoDesign INC

PHASE I ENVIRONMENTAL SITE ASSESSMENT

10.53-Acre Parcel
Northwest of Meyers Road and High School Avenue
Oregon City, Oregon

For
BBL Architects
September 24, 2014

GeoDesign Project: ArchBBL-3-01

GEODESIGN INC

September 24, 2014

BBL Architects
200 North State Street
Lake Oswego, OR 97034

Attention: Mr. Ron Lee

Phase I Environmental Site Assessment
10.53-Acre Parcel
Northwest of Meyers Road and High School Avenue
Oregon City, Oregon
GeoDesign Project: ArchBBL-3-01

GeoDesign, Inc. is pleased to submit our Phase I ESA of the 10.53-acre parcel located northwest of the intersection of NW Meyers Road and High School Avenue in Oregon City, Oregon. Our work was completed in conformance with the standards and practices for all appropriate inquiries specified in Title 40, Chapter I of CFR Part 312 and ASTM Practice E 1527-13. Contractual terms for our services are contained in our proposal dated August 22, 2014.

We appreciate the opportunity to be of service to BBL Architects. Please contact us if you have questions regarding this report.

Sincerely,

GeoDesign, Inc.

Robert E. Belding, R.G.
Principal Geologist

ASB:REB:kt
Attachments
One copy submitted
Document ID: ArchBBL-3-01-092414-envr.docx
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FIGURES

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APPENDICES

Appendix A	Firm Profile
	Resumes of Project Personnel
Appendix B	Regulatory Database Information
Appendix C	Historical Information

ACRONYMS

1.0 INTRODUCTION

This report summarizes the results of our Phase I ESA of the 10.53-acre parcel located northwest of the intersection of NW Meyers Road and High School Avenue in Oregon City, Oregon (project site). The project site includes Tax Lot 1400 of Clackamas County Tax Map 32E09D and includes a vacant barn. The project site is shown relative to surrounding physical features on Figure 1. The project site layout and surrounding properties are shown on Figure 2. GeoDesign's firm profile and resumes of project personnel are presented in Appendix A. For your reference, acronyms used herein are defined at the end of this document.

2.0 PURPOSE

2.1 PROTECTION FROM CERCLA LIABILITY

One purpose for conducting a Phase I ESA is to undertake all appropriate inquiries into prior ownership and uses of a property so that a prospective purchaser may potentially claim protection from CERCLA and/or state liability as an innocent landowner, a bona fide prospective purchaser, or a contiguous property owner. The standards and practices for all appropriate inquiries are specified in Title 40, Chapter I of CFR Part 312 and ORS 465. The inquiry must be conducted by an environmental professional to identify conditions indicative of releases and threatened releases of hazardous substances as defined in CERCLA Section 101(22). If the prospective purchaser is the recipient of an EPA Brownfields Grant, the inquiry must also identify conditions indicative of releases and threatened releases of petroleum and petroleum products and controlled substances as defined in 21 U.S. Code 802. These standards and practices do not require the identification of quantities of hazardous substances, petroleum and petroleum products, and controlled substances that, because of said quantity, generally would not pose a threat to human health or the environment.

2.2 IDENTIFICATION OF RECOGNIZED ENVIRONMENTAL CONDITIONS

Another purpose for conducting a Phase I ESA is to identify recognized environmental conditions in connection with a property as they pertain to ASTM Practice E 1527-13. This practice is intended for use by parties who wish to assess the environmental condition of a property by taking into account commonly known and reasonably ascertainable information. Although use of ASTM Practice E 1527-13 constitutes all appropriate inquiry as described in Section 2.1 of this report, the standard is intended primarily as an approach to identify recognized environmental conditions in connection with a property. A recognized environmental condition is defined by the presence or likely presence of hazardous substances or petroleum products on the project site under circumstances that designate an existing, previously existing, or potential release of hazardous substance or petroleum products into the structures or landscape of the project site. Recognized environmental conditions do not include de minimis conditions that do not generally present a risk to public health or to the environment and would not be the subject of legal enforcement if brought to the attention of appropriate governmental agencies.

3.0 SCOPE OF SERVICES

The completed scope of services was conducted in conformance with the standards and practices for all appropriate inquiries specified in 40 CFR Part 312 and the scope and limitations of ASTM Practice E 1527-13. The specific scope of services completed for this Phase I ESA included the following:

- Reviewed a current USGS topographic map to identify the physical setting of the project site.
- Reviewed federal, tribal, state, and local environmental records for listings of known or suspected environmental conditions at the project site or nearby properties as specified in 40 CFR Part 312 and ASTM Practice E 1527-13.
- Reviewed reasonably ascertainable standard historical sources, including aerial photographs, USGS topographic maps, reverse city directories, and online property information (including available building department records, property tax information, and zoning/land use records) to identify development history on and adjacent to the project site relative to the possible use, generation, storage, release, or disposal of hazardous substances.
- Interviewed a representative of the current owner of the project site (as provided by BBL Architects).
- Conducted a visual reconnaissance of the project site and adjacent properties to obtain information indicating the likelihood of identifying recognized environmental conditions concerning the properties.
- Prepared this report that presents our findings and provides conclusions and recommendations.

The scope of services was limited to only those items listed above. This project did not include completion of an environmental compliance audit; an evaluation for the presence of PCBs in light ballasts; a survey for asbestos, lead-based paint, radon gas, toxic mold, biological pollutants, or urea-formaldehyde insulation; or a wetlands determination or delineation.

4.0 PROJECT SITE AND VICINITY DESCRIPTION

Information concerning the physical setting of the project site and vicinity is based on a review of the USGS 7.5-minute Oregon City, Oregon, topographic quadrangle map; information provided by EDR of Shelton, Connecticut; and observations made during a site reconnaissance conducted on September 11, 2014.

The project site encompasses approximately 10.53 acres located northwest of the intersection of NW Meyers Road and High School Avenue in Oregon City, Oregon. The project site is currently owned by Oregon City School District #62 and includes a vacant barn. The project site includes Tax Lot 1400 of Clackamas County Tax Map 32E09D and is located in the western half of the southeast quarter of Section 9, Township 3 South, Range 2 East of the Willamette Meridian.

The project site is situated at elevations ranging between approximately 410 and 425 feet. The topography of the project site generally slopes slightly downward to the northwest. Based on a review of topographic maps for the area, shallow groundwater beneath the project site is expected to flow west towards Canfield Creek.

Land use in the vicinity of the project site is primarily residential and institutional. According to the City of Oregon City Planning Department, the project site is zoned Campus Institutional (CI). Properties surrounding the project site are zoned Campus Institutional (CI), Institutional (I), and Single Family Dwelling (R-8).

5.0 USER-PROVIDED INFORMATION

The purpose of this section is to describe information provided by the user of this report (BBL Architects) that was considered in the evaluation of potential recognized environmental conditions in connection with the project site. The user was not provided with previously completed environmental reports, title and judicial records for environmental liens or activity and land use restrictions, specialized or actual knowledge or experience, valuation reduction for environmental issues, or commonly known or reasonably ascertainable information. Therefore, these materials were not reviewed as part of this assessment.

6.0 ENVIRONMENTAL RECORDS REVIEW

Federal, tribal, state, and local environmental records and databases were compiled according to 40 CFR Part 312 and ASTM Practice E 1527-13 for the project site and those facilities that currently or previously have occupied properties within the specified search distance from the project site. Information contained in the records and databases was reviewed by GeoDesign to evaluate the potential for environmental impacts to the project site. The EDR report is presented in Appendix B.

6.1 PROJECT SITE

The project site was not listed on any of the government records or databases searched by EDR.

6.2 SURROUNDING SITES

The EDR report identified six surrounding sites listed on one or more regulatory databases within the ASTM search distances. Based on local topography, the inferred direction of shallow groundwater flow, the regulatory status of the listed sites, the media impacted at the listed sites, and information contained in the regulatory databases, it is our professional opinion that none of the six sites should pose a risk of a recognized environmental condition at the project site.

6.3 ORPHAN SITES

Due to poor or inadequate address information, EDR was unable to successfully map 19 facilities identified on several environmental databases. However, enough information was available to ascertain the general location of these orphan facilities relative to the project site and, in some cases, the status of the investigations concerning these orphan sites. Based on the location of the orphan sites, the inferred direction of shallow groundwater flow, the regulatory status of the listed sites, the media impacted at the listed sites, and information contained in the regulatory databases, it is our professional opinion that these orphan sites should not pose a risk of a recognized environmental condition at the project site.

7.0 PROJECT SITE HISTORY AND BACKGROUND

Reasonably ascertainable information concerning the history and background of the project site begins in 1914 and includes aerial photographs, USGS topographic maps, reverse city directories, and online property information (including available building department records, property tax information, and zoning/land use records). Fire insurance maps were not available as reported by EDR. The "No Coverage" report provided by EDR is presented in Appendix C.

Historical aerial photographs for the project site were obtained from EDR and were reviewed by GeoDesign. The scale of the photographs reviewed allowed for the interpretation of general site development/configuration but did not allow for the identification of specific project site features. Aerial photographs were reviewed for the following years: 1952, 1960, 1970, 1981, 1994, 2000, and 2012. The historical aerial photographs are presented in Appendix C.

Historical topographic maps of the project site were obtained from EDR to evaluate past uses of the project site. Topographic maps were reviewed for the following years: 1914, 1939, 1954, 1961, 1970, and 1975. The historical topographic maps are presented in Appendix C.

Reverse city directories for the project site and adjacent properties were obtained from EDR. The city directories were reviewed (if available) at approximately five-year intervals for the years spanning 1965 through 2013. The EDR City Directory Abstract is presented in Appendix C.

Online property information for the project site and select adjacent properties was reviewed by GeoDesign. The online property information is presented in Appendix C.

7.1 PROJECT SITE

Based on the review of historical sources cited in Section 7.0 of this report, we have identified the following developmental history of the project site:

Year	Observations	Source
1914 through 2014	Since 1914, the project site appeared as vacant, forested or agricultural-use land. By 1981, a barn was constructed on the project site. The project site appears to have remained generally unchanged since the barn was constructed.	• Aerial Photograph • Topographic Map • Online Information

Our review of historical sources from 1914 through 2014 indicated that the project site has existed as vacant, forested or agricultural-use land since 1914. A barn was constructed on the project site between 1970 and 1981 and is still present in the southeast portion of the project site.

7.2 ADJOINING SITES

Based on the review of historical sources cited in Section 7.0 of this report, we have identified the following developmental history of properties adjoining the project site:

Year	Observations	Source
1914 through 2000	By 1914, properties surrounding the project site appeared as vacant, forested or agricultural-use land. By 1961, the property located east of the project site was used as an orchard. By 1970, an apparent farmstead was constructed on the property located south of the project site.	• Aerial Photograph • Topographic Map • City Directory
2005 through 2014	By 2005, High School Avenue was constructed east of the project site and the former orchard was redeveloped as a high school athletic field.	• Aerial Photograph

Our review of historical sources from 1914 through 2014 indicated that properties adjoining the project site existed as vacant, forested or agricultural-use land with light residential use until approximately 2005, when High School Avenue and a high school athletic field were constructed to the east of the project site.

8.0 SITE RECONNAISSANCE

GeoDesign conducted a reconnaissance of the project site on September 11, 2014. The observations noted in this section apply to the project site as it appeared on that day. The site reconnaissance was performed to observe the current condition of the project site and to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the project site. Access to the project site and its structures was unlimited. The adjoining properties were also observed from the boundaries of the project site as part of the site reconnaissance. A site plan is provided on Figure 2. Photographs of the project site were taken to document observations made during the reconnaissance and are presented on Figures 3 and 4.

8.1 GENERAL PROJECT SITE USE

The project site consists of vacant property with a barn.

8.1.1 Site Drainage

Surface water at the project site is expected to infiltrate into the subsurface. GeoDesign personnel did not observe surface water on the project site at the time of our site reconnaissance.

8.1.2 Project Site Structures

The approximately 1,200-square-foot, wood-framed barn was constructed with a concrete slab-on-grade foundation, corrugated metal siding, and corrugated metal roofing.

8.1.3 Potable Water Supply

A non-working water spigot was observed near the barn. The source of water for the water spigot was not identified during this assessment.

8.1.4 Sewage Disposal System

Evidence of a sewage disposal system was not observed at the project site.

8.1.5 Hazardous Substances and Petroleum Products
Hazardous substances or petroleum products were not observed on the project site.

8.1.6 Storage Tanks
GeoDesign observed an approximately ½-inch-diameter metal pipe extending upward from the ground surface near the barn. The purpose of this pipe was not identified by GeoDesign. Other possible evidence of USTs or ASTs was not observed on the project site.

8.1.7 Drums
Drums were not observed on the project site.

8.1.8 Unidentified Substance Containers
Unidentified substance containers suspected of containing hazardous substances or petroleum products were not observed on the project site.

8.1.9 Odors
Strong, pungent, or noxious odors were not observed on the project site.

8.1.10 Pools of Liquid
Pools of liquid were not observed on the project site.

8.1.11 PCB-Containing Equipment
Electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs was not observed on the project site.

8.1.12 Pits, Ponds, and Lagoons
Pits, ponds, or lagoons were not observed on the project site.

8.1.13 Stained Soil or Stained Pavement
Stained soil or stained pavement was not observed on the project site.

8.1.14 Stressed Vegetation
Stressed vegetation was not observed on the project site.

8.1.15 Solid Waste
Solid waste was not observed on the project site.

8.1.16 Waste Water
Waste water was not observed on the project site.

8.1.17 Wells
Water wells, drywells, monitoring wells, irrigation wells, injection wells, abandoned wells, or other wells were not observed on the project site.

8.1.18 Septic Systems
Evidence of an on-site septic system or cesspool was not observed on the project site.

8.1.19 Fill
An approximately 10-cubic-yard fill pile was observed north of the barn. Evidence of deleterious material was not observed among the fill.

8.1.20 Heating and Cooling Systems
Heating and cooling systems were not observed on the project site.

8.1.21 Interior Stains or Corrosion
Interior stains or corrosion was not observed in the project site structure.

8.1.22 Interior Drains or Sumps
Interior drains or sumps were not observed in the project site structure.

8.2 SURROUNDING PROPERTY USE
The project site is directly bound to the north by a pond and vacant property; to the east by High School Avenue, across which is a high school athletic field; to the south by residential and vacant property; and to the west by vacant property. Evidence of adverse environmental conditions was not observed on adjacent properties.

9.0 INTERVIEWS

The vacant project site is currently owned by Oregon City School District #62. GeoDesign interviewed a representative of the owner during the course of this study. Information obtained from this interview is presented in the following section.

9.1 CURRENT OWNER REPRESENTATIVE
Mr. Wes Rogers (Oregon City School District director of operations) completed a Phase I ESA Questionnaire on September 10, 2014 regarding his knowledge of the project site. Mr. Rogers has been familiar with the project site for approximately two years. Mr. Rogers did not reveal any information indicative of recognized environmental conditions related to the project site.

10.0 DATA GAPS

The project site and adjoining properties are not listed on any federal, state, or local regulatory databases that would indicate the presence of a recognized environmental condition at the project site. Accordingly, attempts to identify a government official with first-hand knowledge of the environmental condition of the project site were not completed during this assessment. Based on our knowledge of the project site, it is our professional opinion that this data gap is of low significance relative to our ability to identify a recognized environmental condition at the project site.

11.0 CONCLUSIONS AND RECOMMENDATIONS

GeoDesign performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13 and all appropriate inquiries specified in 40 CFR Part 312 and the proposal to BBL Architects dated August 22, 2014 for the project site located at located northwest of the

intersection of NW Meyers Road and High School Avenue in Oregon City, Oregon. Any exceptions to or deletions from this practice are described in Sections 3.0 and 13.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property. Based on the results of the Phase I ESA, it is our professional opinion that no further environmental inquiries regarding the project site are warranted at this time.

A non-working water spigot and an approximately ½-inch-diameter metal pipe were observed protruding from the ground at the project site. The water source for the spigot and the purpose of the metal pipe were not determined by GeoDesign. If encountered during construction, historical water supply wells or USTs associated with the project site should be properly abandoned in accordance with state and local regulations prior to site development. If chemical or hazardous material disposal is evident in any of the septic systems, soil samples should be collected from beneath these features.

We did not observe evidence of deleterious material among the fill pile present at the project site. If hazardous material is found in the fill pile, it should be separated, characterized, and properly disposed.

12.0 DECLARATIONS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 40 CFR Part 312.10. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the project site. We developed and performed all the appropriate inquiries in accordance with the standards and practices set forth in 40 CFR Part 312.

13.0 LIMITATIONS

This Phase I ESA has been prepared for use by BBL Architects. GeoDesign makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others. The information presented in this report is based on the above-described research and a single recent site visit. Information provided by others was relied on in our description of historical conditions and review of regulatory databases and files. The available data do not provide definitive information with regard to all past uses, operations, or incidents at the project site or adjacent properties. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property. There is always a potential that areas with contamination that were not identified during this Phase I ESA exist at the project site or in the study areas. Further evaluation of such potential would require additional research, subsurface exploration, sampling, and/or testing.

Some substances may be present in the project site vicinity in quantities or under conditions that may have led or may lead to contamination of the project site but are not included in current local, state, or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoDesign cannot be responsible if the standards of all

appropriate inquiry or regulatory definitions of hazardous substance change or if you are required to meet more stringent standards in the future.

This report is not intended for use by others, and the information contained herein is not applicable to other sites. Reliance on this report by other parties is strictly at the risk of those parties, and GeoDesign will grant no third party reliance unless specifically requested in writing by our client for whom this report was prepared.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted environmental science practices for Phase I ESAs in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

♦ ♦ ♦

We appreciate the opportunity to be of service to BBL Architects. Please call if you have questions regarding this report.

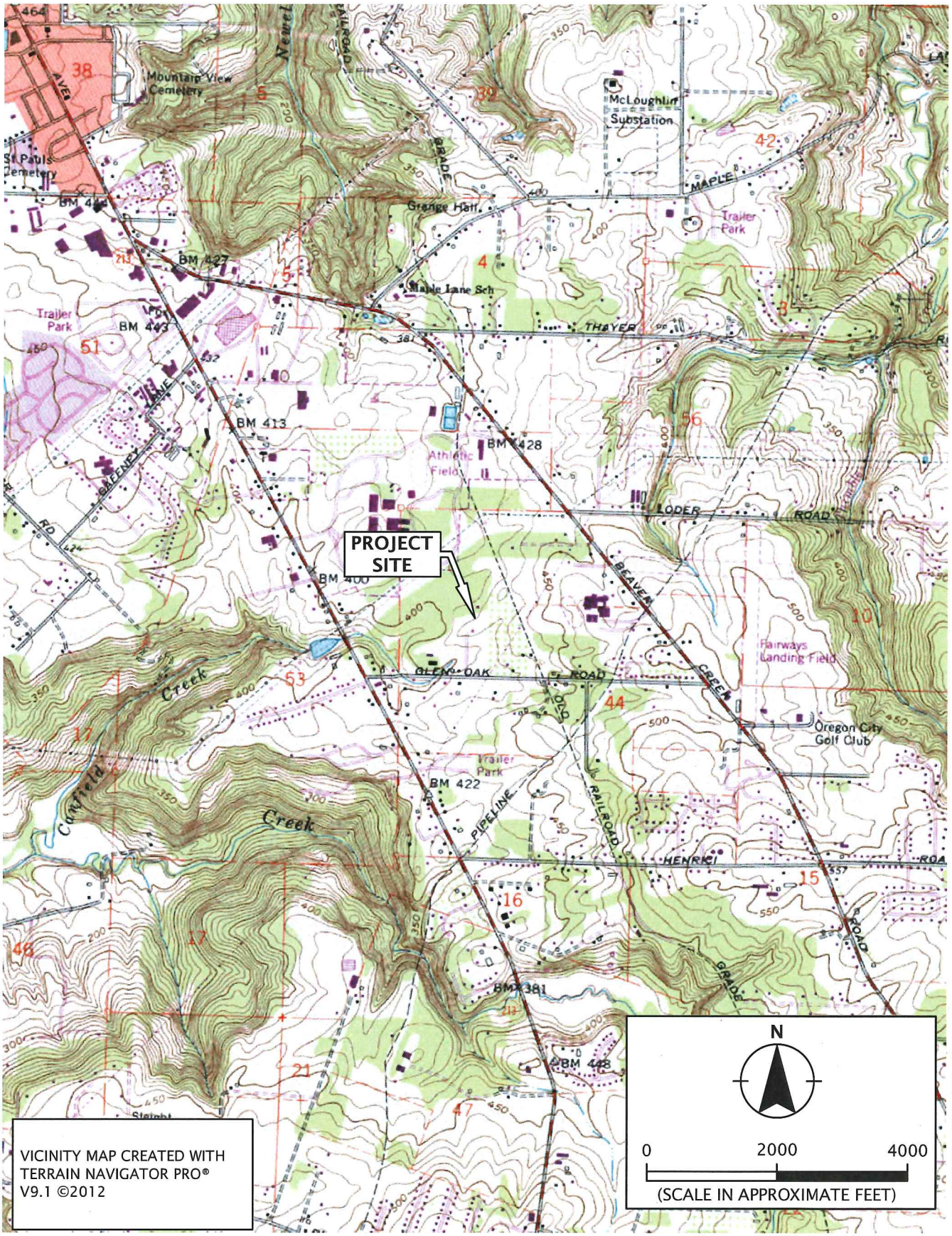
Sincerely,

GeoDesign, Inc.

Andrew S. Blake, R.G.
Project Geologist

Robert E. Belding, R.G.
Principal Geologist

FIGURES

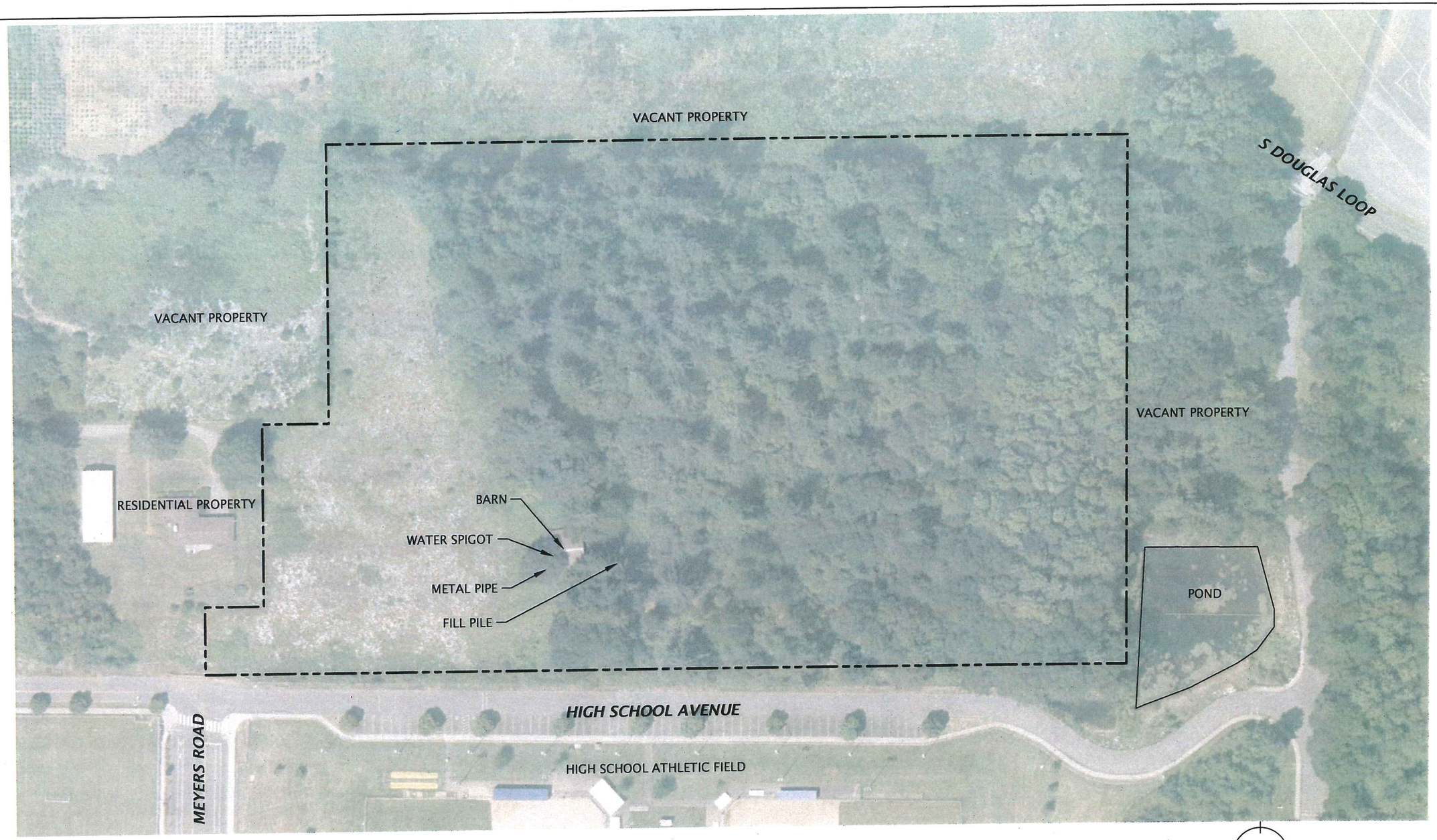


VICINITY MAP CREATED WITH TERRAIN NAVIGATOR PRO® V9.1 ©2012

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ARCHBBL-3-01	**VICINITY MAP**	
SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR	**FIGURE 1**

Printed By: aday | Print Date: 9/24/2014 12:16:58 PM
File Name: J:\A-D\ArchBBL\ArchBBL-3\ArchBBL-3-01\Figures\CAD\ArchBBL-3-01-VM01.dwg | Layout: FIGURE 1



LEGEND:

PROJECT SITE BOUNDARY (CLACKAMAS COUNTY TAX LOT 1400 OF MAP 32E09D)

N

0 100 200

(SCALE IN FEET)

SITE PLAN BASED ON AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH PRO®, SEPTEMBER 18, 2014

SITE PLAN

10.53-ACRE PARCEL
OREGON CITY, OR

FIGURE 2

ARCHBBL-3-01

SEPTEMBER 2014

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File Name: J:\A-D\ArchBBL\ArchBBL-3\ArchBBL-3-01\Figures\CAD\ArchBBL-3-01-SP01.dwg | Layout: FIGURE 2



VIEW OF THE SOUTHERN PORTION OF THE PROJECT SITE. PHOTOGRAPH TAKEN FACING NORTH.



VIEW OF THE NORTHERN PORTION OF THE PROJECT SITE. PHOTOGRAPH TAKEN FACING WEST.

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ARCHBBL-3-01	**PROJECT SITE PHOTOGRAPHS**	
SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR	**FIGURE 3**



VIEW OF THE BARN AND FILL STOCKPILE. PHOTOGRAPH TAKEN FACING SOUTH.



VIEW OF THE BARN. PHOTOGRAPH TAKEN FACING NORTH.

APPENDIX A

GeoDesign Inc

FIRM PROFILE

Employee-owned and founded in 1997, GeoDesign provides geotechnical engineering, environmental, geological, hydrogeological, and pavement design consulting services from offices in Portland, Oregon; Vancouver and Seattle, Washington; and Anaheim, California. Our team consists of more than 100 engineers, geologists, engineering geologists, hydrogeologists, technical personnel, and administrative staff. More than 75 percent of our technical staff have advanced degrees in geology, geotechnical engineering, environmental engineering, and other related sciences. Forty percent are professional engineers, registered geologists, and certified engineering geologists and hydrogeologists.

We value our client relationships and are dedicated to offering exemplary service. Our focus on communication and collaboration enables us to develop a targeted approach for our clients' project needs and objectives. In providing recommendations, we clearly present the issues, alternatives, and risks in order to assist our clients in making informed decisions. As a result, more than 90 percent of our business comes from repeat clients and referrals.

From planning and design through construction, we offer consulting services in support of commercial and residential developments, industrial facilities, major transportation projects, property transactions, regulatory compliance, and infrastructure systems.

GEODESIGN INC

ROBERT E. BELDING, RG, LG

Principal Geologist

Bob Belding is an environmental and geological expert with nearly 30 years of experience managing a diverse range of projects throughout the Pacific Northwest. His project experience includes numerous Phase I and II ESAs, site characterizations, Remedial Investigations/Feasibility Studies, design and implementation of remedial actions, and working closely with regulatory agencies. In addition, Bob serves as an expert witness and provides senior technical review of peer and other consultants' work.

Key Projects

- Bellevue Towers; Bellevue, WA
- Ross Island Sand & Gravel Reclamation; Portland, OR
- Former Beacon Truck Stop; Albany, OR
- Birtcher Commercial Development Group, Environmental Consulting Services; Vancouver, WA
- Former Koch's Cleaners; Beaverton, OR
- The Civic Redevelopment; Portland, OR
- Townsend Farms Business Park; Portland, OR
- Oregon Military Department, Salem Field Maintenance Shop; Salem, OR
- 121st Avenue Business Park - Phase II; Vancouver, WA
- North Creek Place Office Building; Bothell, WA
- Pacific Gas Transmission, Site Investigation and Remediation; Portland, OR
- OGI School of Science and Engineering; Portland OR
- SW Hall and Highway 99W Intersection; Tigard, OR
- Columbia Tech Center; Vancouver, WA
- U.S. Bank, Master Service Agreement, Various Locations
- Evergreen School District, Columbia Tech Center Elementary School; Vancouver, WA
- Evergreen School District, Scovill Property; Vancouver, WA
- Boise Paper Solutions; Wallula, WA
- Hyland Hills Shopping Center (Former Alpine Dry Cleaners); Beaverton, OR
- Brewery Blocks Development (Former Blitz Weinhard Brewery Site); Portland, OR
- Old Mill Marina (Former Oregon-Washington Plywood Company Mill Site); Garibaldi, OR
- Former Oregon Fir Supply Site; Portland, OR
- Lowe's Home Improvement Warehouse; Longview, WA
- Sulzer Pumps Site Adjacent to the Willamette River; Portland, OR
- Former Tube Specialties Site; Portland, OR
- Confederated Tribes of the Umatilla Indian Reservation, Former Landfill Area; Pendleton, OR
- Eaton Corporation, Former Manufacturing Facility; Beaverton, OR
- Sexton Mountain Development (Cobbs Quarry); Beaverton, OR
- Bridgeport Village Development (Durham Quarry); Tigard/Tualatin, OR
- The Landing at Evergreen; Vancouver, WA
- Washington County Facilities Management, Professional Services Contract; Washington County, OR

Credentials/Affiliations

BS, Geology, California State University, Humboldt, 1979
Registered Geologist, OR
Licensed Geologist, WA
Association of Engineering Geologists
Oregon Association of Environmental Professionals

GEODESIGN INC

ANDREW S. BLAKE, RG, LG

Project Geologist

Andrew Blake has over four years of experience with geotechnical and environmental projects. He conducts Phase I ESAs, as well as sediment sampling using vibracore technology. Andrew performs a variety of field tasks, which include test pits, drilling, soil sampling, air/gas monitoring, and density/moisture tests. Prior to GeoDesign, he collected soil and water samples for environmental consulting firms, performed density tests for geotechnical consultants, and set groundwater monitoring wells in accordance with the Oregon Water Resources Department. His past experience also includes operating Geoprobe® soil sampling equipment, rock cutting equipment, sand sieves, magnetic sand grain separators, x-ray diffraction machines, dark room equipment, petrographic microscopes, standard chemistry lab equipment, water flow meters, conductivity meters, and GPS.

Key Projects

- Port of Vancouver - Sediment Sampling; Vancouver, WA
- Bay Boulevard Utility Upgrade; Newport, OR
- Vacant Site - 7201 and 7105 NE 94th Avenue; Vancouver, WA
- Crossroads at Orenco Station; Hillsboro, OR
- Boathouse at 1128 North Shore Road; Lake Oswego, OR
- Village at Mount Solo, Phases III - V; Longview, WA
- Cougar Creek Villas; Vancouver, WA
- Vancouver Mall Professional Campus; Vancouver, WA
- Existing Commercial Building at 2901 SE 65th Avenue; Vancouver, WA
- Battle Ground School District, Dunning Site; Brush Prairie, WA
- Columbia Tech Center; Vancouver, WA
- Former Koch's Cleaners; Beaverton, OR
- Benthic LLC, a Marine Sampling Service, Various Sites, WA and OR
- Former Tube Specialties Site; Portland, OR
- Ross Island Sand & Gravel, Feasibility Study/Reclamation Support Services; Portland, OR
- Washington County Facilities Management, Bridgeport Village; Tigard/Tualatin, OR
- Washington County, Former Shadybrook Landfill; North Plains, OR
- Bellevue Towers; Bellevue, WA
- The Landing at Evergreen; Vancouver, WA
- Ridgecrest Development; Ridgefield, WA
- Proposed Drug Store; St. Helens, OR
- Proposed Purdy Brush Company Facility Expansion; Portland, OR
- Idaho Department of Environmental Quality, Data Collection for Stream Assessments, ID

Credentials/Certifications

BS, Geology, University of Northern Iowa, 2002
Geologist-in-Training, OR
Licensed Driller/Monitor Well Setter, OR
OSHA Hazardous Materials Training (40 Hour, Refresher)
Licensed LBP Paint Inspector, WA, OR
Geological Society of America
American Water Resources Association

APPENDIX B

10.543-Acre Parcel
Glen Oak Road Nearby Site
Oregon City, OR 97045

Inquiry Number: 4061781.2s
September 10, 2014

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

GLEN OAK ROAD NEARBY SITE
OREGON CITY, OR 97045

COORDINATES

Latitude (North):	45.3197000 - 45° 19' 10.92"
Longitude (West):	122.5680000 - 122° 34' 4.80"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	533859.3
UTM Y (Meters):	5018339.5
Elevation:	423 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	45122-C5 OREGON CITY, OR
Most Recent Revision:	1985

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120706
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL---------- Proposed National Priority List Sites
NPL LIENS---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY---------- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG---------- RCRA - Large Quantity Generators
RCRA-SQG---------- RCRA - Small Quantity Generators
RCRA-CESQG---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS---------- Engineering Controls Sites List
US INST CONTROL---------- Sites with Institutional Controls
LUCIS---------- Land Use Control Information System

Federal ERNS list

ERNS---------- Emergency Response Notification System

State- and tribal - equivalent CERCLIS

OR CRL---------- Confirmed Release List and Inventory

State and tribal landfill and/or solid waste disposal site lists

SWF/LF---------- Solid Waste Facilities List

State and tribal leaking storage tank lists

INDIAN LUST---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST---------- Underground Storage Tank Database

EXECUTIVE SUMMARY

AST ---------- Aboveground Storage Tanks
INDIAN UST ---------- Underground Storage Tanks on Indian Land
FEMA UST ---------- Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

ENG CONTROLS ---------- Engineering Controls Recorded at ESCI Sites
INST CONTROL ---------- Institutional Controls Recorded at ESCI Sites

State and tribal voluntary cleanup sites

VCP ---------- Voluntary Cleanup Program Sites
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Brownfields Projects

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
SWRCY ---------- Recycling Facility Location Listing
HIST LF ---------- Old Closed SW Disposal Sites
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---------- Clandestine Drug Labs
AOCONCERN ---------- Columbia Slough
CDL ---------- Uninhabitable Drug Lab Properties
US HIST CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
SPILLS ---------- Spill Database
OR HAZMAT ---------- Hazmat/Incidents
SPILLS 90 ---------- SPILLS 90 data from FirstSearch

Other Ascertainable Records

DOT OPS ---------- Incident and Accident Data
DOD ---------- Department of Defense Sites

EXECUTIVE SUMMARY

FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
UIC	Underground Injection Control Program Database
MANIFEST	Manifest Information
DRYCLEANERS	Drycleaning Facilities
NPDES	Wastewater Permits Database
AIRS	Oregon Title V Facility Listing
HSIS	Hazardous Substance Information Survey
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
Financial Assurance	Financial Assurance Information Listing
2020 COR ACTION	2020 Corrective Action Program List
LEAD SMELTERS	Lead Smelter Sites
PRP	Potentially Responsible Parties
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US FIN ASSUR	Financial Assurance Information
COAL ASH	Coal Ash Disposal Sites Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
COAL ASH DOE	Steam-Electric Plant Operation Data
EPA WATCH LIST	EPA WATCH LIST

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Auto Stat	EDR Exclusive Historic Gas Stations
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

ECSI: The Environmental Cleanup Site Information System records information about sites in Oregon that may be of environmental interest. The data come from the Department of Environmental Quality.

A review of the ECSI list, as provided by EDR, and dated 07/01/2014 has revealed that there are 3 ECSI sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SPENCER ENVIRONMENTAL INC DBA	***14865 S HENRICI RD***	***SSE 1/2 - 1 (0.721 mi.)***	***4***	***9***
ORCHID	***13963 S FIR ST***	***NW 1/2 - 1 (0.765 mi.)***	***5***	***12***
JARCO DRY CLEANER PROPERTY (FO	19195 MOLALLA AVE	NW 1/2 - 1 (0.890 mi.)	6	17

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's LUST Database List.

A review of the LUST list, as provided by EDR, and dated 04/01/2014 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HEATING OIL TANK Cleanup Complete: 08/01/2006	19277 BEAVERCREEK RD	N 1/4 - 1/2 (0.400 mi.)	3	9

Lower Elevation	Address	Direction / Distance	Map ID	Page
HEATING OIL TANK Cleanup Complete: 06/17/2005	14490 SE GLEN OAK RD	S 1/8 - 1/4 (0.142 mi.)	2	9

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/11/2014 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

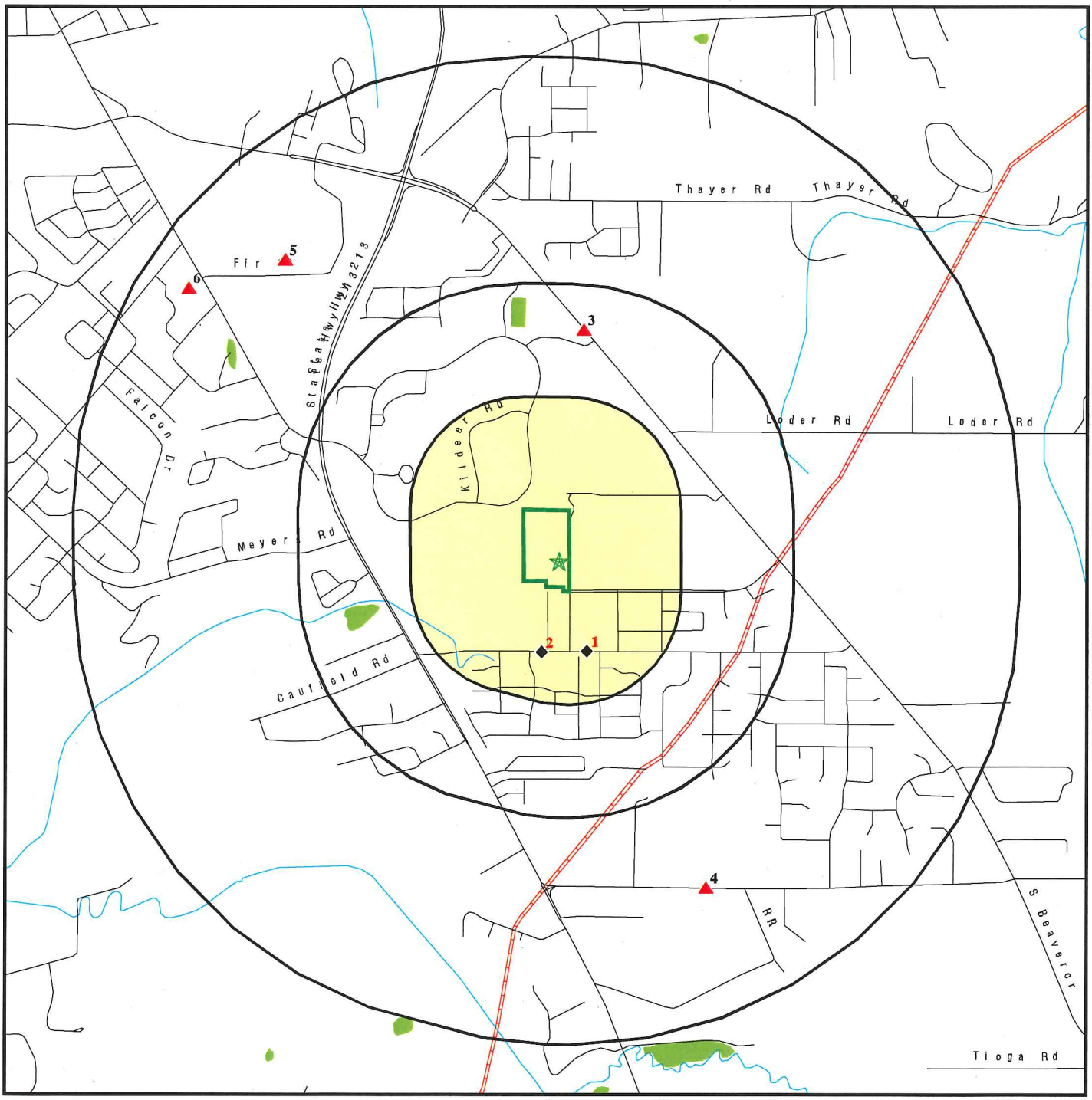
Lower Elevation	Address	Direction / Distance	Map ID	Page
HESS DOROTHY PROPERTY	*14641 S GLEN OAK RD*	*SSE 1/8 - 1/4 (0.137 mi.)*	*1*	*8*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

Site Name	Database(s)
	SPILLS 90
SPENCER ENVIORNMENTAL SVCS INC	HIST FTTS
ODOT OREGON CITY TUNNEL	MANIFEST
ODOT OREGON CITY TUNNEL	RCRA NonGen / NLR
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
	OR HAZMAT
AT&T MOBILITY	HSIS
21560 SOUTH 213 HIGHWAY	US CDL
ROSSMANS CLOSED LANDFILL	NPDES
GRAMENZ, JON	RGA LUST
COALCA / CAFFAL MILL	RGA LUST

overview MAP - 4061781.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

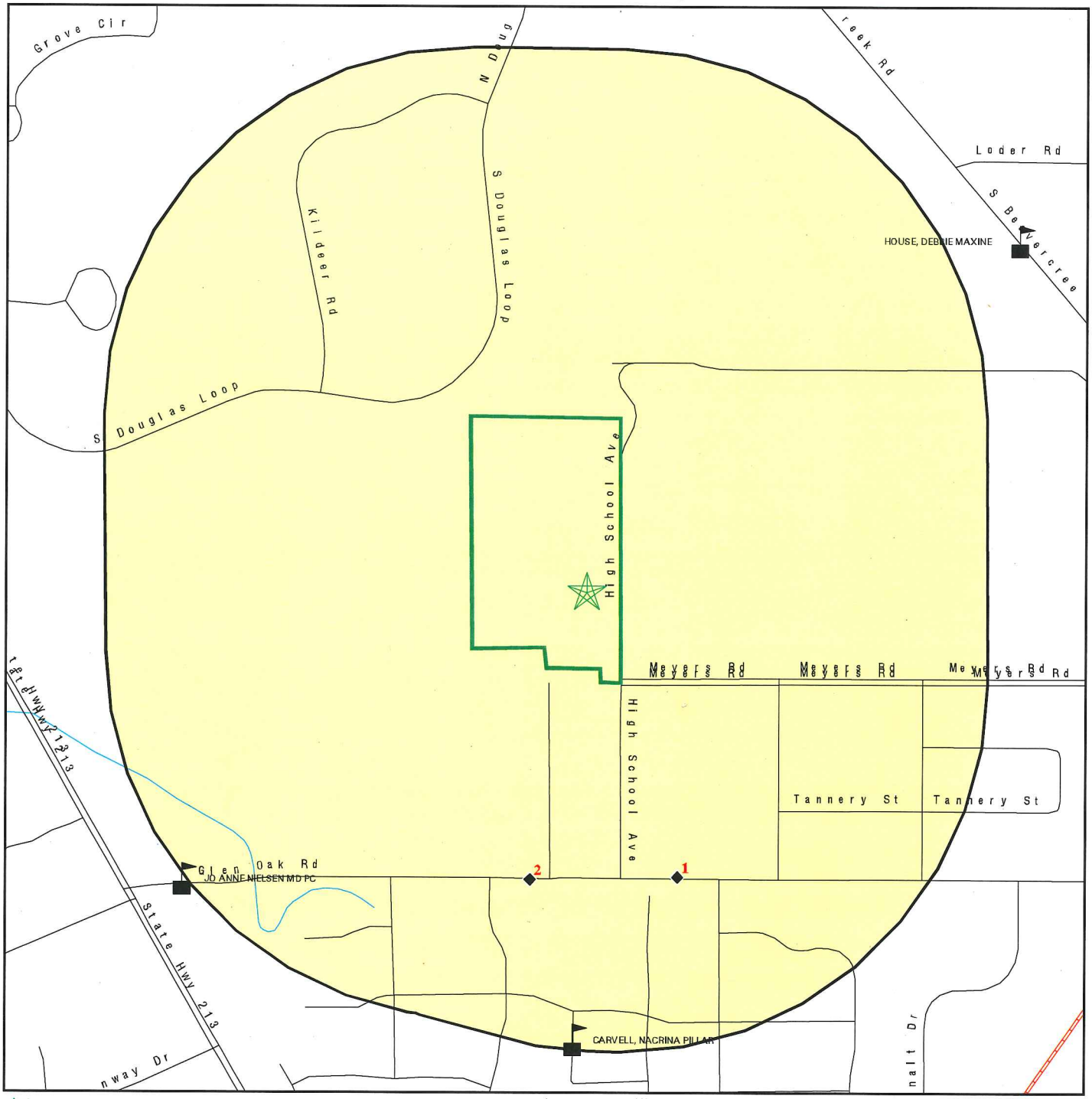
Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 10.543-Acre Parcel ADDRESS: Glen Oak Road Nearby Site Oregon City OR 97045 LAT/LONG: 45.3197 / 122.568	CLIENT: GeoDesign Inc. CONTACT: Andrew Blake INQUIRY #: 4061781.2s DATE: September 10, 2014 6:54 pm

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detail MAP - 4061781.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 10.543-Acre Parcel ADDRESS: Glen Oak Road Nearby Site Oregon City OR 97045 LAT/LONG: 45.3197 / 122.568	CLIENT: GeoDesign Inc. CONTACT: Andrew Blake INQUIRY #: 4061781.2s DATE: September 10, 2014 6:55 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
OR CRL	1.000		0	0	0	0	NR	0
ECSI	1.000		0	0	0	3	NR	3
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	1	1	NR	NR	2
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HIST LF	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	0.001		0	NR	NR	NR	NR	0
AOCONCERN	1.000		0	0	0	0	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US HIST CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
OR HAZMAT	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
DOT OPS	0.001		0	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
HSIS	0.001		0	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	0	NR	NR	NR	0
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SSE
1/8-1/4
0.137 mi.
723 ft.

Relative:
Lower

Actual:
421 ft.

HESS DOROTHY PROPERTY
14641 S GLEN OAK RD
OREGON CITY, OR 97045

RCRA NonGen / NLR **1001969178**
FINDS **ORQ000014076**

RCRA NonGen / NLR:

Date form received by agency:	01/12/2001
Facility name:	HESS DOROTHY PROPERTY
Facility address:	14641 S GLEN OAK RD OREGON CITY, OR 97045
EPA ID:	ORQ000014076
Contact:	DOROTHY HESS
Contact address:	14641 S GLEN OAK RD OREGON CITY, OR 97045
Contact country:	US
Contact telephone:	(503) 656-8830
Contact email:	Not reported
EPA Region:	10
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DOROTHY HESS
Owner/operator address:	14641 S GLEN OAK RD OREGON CITY, OR 97045
Owner/operator country:	US
Owner/operator telephone:	(503) 656-8830
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/12/2001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/14/2000
Site name:	HESS DOROTHY PROPERTY
Classification:	Not a generator, verified

Violation Status: No violations found

FINDS:

HESS DOROTHY PROPERTY (Continued) **1001969178**

Registry ID: 110004819670

Environmental Interest/Information System

OR-DEQ (Oregon - Department Of Environmental Quality) is a regulatory agency whose job is to protect the quality of Oregon's Environment. DEQ uses a combination of technical assistance, inspections and permitting to help public and private facilities and citizens understand and comply with state and federal environmental regulations.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

2
South
1/8-1/4
0.142 mi.
750 ft.

HEATING OIL TANK **LUST** **S106856445**
14490 SE GLEN OAK RD **N/A**
OREGON CITY, OR 97045

Relative:
Lower

Actual:
416 ft.

LUST:
Region: North Western Region
Facility ID: 03-05-0495
Cleanup Received Date: 03/17/2005
Cleanup Start Date: 03/21/2005
Cleanup Complete Date: 06/17/2005

3
North
1/4-1/2
0.400 mi.
2114 ft.

HEATING OIL TANK **LUST** **S108246724**
19277 BEAVERCREEK RD **N/A**
OREGON CITY, OR 97045

Relative:
Higher

Actual:
423 ft.

LUST:
Region: North Western Region
Facility ID: 03-06-0905
Cleanup Received Date: 05/17/2006
Cleanup Start Date: 05/17/2006
Cleanup Complete Date: 08/01/2006

4
SSE
1/2-1
0.721 mi.
3808 ft.

SPENCER ENVIRONMENTAL INC DBA SPENCER **RCRA NonGen / NLR** **1000991194**
14865 S HENRICI RD **FINDS** **ORR000000620**
OREGON CITY, OR 97045 **ECSI**

Relative:
Higher

Actual:
469 ft.

RCRA NonGen / NLR:
Date form received by agency: 04/17/2000
Facility name: SPENCER ENVIRONMENTAL INC DBA SPENCER
Facility address: 14865 S HENRICI RD
OREGON CITY, OR 97045

SPENCER ENVIRONMENTAL INC DBA SPENCER (Continued) **1000991194**

EPA ID: ORR000000620
Mailing address: 6400 101ST AVENUE
PORTLAND, OR 97266
Contact: NO DATA ENTERED NO DATA ENTERED
Contact address: Not reported
,,
Contact country: Not reported
Contact telephone: NO DATA ENTERED
Contact email: Not reported
EPA Region: 10
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: DONALD M SPENCER
Owner/operator address: 6400 SE 101ST AVENUE
PORTLAND, OR 97266
Owner/operator country: US
Owner/operator telephone: (503) 655-0896
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: 04/17/2000
Owner/Op end date: Not reported

Owner/operator name: SPENCER ENVIRONMENTAL, INC.
Owner/operator address: 6400 SE 101ST AVENUE
PORTLAND, OR 97266
Owner/operator country: US
Owner/operator telephone: (503) 788-4612
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: 04/17/2000
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/29/1995
Site name: SPENCER ENVIRONMENTAL INC DBA SPENCER
Classification: Not a generator, verified

SPENCER ENVIRONMENTAL INC DBA SPENCER (Continued) **1000991194**

Violation Status: No violations found

FINDS:

Registry ID: 110004821284

Environmental Interest/Information System
OR-DEQ (Oregon - Department Of Environmental Quality) is a regulatory agency whose job is to protect the quality of Oregon's Environment. DEQ uses a combination of technical assistance, inspections and permitting to help public and private facilities and citizens understand and comply with state and federal environmental regulations.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECSI:

State ID Number:	2408	Brown ID:	0
Study Area:	False	Region ID:	2
Legislatve ID:	0	Investigation:	Suspect
FACA ID:	9364	Further Action:	256
Lat/Long (dms):	45 18 33.10 / -122 33 43.20	County Code:	3.00
Score Value:	Not reported	Cerclis ID:	Not reported
Township Coord.:	3.00	Township Zone:	S
Range Coord:	2.00	Range Zone:	E
Section Coord:	16	Qtr Section:	Not reported
Tax Lots:	Not reported	Size:	Not reported
NPL:	False	Orphan:	False
Updated By:	GWISTAR	Update Date:	07/03/2008

Narrative:

NARR ID: 5738599
NARR Code: Contamination
Created By: Not reported
Created Date: 12/17/2002
Updated By: Not reported
Updated Date: 12/17/2002
NARR Comments: (9/8/99 JMW/SAP) Site used by Spencer Environmental to store off-spec fuels (diesel and gasoline removed from tank decommissioning) and used oil. The facility consists of four 8,000-gallon, above-ground storage tanks. Spencer may not own the property, although DEQ was informed that they intend to decommission the facility and remove the tanks.

NARR ID: 5738600
NARR Code: Remedial Action
Created By: Not reported
Created Date: 12/17/2002
Updated By: Not reported
Updated Date: 12/17/2002
NARR Comments: (9/8/99 JMW/SAP) Referred to the Site Assessment Program because site is a bulk storage facility. Site is a high priority for screening due

SPENCER ENVIRONMENTAL INC DBA SPENCER (Continued) **1000991194**

to the apparently sensitive location.

Administrative Action:

Admin ID:	707353	Action ID:	9424
Agency:	Dept Of Environmental Quality	Region:	Northwestern Region
Start Date:	09/08/1999	Complete Date:	09/08/1999
Substance Code:	VCS	Rank Value:	0
Employee Id:	313	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	ENTRY	Category:	Administrative Action
Action Flag:	True	Action Code Flag:	False
Action:	Site added to database		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	707354	Action ID:	9508
Agency:	Dept Of Environmental Quality	Region:	Northwestern Region
Start Date:	09/08/1999	Complete Date:	09/08/1999
Substance Code:	SAS	Rank Value:	0
Employee Id:	2030	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	RSSC	Category:	Remedial Action
Action Flag:	True	Action Code Flag:	False
Action:	Site Screening recommended (EV)		
Further Action:	High		
Comments:	High priority for a site evaluation.		

Operations:

Operation Id:	133609
Operation Status:	Active
Common Name:	Spencer Environmental
Yrs of Operation:	unknown
Comments:	Not reported
Updated Date:	09/08/1999
Operations SIC Id:	196837
SIC Code:	4212
Created By:	Not reported
Created Date:	12/17/2002

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5 **ORCHID** **NPDES S108662494**
NW **13963 S FIR ST** **ECSI N/A**
1/2-1 **OREGON CITY, OR 97045**
0.765 mi.
4037 ft.

Relative:
Higher

Actual:
449 ft.

NPDES:

WQ File Nbr:	101827
Legal Name:	ORCHID ORTHOPEDIC SOLUTIONS, OREGON, INC.
Region:	Not reported
Pri SIC:	3369
Facility Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Category:	Not reported
Permit Type:	GEN12H
Permit Active:	Not reported
Is Active?:	FALSE
Permit Description:	Not reported
Expiration Date:	Not reported

ORCHID (Continued) **S108662494**

EPA Number:	Not reported
UIC Facility:	Not reported
Admin Agent:	Not reported
Last Action Date:	Not reported
Permit Writer:	Not reported
Compliance Inspector:	Not reported
DMR Reviewer:	Not reported
Application Number:	Not reported
Class:	Not reported
Start Date:	Not reported

WQ File Nbr:	101827
Legal Name:	ORCHID ORTHOPEDIC SOLUTIONS, OREGON, INC.
Region:	NWR
Pri SIC:	3369
Facility Type:	OTHER NONFERROUS FOUNDRIES
Latitude:	45.3296
Longitude:	-122.5806
Category:	STM
Permit Type:	GEN12Z
Permit Active:	True
Is Active?:	Not reported
Permit Description:	Stormwater; NPDES specific SIC codes
Expiration Date:	06/30/2017
EPA Number:	ORR200313
UIC Facility:	False
Admin Agent:	NW Region Office
Last Action Date:	09/18/2012
Permit Writer:	Jurries
Compliance Inspector:	Jurries
DMR Reviewer:	Jurries
Application Number:	965341
Class:	MINOR
Start Date:	10/29/1997

ECSI:

State ID Number:	1009	Brown ID:	0
Study Area:	False	Region ID:	2
Legislatve ID:	0	Investigation:	Suspect
FACA ID:	693	Further Action:	260
Lat/Long (dms):	45 19 46.60 / -122 34 50.20	County Code:	3.00
Score Value:	Not reported	Cerclis ID:	050975465
Township Coord.:	3.00	Township Zone:	S
Range Coord:	2.00	Range Zone:	E
Section Coord:	8	Qtr Section:	Not reported
Tax Lots:	Not reported	Size:	7.29 acres
NPL:	False	Orphan:	False
Updated By:	GWISTAR	Update Date:	08/15/2006

Narrative:

NARR ID:	5739236
NARR Code:	Contamination
Created By:	Not reported
Created Date:	12/17/2002
Updated By:	Not reported
Updated Date:	12/17/2002
NARR Comments:	(1/18/94 KPD/SAS) In the past, PED has disposed of spent wax by

ORCHID (Continued) **S108662494**

placing it in 55-gallon drums and landfilling it on the northern portion of the property. Spent foundry sands (free silica and some zirconium) were used as fill. Aviation motor oil (Aeroshell 120) was also previously used by PED, but it is not clear how the oil was disposed of. Soil samples taken in the landfill in 1988 found no hazardous levels of contaminants. TPH was not analyzed for, however.

NARR ID: 5739237
NARR Code: Data Sources
Created By: Not reported
Created Date: 12/17/2002
Updated By: Not reported
Updated Date: 12/17/2002
NARR Comments: EPA CERCLA Preliminary Assessment. EPA CERCLA Screening Site Inspection. Environmental Site Assessment. Complaint Form.

NARR ID: 5739238
NARR Code: Hazardous Substance/Waste Types
Created By: Not reported
Created Date: 12/17/2002
Updated By: Not reported
Updated Date: 12/17/2002
NARR Comments: aviation motor oil, spent casting wax

NARR ID: 5739239
NARR Code: Pathways Other Hazards
Created By: Not reported
Created Date: 12/17/2002
Updated By: Not reported
Updated Date: 12/17/2002
NARR Comments: A CERCLA Site Inspection identified 271 domestic wells within a three-mile radius of the site. However, the drinking water aquifer is over 100 feet deep in the area and is protected by an impermeable layer. Shallow groundwater may be less than 20 feet deep. An on-site drainage ditch discharges to Newell Creek 2,500 feet away. The site is surrounded by commercial and residential property. It is not known if the landfill has been capped or otherwise properly closed.

NARR ID: 5739240
NARR Code: Remedial Action
Created By: Not reported
Created Date: 12/17/2002
Updated By: Not reported
Updated Date: 12/17/2002
NARR Comments: (1/18/94 KPD/SAS) PED currently recycles much of its wastes, and properly disposes of the rest off-site. Site Assessment recommends that additional sampling or investigation be performed to check the current status of the landfill. If the owners or operators of the site choose not to enter the Voluntary Cleanup program, Site Assessment recommends that further investigation in the form of an expanded Preliminary Assessment (XPA) be performed. Because there is currently no evidence that contaminants have impacted soils, surface water, or groundwater, Site Assessment recommends that the XPA be given a low priority.

Permit:
Permit Agency: DEQ
Permit Number: 1009

ORCHID (Continued) **S108662494**

Permit Type: Solid Waste
Comments: Not reported

Administrative Action:

Admin ID:	721704	Action ID:	9425
Agency:	Dept Of Environmental Quality	Region:	Headquarters
Start Date:	10/27/1993	Complete Date:	10/27/1993
Substance Code:	SAS	Rank Value:	0
Employee Id:	301	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	EV	Category:	Remedial Action
Action Flag:	True	Action Code Flag:	False
Action:	SITE EVALUATION		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	721705	Action ID:	9510
Agency:	Dept Of Environmental Quality	Region:	Headquarters
Start Date:	01/20/1994	Complete Date:	01/20/1994
Substance Code:	SAS	Rank Value:	0
Employee Id:	301	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	RXPA	Category:	Remedial Action
Action Flag:	True	Action Code Flag:	False
Action:	State Expanded Preliminary Assessment recommended (XPA)		
Further Action:	Low		
Comments:	Not reported		

Admin ID:	714748	Action ID:	9449
Agency:	Dept Of Environmental Quality	Region:	Headquarters
Start Date:	10/29/1993	Complete Date:	Not reported
Substance Code:	SAS	Rank Value:	0
Employee Id:	301	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	NSFL	Category:	Listing Action
Action Flag:	True	Action Code Flag:	False
Action:	Insufficient information to list		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	714749	Action ID:	9459
Agency:	Dept Of Environmental Quality	Region:	Headquarters
Start Date:	10/30/1993	Complete Date:	01/18/1994
Substance Code:	SAS	Rank Value:	0
Employee Id:	301	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	PAE	Category:	Remedial Action
Action Flag:	True	Action Code Flag:	False
Action:	PRELIMINARY ASSESSMENT EQUIVALENT		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	715974	Action ID:	9421
Agency:	Environmantal Protection Agency	Region:	Not reported
Start Date:	02/25/1985	Complete Date:	Not reported
Substance Code:	Not reported	Rank Value:	0
Employee Id:	Not reported	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002

ORCHID (Continued) **S108662494**

Action Code:	DS1	Category:	EPA Led Action
Action Flag:	True	Action Code Flag:	False
Action:	Site added to CERCLIS		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	717964	Action ID:	9424
Agency:	Dept Of Environmental Quality	Region:	Headquarters
Start Date:	04/21/1988	Complete Date:	Not reported
Substance Code:	SRS	Rank Value:	0
Employee Id:	631	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	ENTRY	Category:	Administrative Action
Action Flag:	True	Action Code Flag:	False
Action:	Site added to database		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	720273	Action ID:	9512
Agency:	Environmantal Protection Agency	Region:	Not reported
Start Date:	12/07/1988	Complete Date:	12/07/1988
Substance Code:	Not reported	Rank Value:	0
Employee Id:	Not reported	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	SI1	Category:	EPA Led Action
Action Flag:	True	Action Code Flag:	False
Action:	EPA Screening Site Inspection 1		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	720289	Action ID:	9457
Agency:	Environmantal Protection Agency	Region:	Not reported
Start Date:	09/30/1987	Complete Date:	09/30/1987
Substance Code:	Not reported	Rank Value:	0
Employee Id:	Not reported	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	PA1	Category:	EPA Led Action
Action Flag:	True	Action Code Flag:	False
Action:	EPA Basic Preliminary Assessment		
Further Action:	Not reported		
Comments:	State lead (Bill Renfroe/RAS)		

Admin ID:	720314	Action ID:	9444
Agency:	Environmantal Protection Agency	Region:	Not reported
Start Date:	12/07/1988	Complete Date:	12/07/1988
Substance Code:	Not reported	Rank Value:	0
Employee Id:	Not reported	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	NFRAP	Category:	EPA Led Action
Action Flag:	True	Action Code Flag:	False
Action:	No Further Remedial Action Planned under Federal program		
Further Action:	Not reported		
Comments:	Not reported		

Admin ID:	720678	Action ID:	9437
Agency:	Dept Of Environmental Quality	Region:	Headquarters
Start Date:	10/28/1993	Complete Date:	10/28/1993

ORCHID (Continued) **S108662494**

Substance Code:	SAS	Rank Value:	0
Employee Id:	301	Cleanup Flag:	False
Created By:	Not reported	Created Date:	12/17/2002
Action Code:	LRC	Category:	Listing Action
Action Flag:	True	Action Code Flag:	False
Action:	Listing Review completed		
Further Action:	Not reported		
Comments:	Not reported		

Operations:

Operation Id:	132312
Operation Status:	Active
Common Name:	PED Manufacturing Ltd.
Yrs of Operation:	1972 to present
Comments:	Production facility for investment steel castings.
Updated Date:	02/29/1996
Operations SIC Id:	194903
SIC Code:	3324
Created By:	Not reported
Created Date:	12/17/2002

6
NW
1/2-1
0.890 mi.
4701 ft.

Relative:
Higher

Actual:
439 ft.

JARCO DRY CLEANER PROPERTY (FORMER) **ECSI** **S109051806**
19195 MOLALLA AVE **N/A**
OREGON CITY, OR 97045

ECSI:

State ID Number:	4961	Brown ID:	0
Study Area:	False	Region ID:	2
Legislatve ID:	0	Investigation:	Suspect
FACA ID:	106746	Further Action:	257
Lat/Long (dms):	45 19 47.30 / -122 35 7.40	County Code:	3.00
Score Value:	Not reported	Cerclis ID:	Not reported
Township Coord.:	3.00	Township Zone:	S
Range Coord:	2.00	Range Zone:	E
Section Coord:	8	Qtr Section:	AB
Tax Lots:	02900	Size:	34,348 sq ft
NPL:	False	Orphan:	False
Updated By:	GWISTAR	Update Date:	02/10/2011

Hazardous Release:

Substance ID.:	121011
Haz Release ID:	387160
Qty Released:	unknown
Date Released:	unknown
Update Date:	04/02/2008
Update By:	CHARMAN
Substance Code:	127-18-4
Substance Name:	TETRACHLOROETHYLENE
Substance Abbrev.:	Not reported
Substance Category ID:	8519
Substance Category:	Volatiles
Category Level:	Not reported
Created By:	Not reported
Created Date:	12/17/2002
Substance Category ID:	8551
Substance Category:	Solvents of interest to Milwaukie Area GW study
Category Level:	Not reported

JARCO DRY CLEANER PROPERTY (FORMER) (Continued) **S109051806**

Created By:	Not reported
Created Date:	12/17/2002
Substance Category ID:	8519
Substance Category:	Volatiles
Category Level:	Not reported
Created By:	Not reported
Created Date:	12/17/2002
Substance Category ID:	8551
Substance Category:	Solvents of interest to Milwaukie Area GW study
Category Level:	Not reported
Created By:	Not reported
Created Date:	12/17/2002
Substance Alias ID:	316912
Sub Alias Name:	ETHENE,TETRACHLORO-
Substance Alias ID:	316913
Sub Alias Name:	ETHYLENE TETRACHLORIDE
Substance Alias ID:	316914
Sub Alias Name:	PERCHLOROETHYLENE
Substance Alias ID:	316915
Sub Alias Name:	PERCLENE
Substance Alias ID:	316916
Sub Alias Name:	TETRACHLOROETHENE
Substance Alias ID:	316917
Sub Alias Name:	TETRACHLOROETHENE,1,1,2,2-
Substance Alias ID:	316918
Sub Alias Name:	TETRACHLOROETHYLENE,1,1,2,2-
Sampling Result ID:	349370
Feature Id:	0
Hazard Release Id:	387160
Medium:	698
Substance Abbrev.:	0
Unit Code:	Not reported
Observation:	False
Owner Operator:	False
Lab Data:	True
Sample Depth:	12.5' bgs
Start Date:	05/26/2006
End Date:	05/26/2006
Min Concentration:	Not reported
Max Concentration:	Not reported
Sample Comment:	3.1 ppb, B9-GW
Last Update By:	CHARMAN
Update Date:	04/02/2008
Sampling Result ID:	349371
Feature Id:	0
Hazard Release Id:	387160
Medium:	698
Substance Abbrev.:	0
Unit Code:	Not reported
Observation:	False
Owner Operator:	False
Lab Data:	True
Sample Depth:	12.5' bgs
Start Date:	05/26/2006
End Date:	05/26/2006
Min Concentration:	Not reported
Max Concentration:	Not reported

JARCO DRY CLEANER PROPERTY (FORMER) (Continued) **S109051806**

Sample Comment: 2.5 ppb, B8-GW
Last Update By: CHARMAN
Update Date: 04/02/2008
Sampling Result ID: 349372
Feature Id: 0
Hazard Release Id: 387160
Medium: 698
Substance Abbrev.: 0
Unit Code: Not reported
Observation: False
Owner Operator: False
Lab Data: True
Sample Depth: 14' bgs
Start Date: 05/26/2006
End Date: 05/26/2006
Min Concentration: Not reported
Max Concentration: Not reported
Sample Comment: 5.6 ppb, B7-GW
Last Update By: CHARMAN
Update Date: 04/02/2008

Narrative:
NARR ID: 5750288
NARR Code: Remedial Action
Created By: JWAGGY
Created Date: 03/28/2008
Updated By: JWAGGY
Updated Date: 03/28/2008
NARR Comments: (3/27/08 JO/ICP) This site was an ICP but decided to leave the program. The site is now a pending Dry Cleaner Site.

NARR ID: 5750592
NARR Code: 1922
Created By: GWISTAR
Created Date: 06/24/2008
Updated By: GWISTAR
Updated Date: 06/24/2008
NARR Comments: [April 2008] Detected concentrations of PCE (dry-cleaner solvent) in groundwater above DEQ risk levels for Tap Water ingestion. The site owners dropped out of DEQ's ICP while waiting for a project manager to be assigned; a site investigation and risk assessment were performed, but were not reviewed under DEQ Cleanup Program. The site is a medium-to-high priority for further action.

Administrative Action:
Admin ID: 735073
Agency: Dept Of Environmental Quality
Start Date: 03/28/2008
Substance Code: Not reported
Employee Id: 313
Created By: JWAGGY
Action Code: ENTRY
Action Flag: True
Action: Site added to database
Further Action: Not reported
Comments: Not reported
Action ID: 9424
Region: Not reported
Complete Date: 03/28/2008
Rank Value: Not reported
Cleanup Flag: False
Created Date: 03/28/2008
Category: Administrative Action
Action Code Flag: False

Admin ID: 735074
Action ID: 9435

JARCO DRY CLEANER PROPERTY (FORMER) (Continued) **S109051806**

Agency:	Dept Of Environmental Quality	Region:	Northwestern Region
Start Date:	03/28/2008	Complete Date:	03/28/2008
Substance Code:	ICP	Rank Value:	Not reported
Employee Id:	2944	Cleanup Flag:	False
Created By:	JWAGGY	Created Date:	03/28/2008
Action Code:	ICP	Category:	Remedial Action
Action Flag:	True	Action Code Flag:	False
Action:	Independent Cleanup Program		
Further Action:	0		
Comments:	Not reported		

Admin ID:	735080	Action ID:	9508
Agency:	Dept Of Environmental Quality	Region:	Northwestern Region
Start Date:	04/02/2008	Complete Date:	04/02/2008
Substance Code:	SAS	Rank Value:	Not reported
Employee Id:	2339	Cleanup Flag:	False
Created By:	CHARMAN	Created Date:	04/02/2008
Action Code:	RSSC	Category:	Remedial Action
Action Flag:	True	Action Code Flag:	False
Action:	Site Screening recommended (EV)		
Further Action:	High-Medium		
Comments:	Detected concentrations of PCE in groundwater above Tap Water ingestion DEQ RBCs. Site owners dropped out of ICP while waiting for PM - site investigation and risk assessment were performed, but not reviewed under DEQ Cleanup Program.		

Count: 20 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
OREGON CITY	S113668019		HWY 213	97045	OR HAZMAT
OREGON CITY	S113667953		HWY 213	97045	OR HAZMAT
OREGON CITY	S111144270		HWY 213	97045	OR HAZMAT
OREGON CITY	S108390715		HWY 213 - BEAVERCREEK RD	97045	OR HAZMAT
OREGON CITY	S105526448		HWY 213 @ SPANGLER RD	97045	OR HAZMAT
OREGON CITY	S105522689		HWY 213 & BEAVERCREEK RD	97045	OR HAZMAT
OREGON CITY	1012063520	21560 SOUTH 213 HIGHWAY	21560 SOUTH 213 HIGHWAY		US CDL
OREGON CITY	S112438936		HWY 213, MP 0.6	97045	SPILLS 90
OREGON CITY	S105522497		HWY 213-HENRICI	97045	OR HAZMAT
OREGON CITY	S108390764		HWY 99 E & PACQUET ST	97045	OR HAZMAT
OREGON CITY	S112231389	ODOT OREGON CITY TUNNEL	HWY 99E MP 12.65	97045	MANIFEST
OREGON CITY	1014919999	ODOT OREGON CITY TUNNEL	HWY 99E MP 12.65	97045	RCRA NonGen / NLR
OREGON CITY	S105522662		I-205 AT HWY 213	97045	OR HAZMAT
OREGON CITY	1008189746	SPENCER ENVIORNMENTAL SVCS INC	15770 BEAVER GLEN RD	97045	HIST FTTS
OREGON CITY	S105522840		18500 BLK OF S HWY 99E	97045	OR HAZMAT
OREGON CITY	S108662412	ROSSMANS CLOSED LANDFILL	CLACKAMAS RIVER DR. & HWY 213	97045	NPDES
OREGON CITY	S115368057	GRAMENZ, JON	21692 S HIGHWAY 213		RGA LUST
OREGON CITY	S115360438	COALCA / CAFFAL MILL	21195 S HWY 99E		RGA LUST
OREGON CITY	S111766639		S HWY 213	97045	OR HAZMAT
OREGON CITY	S111246428	AT&T MOBILITY	5895 S HWY 211	97045	HSIS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 07/08/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/19/2014
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 116

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/19/2014
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 116

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 18

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/30/2013
Date Data Arrived at EDR: 10/01/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 66

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 07/14/2014
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

CRL: Confirmed Release List and Inventory
All facilities with a confirmed release.

Date of Government Version: 05/01/2014
Date Data Arrived at EDR: 05/22/2014
Date Made Active in Reports: 06/13/2014
Number of Days to Update: 22

Source: Department of Environmental Quality
Telephone: 503-229-6170
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

ECSI: Environmental Cleanup Site Information System
Sites that are or may be contaminated and may require cleanup.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/08/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 41

Source: Department of Environmental Quality
Telephone: 503-229-6629
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 06/19/2014
Number of Days to Update: 20

Source: Department of Environmental Quality
Telephone: 503-229-6299
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/22/2014
Date Made Active in Reports: 06/13/2014
Number of Days to Update: 22

Source: Department of Environmental Quality
Telephone: 503-229-5790
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 73

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 61

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/20/2014
Data Release Frequency: Varies

State and tribal registered storage tank lists

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/22/2014
Date Made Active in Reports: 06/13/2014
Number of Days to Update: 22

Source: Department of Environmental Quality
Telephone: 503-229-5815
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

AST: Aboveground Storage Tanks
Aboveground storage tank locations reported to the Office of State Fire Marshal.

Date of Government Version: 12/02/2013
Date Data Arrived at EDR: 12/19/2013
Date Made Active in Reports: 01/30/2014
Number of Days to Update: 42

Source: Office of State Fire Marshal
Telephone: 503-378-3473
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 07/25/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 25

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/14/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Recorded at ESCI Sites

Engineering controls are physical measures selected or approved by the Director for the purpose of preventing or minimizing exposure to hazardous substances. Engineering controls may include, but are not limited to, fencing, capping, horizontal or vertical barriers, hydraulic controls, and alternative water supplies.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/08/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 41

Source: Department of Environmental Quality
Telephone: 503-229-5193
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

INST CONTROL: Institutional Controls Recorded at ESCI Sites

An institutional control is a legal or administrative tool or action taken to reduce the potential for exposure to hazardous substances. Institutional controls may include, but are not limited to, use restrictions, environmental monitoring requirements, and site access and security measures.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/08/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 41

Source: Department of Environmental Quality
Telephone: 503-229-5193
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 45

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCS: Voluntary Cleanup Program Sites
Responsible parties have entered into an agreement with DEQ to voluntarily address contamination associated with their property.

Date of Government Version: 07/02/2014
Date Data Arrived at EDR: 07/10/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 39

Source: DEQ
Telephone: 503-229-5256
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 10/03/2014
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Projects
Brownfields investigations and/or cleanups that have been conducted in Oregon.

Date of Government Version: 05/01/2014
Date Data Arrived at EDR: 05/22/2014
Date Made Active in Reports: 06/13/2014
Number of Days to Update: 22

Source: Department of Environmental Quality
Telephone: 503-229-6801
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Semi-Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 25

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycling Facility Location Listing
A listing of recycling facility locations.

Date of Government Version: 06/02/2014
Date Data Arrived at EDR: 06/04/2014
Date Made Active in Reports: 06/13/2014
Number of Days to Update: 9

Source: Department of Environmental Quality
Telephone: 503-229-5353
Last EDR Contact: 09/04/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Quarterly

HIST LF: Old Closed SW Disposal Sites
A list of solid waste disposal sites that have been closed for a long while.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 07/08/2003
Date Made Active in Reports: 07/18/2003
Number of Days to Update: 10

Source: Department of Environmental Quality
Telephone: 503-229-5409
Last EDR Contact: 07/08/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/03/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Quarterly

AOC COL: Columbia Slough
Columbia Slough waterway boundaries.

Date of Government Version: 08/10/2005
Date Data Arrived at EDR: 05/17/2006
Date Made Active in Reports: 06/16/2006
Number of Days to Update: 30

Source: City of Portland Environmental Services
Telephone: 503-823-5310
Last EDR Contact: 03/13/2007
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

AOC MU: East Multnomah County Area
Approximate extent of TSA VOC plume February , 2002

Date of Government Version: N/A
Date Data Arrived at EDR: 10/07/2002
Date Made Active in Reports: 10/22/2002
Number of Days to Update: 15

Source: City of Portland Environmental Services
Telephone: 503-823-5310
Last EDR Contact: 03/13/2007
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CDL 2: Clandestine Drug Lab Site Listing
A listing of clandestine drug lab site locations included in the Incident database.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/07/2014
Date Made Active in Reports: 05/22/2014
Number of Days to Update: 15

Source: Oregon State Police
Telephone: 503-373-1540
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

CDL: Uninhabitable Drug Lab Properties
The properties listed on these county pages have been declared by a law enforcement agency to be unfit for use due to meth lab and/or storage activities. The properties are considered uninhabitable until cleaned up by a state certified decontamination contractor and a certificate of fitness is issued by the Oregon Health Division.

Date of Government Version: 05/27/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 09/08/2014
Number of Days to Update: 27

Source: Department of Consumer & Business Services
Telephone: 503-378-4133
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/03/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/31/2014
Date Data Arrived at EDR: 04/01/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 105

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

SPILLS: Spill Data
Oil and hazardous material spills reported to the Environmental Response Program.

Date of Government Version: 02/22/2014
Date Data Arrived at EDR: 04/24/2014
Date Made Active in Reports: 05/22/2014
Number of Days to Update: 28

Source: Department of Environmental Quality
Telephone: 503-229-5815
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Semi-Annually

HAZMAT: Hazmat/Incidents
Hazardous material incidents reported to the State Fire Marshal by emergency responders. The hazardous material may or may not have been released.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/07/2014
Date Made Active in Reports: 05/22/2014
Number of Days to Update: 15

Source: State Fire Marshal's Office
Telephone: 503-373-1540
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Semi-Annually

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 05/01/2006
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/06/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 55

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 06/04/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/30/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/09/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/30/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 132

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/04/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/29/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 05/06/2014
Date Data Arrived at EDR: 05/16/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/09/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2013
Date Data Arrived at EDR: 07/17/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 107

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2014
Date Data Arrived at EDR: 07/10/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/10/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/18/2013
Date Data Arrived at EDR: 02/27/2014
Date Made Active in Reports: 03/12/2014
Number of Days to Update: 13

Source: EPA
Telephone: (206) 553-1200
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/23/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/29/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Biennially

UIC: Underground Injection Control Program Database
DEQ's Underground Injection Control Program is authorized by the Environmental Protection Agency (EPA) to regulate all underground injection in Oregon to protect groundwater resources.

Date of Government Version: 07/03/2014
Date Data Arrived at EDR: 07/07/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 42

Source: Department of Environmental Quality
Telephone: 503-229-5945
Last EDR Contact: 07/14/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

OR MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 11/27/2013
Date Made Active in Reports: 12/31/2013
Number of Days to Update: 34

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 08/11/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Annually

DRYCLEANERS: Drycleaning Facilities
A listing of registered drycleaning facilities in Oregon.

Date of Government Version: 08/05/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 12

Source: Department of Environmental Quality
Telephone: 503-229-6783
Last EDR Contact: 08/05/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

NPDES: Wastewater Permits Database
A listing of permitted wastewater facilities.

Date of Government Version: 05/13/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 05/22/2014
Number of Days to Update: 7

Source: Department of Environmental Quality
Telephone: 503-229-5657
Last EDR Contact: 08/11/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

AIRS: Oregon Title V Facility Listing
A listing of Title V facility source and emissions information.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/22/2014
Date Made Active in Reports: 03/06/2014
Number of Days to Update: 43

Source: Department of Environmental Quality
Telephone: 503-229-6459
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

HSIS: Hazardous Substance Information Survey
Companies in Oregon submitting the Hazardous Substance Information Survey and either reporting or not reporting hazardous substances.

Date of Government Version: 12/02/2013
Date Data Arrived at EDR: 12/19/2013
Date Made Active in Reports: 01/31/2014
Number of Days to Update: 43

Source: State Fire Marshal's Office
Telephone: 503-373-1540
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Semi-Annually

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial assurance information for hazardous waste facilities.

Date of Government Version: 03/14/2014
Date Data Arrived at EDR: 04/11/2014
Date Made Active in Reports: 05/21/2014
Number of Days to Update: 40

Source: Department of Environmental Quality
Telephone: 541-633-2011
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/04/2014
Date Data Arrived at EDR: 06/12/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 07/03/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 72

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: N/A

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/19/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 38

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
Financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/06/2014
Date Data Arrived at EDR: 05/07/2014
Date Made Active in Reports: 05/21/2014
Number of Days to Update: 14

Source: Department of Environmental Quality
Telephone: 503-229-5521
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites Listing
A listing of coal ash disposal sites.

Date of Government Version: 06/01/2011
Date Data Arrived at EDR: 06/02/2011
Date Made Active in Reports: 06/30/2011
Number of Days to Update: 28

Source: Department of Environmental Quality
Telephone: 541-298-7255
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 03/14/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 47

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/11/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oregon.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List
The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oregon.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oregon.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/27/2013
Number of Days to Update: 179

Source: Department of Environmental Quality
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/01/2014
Date Data Arrived at EDR: 05/07/2014
Date Made Active in Reports: 06/10/2014
Number of Days to Update: 34

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/16/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Listings
Source: Employment Department
Telephone: 503-947-1420

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data
Source: Oregon Geospatial Enterprise Office
Telephone: 503-378-2166

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

10.543-ACRE PARCEL
GLEN OAK ROAD NEARBY SITE
OREGON CITY, OR 97045

TARGET PROPERTY COORDINATES

Latitude (North):	45.3197 - 45° 19' 10.92"
Longitude (West):	122.568 - 122° 34' 4.80"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	533859.3
UTM Y (Meters):	5018339.5
Elevation:	423 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	45122-C5 OREGON CITY, OR
Most Recent Revision:	1985

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

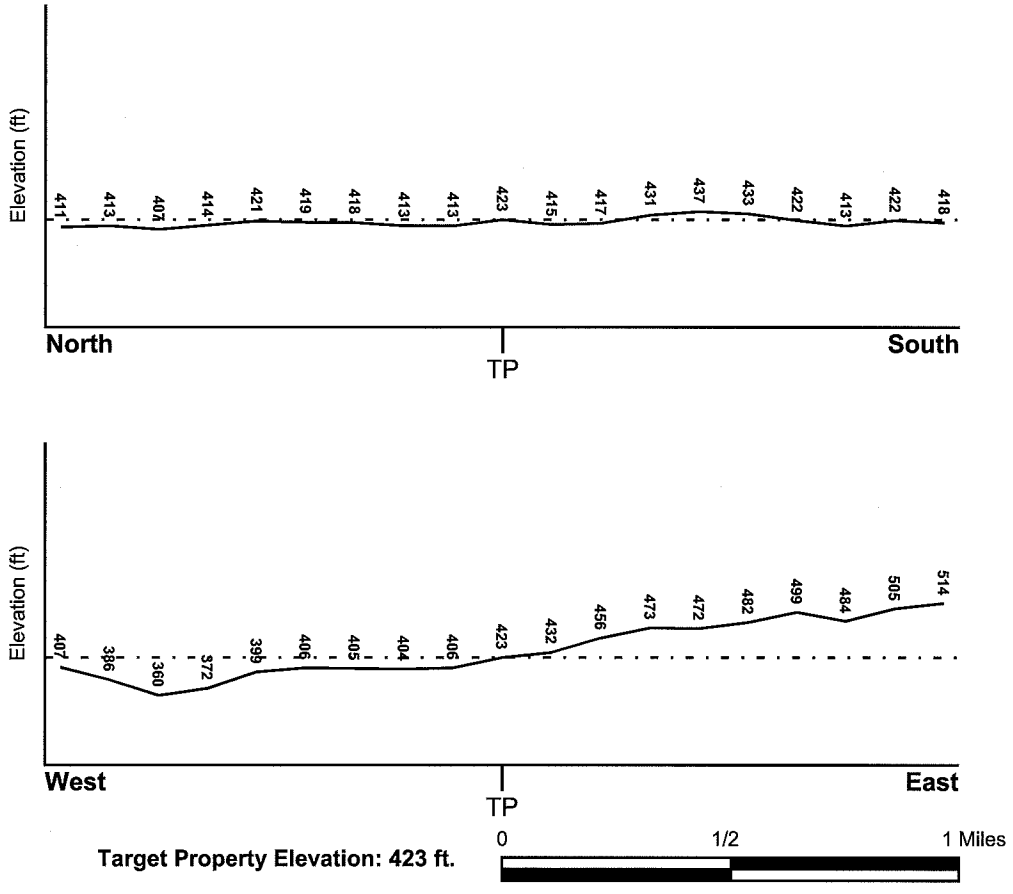
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General West

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
CLACKAMAS, OR	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 41005C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
OREGON CITY	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

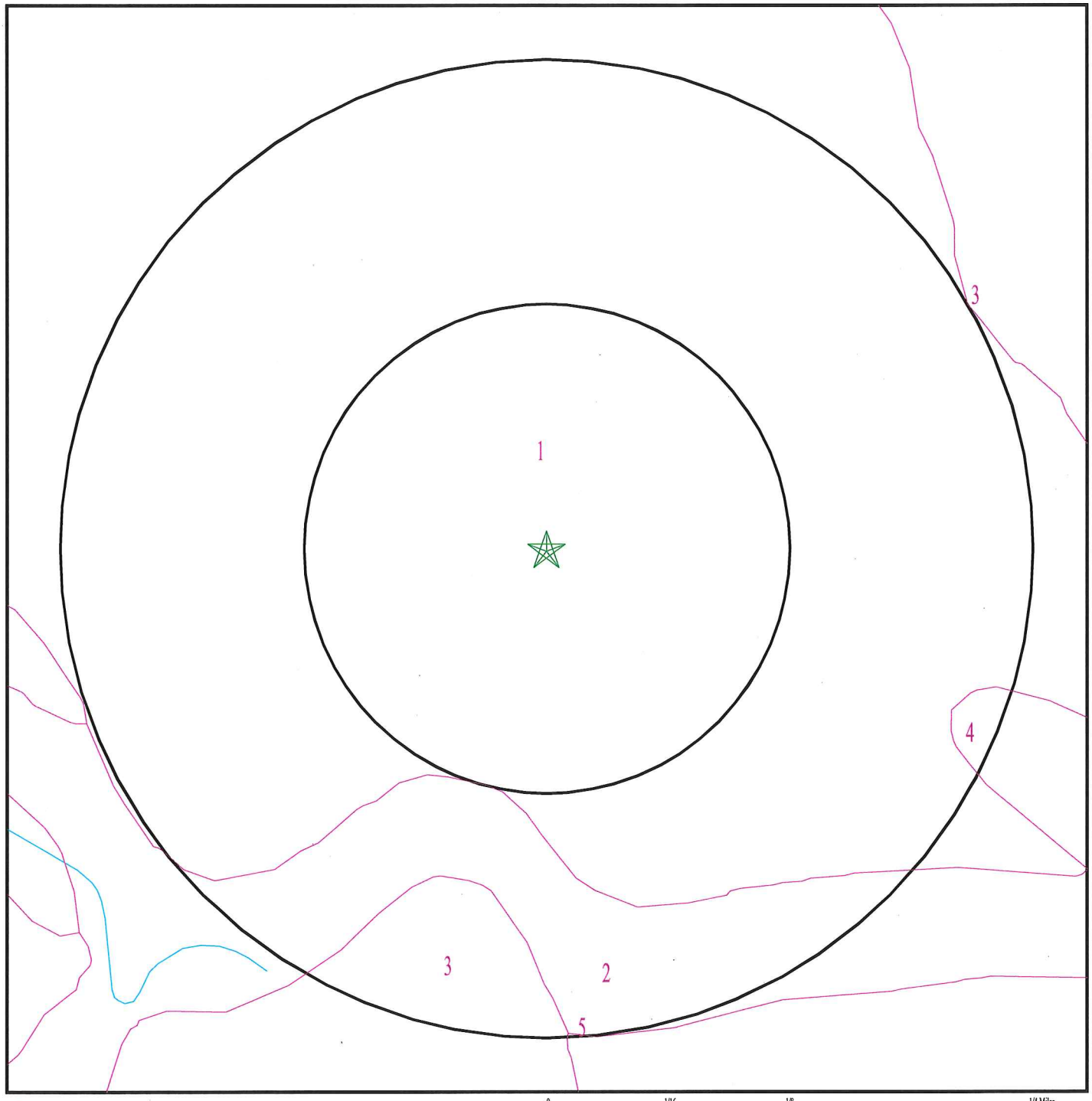
Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT **GEOLOGIC AGE IDENTIFICATION**

Era:	Cenozoic	Category:	Volcanic Rocks
System:	Tertiary		
Series:	Upper Tertiary andesite		
Code:	uTa *(decoded above as Era, System & Series)*		

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4061781.2s



★ Target Property
SSURGO Soil
Water

SITE NAME:	10.543-Acre Parcel	CLIENT:	GeoDesign Inc.
ADDRESS:	Glen Oak Road Nearby Site Oregon City OR 97045	CONTACT:	Andrew Blake
		INQUIRY #:	4061781.2s
LAT/LONG:	45.3197 / 122.568	DATE:	September 10, 2014 6:55 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Bornstedt

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 76 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 5.1
2	7 inches	33 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 5.1
3	33 inches	70 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 1.4 Min: 0.42	Max: 5.5 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Cottrell

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 75 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	24 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6 Min: 5.1
2	24 inches	55 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 4 Min: 1.4	Max: 5.5 Min: 5.1
3	55 inches	85 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 5.5 Min: 5.1

Soil Map ID: 3

Soil Component Name: Jory

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 4.5
2	12 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 5.5 Min: 4.5

Soil Map ID: 4

Soil Component Name: Jory

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 4.5
2	12 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 5.5 Min: 4.5

Soil Map ID: 5

Soil Component Name: Jory

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 6.5 Min: 4.5

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	12 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 5.5 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000992632	1/4 - 1/2 Mile SSE
A4	USGS40000992650	1/4 - 1/2 Mile East
B6	USGS40000992624	1/2 - 1 Mile WSW
9	USGS40000992684	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

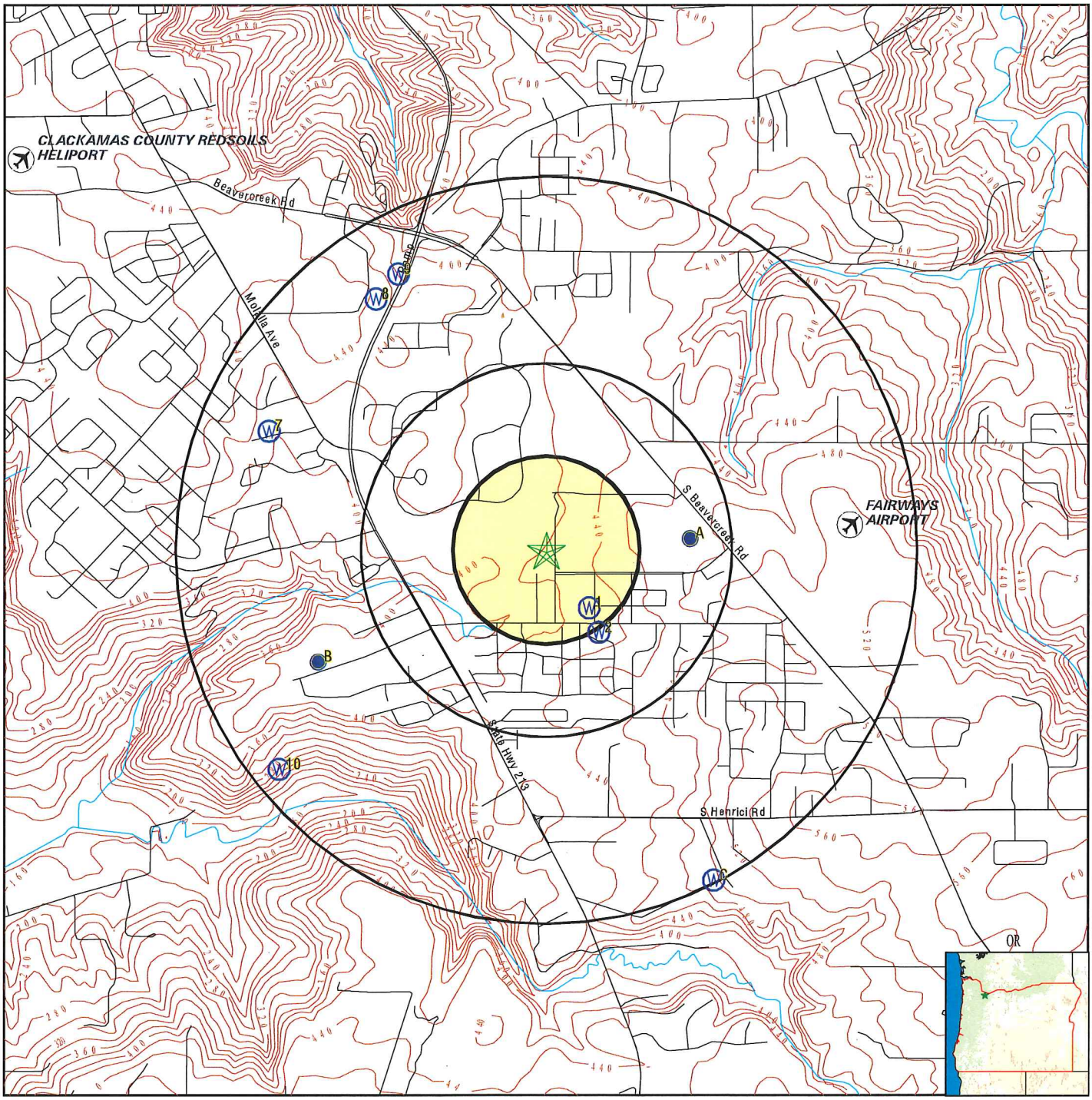
MAP ID	WELL ID	LOCATION FROM TP
1	ORW400000009212	1/8 - 1/4 Mile SE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	ORW400000009249	1/4 - 1/2 Mile East
B5	ORW400000009180	1/2 - 1 Mile WSW
7	ORI400000010584	1/2 - 1 Mile WNW
8	ORW400000009369	1/2 - 1 Mile NW
10	ORI400000010477	1/2 - 1 Mile SW
C11	ORI400000010436	1/2 - 1 Mile SSE
C12	ORI400000010437	1/2 - 1 Mile SSE
C13	ORI400000010438	1/2 - 1 Mile SSE

PHYSICAL SETTING SOURCE MAP - 4061781.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

SITE NAME:	10.543-Acre Parcel	CLIENT:	GeoDesign Inc.
ADDRESS:	Glen Oak Road Nearby Site Oregon City OR 97045	CONTACT:	Andrew Blake
LAT/LONG:	45.3197 / 122.568	INQUIRY #:	4061781.2s
		DATE:	September 10, 2014 6:55 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **SE** **1/8 - 1/4 Mile** **Higher**	**OR WELLS**	**ORW400000009212**

Logid:	CLAC 17420	Lstupdate:	Not Reported
Establby:	KARL WOZNIAK	Xysource:	UNKNOWN
Horizerr:	9999	Sourceorg:	USGS
Sourceowrd:	WILLGW		
Welltag:	0		
Sownum:	0	Obswell:	9
Recwell:	9	Obsflagall:	Not Reported
Lsdelev:	430	Site id:	ORW400000009212

	Database	EDR ID Number
2 **SSE** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000992632**

Org. Identifier:	USGS-OR		
Formal name:	USGS Oregon Water Science Center		
Monloc Identifier:	USGS-451900122335000		
Monloc name:	03S/02E-09DCD		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17090007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	45.3165106
Longitude:	-122.5650899	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	Other aquifers		
Formation type:	Troutdale Formation		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
A3 **East** **1/4 - 1/2 Mile** **Higher**	**OR WELLS**	**ORW400000009249**

Logid:	CLAC 17312	Lstupdate:	Not Reported
Establby:	KARL WOZNIAK	Xysource:	UNKNOWN
Horizerr:	9999	Sourceorg:	USGS
Sourceowrd:	WILLGW		
Welltag:	0		
Sownum:	0	Obswell:	9
Recwell:	9	Obsflagall:	Not Reported
Lsdelev:	465	Site id:	ORW400000009249

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A4
East
1/4 - 1/2 Mile
Higher | **FED USGS** | **USGS40000992650**

Org. Identifier:	USGS-OR		
Formal name:	USGS Oregon Water Science Center		
Monloc Identifier:	USGS-451913122333201		
Monloc name:	03S/02E-09DDA		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17090007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	45.3201439
Longitude:	-122.5600509	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	465
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19740829	Welldepth:	1005
Welldepth units:	ft	Wellholedepth:	1005
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B5
WSW
1/2 - 1 Mile
Lower | **OR WELLS** | **ORW400000009180**

Logid:	CLAC 17429	Lstupdate:	Not Reported
Establby:	KARL WOZNIAK	Xysource:	UNKNOWN
Horizerr:	9999	Sourceorg:	USGS
Sourceowrd:	WILLGW		
Welltag:	0		
Sownum:	0	Obswell:	9
Recwell:	9	Obsflagall:	Not Reported
Lsdelev:	405	Site id:	ORW400000009180

B6
WSW
1/2 - 1 Mile
Lower | **FED USGS** | **USGS40000992624**

Org. Identifier:	USGS-OR		
Formal name:	USGS Oregon Water Science Center		
Monloc Identifier:	USGS-451856122344601		
Monloc name:	03S/02E-17AAA		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17090007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	45.3153659
Longitude:	-122.5806264	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	405
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19680319	Welldepth:	173
Welldepth units:	ft	Wellholedepth:	173
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

7
WNW
1/2 - 1 Mile
Lower

OR WELLS **ORI400000010584**

Well inspe:	45188		
Physical l:	Not Reported	Inspection:	14-AUG-07
Startcard :	Not Reported	WI county :	CLAC
WI nbr:	Not Reported	Startcard1:	Not Reported
Well tag n:	Not Reported	No log:	0
Property o:	Not Reported	Inspecti 1:	Not Reported
Special st:	0	Title:	Not Reported
Inspecti 2:	Not Reported	Witnesses:	Not Reported
Name owner:	NICHOLS, ROGER		
Street:	Not Reported	City:	Not Reported
State:	Not Reported	Zip:	Not Reported
Phone home:	Not Reported	Phone comp:	Not Reported
Gps on wel:	0	Distance t:	Not Reported
Bearing to:	Not Reported	Drilling m:	Not Reported
Use of wel:	Not Reported	Drilling 1:	0
Rough log :	0	Inspected :	Not Reported
Well tag r:	Not Reported		
Monitoring:	Not Reported	Monitori 1:	0
Protective:	0	Well locke:	0
Consultant:	0	Water in v:	0
Seal test :	Not Reported	Samples ta:	0
Casing dia:	Not Reported	Csg above :	Not Reported
Csg gauge:	Not Reported	Borehole d:	Not Reported
Dedicated :	0	Access por:	0
Access p 1:	Not Reported	Measuring :	Not Reported
Measuring1:	0	Depth belo:	Not Reported
Depth be 1:	Not Reported	Tape hold:	Not Reported
Tape missi:	Not Reported	Tape cut:	Not Reported
Water leve:	Not Reported	Water le 1:	Not Reported
Cascading :	0	Pump type:	Not Reported
Pump make:	Not Reported	Pump hp:	Not Reported
Flowmeter :	Not Reported	Flowmeter1:	Not Reported
Flowmete 1:	Not Reported	Flowmete 2:	Not Reported
Associated:	Not Reported	Nbr of hou:	Not Reported
Deficiency:	Not Reported		
Inspecti 3:	Not Reported		
Work new:	-1	Work deepe:	0
Work conve:	0	Work alter:	0
Work aband:	0	Work exist:	0
Work other:	Not Reported	Drill rota:	0

Drill ro 1:	0	Drill cabl:	0
Drill ca 1:	0	Drill reve:	0
Drill re 1:	0	Drill auge:	0
Drill push:	0	Drill hand:	0
Drill holl:	0	Drill soni:	0
Drill othe:	Not Reported	Use domest:	0
Use irriga:	0	Use commun:	0
Use indust:	0	Use livest:	0
Use dewate:	0	Use monito:	0
Use therma:	0	Use inject:	0
Use piezom:	0	Use observ:	0
Use recove:	0	Use other:	Not Reported
Bentonite :	0	Conductivi:	Not Reported
Conducti 1:	Not Reported		
Measuremen:	Not Reported		
Well tag 1:	Not Reported	Bonded lic:	Not Reported
Unbonded l:	Not Reported	Bonded dri:	Not Reported
Unbonded d:	Not Reported	County cod:	CLAC
Tax lot:	2500		
Township:	3		
Township c:	S		
Range:	2		
Range char:	E		
Sctn:	8		
Qtr40:	Not Reported	Qtr160:	Not Reported
Latitude d:	45.32431		
Longitude :	-122.58337		
Gps horizo:	Not Reported		
Year const:	2007		
Date const:	Not Reported	Date con 1:	Not Reported
Deficienci:	U	Previous i:	0
Inspected1:	JWJ	Wm region:	NW
Well tag a:	BANDED TO CASING		
Well tag 2:	Not Reported	Depth:	Not Reported
Static wat:	Not Reported	Status of :	CMP
Location r:	Not Reported		
Site visit:	0	Type of lo:	W
Casing cap:	SS	Pictures t:	0
Street of :	S LAZY CREEK LANE OREGON CITY OR 97045		
Street of1:	NEAREST 13703 S LAZY CREEK LN., OREGON CITY,OR 97045		
Last updt :	17-DEC-07	Last updt1:	jefferjw
Rec creati:	01-JUN-09	Rec crea 1:	OWRD\migrate
Newlat:	45.32431		
Newlong:	-122.58337		
Site id:	ORI400000010584		

8
NW
1/2 - 1 Mile
Higher

OR WELLS **ORW400000009369**

Logid:	CLAC 17251	Lstupdate:	Not Reported
Establby:	KARL WOZNIAK	Xysource:	UNKNOWN
Horizerr:	9999	Sourceorg:	USGS
Sourceowrd:	WILLGW		
Welltag:	0		
Sownum:	0	Obswell:	9
Recwell:	9	Obsflagall:	Not Reported
Lsdelev:	415	Site id:	ORW400000009369

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

9
NNW
1/2 - 1 Mile
Lower | **FED USGS** | **USGS40000992684**

Org. Identifier:	USGS-OR		
Formal name:	USGS Oregon Water Science Center		
Monloc Identifier:	USGS-451950122343000		
Monloc name:	03S/02E-09BBA		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17090007	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	45.3303991
Longitude:	-122.5762015	Sourcemap scale:	Not Reported
Horiz Acc measure:	Unknown	Horiz Acc measure units:	Unknown
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	Other aquifers		
Formation type:	Troutdale Formation		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

10
SW
1/2 - 1 Mile
Lower | **OR WELLS** | **ORI400000010477**

Well inspe:	47873		
Physical I:	Not Reported	Inspection:	30-APR-09
Startcard :	Not Reported	WI county :	WASH
WI nbr:	Not Reported	Startcard1:	Not Reported
Well tag n:	Not Reported	No log:	0
Property o:	Not Reported	Inspecti 1:	ATT
Special st:	0	Title:	WIN
Inspecti 2:	ROC	Witnesses:	Not Reported
Name owner:	CITY OF HILLSBORO		
Street:	150 E MAIN ST 5TH FLOOR	City:	HILLSBORO
State:	OR	Zip:	971234028
Phone home:	Not Reported	Phone comp:	5036816219
Gps on wel:	-1	Distance t:	Not Reported
Bearing to:	Not Reported	Drilling m:	Not Reported
Use of wel:	Not Reported	Drilling 1:	0
Rough log :	0	Inspected :	Not Reported
Well tag r:	Not Reported		
Monitoring:	Not Reported	Monitori 1:	0
Protective:	0	Well locke:	0
Consultant:	0	Water in v:	0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Seal test :	Not Reported	Samples ta:	0
Casing dia:	Not Reported	Csg above :	Not Reported
Csg gauge:	Not Reported	Borehole d:	Not Reported
Dedicated :	0	Access por:	0
Access p 1:	Not Reported	Measuring :	Not Reported
Measuring1:	0	Depth belo:	Not Reported
Depth be 1:	Not Reported	Tape hold:	Not Reported
Tape missi:	Not Reported	Tape cut:	Not Reported
Water leve:	Not Reported	Water le 1:	Not Reported
Cascading :	0	Pump type:	Not Reported
Pump make:	Not Reported	Pump hp:	Not Reported
Flowmeter :	Not Reported	Flowmeter1:	Not Reported
Flowmete 1:	Not Reported	Flowmete 2:	Not Reported
Associated:	Not Reported	Nbr of hou:	Not Reported
Deficiency:	Not Reported		
Inspecti 3:	DID NOT LOCATE MAY BE IN ROAD		
Work new:	0	Work deepe:	0
Work conve:	0	Work alter:	-1
Work aband:	0	Work exist:	0
Work other:	Not Reported	Drill rota:	0
Drill ro 1:	0	Drill cabl:	0
Drill ca 1:	0	Drill reve:	0
Drill re 1:	0	Drill auge:	0
Drill push:	0	Drill hand:	0
Drill holl:	0	Drill soni:	0
Drill othe:	Not Reported	Use domest:	0
Use irriga:	0	Use commun:	0
Use indust:	0	Use livest:	0
Use dewate:	0	Use monito:	-1
Use therma:	0	Use inject:	0
Use piezom:	0	Use observ:	0
Use recove:	0	Use other:	Not Reported
Bentonite :	0	Conductivi:	Not Reported
Conducti 1:	Not Reported		
Measuremen:	Not Reported		
Well tag 1:	Not Reported	Bonded lic:	Not Reported
Unbonded l:	Not Reported	Bonded dri:	Not Reported
Unbonded d:	Not Reported	County cod:	WASH
Tax lot:	8500		
Township:	1		
Township c:	N		
Range:	2		
Range char:	W		
Sctn:	31		
Qtr40:	SE	Qtr160:	SE
Latitude d:	45.3112		
Longitude :	122.5828		
Gps horizo:	Not Reported		
Year const:	0		
Date const:	Not Reported	Date con 1:	Not Reported
Deficienci:	U	Previous i:	0
Inspected1:	L R	Wm region:	NW
Well tag a:	Not Reported		
Well tag 2:	Not Reported	Depth:	Not Reported
Static wat:	Not Reported	Status of :	Not Reported
Location r:	Not Reported		
Site visit:	0	Type of lo:	Not Reported
Casing cap:	Not Reported	Pictures t:	0
Street of :	971 SE BASELINE ST		
Street of1:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Last updt :	18-JUN-09	Last updt1:	ramseyll
Rec creati:	18-JUN-09	Rec crea 1:	ramseyll
Newlat:	45.3112		
Newlong:	-122.5828		
Site id:	ORI400000010477		

C11
SSE
1/2 - 1 Mile
Higher

OR WELLS **ORI400000010436**

Well inspe:	22832		
Physical l:	Not Reported	Inspection:	10-JUL-00
Startcard :	Not Reported	Wl county :	Not Reported
Wl nbr:	Not Reported	Startcard1:	Not Reported
Well tag n:	Not Reported	No log:	0
Property o:	Not Reported	Inspecti 1:	Not Reported
Special st:	0	Title:	Not Reported
Inspecti 2:	Not Reported	Witnesses:	Not Reported
Name owner:	BRIAN OOTEN; 14960 S HENRICI RD, OREGON CITY; BESIDE MAINTENANCE BLDG		
Street:	Not Reported	City:	Not Reported
State:	Not Reported	Zip:	Not Reported
Phone home:	Not Reported	Phone comp:	Not Reported
Gps on wel:	0	Distance t:	Not Reported
Bearing to:	Not Reported	Drilling m:	Not Reported
Use of wel:	Not Reported	Drilling 1:	0
Rough log :	0	Inspected :	Not Reported
Well tag r:	Not Reported		
Monitoring:	Not Reported	Monitori 1:	0
Protective:	0	Well locke:	0
Consultant:	0	Water in v:	0
Seal test :	Not Reported	Samples ta:	0
Casing dia:	Not Reported	Csg above :	Not Reported
Csg gauge:	Not Reported	Borehole d:	Not Reported
Dedicated :	0	Access por:	0
Access p 1:	Not Reported	Measuring :	Not Reported
Measuring1:	0	Depth belo:	Not Reported
Depth be 1:	Not Reported	Tape hold:	Not Reported
Tape missi:	Not Reported	Tape cut:	Not Reported
Water leve:	Not Reported	Water le 1:	Not Reported
Cascading :	0	Pump type:	Not Reported
Pump make:	Not Reported	Pump hp:	Not Reported
Flowmeter :	Not Reported	Flowmeter1:	Not Reported
Flowmete 1:	Not Reported	Flowmete 2:	Not Reported
Associated:	Not Reported	Nbr of hou:	Not Reported
Deficiency:	Not Reported		
Inspecti 3:	Not Reported		
Work new:	-1	Work deepe:	0
Work conve:	0	Work alter:	0
Work aband:	0	Work exist:	0
Work other:	Not Reported	Drill rota:	0
Drill ro 1:	0	Drill cabl:	0
Drill ca 1:	0	Drill reve:	0
Drill re 1:	0	Drill auge:	0
Drill push:	0	Drill hand:	0
Drill holl:	0	Drill soni:	0
Drill othe:	Not Reported	Use domest:	0
Use irriga:	0	Use commun:	0
Use indust:	0	Use livest:	0
Use dewate:	0	Use monito:	0
Use therma:	0	Use inject:	0

Use piezom:	0	Use observ:	0
Use recove:	0	Use other:	Not Reported
Bentonite :	0	Conductivi:	Not Reported
Conducti 1:	Not Reported		
Measuremen:	Not Reported		
Well tag 1:	Not Reported	Bonded lic:	Not Reported
Unbonded l:	Not Reported	Bonded dri:	Not Reported
Unbonded d:	Not Reported	County cod:	CLAC
Tax lot:	Not Reported		
Township:	3		
Township c:	S		
Range:	2		
Range char:	E		
Sctn:	15		
Qtr40:	NW	Qtr160:	SW
Latitude d:	45.3069		
Longitude :	122.55873		
Gps horizo:	Not Reported		
Year const:	2000		
Date const:	Not Reported	Date con 1:	Not Reported
Deficienci:	N	Previous i:	0
Inspected1:	KRB	Wm region:	NW
Well tag a:	BANDED TO CEMENT		
Well tag 2:	Not Reported	Depth:	Not Reported
Static wat:	Not Reported	Status of :	Not Reported
Location r:	Not Reported		
Site visit:	0	Type of lo:	Not Reported
Casing cap:	Not Reported	Pictures t:	0
Street of :	Not Reported		
Street of1:	Not Reported		
Last updt :	01-JAN-00	Last updt1:	byrdkr
Rec creati:	01-JUN-09	Rec crea 1:	OWRD\migrate
Newlat:	45.3069		
Newlong:	-122.55873		
Site id:	ORI400000010436		

C12
SSE
1/2 - 1 Mile
Higher

OR WELLS **ORI400000010437**

Well inspe:	24633		
Physical l:	Not Reported	Inspection:	15-APR-02
Startcard :	Not Reported	WI county :	Not Reported
WI nbr:	Not Reported	Startcard1:	Not Reported
Well tag n:	Not Reported	No log:	0
Property o:	Not Reported	Inspecti 1:	Not Reported
Special st:	0	Title:	Not Reported
Inspecti 2:	Not Reported	Witnesses:	Not Reported
Name owner:	BRIAN OOTEN; 14960 S HENRICI RD, OREGON CITY; BESIDE MAINTENANCE BLDG		
Street:	Not Reported	City:	Not Reported
State:	Not Reported	Zip:	Not Reported
Phone home:	Not Reported	Phone comp:	Not Reported
Gps on wel:	0	Distance t:	Not Reported
Bearing to:	Not Reported	Drilling m:	Not Reported
Use of wel:	Not Reported	Drilling 1:	0
Rough log :	0	Inspected :	Not Reported
Well tag r:	Not Reported		
Monitoring:	Not Reported	Monitori 1:	0
Protective:	0	Well locke:	0
Consultant:	0	Water in v:	0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Seal test :	Not Reported	Samples ta:	0
Casing dia:	Not Reported	Csg above :	Not Reported
Csg gauge:	Not Reported	Borehole d:	Not Reported
Dedicated :	0	Access por:	0
Access p 1:	Not Reported	Measuring :	Not Reported
Measuring1:	0	Depth belo:	Not Reported
Depth be 1:	Not Reported	Tape hold:	Not Reported
Tape missi:	Not Reported	Tape cut:	Not Reported
Water leve:	Not Reported	Water le 1:	Not Reported
Cascading :	0	Pump type:	Not Reported
Pump make:	Not Reported	Pump hp:	Not Reported
Flowmeter :	Not Reported	Flowmeter1:	Not Reported
Flowmete 1:	Not Reported	Flowmete 2:	Not Reported
Associated:	Not Reported	Nbr of hou:	Not Reported
Deficiency:	Not Reported		
Inspecti 3:	STILL IN PLACE; VARIANCE WAS DENIED		
Work new:	-1	Work deepe:	0
Work conve:	0	Work alter:	0
Work aband:	0	Work exist:	0
Work other:	Not Reported	Drill rota:	0
Drill ro 1:	0	Drill cabl:	0
Drill ca 1:	0	Drill reve:	0
Drill re 1:	0	Drill auge:	0
Drill push:	0	Drill hand:	0
Drill holl:	0	Drill soni:	0
Drill othe:	Not Reported	Use domest:	0
Use irriga:	0	Use commun:	0
Use indust:	0	Use livest:	0
Use dewate:	0	Use monito:	0
Use therma:	0	Use inject:	0
Use piezom:	0	Use observ:	0
Use recove:	0	Use other:	Not Reported
Bentonite :	0	Conductivi:	Not Reported
Conducti 1:	Not Reported		
Measuremen:	Not Reported		
Well tag 1:	Not Reported	Bonded lic:	Not Reported
Unbonded l:	Not Reported	Bonded dri:	Not Reported
Unbonded d:	Not Reported	County cod:	CLAC
Tax lot:	802		
Township:	4		
Township c:	S		
Range:	2		
Range char:	E		
Sctn:	16		
Qtr40:	NE	Qtr160:	SE
Latitude d:	45.3069		
Longitude :	122.55873		
Gps horizo:	Not Reported		
Year const:	2000		
Date const:	Not Reported	Date con 1:	Not Reported
Deficienci:	N	Previous i:	-1
Inspected1:	KRB	Wm region:	NW
Well tag a:	BANDED TO CEMENT		
Well tag 2:	Not Reported	Depth:	Not Reported
Static wat:	Not Reported	Status of :	Not Reported
Location r:	Not Reported		
Site visit:	0	Type of lo:	Not Reported
Casing cap:	Not Reported	Pictures t:	0
Street of :	Not Reported		
Street of1:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Last updt :	01-JAN-00	Last updt1:	byrdkr
Rec creati:	01-JUN-09	Rec crea 1:	OWRD\migrate
Newlat:	45.3069		
Newlong:	-122.55873		
Site id:	ORI400000010437		

C13
SSE
1/2 - 1 Mile
Higher

OR WELLS **ORI400000010438**

Well inspe:	27587		
Physical l:	Not Reported	Inspection:	11-JUN-02
Startcard :	Not Reported	WI county :	Not Reported
WI nbr:	Not Reported	Startcard1:	Not Reported
Well tag n:	Not Reported	No log:	0
Property o:	Not Reported	Inspecti 1:	Not Reported
Special st:	0	Title:	Not Reported
Inspecti 2:	Not Reported	Witnesses:	Not Reported
Name owner:	BRIAN OOTEN; 14960 S HENRICI RD, OREGON CITY; BESIDE MAINTENANCE BLDG		
Street:	Not Reported	City:	Not Reported
State:	Not Reported	Zip:	Not Reported
Phone home:	Not Reported	Phone comp:	Not Reported
Gps on wel:	0	Distance t:	Not Reported
Bearing to:	Not Reported	Drilling m:	Not Reported
Use of wel:	Not Reported	Drilling 1:	0
Rough log :	0	Inspected :	Not Reported
Well tag r:	Not Reported		
Monitoring:	Not Reported	Monitori 1:	0
Protective:	0	Well locke:	0
Consultant:	0	Water in v:	0
Seal test :	Not Reported	Samples ta:	0
Casing dia:	Not Reported	Csg above :	Not Reported
Csg gauge:	Not Reported	Borehole d:	Not Reported
Dedicated :	0	Access por:	0
Access p 1:	Not Reported	Measuring :	Not Reported
Measuring1:	0	Depth belo:	Not Reported
Depth be 1:	Not Reported	Tape hold:	Not Reported
Tape missi:	Not Reported	Tape cut:	Not Reported
Water leve:	Not Reported	Water le 1:	Not Reported
Cascading :	0	Pump type:	Not Reported
Pump make:	Not Reported	Pump hp:	Not Reported
Flowmeter :	Not Reported	Flowmeter1:	Not Reported
Flowmete 1:	Not Reported	Flowmete 2:	Not Reported
Associated:	Not Reported	Nbr of hou:	Not Reported
Deficiency:	Not Reported		
Inspecti 3:	STILL IN PLACE; VARIANCE WAS DENIED; OWNER SAID WILL BE DONE 6/26		
Work new:	-1	Work deepe:	0
Work conve:	0	Work alter:	0
Work aband:	0	Work exist:	0
Work other:	Not Reported	Drill rota:	0
Drill ro 1:	0	Drill cabl:	0
Drill ca 1:	0	Drill reve:	0
Drill re 1:	0	Drill auge:	0
Drill push:	0	Drill hand:	0
Drill holl:	0	Drill soni:	0
Drill othe:	Not Reported	Use domest:	0
Use irriga:	0	Use commun:	0
Use indust:	0	Use livest:	0
Use dewate:	0	Use monito:	0
Use therma:	0	Use inject:	0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Use piezom:	0	Use observ:	0
Use recove:	0	Use other:	Not Reported
Bentonite :	0	Conductivi:	Not Reported
Conducti 1:	Not Reported		
Measuremen:	Not Reported		
Well tag 1:	Not Reported	Bonded lic:	Not Reported
Unbonded l:	Not Reported	Bonded dri:	Not Reported
Unbonded d:	Not Reported	County cod:	CLAC
Tax lot:	802		
Township:	3		
Township c:	S		
Range:	2		
Range char:	E		
Sctn:	15		
Qtr40:	NW	Qtr160:	SW
Latitude d:	45.3069		
Longitude :	122.55873		
Gps horizo:	Not Reported		
Year const:	2000		
Date const:	Not Reported	Date con 1:	Not Reported
Deficienci:	N	Previous i:	-1
Inspected1:	KRB	Wm region:	NW
Well tag a:	BANDED TO CEMENT		
Well tag 2:	Not Reported	Depth:	Not Reported
Static wat:	Not Reported	Status of :	Not Reported
Location r:	Not Reported		
Site visit:	0	Type of lo:	Not Reported
Casing cap:	Not Reported	Pictures t:	0
Street of :	Not Reported		
Street of1:	Not Reported		
Last updt :	01-JAN-00	Last updt1:	byrdkr
Rec creati:	01-JUN-09	Rec crea 1:	OWRD\migrate
Newlat:	45.3069		
Newlong:	-122.55873		
Site id:	ORI400000010438		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: OR Radon

Radon Test Results

Zipcode	Num Tests	Maximum	Minimum	Average	# > 4 pCi/L
97045	26	6.4	0.5	2.2	2

Federal EPA Radon Zone for CLACKAMAS County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data
Source: Oregon Geospatial Enterprise Office
Telephone: 503-378-2166

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Data
Source: Department of Water Resources
Telephone: 503-986-0843

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Locations
Source: Department of Geology and Mineral Industries
Telephone: 971-673-1540
A listing of oil and gas well locations in the state.

RADON

State Database: OR Radon
Source: Oregon Health Services
Telephone: 503-731-4272
Radon Levels in Orgeon

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

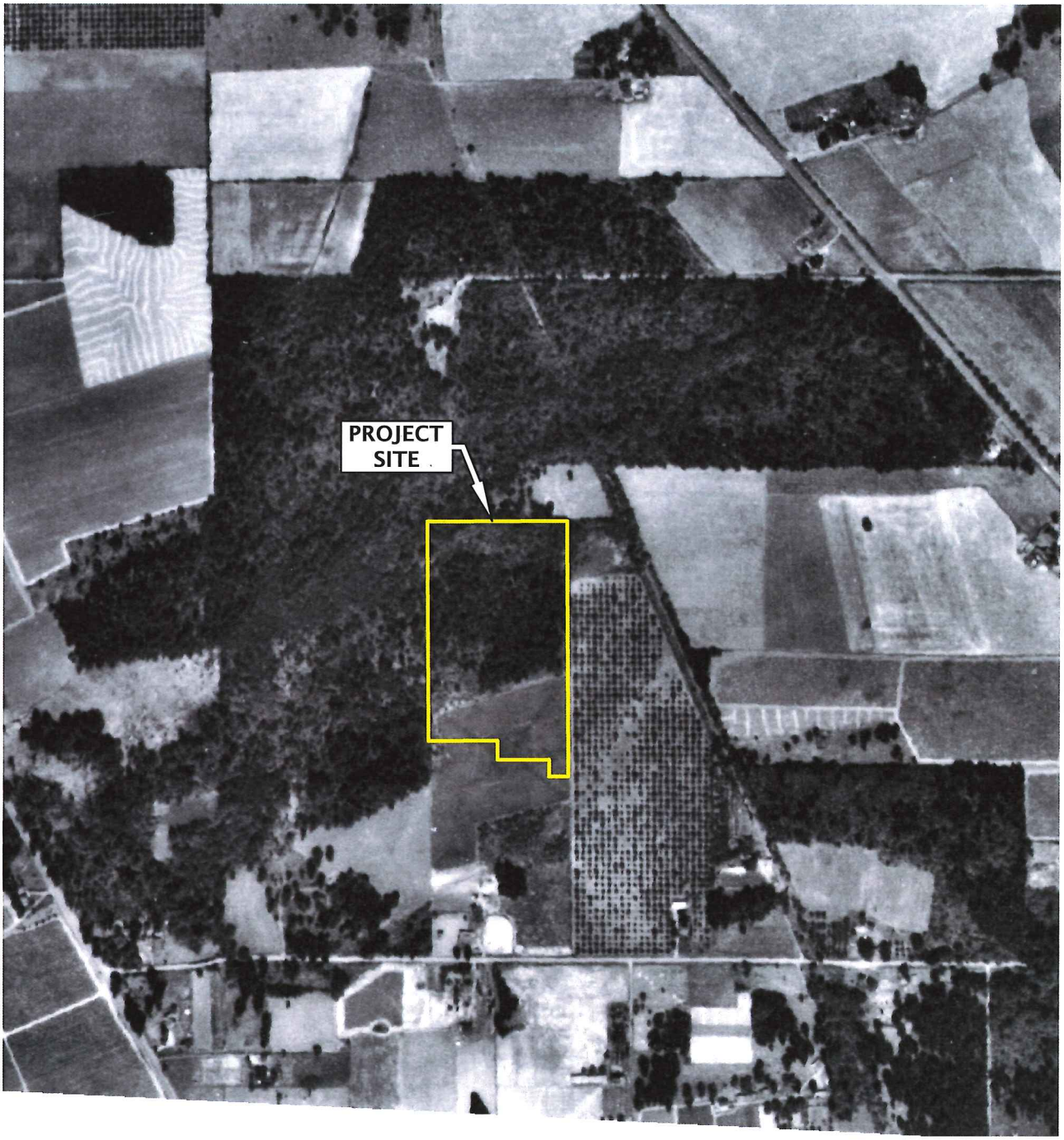
Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX C



PROJECT SITE BOUNDARIES ARE APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL AERIAL PHOTOGRAPH** **1952**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:18:12 PM
File Name: J:\A-D\ArchBBL\ArchBBL-3\ArchBBL-3-01\Figures\CAD\ArchBBL-3-01-HA01.dwg | Layout: 1952

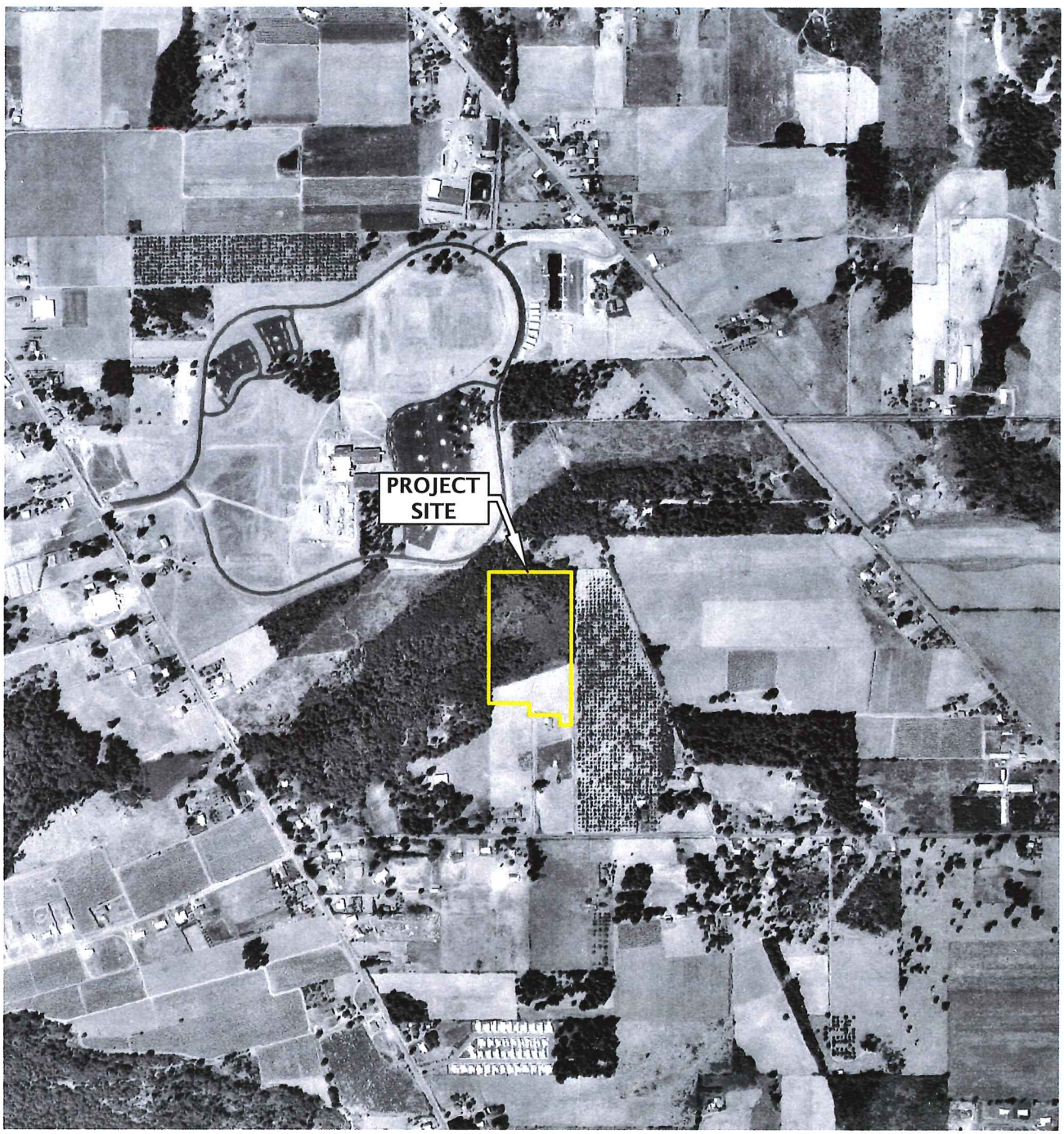


PROJECT SITE BOUNDARIES ARE APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL AERIAL PHOTOGRAPH 1960**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:18:13 PM
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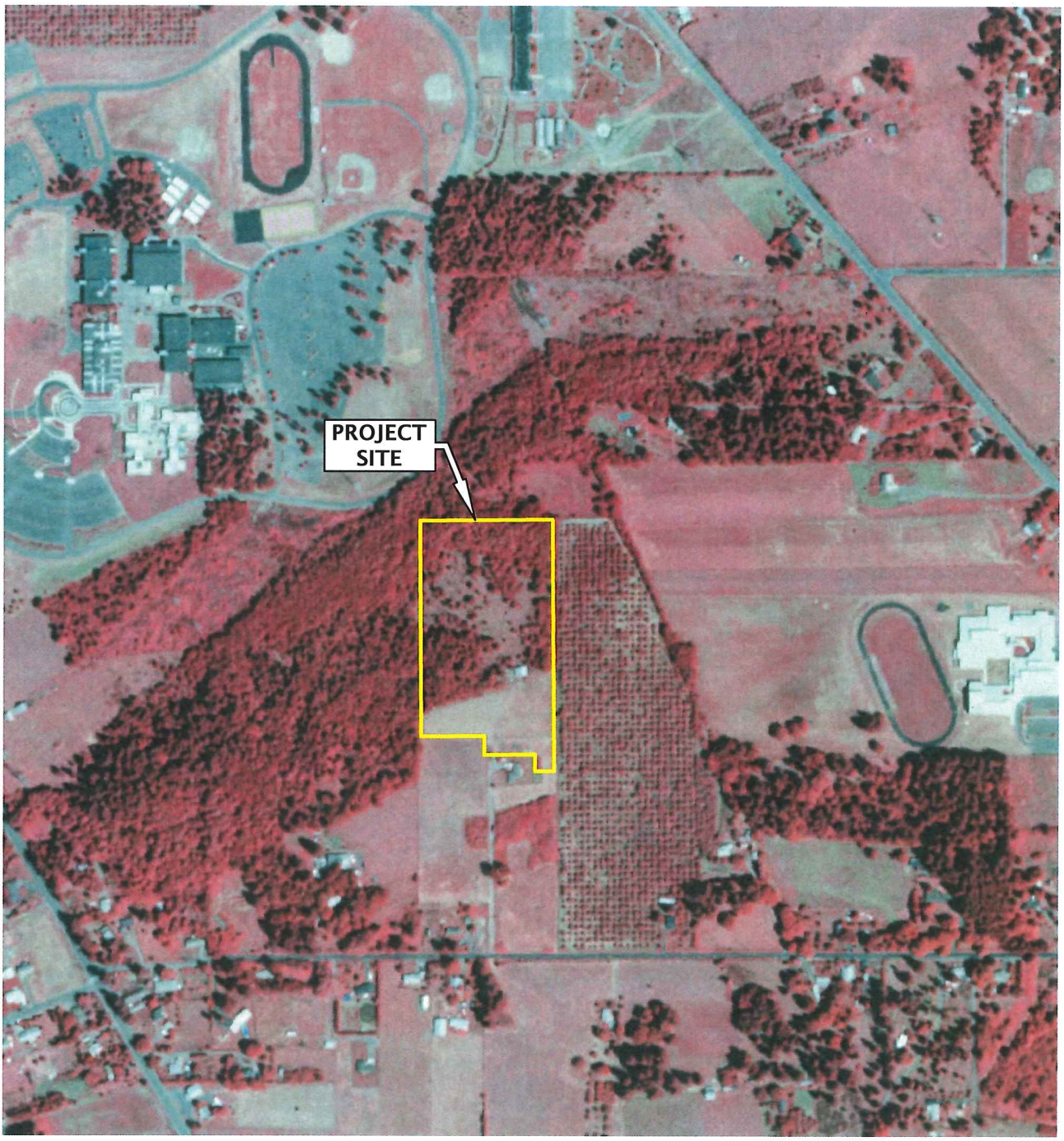


PROJECT SITE BOUNDARIES ARE APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL AERIAL PHOTOGRAPH 1970**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:18:15 PM
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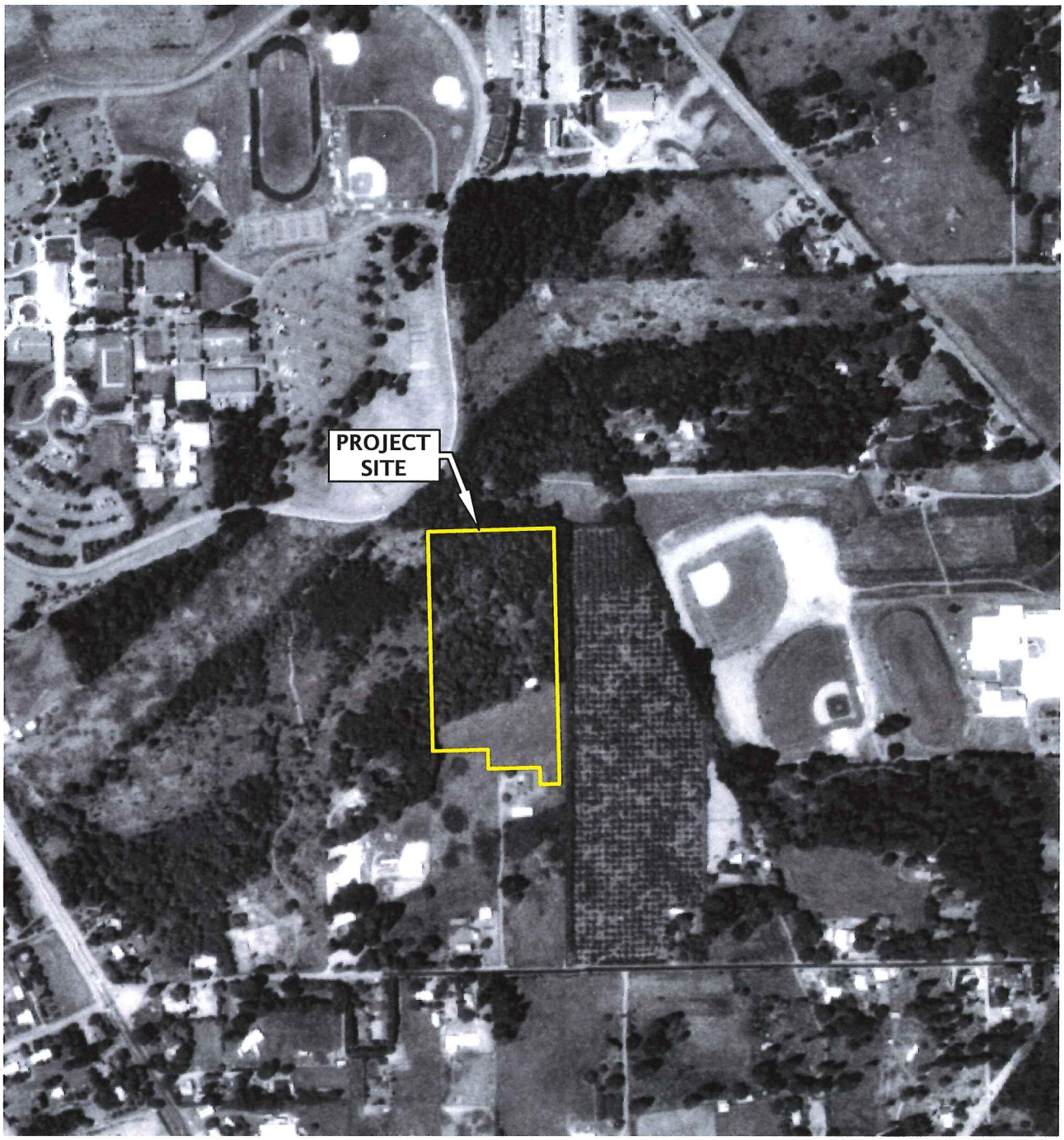


PROJECT SITE BOUNDARIES ARE APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL AERIAL PHOTOGRAPH** **1981**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:18:17 PM
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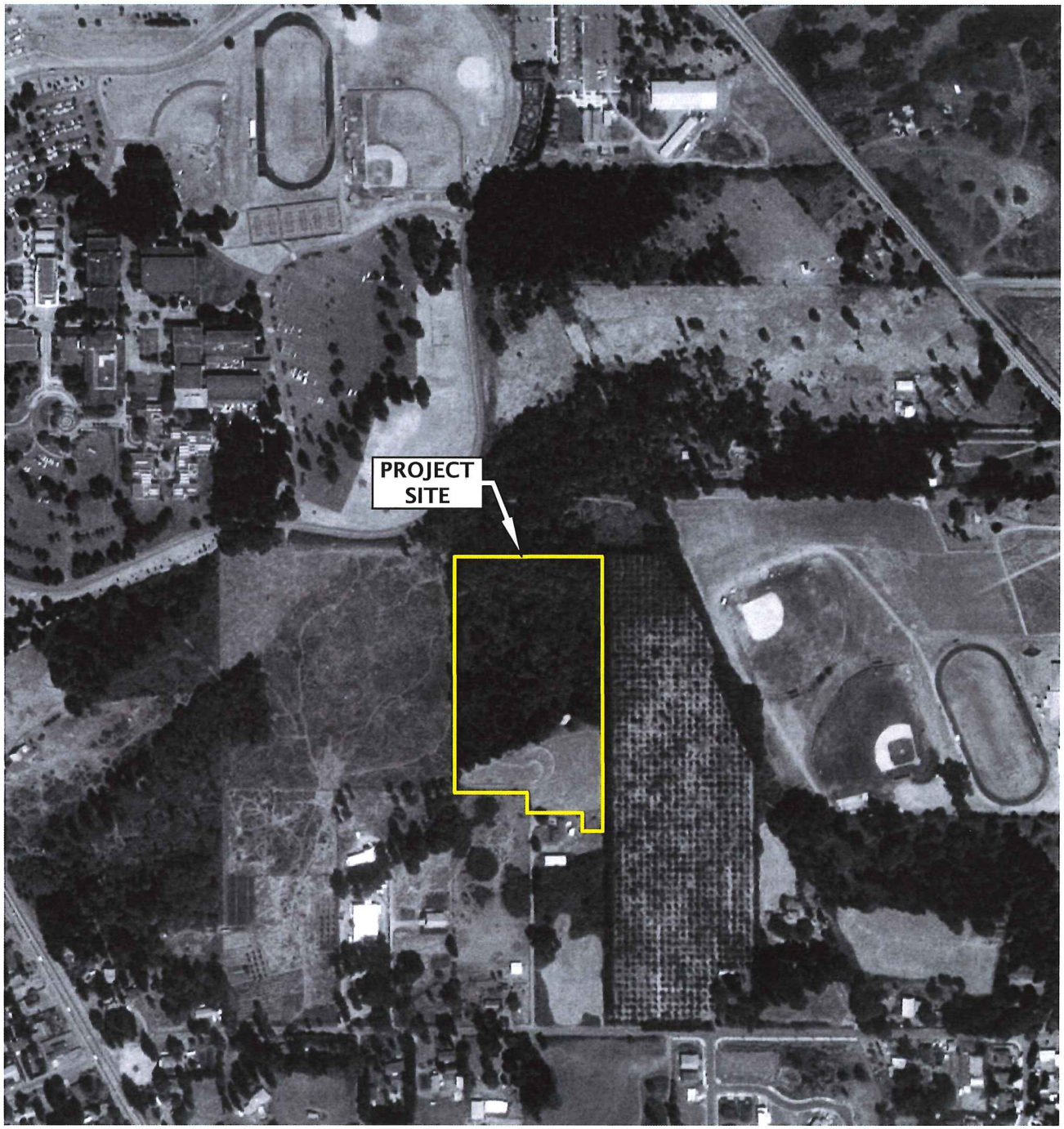


PROJECT SITE BOUNDARIES ARE APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL AERIAL PHOTOGRAPH 1994**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:18:18 PM
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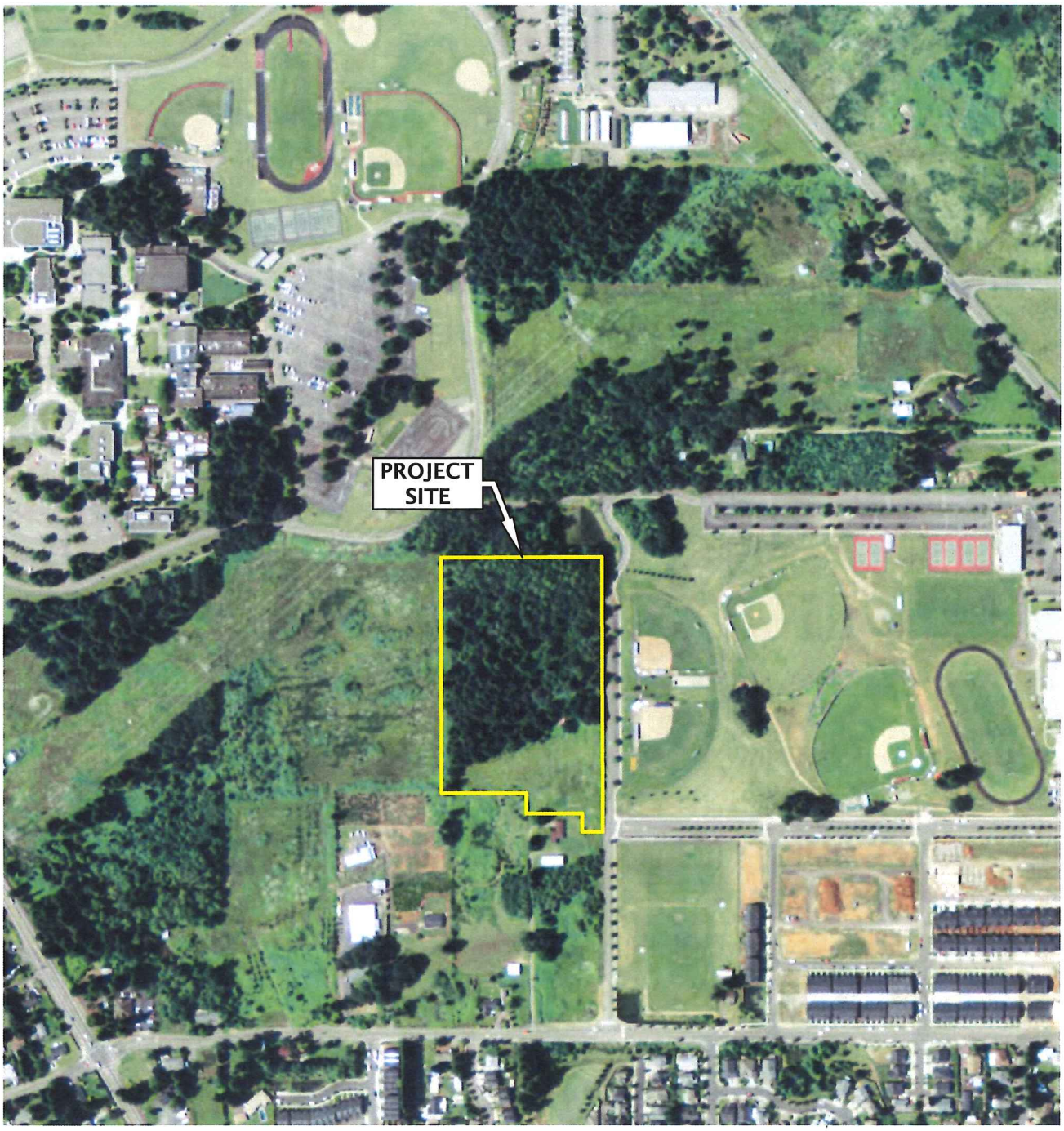


PROJECT SITE BOUNDARIES ARE APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL AERIAL PHOTOGRAPH 2000**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

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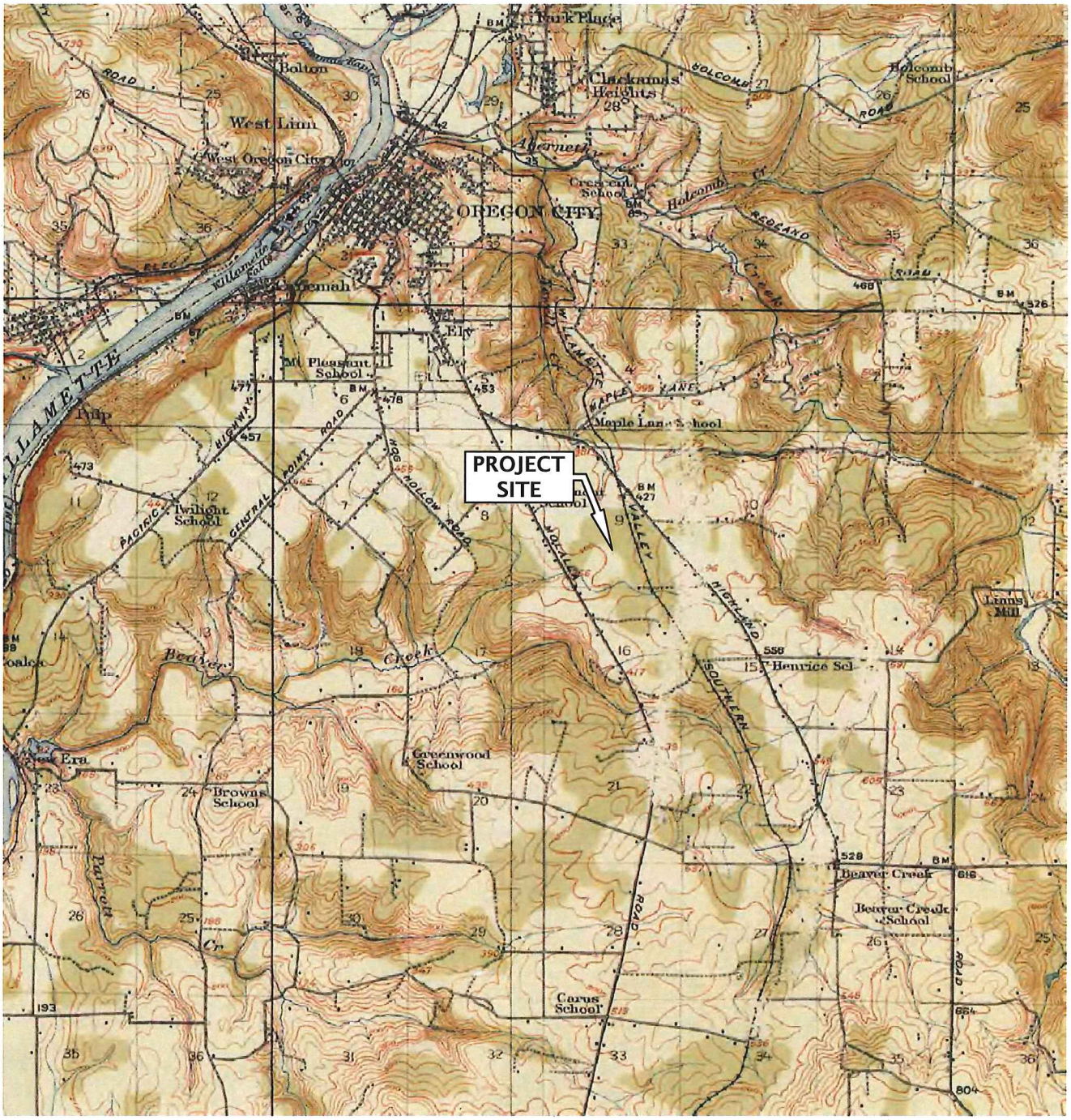
PROJECT SITE BOUNDARIES ARE APPROXIMATE.

N

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ARCHBBL-3-01	**HISTORICAL AERIAL PHOTOGRAPH 2012**
SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:18:22 PM
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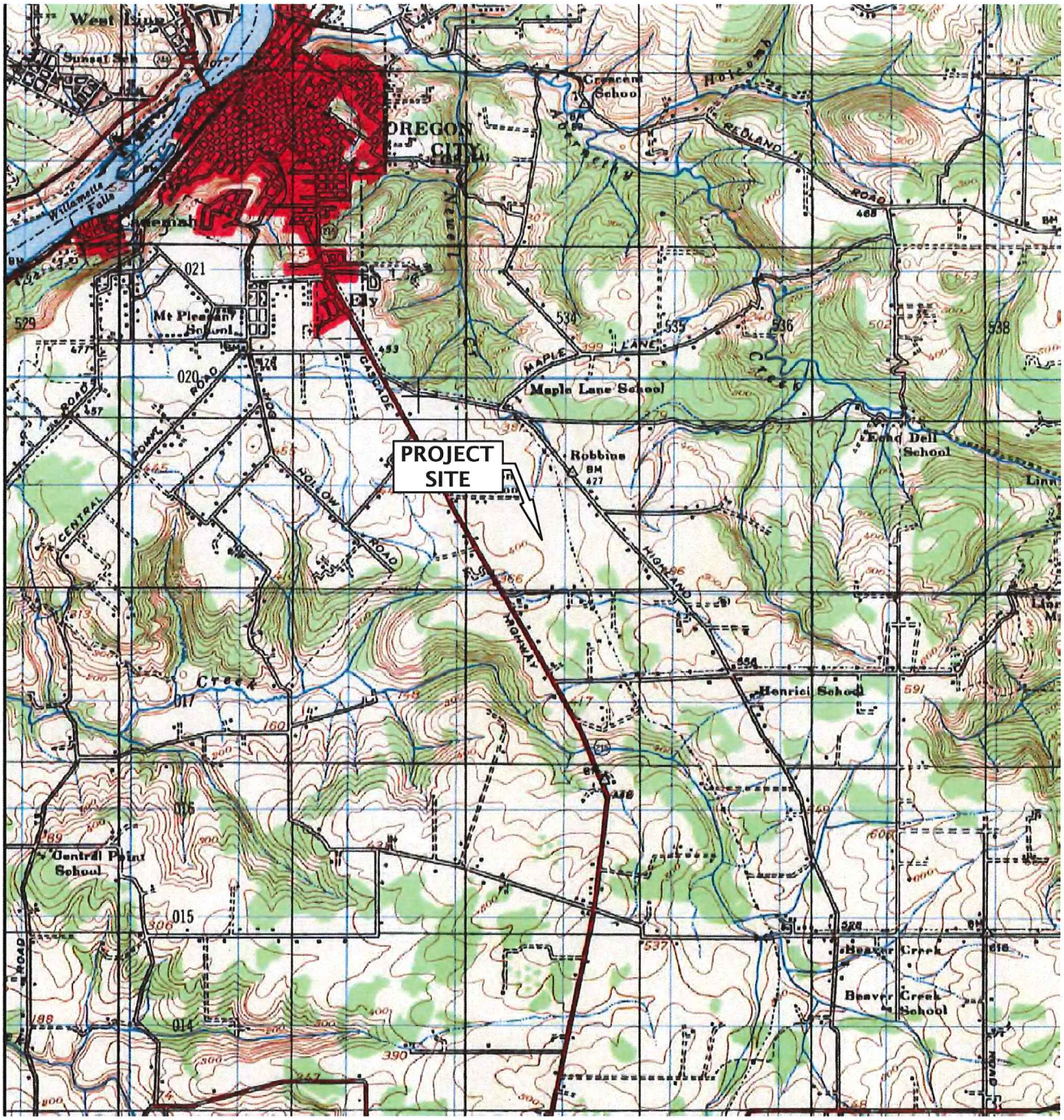


PROJECT SITE LOCATION IS APPROXIMATE.

N

GeoDesign Inc 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL TOPOGRAPHIC MAP 1914**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:21:48 PM
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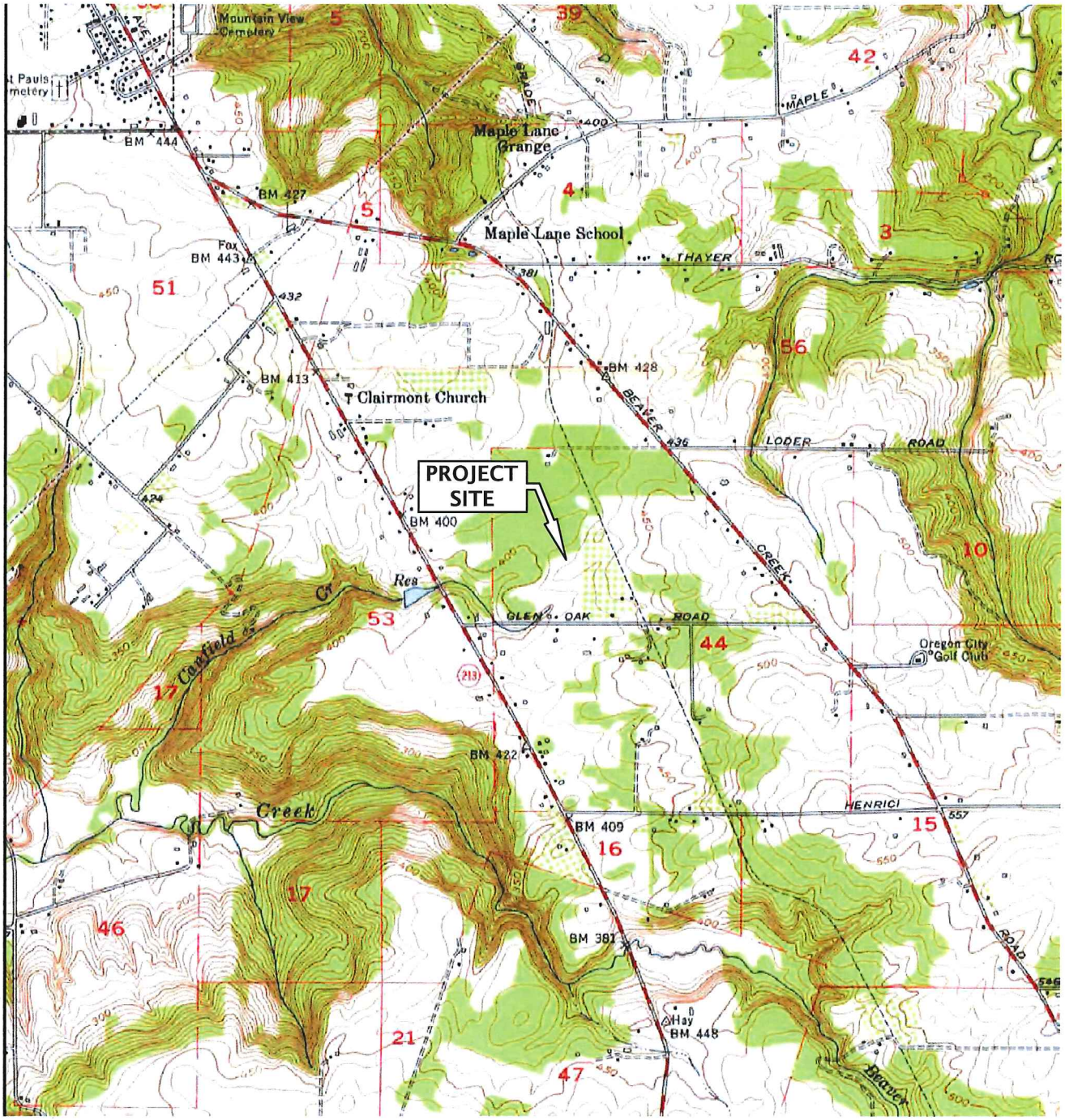
PROJECT SITE LOCATION IS APPROXIMATE.

N

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ARCHBBL-3-01	**HISTORICAL TOPOGRAPHIC MAP 1939**
SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:21:49 PM
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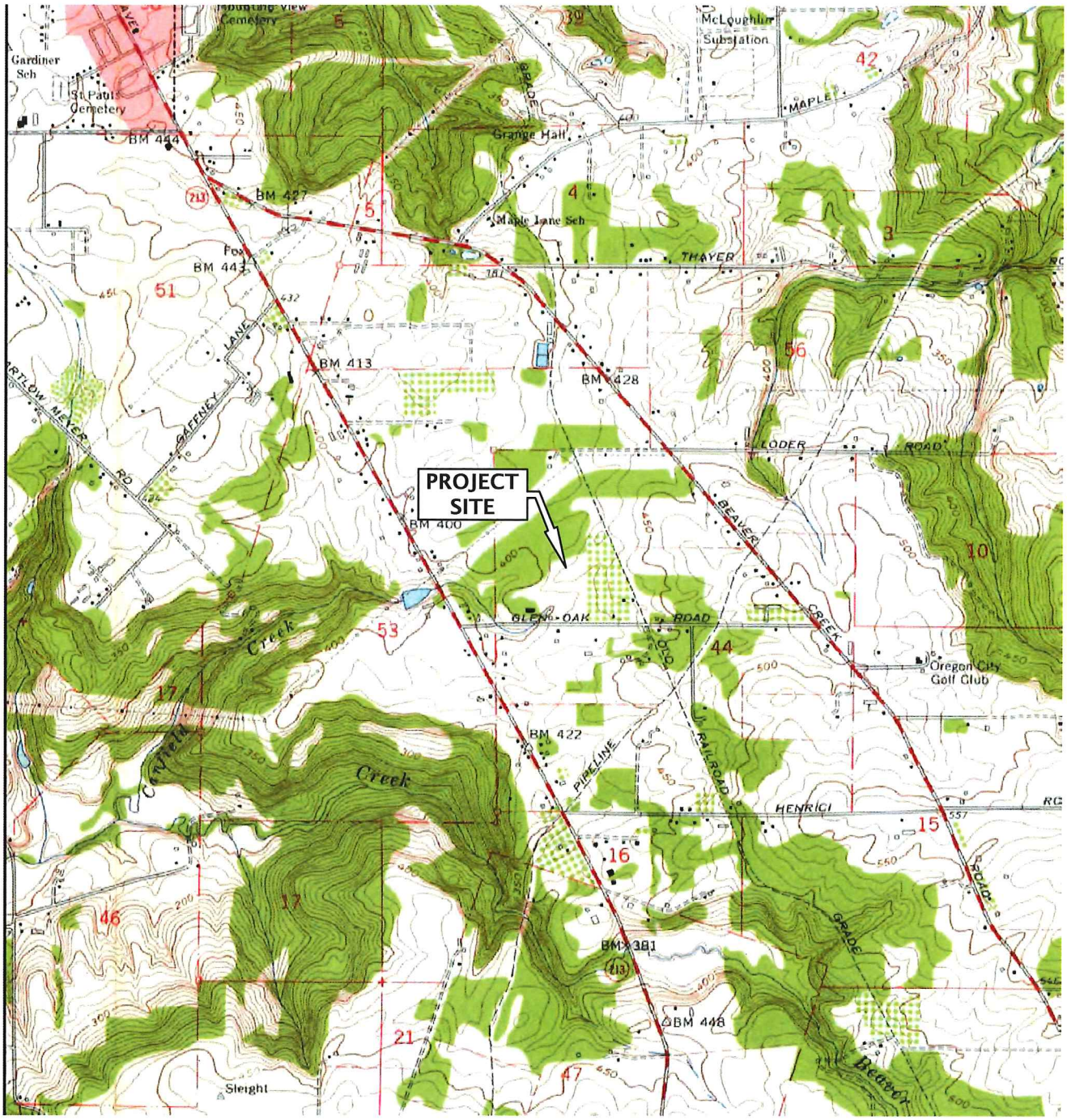


PROJECT SITE LOCATION IS APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL TOPOGRAPHIC MAP 1954**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:21:50 PM
File Name: J:\A-D\ArchBBL\ArchBBL-3\ArchBBL-3-01\Figures\CAD\ArchBBL-3-01-HT01.dwg | Layout: 1954

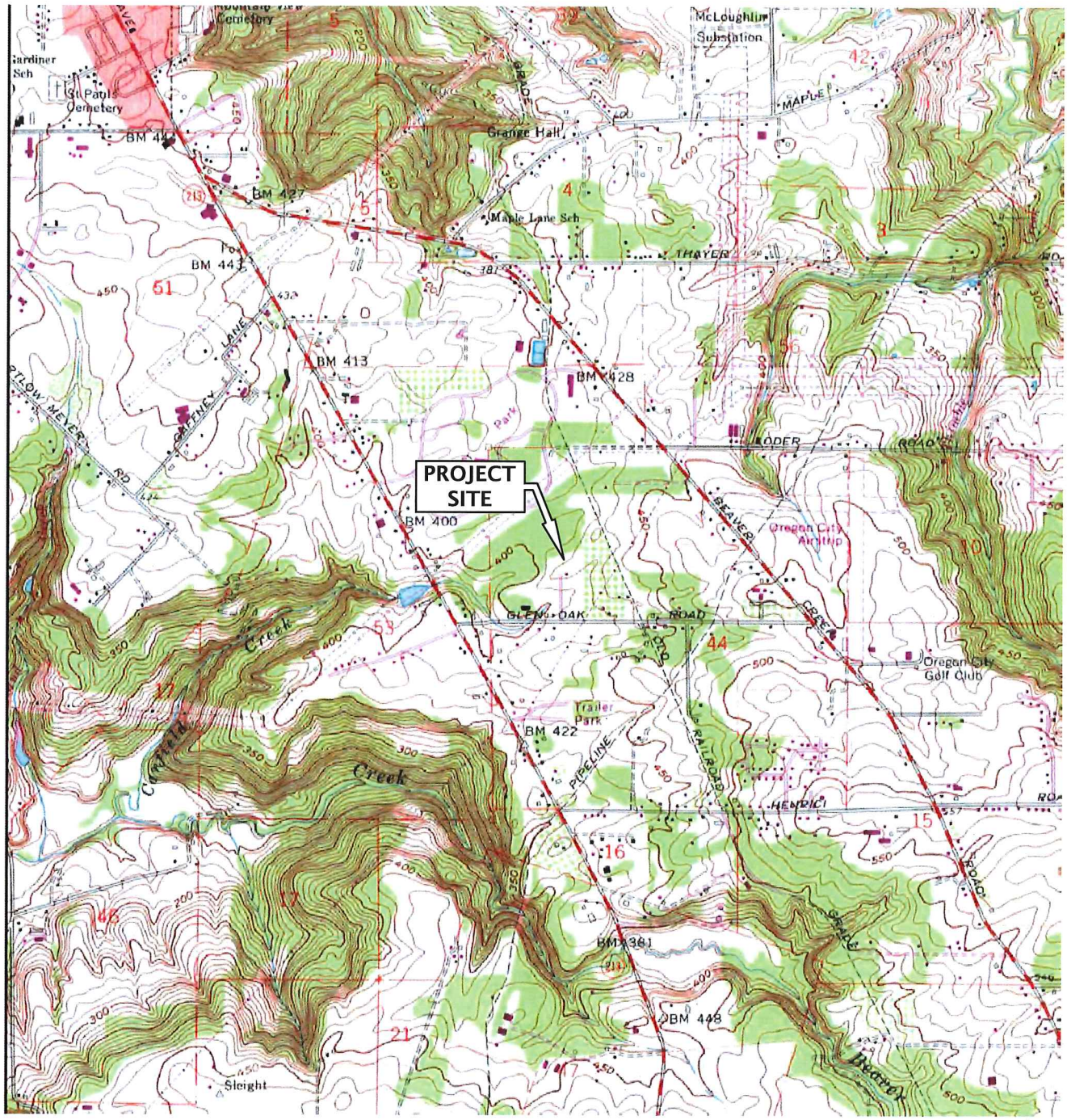


PROJECT SITE LOCATION IS APPROXIMATE.

N

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL TOPOGRAPHIC MAP 1961**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:21:50 PM
File Name: J:\A-D\ArchBBL\ArchBBL-3\ArchBBL-3-01\Figures\CAD\ArchBBL-3-01-HT01.dwg | Layout: 1961



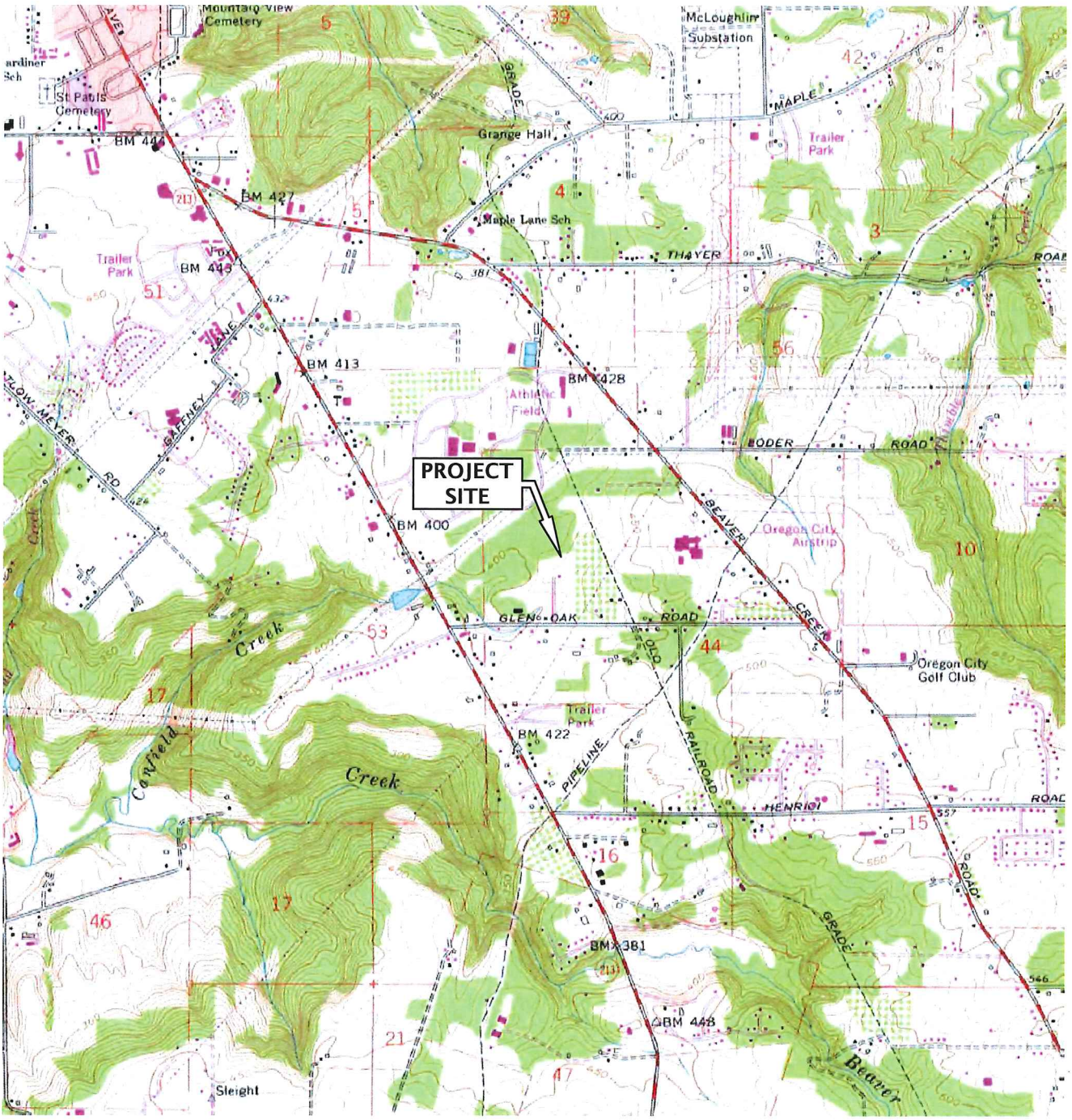
PROJECT SITE LOCATION IS APPROXIMATE.

N

GEODESIGN INC
15575 SW Sequoia Parkway - Suite 100
Portland OR 97224
Off 503.968.8787 Fax 503.968.3068

ARCHBBL-3-01	**HISTORICAL TOPOGRAPHIC MAP 1970**
SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:21:51 PM
File Name: J:\A-D\ArchBBL\ArchBBL-3\ArchBBL-3-01\Figures\CAD\ArchBBL-3-01-HT01.dwg | Layout: 1970



PROJECT SITE LOCATION IS APPROXIMATE.

GEODESIGN INC 15575 SW Sequoia Parkway - Suite 100 Portland OR 97224 Off 503.968.8787 Fax 503.968.3068	ARCHBBL-3-01	**HISTORICAL TOPOGRAPHIC MAP 1975**
	SEPTEMBER 2014	10.53-ACRE PARCEL OREGON CITY, OR

Printed By: aday | Print Date: 9/24/2014 12:21:52 PM
File Name: J:\A-D\ArchBBL\ArchBBL-3\ArchBBL-3-01\Figures\CAD\ArchBBL-3-01-HT01.dwg | Layout: 1975

10.543-Acre Parcel
Glen Oak Road Nearby Site
Oregon City, OR 97045

Inquiry Number: 4061781.5
September 12, 2014

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2013	☑	☐	Cole Information Services
2008	☑	☐	Cole Information Services
2003	☑	☐	Cole Information Services
1999	☑	☐	Cole Information Services
1996	☑	☐	Polk's City Directory
1987	☐	☐	Polk's City Directory
1981	☐	☐	Polk's City Directory
1976	☐	☐	Polk's City Directory
1971	☐	☐	Polk's City Directory
1965	☐	☐	Polk's City Directory

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FINDINGS

TARGET PROPERTY STREET

Glen Oak Road Nearby Site
Oregon City, OR 97045

Year	*CD Image*	*Source*	
GLEN OAK RD			
2013	pg A1	Cole Information Services	
2008	pg A3	Cole Information Services	
2003	pg A4	Cole Information Services	
1999	-	Cole Information Services	Target and Adjoining not listed in Source
1996	-	Polk's City Directory	Street not listed in Source
1987	-	Polk's City Directory	Street not listed in Source
1981	-	Polk's City Directory	Street not listed in Source
1976	-	Polk's City Directory	Street not listed in Source
1971	-	Polk's City Directory	Street not listed in Source
1965	-	Polk's City Directory	Street not listed in Source
S GLEN OAK RD			
2013	-	Cole Information Services	Target and Adjoining not listed in Source
2008	-	Cole Information Services	Target and Adjoining not listed in Source
2003	-	Cole Information Services	Target and Adjoining not listed in Source
1999	pg A5	Cole Information Services	
1996	pg A6	Polk's City Directory	
1987	-	Polk's City Directory	Street not listed in Source
1981	-	Polk's City Directory	Street not listed in Source
1976	-	Polk's City Directory	Street not listed in Source
1971	-	Polk's City Directory	Street not listed in Source
1965	-	Polk's City Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information Services

GLEN OAK RD 2013

14279	CLARKE RONALD MD
	EMERGY DAREN DO
	NIELSEN JOANNE MD PC
	RESK JAMES MD
14288	CHARLES SILVA
14323	SHERRY CLEMENT
14324	DONALD FRIEDMAN
14362	OCCUPANT UNKNOWN
14401	BOARDWALK MANUFACTURING
14432	OCCUPANT UNKNOWN
14433	ROSS KEITH
14444	TROY RUTHERFORD
14468	RONALD RUTHERFORD
14491	TITO ROMAYOR
14511	KEITH WRIGHT
14631	OCCUPANT UNKNOWN
14637	OCCUPANT UNKNOWN
14643	OCCUPANT UNKNOWN
14649	OCCUPANT UNKNOWN
14655	CLAYTON ROSENAU
14661	MICHAEL TAYLOR
14667	HEATHER NORGARD
14673	TREVOR BENYA
14679	WILLIAM BAKER
14685	OCCUPANT UNKNOWN
14691	OCCUPANT UNKNOWN
14697	OCCUPANT UNKNOWN
14703	TIMOTHY CUNNINGHAM
14709	GRACE ALLEN
14715	CHRIS SAGAN
14721	LISA SPRAGUE
14727	OCCUPANT UNKNOWN
14733	OCCUPANT UNKNOWN
14739	OCCUPANT UNKNOWN
14745	DAWN KYLLO
14757	OCCUPANT UNKNOWN
14763	OCCUPANT UNKNOWN
14769	OCCUPANT UNKNOWN
14771	CHRISTIAN GRANGER
14775	KARA JOHNSON
14781	MATTHEW WANDSCHNEIDER
14787	OCCUPANT UNKNOWN
14793	OCCUPANT UNKNOWN
14799	JENNIFER PALO
14804	OCCUPANT UNKNOWN
14805	KELLI DARUS
14811	OCCUPANT UNKNOWN
14817	TED IVERSON
14823	JIM ZISCHKE
14829	OCCUPANT UNKNOWN

Target Street	Cross Street	Source
✓	-	Cole Information Services

GLEN OAK RD 2013 (Cont'd)

14842	LARRY LONG
14847	KRYSTN BRITT
14853	OCCUPANT UNKNOWN
14859	OCCUPANT UNKNOWN
14865	AUSTIN CUMMINGS
14871	OCCUPANT UNKNOWN
14877	JOSEPH RIEHL
14878	OCCUPANT UNKNOWN
14889	OCCUPANT UNKNOWN
14901	JAMES MARTINEAU
14917	JOSHUA AREHART
14918	OCCUPANT UNKNOWN
15005	JOE GIBSON
15015	MICHAEL WITT
15025	JAY KEITH
15035	LEANNA WRIGHT
15060	WARREN BURLEY
15066	ROCKY KEITH
15072	CAMERUN DAVIS
15075	KENNETH JAMES
15085	MARY ATTAWAY
15090	CAROLYN CRONE
15095	JASON HORTON
15096	OCCUPANT UNKNOWN
15105	MICHAEL SCHULZE
15115	OCCUPANT UNKNOWN
15125	JANE BEADLE
15135	CATHY MITCHELL

Target Street	Cross Street	Source
✓	-	Cole Information Services

GLEN OAK RD 2008

14279	ALLERGY ASTHMA CLINIC PC
	EMERY DAREN F DO
	JAMES RESK
	JOANNE NIELSEN MD
	KCR DEVELOPMENT LLC
	OREGON CITY PEDIATRIC BUILDING
	PEDRIATIC CLINIC
	RESK JAMES MD
	RONALD CLARKE MD
14288	CHARLES SILVA
	SARAHS COUNTRY CORNER
14323	SHERRY CLEMENT
14324	DAVID ADELHART
14362	OCCUPANT UNKNOWN
14401	B & B INSTALLATIONS INC
14422	OCCUPANT UNKNOWN
14432	OCCUPANT UNKNOWN
14433	ROSS KEITH
14444	TROY RUTHERFORD
14469	RONALD RUTHERFORD
14491	MORGAN MACHINSKI
14511	KEITH WRIGHT
14641	OCCUPANT UNKNOWN
14762	OCCUPANT UNKNOWN
14771	CHRISTIAN GRANGER
14804	BRENDA WYNN
14842	LARRY LONG
14878	OCCUPANT UNKNOWN
14917	JOSHUA AREHART
14918	PAUL RATIGAN
14995	RICHARD HENRICHS
15005	JOE GIBSON
15015	MICHAEL WITT
15025	JAY KEITH
15035	SUZANNE WRIGHT
15045	WAYNE STEWART
15060	WARREN BURLEY
15066	R KEITH PAINTING INC
	ROCKY KEITH
15072	CAMERUN DAVIS
15075	KENNETH JAMES
15085	GARTH ATTAWAY
15095	RODNEY WEED
	RPW
15105	MICHAEL SCHULZE
15115	DONALD NUTT
15125	LEE BEADLE
15135	CATHY MITCHELL

Target Street	Cross Street	Source
✓	-	Cole Information Services

GLEN OAK RD 2003

14279 DAREN F EMERY DO
DR EMERY & DR CLARKE
OREGON CITY PEDIATRICS
14288 CHARLES SILVA
14323 ROYLE CLEMENT
14324 CHARLES SILVA
SYLVIAS UNIQUETIES
14362 OCCUPANT UNKNOWN
14401 B & B INSTALLATIONS INC
BOARDWALK MFG INC
OCCUPANT UNKNOWN
14422 STEVEN SPLONSKOWSKI
14432 SMITH WARREN & ROBIN
WARREN SMITH
14433 ROSS KEITH
14444 TROY RUTHERFORD
14468 RONALD RUTHERFORD
14490 MELISSA BODNER
14491 STEVEN MALIN
14511 JULIE LINN
14641 OCCUPANT UNKNOWN
14725 OCCUPANT UNKNOWN
14762 PAMELA JACKSON
14771 BARBARA WATNEE
14804 JAMES THARP
14839 ROBERT HUNT
14842 LARRY LONG
14844 KIP SWANSON
14878 JACK LAMB
14918 PAUL RATIGAN
14921 CRAIG SMITH
14995 WILLIAM CARLSON
15005 JOSEPH GIBSON
15015 MICHAEL WITT
15025 WILLIAM DALE
15035 SUZANNE WRIGHT
15045 WAYNE STEWART
15060 WARREN BURLEY
15066 ROCKY KEITH
15072 K FREEMAN
15075 DARREL JAMES
15085 GARTH ATTAWAY
15095 RODNEY WEED
RPW INC
15105 MIKE WITT
15115 KAY SCHWAB
15125 OCCUPANT UNKNOWN
15135 CATHY MITCHELL

Target Street	Cross Street	Source
✓	-	Cole Information Services

S GLEN OAK RD 1999

14323	OCCUPANT UNKNOWN
14324	ROB SILVA
14362	K NEWMAN
14422	STEVEN SPLONSKOWSKI
14432	WARREN SMITH
14433	ROSS KEITH
14444	TROY RUTHERFORD
14468	RONALD RUTHERFORD
14490	LACEY SPARLING
14491	SCOTT ENNES
14511	GEORGE HANEL
14641	ALFRED HESS
14725	BRIAN HUNT
14762	MERLE HULL
	PAMELA JACKSON
14771	BARBARA WATNEE
14792	ROB HUMPHREYS
14804	JAMES THARP
14839	EDGAR HUNT
14844	KIP SWANSON
14878	JACK LAMB
14918	PAUL RATIGAN
14921	OCCUPANT UNKNOWN
14995	WILLIAM CARLSON
15005	OCCUPANT UNKNOWN
15015	OCCUPANT UNKNOWN
15035	SUZANNE WRIGHT
15045	WAYNE STEWART
15060	WARREN BURLEY
15066	ROCKY KEITH
15072	K FREEMAN
15075	DARREL JAMES
15085	OCCUPANT UNKNOWN
15095	ROD WEED
15105	EDGAR BROCKMANN
15115	KAREN MCCLENAHAN
15125	LEE BEADLE
15135	MARK WELTERS

Target Street	Cross Street	Source
✓	-	Polk's City Directory

S GLEN OAK RD 1996

HOUSEHOLDS 38

GLEN ECHO CT (GL) 97027

6150 Ridley Arthur L 655-3873
6155 Snyder James R Jr 656-6986
Snyder Marion Jr 656-6986

HOUSEHOLDS 3

S GLEN OAK RD (O) 97045

14401 DESIGN WOODWORKS INC 9006 R012 656-0688
FINISHERS CORP 9006 R012 557-0196
14422 Splonskowski Cathy 9006 R012 650-4615
Splonskowski Steven J 9006 R012 650-4615
14432 Smith Robin 9006 R012 657-7435
Smith Warren 9006 R012 657-7435
14433 Keith Rose 9006 R012 656-5151
14468 Rutherford Ronald D 9006 R012 656-6047
14491 Ennes Scott 9006 R012 656-4174
14511 Hanel George 9072 R012 655-1849
14641 Hess Alfred N 9072 R012 656-8830
14725 Chandler Oscar 9073 R012 656-8042
14730 Heider Alvin H 9073 R012 656-6875
14762 Tharp James 9073 R012 656-4746
Tharp Mabel E 9073 R012 656-8236
14771 Watnee Leroy B 9073 R012 656-3510
14792 Humphreys Linda 9073 R012 656-5643
Humphreys Rob 9073 R012 656-5643
14839 Hunt Edgar L 9074 R012 656-2272
14844 Swanson Kip 9074 R012 656-3212
14918 Ratigan Paul E 9075 R012 656-5927
14921 Nichols Gerald B 9075 R012 656-5853
14995 Carlson William M 9075 R012 656-8537
15015 Witt Kathy 9007 R012 656-6506
Witt Michael 9007 R012 656-6506
15035 A BLOOMIN GROOMIN GALLERY 9007 R012 650-8681
Wright Keith V 9007 R012 650-0028
Wright Suzanne 9007 R012 650-0028
15045 Stewart Wayne S 9007 R012 656-9555
15060 Burley Priscilla 9007 R012 656-6368
Burley Warren 9007 R012 656-6368
15065 Keith Rocky 9007 R012 656-6213
15072 Freeman K D 9007 R012 656-9612
15075 James Darrel 9007 R012 655-2409
James Lois 9007 R012 655-2409
15095 Weed P 9007 R012 650-1026
Weed R 9007 R012 650-1026
15105 Brockmann E P 9076 R012 655-7081
Brockmann Nancy 9076 R012 655-7081
15125 Beadle Lee C 9076 R012 656-7689
15135 Welters Mark 9076 R012 657-9232

BUSINESSES 3 HOUSEHOLDS 38

S GLEN VIEW CT (O) 97045

19541 Kittelson Kenneth 8912 R009 656-8501
19606 Brady R L 8912 R009 656-9352

HOUSEHOLDS 2

NE GLEN WIDING DR (P) 97220

10.543-Acre Parcel
Glen Oak Road Nearby Site
Oregon City, OR 97045

Inquiry Number: 4061781.3
September 10, 2014

Certified Sanborn® Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

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9/10/14

Site Name:
10.543-Acre Parcel
Glen Oak Road Nearby Site
Oregon City, OR 97045

EDR Inquiry # 4061781.3

Client Name:
GeoDesign Inc.
15575 SW Sequoia Parkway
Portland, OR 97224

Contact: Andrew Blake

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Certified Sanborn Results:

Site Name: 10.543-Acre Parcel
Address: Glen Oak Road Nearby Site
City, State, Zip: Oregon City, OR 97045
Cross Street:
P.O. # NA
Project: ArchBBL-3-01
Certification # 6F8C-4CC7-887D

Sanborn® Library search results
Certification # 6F8C-4CC7-887D

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- ✓ EDR Private Collection

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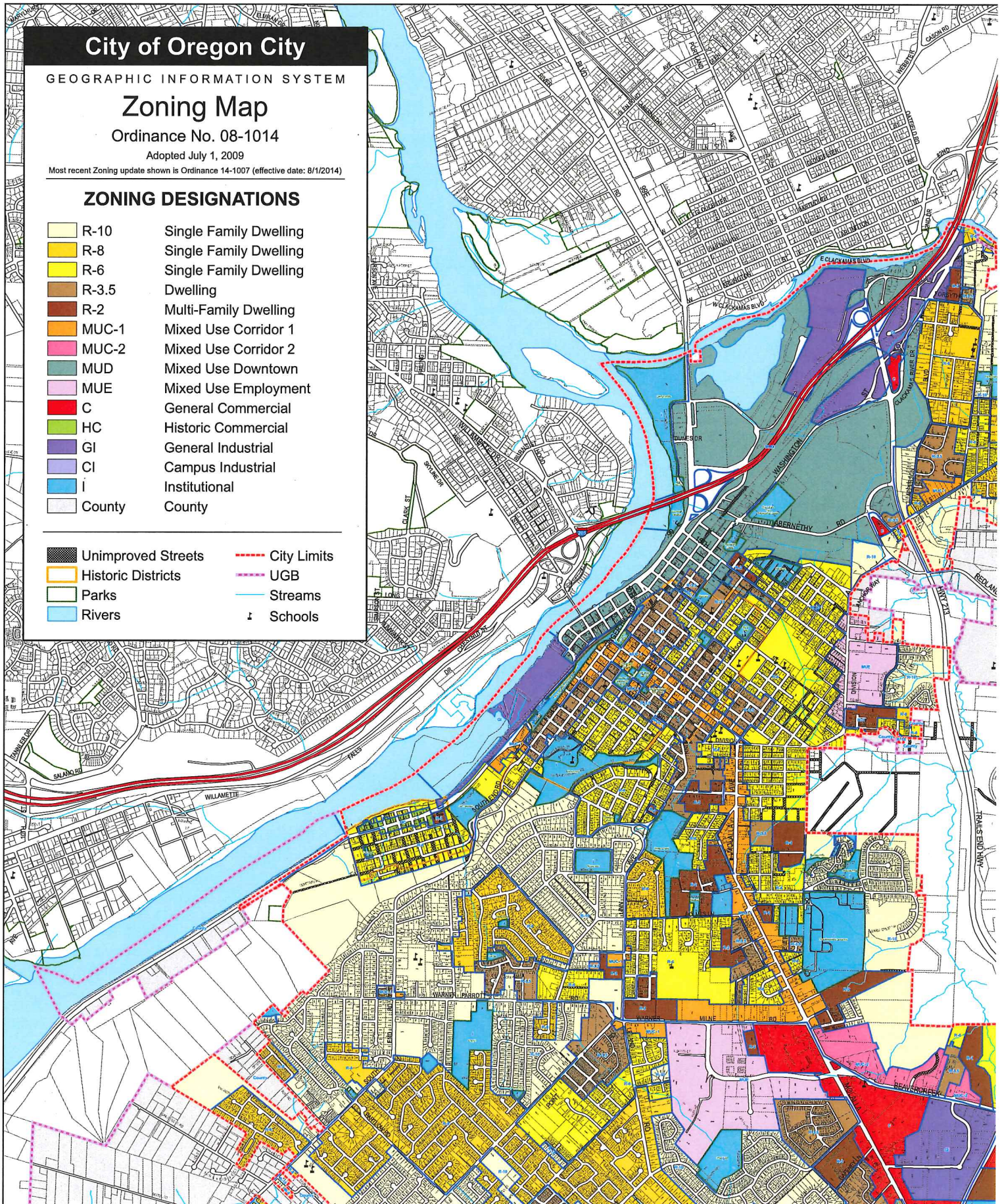
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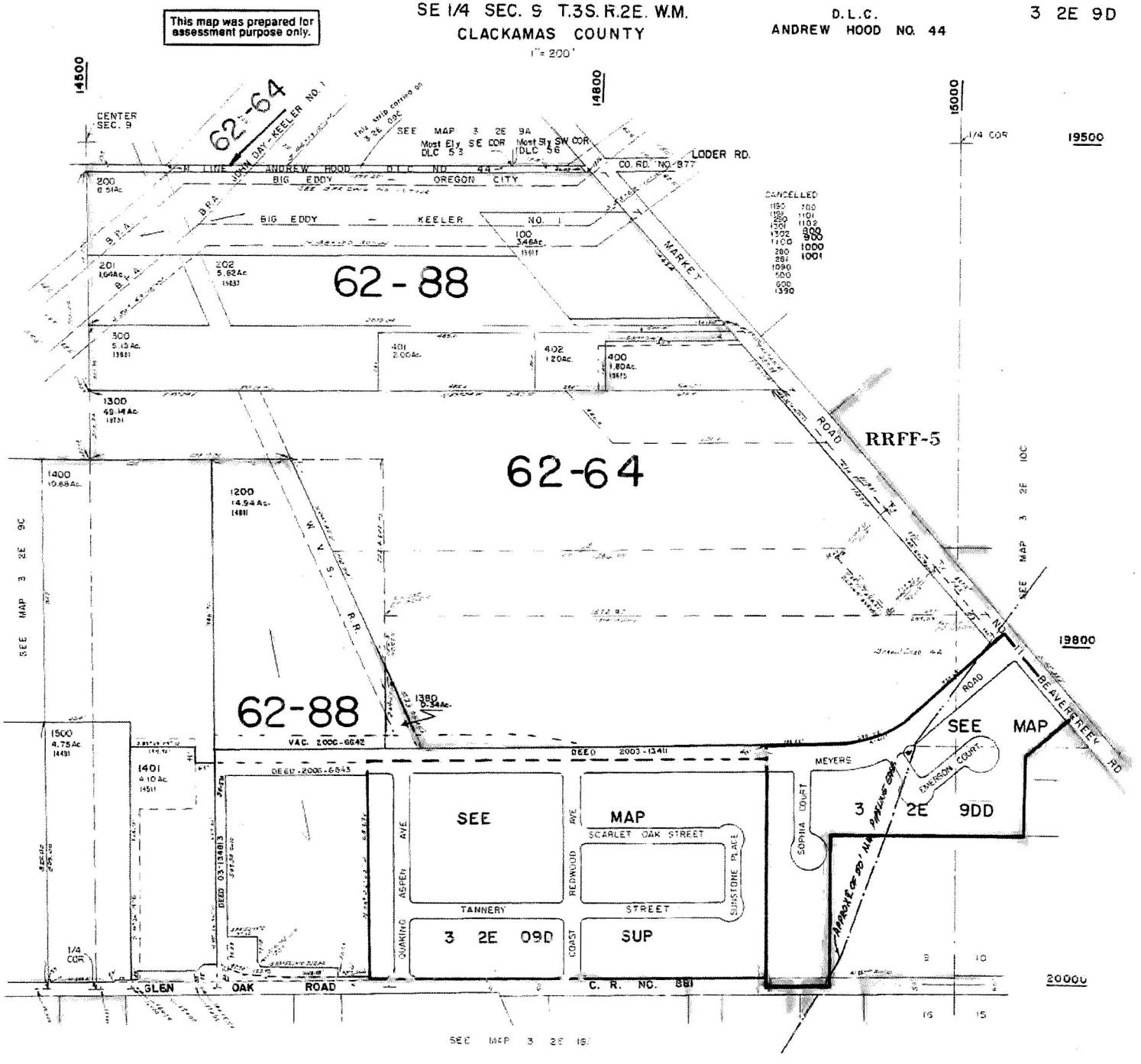
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City of Oregon City
GEOGRAPHIC INFORMATION SYSTEM
Zoning Map
Ordinance No. 08-1014
Adopted July 1, 2009
Most recent Zoning update shown is Ordinance 14-1007 (effective date: 8/1/2014)
ZONING DESIGNATIONS
R-10 Single Family Dwelling
R-8 Single Family Dwelling
R-6 Single Family Dwelling
R-3.5 Dwelling
R-2 Multi-Family Dwelling
MUC-1 Mixed Use Corridor 1
MUC-2 Mixed Use Corridor 2
MUD Mixed Use Downtown
MUE Mixed Use Employment
C General Commercial
HC Historic Commercial
GI General Industrial
CI Campus Industrial
I Institutional
County County
Unimproved Streets
Historic Districts
Parks
Rivers
City Limits
UGB
Streams
Schools
WILLAMETTE
ABERNETHY RD
MILNE RD
WARNER PARROTT RD
WARNER MILNE RD
SOUTH END RD
DIVISION
WASHINGTON
E CLACKAMAS BLVD
W CLACKAMAS BLVD
CLACKAMAS RIVER DR
TRAILS END HWY
REDLAND
BEAVERCREEK
MOLALLA
CANEMAH
SALAMO RD
CLARK ST
CHESTNUT ST
SKYLINE DR
WILLAMETTE DR
DUNES DR
HIGHWAY 213

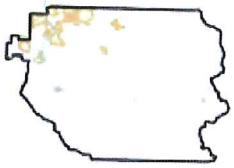

This map was prepared for assessment purpose only.
SE 1/4 SEC. 9 T.3S. R.2E. W.M.
CLACKAMAS COUNTY
1" = 200'
D.L.C.
ANDREW HOOD NO. 44
3 2E 9D
14500
14800
15000
19500
19800
20000
62-64
62-88
62-64
62-88
RRFF-5
CENTER SEC. 9
JOHN DAY-KEELER NO. 1
SEE MAP 3 2E 9A
Most Ely. SE COR DLC 53
Most Sly. SW COR DLC 58
N. LINE ANDREW HOOD D.L.C. NO. 44
BIG EDDY — OREGON CITY
LODER RD.
CO. RD. NO. 877
BIG EDDY — KEELER NO. 1
B.P.A.
MARKEY ROAD
CANCELLED
200 6.54Ac.
201 1.64Ac.
202 5.62Ac.
100 3.46Ac.
300 5.13 Ac.
401 2.00Ac.
402 1.20Ac.
400 1.80Ac.
1300 49.14 Ac.
1400 10.68Ac.
1200 14.94 Ac.
1380 0.34Ac.
1500 4.75Ac.
1401 4.10 Ac.
VAC. 2006-6642
DEED 2005-1341
DEED 2006-6543
DEED 03-134813
SEE MAP 3 2E 9C
SEE MAP 3 2E 10C
SEE MAP 3 2E 16
SEE MAP
3 2E 9DD
SEE MAP
3 2E 09D
SUP
MEYERS
EMERSON COURT
SOPHIA COURT
SCARLET OAK STREET
TANNERY
ASPEN AVE
REDWOOD AVE
QUARING
COAST
SUNSTONE PLACE
APPROX. 60' N.W. PIPELINE EASEMENT
BEAVERCREEK RD.
GLEN OAK ROAD
C. R. NO. 981
1/4 COR
3 2E 9DD

CMAP


S DOUGLAS LOOP
Oregon City
HIGH SCHOOL AVE
MEY
LAVE
© Clackamas County 2012

Map Tools

Photo View **Off**



Scale = 1 : 2400

Property Information

- Address Information
- Building Characteristics
- Jurisdiction Information
- Schooling Information
- Voting Information
- Service Information
- Hazard Information

Address Information

For owner information please contact Assessment & Taxation

return to map | new search

Building Characteristics

Sq Ft	Information not available.
Bedrooms	Information not available.
Baths	Information not available.
Year Built	Information not available.
Last Sale	11/30/2012 $1,675,000.00

return to map | new search

Tax Information

Map Number (TLNO)	32E09D 01400
Parcel Number	00870061
View Tax Map	view tax map
Est. Market Building Value	890.00

Est. Market Land Value	362,843.00
Est. Market Total Value	363,733.00
Est. Current Year Assessed Value	57,219.00
Tax Code	062-088
Est. Acres	10.53

Jurisdiction Information return to map | new search

City	Oregon City
Urban Growth Boundary	METRO UGB
Zoning	Contact City

Schooling Information return to map | new search

Elementary School Attendance	Beavercreek Elementary
Middle School Attendance	Ogden Middle
Senior High School Attendance	Oregon City High

Voting Information return to map | new search

State House District	40
State Senate District	20
Voting Precinct	5
Congressional District	5

Service Information return to map | new search

Cable Company	City
Community Planning Organization	City
Fire District	Clackamas RFPD #1
Garbage Hauler	Oregon City Garbage Co.
Park District	Not in district
School District	Oregon City
Sewer District	Not in district
Water District	CLACKAMAS RIVER WATER

Hazard Information return to map | new search

Flood	Likely not in a flood zone
Relative Earthquake Hazard	Your risk may be the lowest.

Relative Wild Fire Hazard	You may be at moderate risk.
Soils Information	8B - BORNSTEDT SILT LOAM, 0 TO 8 PERCENT SLOPES
Approximate Elevation	412.09

Survey & Plat Information return to map | new search

Clackamas County's Surveyor Information System

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Contact CMap | Privacy statement

ACRONYMS

ACRONYMS

AST	aboveground storage tank
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
EDR	Environmental Data Resources, Inc.
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ORS	Oregon Revised Statute
PCB	polychlorinated biphenyl
USGS	U.S. Geological Survey
UST	underground storage tank

Kelly Moosbrugger-City Planner
City of Oregon City
Community Development-Planning
221 Molalla Avenue, Suite 200
Oregon City, Oregon 97045
RE: Oregon City Schools Transportation Facility (CP 14-03, DP 14-04, and NR 14-10)

Ms. Moosbrugger,

I am concerned that the proposed project will negative impact my property to the west (TL. 200). My family does not plan to develop our property for 10-15 years, as we are currently working on other projects.

After reviewing the master plan, we are concerned that the school district is trying to transfer some of their development impacts onto our property. For example in the attached Addendum H- Loder road, they want to relocate this road onto the east perimeter of our property. The location of this road would not benefit our parcel as it is in the wrong location. It would require us to give up valuable land for the benefit of the school district. The Loder road extension benefits both the school district and the community college and it should be located on their properties, otherwise they should purchase land from us for the necessary right of way. The school district already has a private roadway which connects to the balance of their campus. Thus we do not endorse this routing option and view it as a taking which will require compensation if it is approved.

We take exception to a fact set forth in a letter to you from Sisul Engineering where Mr. Sisul says, "most of the site drains towards a neighboring parcel west of the site(TL 200)" I have highlighted these words in yellow. The elevation of much of the easterly perimeter of our property is at a higher elevation than the school property, so this could not occur. The surface water flows north to the wetland, not mostly west onto our property. We are concerned that surface water from the proposed facility will be discharged onto our property and will create potential wetlands or enlarged resource areas. Please ensure that no additional water is directed onto our property.

Lastly, the proposed Meyers road alignment enters our property approximately 80 ft north of the earlier maps provided to us by the city of Oregon City from Ms. Kraushauser, a city engineer at that time. This jog in the Meyers road alignment came about after the Park and bus barn lots were partitioned. We were told that there had to be an agreement between adjacent property owners for the location of Meyers road entering their respective properties. This was not done, and the school district has lost some of their property as a result. There should be no jog in the Meyers road right of way next to the bus barn site. This is poor traffic engineering!

Thank you for letting my family address our concerns.

Sincerely,

Ronald R. Saunders

CC: John Lewis- City Engineer

SISUL ENGINEERING

A Division of Sisul Enterprises, Inc.

375 PORTLAND AVENUE, GLADSTONE, OREGON 97027
(503) 657-0188
FAX (503) 657-5779

March 17, 2015

City of Oregon City
Community Development – Planning
221 Molalla Avenue, Suite 200
Oregon City, OR 97045

ATTN: Kelly Moosbrugger

RE: Oregon City Schools Transportation Facility (CP 14-03, DP 14-04, and NR 14-10)

Dear Kelly:

In response to your item of incompleteness dated 3-11-2015, after discussing the item with Gordon Munro, consultant for the City, we respond with the following.

EXISTING DRAINAGE PATTERN

The proposed transportation facility site generally drains east to west. Some of the site falls towards the on-site wetland but most of the site drains towards a neighboring parcel west of the site (TL 200). Of the related Meyers Road right-of-way extension, a small easterly portion of the future right-of-way falls back towards High School Avenue, but most of the proposed right-of-way currently falls towards the west and towards a neighboring, largely undeveloped, parcel (TL 200).

Eventually, overland flow draining westerly would reach a small seasonal tributary of Caulfield Creek, including that portion of the site that may drain towards the on-site wetland. Runoff from the small portion of the future Meyers Road right-of-way that falls easterly towards High School Avenue is collected by the drainage system in High School Avenue. This drainage is directed towards the storm detention pond at the intersection of High School Avenue and Glen Oak Road and eventually is discharged into Caulfield Creek.

PROPOSED DRAINAGE PATTERN WITH IMPROVEMENTS

Runoff from the proposed transportation facility will be directed towards the on-site wetland at the north end of the site. The discharge point towards the wetland from the proposed transportation facility improvements would be near the west property line of the transportation facility, and within the wetland buffer.

Most of the runoff draining from the proposed Meyers Road extension would be directed to Caulfield Creek. Runoff off the most easterly portion of the Meyers Road extension would drain back towards High School Avenue.

RUNOFF IMPACTS

Runoff from all improvements will have to meet the City of Oregon City's storm drainage requirements. Such requirements require water quality and water quantity control measures.

All proposed improvements (both public and private) will meet the City's standards for water quality and runoff quantity. Different techniques will be used on site from those in the public right-of-way, but the City standards will be met.

Caulfield Creek Impact

Runoff that would be rerouted to drain directly towards Caulfield Creek, would be from a contributing area of approximately 0.95 acres, all from the proposed right-of-way extension of Meyers Road. This compares to the total upstream area of Caulfield Creek of approximately 330 acres. Therefore, the propose drainage adjustment would increase the basin size 0.3%, at the point of discharge where the street runoff would be directed. But as pointed out above, the natural runoff drainage direction is such that the flows combines with the main stem of Caulfield Creek 1400 feet downstream from where the new outlet is proposed. This small change would not significantly impact Caulfield Creek as a whole nor the small section of the creek length where the Meyers Road extension runoff will be re-directed upstream of the natural confluence point.

An energy dissipater will be used at the pipe outfall at the creek, to reduce flow velocities. However the design of a green street facility for the Meyers Road extension will mitigate runoff peak flows and the conveyance pipe from Meyers Road to the creek will be designed so runoff flows will remain below erosive velocities, but above necessary cleaning velocity for the pipe itself.

Glen Oak Road Park Wetland Impact

Based on the recommendations from the wetland scientist that is providing services to both the Parks Department and the School District, John van Staveren of Pacific Habitat Services, we will not discharge directly to the low grade wetland that exists on the Park site in what has been a horse pasture area. Rather we will carry the pipe conveyance past the wetland area directly to the edge of Caulfield Creek. Mr. van Staveren believes that discharging the Meyers Road runoff to the wetland would not benefit that wetland area and could damage it, and thus recommends it be carried to Caulfield Creek.

Transportation Facility Site Wetland Impact

All runoff from the transportation facility will be directed to two large storm detention facilities at the north end of the improvement area on the transportation facility site. The controlled flow releases from the detention basins will outfall near the western edge of the existing wetland on the Transportation Facility site. This wetland, unlike the degraded wetland on the Park site, is in good condition and surrounded by and has large trees within it.

In discussion with Mr. van Staveren about the discharge point for this wetland, which would be within the wetland buffer, the level of concern that controlled release flows from the site's detention ponds would negatively impact this wetland is much lower. Mr. van Staveren believes the wetland on the Transportation site is likely kept wet by groundwater as well as surface water flows and a point discharge into would not be as harmful. We did discuss if some sort of perforated pipe outlet system might be beneficial, but because of the large and numerous trees in and around the wetland area, a perforated pipe system would be more harmful to the mature trees than a point discharge to the wetland. We both had experience and concerns that in the long term perforated pipe outlets tend to plug and become ineffective, another reason to not use such a system.

The wetland on the Transportation Facility site does drain, southwesterly across the neighboring parcel in a seasonal drainageway. This seasonal drainage connects to the main stem of Caulfield Creek approximately 1400 linear feet from the westerly edge of the wetland on the Transportation Facility site.

Impacts to Adjoining Parcels to the West

The beneficiary of the localized rerouting of the runoff from the Transportation Facility site and the Meyer Road extension area will be the parcel immediately west of the Transportation Facility (Tax Lot 200). Existing sheet-flow drainage and shallow concentrated flows that originates on the Transportation Facility, in its existing condition, will largely be redirected to either Caulfield Creek or the wetland area at the north of the Transportation Facility site. While both Caulfield Creek and wetlands' seasonal downstream drainageway cross TL 200, the runoff will be directed away from potential developable areas of the parcel and concentrated in the resource areas on the parcel instead.

CONCLUSION

The proposed drainage redirection towards Caulfield Creek from the Meyers Road extension will have insignificant impact on Caulfield Creek flows, as the redirected area is only 0.3% of the upstream basin area, and approximately only 1400 linear feet upstream from where the runoff would have entered the main stem of Caulfield Creek anyway.

The impacts to the wetland on the Transportation Facility site will be relatively minor as it appears groundwater is what keeps the on-site wetland charged. We believe that flow spreading through the use of a perforated pipe or other methods would create more harm to the existing mature trees in and around the wetland than the proposed point discharge near the western edge of the wetland.

Sincerely,

Thomas J. Sisul, P.E.

OREGON CITY SCHOOL DISTRICT

MASTER PLAN
OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

SITE PLAN AND DESIGN REVIEW
PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM H – LODER ROAD

The City of Oregon City plans to extend Loder Road to Glen Oak Road in order to link up to Highway 213.

The exact routing of this extension of Loder Road has not been finalized, but City Planners have suggested that one possibility is to improve the District's private driveway on High School Avenue as a part of the Loder Road Extension.

While the proposed development of the new Transportation Maintenance Facility would not impede this possibility, the routing of Loder Road in this location would result in significant public traffic through the School District's campus. The resulting loss of the District's control over entry into the campus would be counterproductive to the District's mandate to provide a safe and secure environment for its students. In addition there would be negative impacts and increased pedestrian risk on the use of the current athletic fields as hundreds of spectators would be crossing a busy public road instead of a private driveway. Thus the District does not endorse this routing option for Loder Road.

It is the District's view that a better routing of the Loder Road extension would be on the other (west) side of the District's Transportation Maintenance Facility site. Refer to the attached suggested routing. The attached drawing is diagrammatic and it should be noted that the exact location of the Loder Road extension may need to be adjusted further west to address the exact boundaries of the Natural Resource Overlay District. In addition to avoiding security impacts and increased pedestrian risk at the High School campus, this location may be of some benefit for accessing Campus Industrial properties to the west depending upon final layouts of those future developments. Finally, the District has not received nor solicited any indication from Clackamas Community College as to their preferred routing of the Loder Road extension.

MEYERS ROAD & LODER ROAD EXTENSION ALIGNMENT

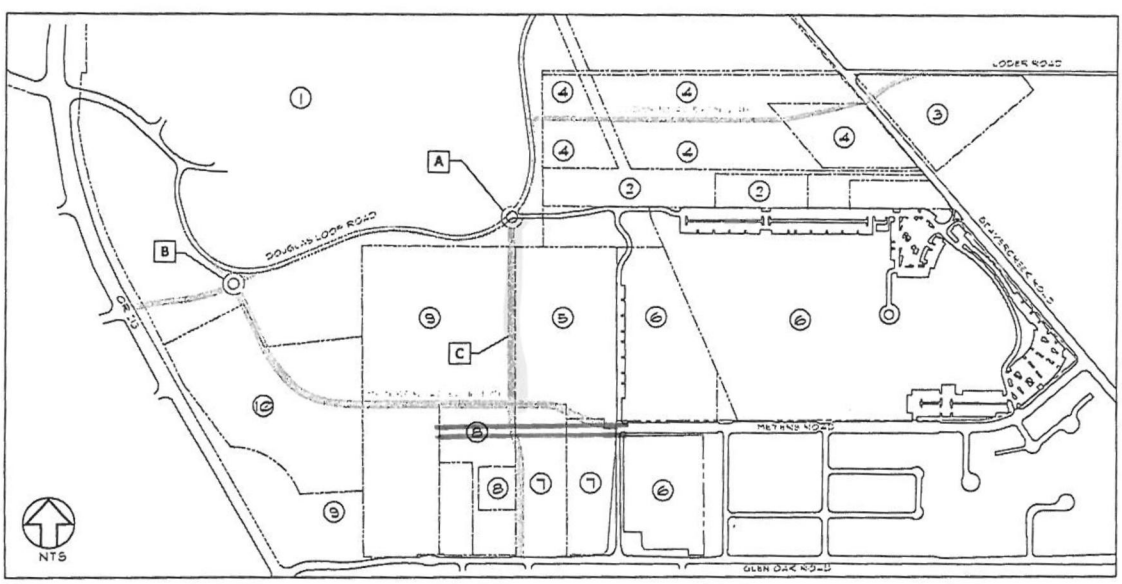
01.27.14

AFFECTED PROPERTY OWNERS

1. CLACKAMAS COMMUNITY COLLEGE
2. NUTT
3. HALL
4. BELLS
5. OREGON CITY SCHOOL DISTRICT
6. OREGON CITY HIGH SCHOOL
7. OREGON CITY PARKS
8. KEITH
9. SAUNDERS
10. BERGE

LEGEND

- ROADWAY
- BPA RIGHT-OF-WAY
- ROUNDABOUT
- PROPERTY LINES OF AFFECTED PROPERTY OWNERS



DESIGN FEATURES

- [A] 3 OR 4-WAY ROUNDABOUT
- [B] 4- WAY ROUNDABOUT
- [C] POSSIBLE FUTURE ROAD CONNECTION

BBL ARCHITECTS
ARCHITECTURE ▪ PLANNING ▪ INTERIOR DESIGN
200 North State Street ▪ Lake Oswego, Oregon 97034

OREGON CITY SCHOOL DISTRICT

MASTER PLAN OREGON CITY HIGH SCHOOL AND TRANSPORTATION MAINTENANCE FACILITY CAMPUS

▪

SITE PLAN AND DESIGN REVIEW PROPOSED TRANSPORTATION MAINTENANCE FACILITY

ADDENDUM D – FINAL TRAFFIC IMPACT STUDY REPORT

OREGON CITY SCHOOL DISTRICT
TRANSPORTATION MAINTENANCE FACILITY
TRAFFIC IMPACT STUDY

OREGON CITY, OREGON

DATE:
February 23, 2015

PREPARED FOR:
BBL Architects

PREPARED BY:
Michael Ard, PE
Will Farley, PE



LANCASTER
ENGINEERING

321 SW 4th Ave., Suite 400 | Portland, OR 97204 | 503.248.0313 | lancasterengineering.com

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EXECUTIVE SUMMARY

1. Oregon City School District has proposed a new transportation maintenance facility located immediately west of the existing Oregon City High School campus. Upon completion of the new facility, the existing bus facility located on the west side of S Maple Lane Road and north of S Beavercreek Road will be closed.

2. Based on detailed bus and employee data provided by the school district, the proposed facilities are projected to generate 41 trips during the morning peak hour, with 22 entering and 19 exiting the site. During the evening peak hour 25 site trips are projected, with 4 entering and 21 exiting the site. At the 20-year planning horizon it is anticipated that the proposed facility may generate 45 trips during the morning peak hour, with 25 entering and 21 exiting the site. During the evening peak hour at the planning horizon 27 trips are projected, with 4 entering and 23 exiting the site.

3. Based on the detailed review of crash history at the study area intersections, no significant safety hazards were identified and no specific mitigations are recommended.

4. The study intersections have appropriate left-turn lanes in place. No new left-turn lanes are recommended in conjunction with the proposed development.

5. The proposed site access driveways on Meyers Road and High School Avenue should be designed to provide sufficient intersection sight distance for safe operation of the future intersections. There are no significant vertical obstructions to sight distance, and existing vegetation within the site will be cleared as needed to provide safe sight lines.

6. Based on the operational analysis, the study area intersections currently operate acceptably and are projected to continue operating acceptably under year 2016 and year 2020 traffic conditions either with or without the addition of site trips from the proposed transportation maintenance facility. No operational mitigations are necessary or recommended in conjunction with the proposed development.

7. Based on the detailed automobile parking analysis, the 138 proposed parking spaces within the transportation maintenance facility site is within the recommended acceptable range of 97 to 150 spaces for this facility as considered alone. The proposed parking supply within the entire campus also falls within the recommended range of 714 to 1,278 parking spaces.

8. Oregon City does not have explicit requirements for bicycle parking for public school transportation and maintenance facilities. Accordingly, it is recommended that the minimum bicycle parking standard be established based on the number of parking spaces provided for employees and the typical requirement for at least one bicycle parking space per 20 motorized vehicle spaces. Using this approach, a minimum of eight bicycle parking spaces should be provided within the subject property, with at least four spaces covered.

PROJECT DESCRIPTION

INTRODUCTION

Oregon City School District has proposed a new transportation maintenance facility to be located immediately west of the existing Oregon City High School campus. The facility will include parking for school district buses as well as maintenance facilities and offices for transportation and maintenance staff.

Upon completion of the proposed facilities, the existing transportation facilities located west of S Maple Lane Road and north of S Beavercreek Road will be closed. Eight buses currently stored at Redland Elementary School will also be relocated to the new facility.

The purpose of this study is to assess the potential impacts of the proposed development and address the transportation analysis requirements of Oregon City. The report will identify the net increase in traffic attributable to the proposed development and examine the transportation impacts of these additional trips both upon completion of the facilities and under year 2020 traffic conditions with completion of a planned extension of Meyers Road between Molalla Avenue (Highway 213) and High School Avenue. The report will include level of service calculations and volume-to-capacity calculations for existing conditions, year 2016 traffic conditions and year 2020 traffic conditions. The analysis will also include a detailed crash history analysis

Detailed information on traffic counts, crash data, and level of service calculations are included in the appendix to this report.

LOCATION DESCRIPTION

The subject property is located in the northeast corner of the intersection of Meyers Road at High School Avenue. The site is immediately west of High School Avenue, and north of the Meyers Road alignment. Upon development of the subject property, Meyers Road will be extended to the west along the southern frontage of the property. The site will take access via two driveways on each roadway frontage.

Based on discussions with City staff and John Replinger, several intersections were identified as requiring analysis. These included S Beavercreek Road at Meyers Road, S Molalla Avenue at S Glen Oak Road, S Molalla Avenue at S Meyers Road, and S Molalla Avenue at Highway 213. Additionally, some examination of operation, safety and capacity is required for the intersections of Meyers Road at High School Avenue and Glen Oak Road at High School Avenue. These intersections were examined during the morning and evening peak hours. It is notable that the proposed development is associated with school activities, which would normally trigger analysis during the afternoon school peak traffic period. However, most site trips that occur during the afternoon school dismissal period will be on scheduled bus routes, and these vehicles would be present at the study area intersections regardless of the location of the bus yard. Accordingly, the proposed development will have a min-

imal impact on the volume and character of traffic in the site vicinity during this period. Accordingly, detailed analysis of afternoon school peak period operations is not required.

High School Avenue is classified by Oregon City as a Collector between Glen Oak Road and Meyers Road, and as a Local Street north of Meyers Road. It extends approximately 0.35 miles north from S Glen Oak Road along the west side of the Oregon City High School Campus. It has a two-lane cross-section with curb, gutter and sidewalks along the east side of the roadway. The west side of the road has gravel and grass shoulders. There is no on-street parking permitted between S Glen Oak Road and Meyers Road, however there is head-in parking available on the east side of the roadway along the frontage of the sports fields north of Meyers Road. The roadway has 20 mph school speed zone signs in place.

Meyers Road is classified by Oregon City as a Minor Arterial. The roadway currently exists in two separate segments, with one extending from Leland Road to Highway 213 and the other extending from High School Avenue to Beavercreek Road. The city's transportation system plan includes a future extension of Meyers Road connecting these existing segments. The segment between Beavercreek Road and High School Avenue has one through lane in each direction. It has left-turn lanes provided at intersections and a raised center median away from intersections. Bike lanes, curbs and sidewalks are provided on both sides of the roadway. Speed zone signing indicating a speed limit of 30 mph is accompanied by school speed zone signing indicating a speed limit of 20 mph between 7:00 AM and 5:00 PM. Some on-street parking is provided on each side of the roadway to the right of the bike lanes. The segment between Leland Road and Highway 213 has one through lane in each direction and a posted speed limit of 35 mph. In the vicinity of Highway 213 there are bike lanes in place on both sides of the roadway, and sidewalks are in place along the north side of the road.

Glen Oak Road is classified by Oregon City as a Collector. It has one through lane in each direction and a posted speed limit of 35 mph. Partial bike lanes and sidewalks are in place on both sides of the roadway. Some on-street parking is available on each side of the roadway.

Beavercreek Road is classified by Oregon City as a Major Arterial. It has a two-lane cross-section with a posted speed limit of 40 mph in the vicinity of the project site, with turn lanes added at intersections. Bike lanes are in place on both sides of the roadway. North of the site the roadway widens to provide two through lanes in each direction. Partial curbs and sidewalks are in place on both sides of the roadway.

Molalla Avenue northwest of Highway 213 is classified by Oregon City as a Major Arterial. It has two through lanes in each direction and a center two-way left-turn lane, with a posted speed limit of 35 mph. Bike lanes are in place along both sides of the roadway. Sidewalks are in place along the northeast side of the roadway, and partial sidewalks are provided along the southwest side of the roadway.

Highway 213 is classified by the Oregon City as a Major Arterial south of its intersection with Molalla Avenue and as an Expressway to the north. It has one travel lane in each direction in the vicinity of S Glen Oak Road and widens to provide two lanes in each direction north of S Meyers Road. It has a posted speed limit of 45 mph in the site vicinity. Bike lanes are in place on both sides of the roadway. Partial sidewalks are also in place along portions of the roadway.

INTERSECTION DESCRIPTIONS

The intersection of Beavercreek Road at Meyers Road is a T-intersection controlled by a traffic signal. The eastbound approach has a left-turn lane and a right-turn lane. The southbound approach has a single shared through/right-turn lane. The northbound approach has a left-turn lane operating with permitted signal phasing and a through lane. All three approaches have marked crosswalks with pedestrian signals in place.

The intersection of Meyers Road at High School Avenue is currently a T-intersection operating under all-way stop control. The west leg of the intersection has not yet been constructed and has barricades where Meyers Road currently ends. The northbound and southbound approaches each have a single, shared lane for all turning movements. The westbound approach has a left-turn lane and a right-turn lane. A marked crosswalk is in place crossing the east leg of the intersection.

The intersection of Beavercreek Road at Glen Oak Road is a T-intersection operating under stop control for the eastbound Glen Oak Road approach. The northbound and southbound approaches on Beavercreek Road are free-flowing. The eastbound approach has a left-turn lane and a right-turn lane. The northbound approach has a left-turn lane and a through lane. The southbound approach has a single, shared lane for through and right-turn movements.

The intersection of Glen Oak Road at High School Avenue is a T-intersection operating under stop control for the southbound High School Avenue approach. The southbound and eastbound approaches each have a single, shared lane for all turning movements. The eastbound approach has a left-turn lane and a through lane. Marked crosswalks are in place crossing the north and east legs of the intersection.

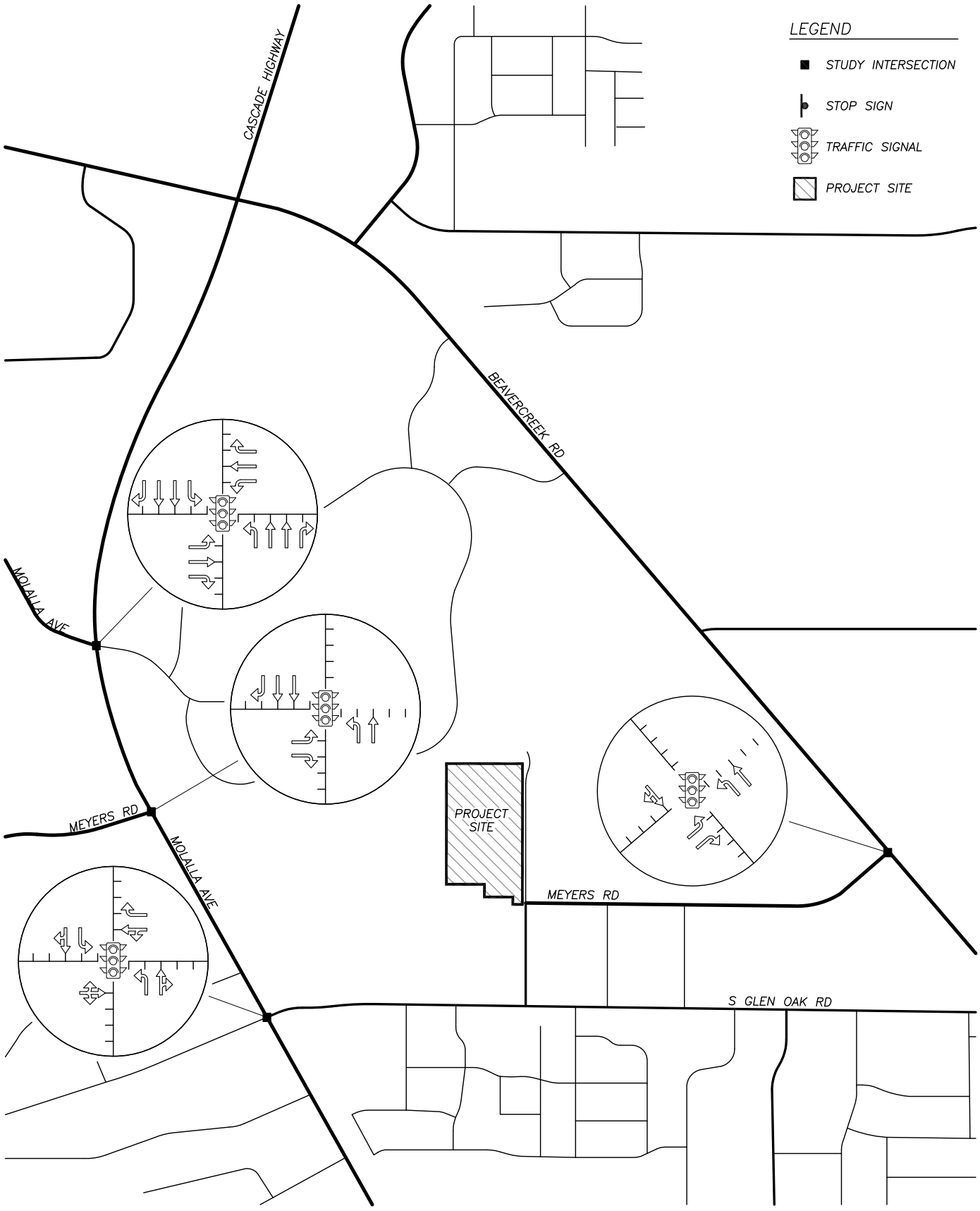
The intersection of Highway 213 at Glen Oak Road is a 4-way intersection controlled by a traffic signal. The westbound approach has a shared left/through lane and right-turn lane. The eastbound approach has a single, shared lane for all turning movements. The northbound and southbound approaches each have a left-turn lane operating with protected signal phasing and a shared through/right lane.

The intersection of Highway 213 at Meyers Road is a T-intersection controlled by a traffic signal. The northbound approach has a left-turn lane operating with protected signal phasing and a through lane. The southbound approach has two through lanes and a right-turn lane. The eastbound approach has a left-turn lane and a right-turn lane. All three intersection approaches have marked crosswalks with pedestrian signals in place.

The intersection of Highway 213 at Molalla Avenue is a 4-way intersection controlled by a traffic signal. The eastbound and westbound approaches each have a left-turn lane operating with protected signal phasing, a through lane and a right-turn lane. The northbound and southbound approaches each have a left-turn lane operating with protected signal phasing, two through lanes and a right-turn lane. There are marked crosswalks with pedestrian signals in place crossing all four legs of the intersection.

Manual turning movement counts were made at the study intersections during October 2014 from 7:00 to 9:00 AM and from 4:00 to 6:00 PM. The system peak hours occur from 7:10 to 8:10 AM and from 5:00 to 6:00 PM. Detailed traffic count data is included in the appendix to this report.

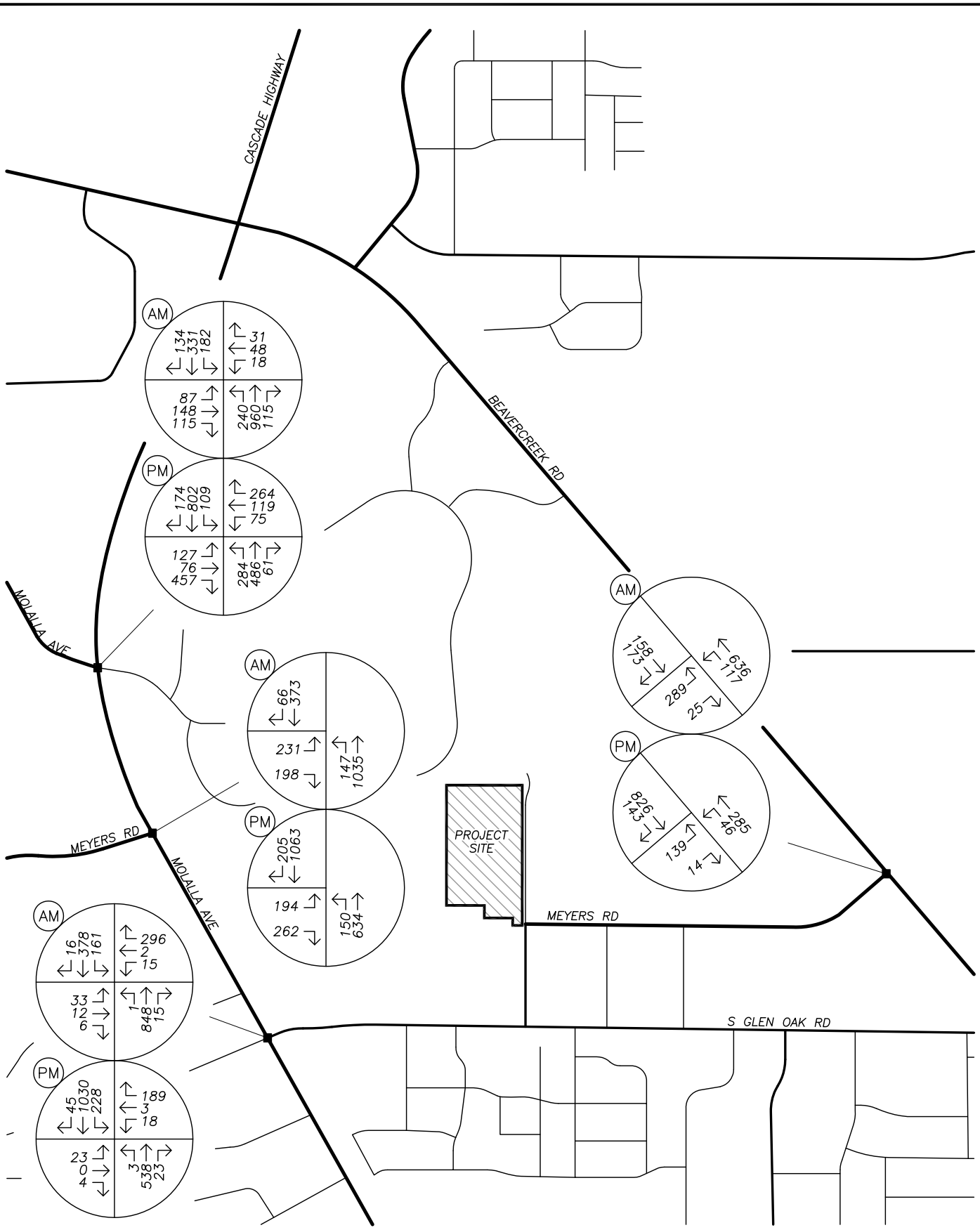
Figure 1 on page eight shows the project study area and the location of the site. Figure 2 on page nine shows the existing traffic volumes at the study area intersections.



VICINITY MAP

no scale

FIGURE 1



TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hours

no scale

FIGURE 2

TRIP GENERATION & DISTRIBUTION

TRIP GENERATION

To estimate the number of trips that will be generated by the proposed development, detailed employee and bus route data for the site was obtained from the Oregon City School District. The data was examined to determine the number of site trips that will overlap with the peak hours of adjacent-street traffic, from 7:10 to 8:10 AM and from 5:00 to 6:00 PM.

Based on the detailed analysis of the bus and employee data, the proposed development, for year of opening, is projected to result in a net increase of 41 trips during the morning peak hour, with 22 entering and 19 exiting the site. During the evening peak hour at year of opening, an increase of 25 trips is projected with 4 entering and 21 exiting the site.

Since the number of students who attend school typically increases with the population in the area, and by association the number of buses needed to serve them may also increase, the site's trip generation was adjusted to account for potential future site traffic volumes. Based on the "middle range" enrollment forecasts from the Oregon City School District, it is projected that the site's trip generation could increase by 4.6 percent over the next 10 years. In order to vest the potential future site trips on the surrounding transportation system and to ensure a conservative analysis, this growth was projected over a 20-year span to determine potential site traffic volumes at the planning horizon. These volumes were then conservatively applied to the 5-year analysis scenario. The table below summarizes the trip generation analysis for both year of opening and the 20-year outlook.

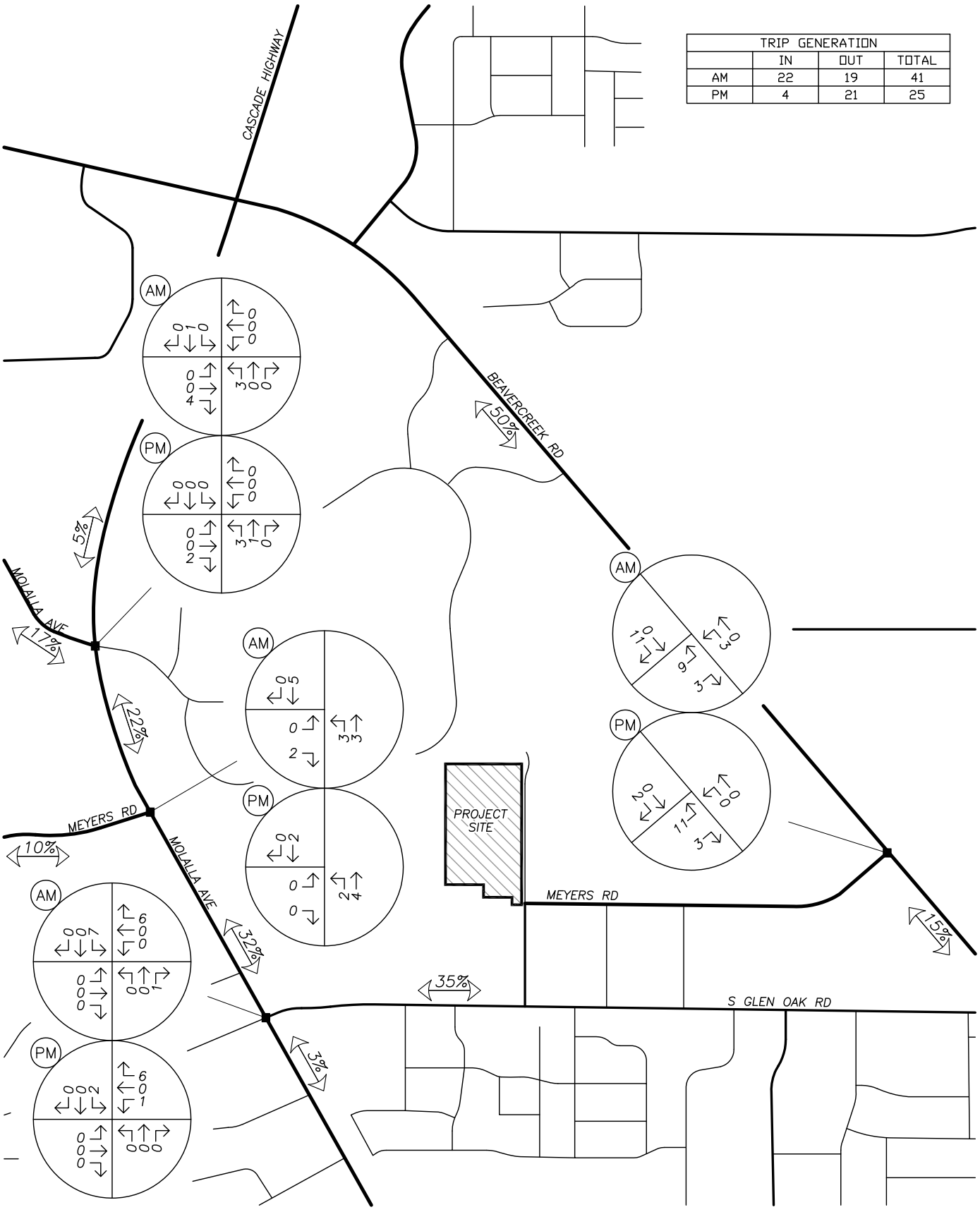
TRIP GENERATION SUMMARY

	AM Peak Hour			PM Peak Hour			Daily Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
SB Buses	0	5	5	0	0	0	80	80	160
BB Buses	0	8	8	0	0	0	97	97	194
Field Trip/Sports Buses	0	2	2	2	0	2	10	10	20
Driver vehicles	3	0	3	2	19	21	124	124	248
Clerical and Staff	10	2	12	0	1	1	22	22	44
Mechanics	4	1	5	0	0	0	10	10	20
Maintenance	5	1	6	0	1	1	29	29	58
Year 2016 Trip Gen	**22**	**19**	**41**	**4**	**21**	**25**	**372**	**372**	**744**
Anticipated Growth (9.5%)	2	2	4	0	2	2	35	35	70
Year 2035 Trip Gen	**24**	**21**	**45**	**4**	**23**	**27**	**407**	**407**	**814**

TRIP DISTRIBUTION

The distribution of bus trips was determined based on the detailed bus data provided by the school district. A detailed diagram showing the distribution and assignment of bus trips is included in the technical appendix. The distribution and assignment of passenger vehicle trips was developed based on the existing travel patterns in the site vicinity as well as the locations of major transportation facilities in the site vicinity and likely trip origins.

The trip distribution and assignment for the net increase in site trips associated with the proposed development is shown in Figure 3 on page 12.



SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Total Site Trips
AM & PM Peak Hours

no scale

FIGURE 3

SAFETY ANALYSIS

CRASH HISTORY

In order to identify any existing safety hazards in the site vicinity, a five-year crash history was obtained from ODOT's Crash Analysis and Reporting Unit. The data covered the period from January, 2009 through December 2013.

A brief discussion of crashes is provided for each of the study area intersections. In addition to the crash descriptions, calculated crash rates were determined for each location. Examination of the crash rate, expressed as the number of crashes per million entering vehicles (CMEV), allows intersections with widely different traffic volumes to be compared on the basis of relative crash risk. Typically, crash rates greater than 1.0 require further investigation into the type and causes of the crashes to determine whether patterns indicative of specific safety hazards exist.

The intersection of Beavercreek Road at Meyers Road had two reported crashes during the five-year analysis interval. Both were rear-end collisions, and both resulted in reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 0.08 crashes per million entering vehicles.

The intersection of Meyers Road at High School Avenue had no reported crashes during the five-year analysis period.

The intersection of Beavercreek Road at Glen Oak Road had six reported collisions during the five-year analysis period. The crashes included five turning-movement collisions and one backing collision. They resulted in two reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 0.28 crashes per million entering vehicles.

The intersection of Glen Oak Road at High School Avenue had two reported crashes during the five-year analysis period. Both were rear-end collisions. The crashes resulted in one non-incapacitating injury.

The intersection of Highway 213 at Glen Oak Road had five reported collisions during the five-year analysis period. These included four rear-end collisions and one fixed-object collision. The crashes resulted in three reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 0.13 crashes per million entering vehicles.

The intersection of Highway 213 at Meyers Road had 21 reported collisions during the five-year analysis period. These included 19 rear-end collisions, 1 angle collision and 1 turning-movement collision. The crashes resulted in 4 non-incapacitating injuries and 15 reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 0.46 crashes per million entering vehicles.

The intersection of Highway 213 at Molalla Avenue had 25 reported collisions during the five-year analysis period. These included 15 rear-end collisions, 5 turning-movement collisions, 3 angle colli-

sions, 1 bicycle collision and 1 non-collision. The crashes resulted in 1 fatality, 3 non-incapacitating injuries and 11 reports of a "possible injury/complaint of pain". The bicycle collision occurred when a 12-year-old female rode a bicycle westbound across Highway 213 while disregarding the traffic signal. She sustained non-incapacitating injuries. The fatal collision occurred when a northbound through vehicle failed to stop at the red light and struck a southbound vehicle making a left turn toward the Clackamas Community College campus, killing the 76-year-old passenger in the left-turning vehicle. Based on the details of the detailed crash data, there were no inherent safety deficiencies at the intersection that contributed to the fatality. The crash rate for the intersection was calculated to be 0.45 crashes per million entering vehicles.

Based on the detailed review of crash history at the study area intersections, no significant safety hazards were identified and no mitigations are recommended.

LEFT-TURN LANE WARRANT ANALYSIS

Installation of a left-turn lane on a major-street approach is primarily a safety consideration, since left-turn lanes allow vehicles to move out of the through travel lane while waiting for a safe gap in the opposing traffic stream. Installation of a left-turn lane reduces rear-end collisions that would otherwise occur between through vehicles and vehicles that are stopped within the travel lane. They are also associated with reductions in turning-movement collisions, head-on collisions and sideswipe collisions, since they provide lateral separation between the opposing through travel lanes and allow left-turning drivers to wait without impeding through traffic.

Major-street left-turn lanes are already in place at all of the study area intersections. Accordingly, no new left-turn lanes are recommended.

INTERSECTION SIGHT DISTANCE

Sight distance cannot be measured directly at the site access locations due to the fact that the road segments are not currently complete and existing vegetation with the subject property that will be cleared upon development of the project site currently obstructs sight distance. There are no significant hills which will obstruct sight distance in the future, so it is recommended that the site accesses be designed to provide adequate intersection sight distance in each direction.

The required intersection sight distance along Meyers Road is 390 feet in each direction based on the 35 mph speed limit.

The required intersection sight distance along High School Avenue is 225 feet to the south, based on a potential speed of up to 20 mph for turning vehicles approaching from Meyers Road if the stop signs are removed from the intersection. The required intersection sight distance to the north is 280 feet based on an assumed 25 mph speed limit for the roadway.

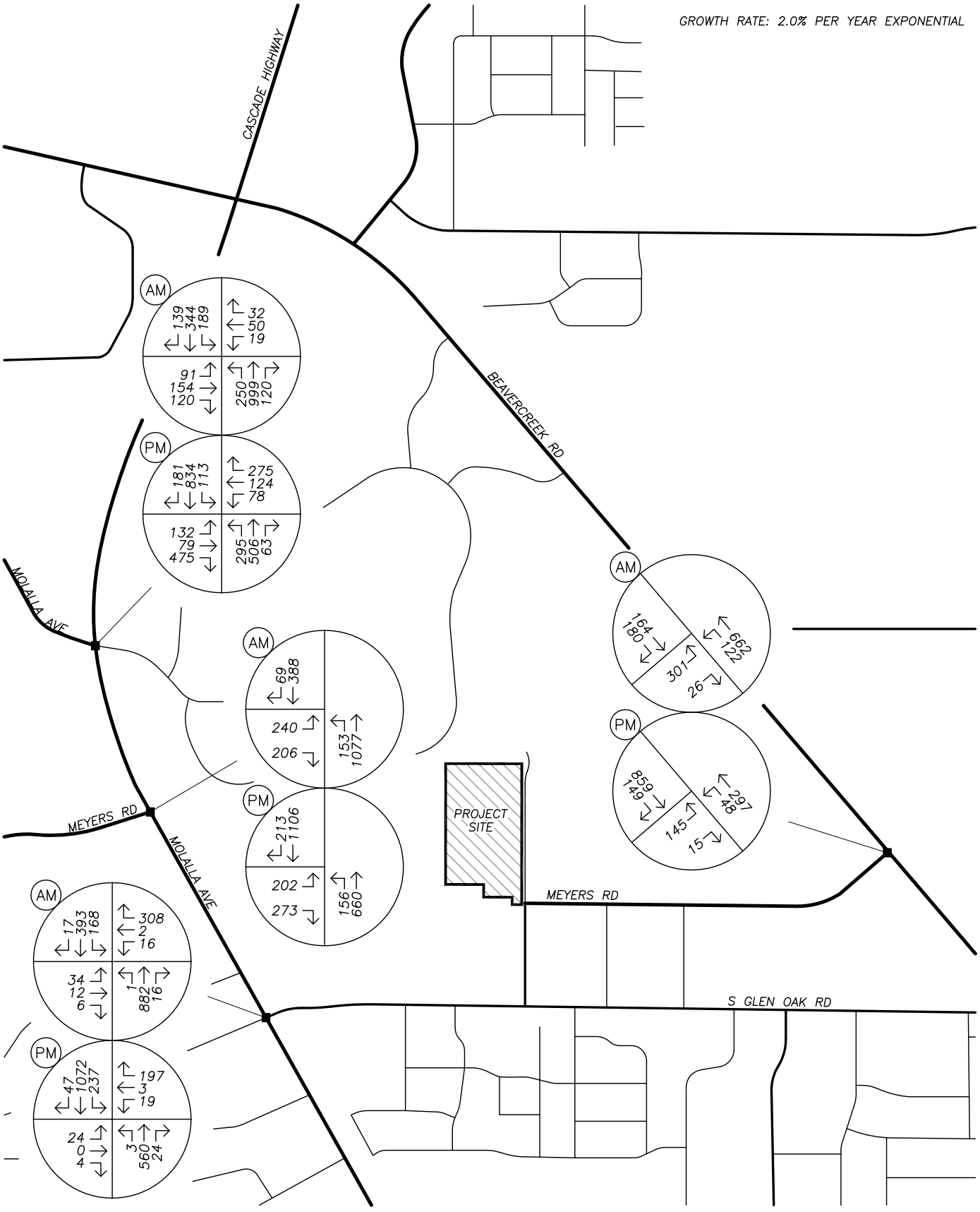
OPERATIONAL ANALYSIS

BACKGROUND TRAFFIC

The proposed development is expected to be completed and fully functional by 2016. In order to account for traffic volume growth between the time of the count data collection in 2014 and the year of project completion, two years of growth at two percent per year were added to the study area intersections. This growth accounts for the impacts of development outside the immediate project vicinity which will result in increased traffic throughout Oregon City.

In addition to determining the likely traffic volumes in the site vicinity for the year of project completion, an additional analysis was prepared for year 2020 traffic conditions. At that time, it is anticipated that the extension of Meyers Road between Highway 213 and High School Avenue will be completed, resulting in diversion of existing traffic patterns where drivers will use the new roadway. A new extension of Loder Road between Beavercreek Road and Glen Oak Road immediately east of Highway 213 is also anticipated to be completed at that time. In order to assess the impacts of the proposed development on the transportation system at that time, the year 2020 background traffic volumes at the study area intersections were also analyzed assuming that this improvement is in place.

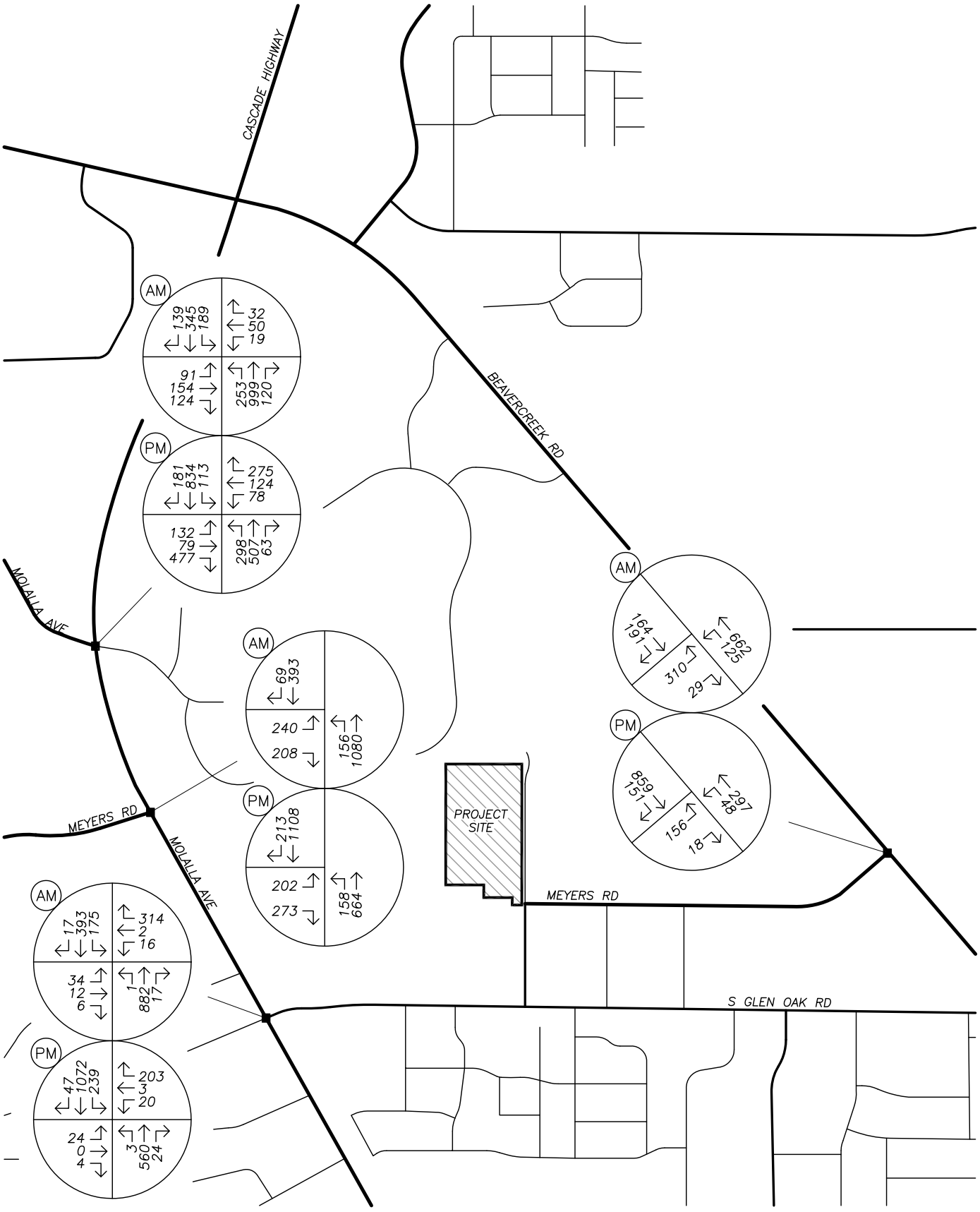
Figure 4 on page 16 shows the year 2016 background traffic volumes. Figure 5 on page 17 shows the year 2016 background traffic with addition of site trips from the proposed development. Figure 6 on page 18 shows the year 2020 background traffic volumes upon completion of the Meyers Road connection between Highway 213 and High School Avenue. Figure 7 on page 19 shows the projected year 2020 traffic volumes with the addition of site trips from the proposed development.



TRAFFIC VOLUMES
Year 2016 Background Conditions
AM & PM Peak Hours

no scale

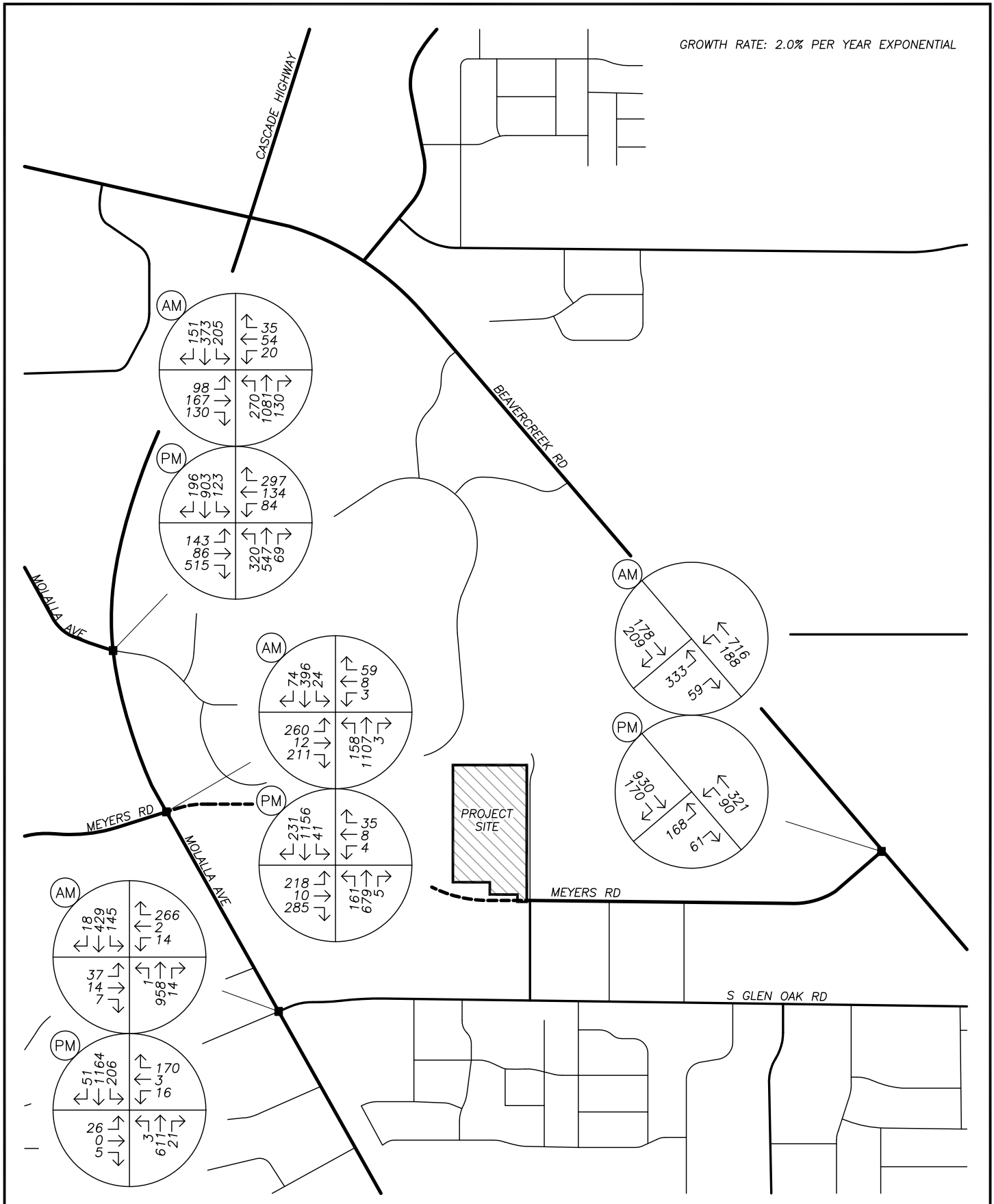
FIGURE 4



TRAFFIC VOLUMES
Year 2016 Background Plus Site Conditions
AM & PM Peak Hours

no scale

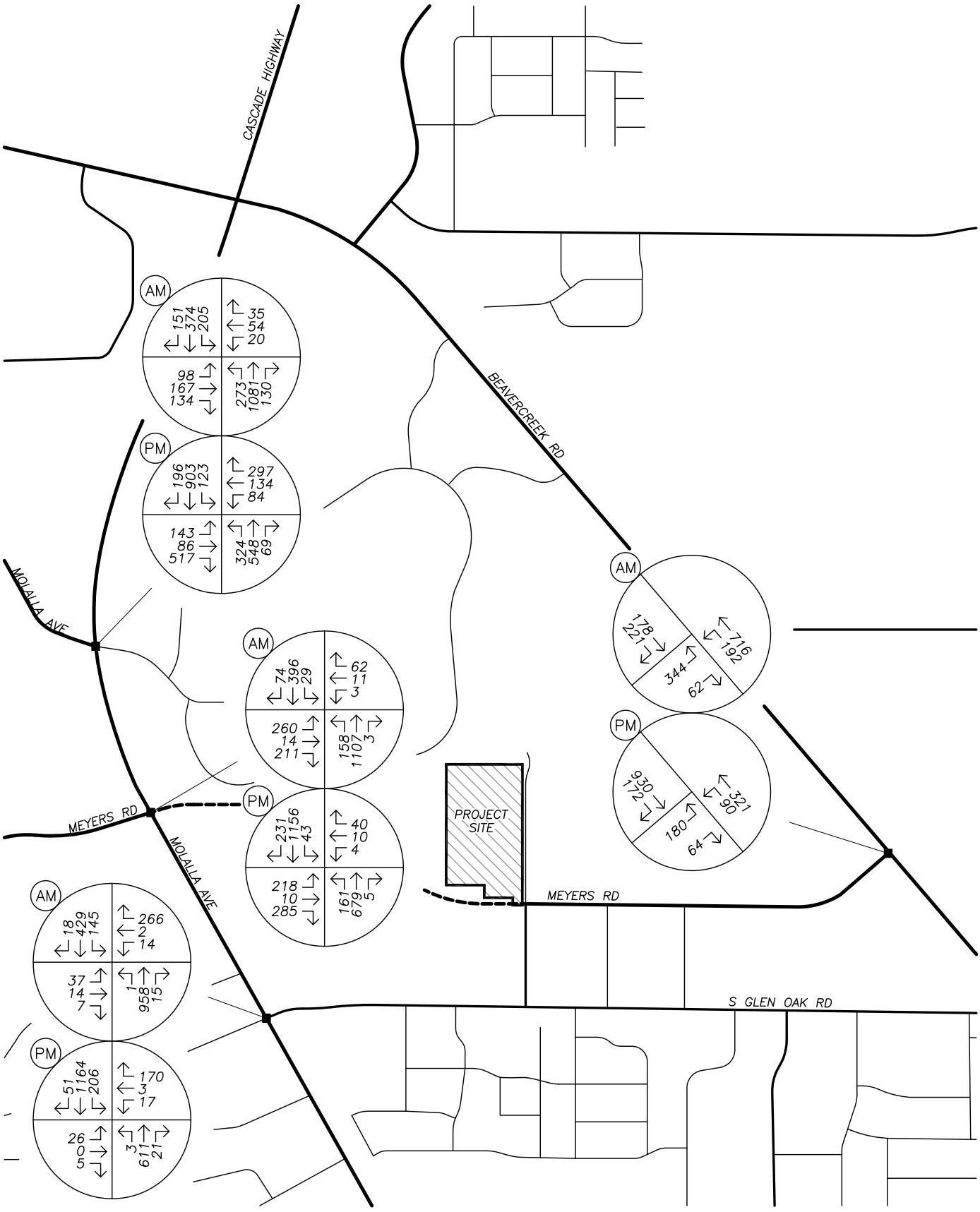
FIGURE 5



TRAFFIC VOLUMES
Year 2020 Background Conditions
AM & PM Peak Hours

no scale

FIGURE 6



TRAFFIC VOLUMES
Year 2020 Background Plus Site Conditions
AM & PM Peak Hours

no scale

FIGURE 7

CAPACITY ANALYSIS

To determine the level of service at the study intersections, a capacity analysis was conducted. The analysis was conducted according to the signalized intersection analysis methodologies in the *HIGHWAY CAPACITY MANUAL* (HCM) published by the Transportation Research Board. Level of service can range from A, which indicates little or no delay, to F, which indicates a significant amount of congestion and delay. Oregon City has recently established new operational standards for intersection performance. Intersections outside the Regional Center but designated on the Arterial and Throughway Network are required to operate with a v/c ratio of 0.99 or less. Signalized intersections outside the boundaries of the Regional Center and not on the Arterial and Throughway Network are required to operate at level of service "D" or better and with no approach operating at worse than LOS "E" and with a v/c ration not higher than 1.0 for the sum of the critical movements.

The intersection of Beavercreek Road at Meyers Road is currently operating at level of service B during the morning peak hour and level of service A during the evening peak hour. Under year 2016 traffic conditions, the intersection is projected to operate at level of service B during the morning and evening peak hour either with or without the addition of site trips from the proposed development. Under year 2020 traffic conditions, the intersection is projected to operate at level of service C during the morning peak hour and level of service B during the evening peak hour either with or without the addition of site trips from the proposed development. Intersection operation is acceptable and no mitigations are recommended.

The intersection of Meyers Road at High School Avenue currently operates under all-way stop control. Traffic volumes on all approaches are low, and delays are minimal. The intersection operates at level of service A/B and will continue to operate well within capacity and with a high level of service through 2016 either with or without the addition of site trips from the proposed development. Intersection operation is acceptable and no mitigations are recommended. Under year 2020 traffic conditions with the completion of the Meyers Avenue extension, it is assumed that the intersection will be converted to operate under stop control for the northbound and southbound approaches, while the eastbound and westbound Meyers Avenue approaches will be free-flowing, since Meyers Road is designated as a Minor Arterial street. The traffic volumes anticipated along Meyers Road upon completion of the street connection will be well within the capacity of the intersection. Again, no operational mitigations are recommended.

The intersection of Glen Oak Road at High School Avenue currently operates at level of service C for the stop-controlled minor-street approach during the morning peak hour and level of service B during the evening peak hour. Under year 2016 traffic conditions, the intersection is projected to continue to operate similarly either with or without the addition of site trips from the proposed facilities. Under year 2020 traffic conditions the completion of the Meyers Road extension will result in a nominal decrease in through traffic volumes traveling along Glen Oak Road and a decrease in southbound traffic volumes on High School Avenue. Accordingly, operation of this intersection would be expected to improve upon completion of the Meyers Road connection. Again, no operational mitigations are recommended.

The intersection of Highway 213 at Glen Oak Road currently operates at level of service C during the morning peak hour and level of service B during the evening peak hour. Under year 2016 traffic

conditions the intersection is projected to continue to operate with these levels of service either with or without the addition of site trips from the proposed development. Under year 2020 traffic conditions, the intersection is projected to operate at level of service C during the morning and evening peak hours either with or without the addition of site trips from the proposed development. Intersection operation is acceptable and no mitigations are recommended.

The intersection of Highway 213 at Meyers Road currently operates at level of service C during the morning peak hour and level of service B during the evening peak hour. Under year 2016 traffic conditions the intersection is projected to continue to operate with these levels of service either with or without the addition of site trips from the proposed development. Under year 2020 traffic conditions, the intersection is projected to operate at level of service C during the morning and evening peak hours either with or without the addition of site trips from the proposed development. Intersection operation is acceptable and no mitigations are recommended.

The intersection of Highway 213 at Molalla Avenue/S Douglas Loop currently operates at level of service C during the morning and evening peak hours. Under year 2016 traffic conditions the intersection is projected to continue to operate at level of service C during the morning and evening peak hours either with or without the addition of site trips from the proposed development. Under year 2020 traffic conditions, the intersection is projected to operate at level of service C during the morning peak hour and level of service D during the evening peak hour either with or without the addition of site trips from the proposed development. Intersection operation is acceptable and no mitigations are recommended.

The results of the capacity analysis, along with the Levels of Service (LOS) and delay are shown in the table on the following page. Detailed capacity analysis results are included in the appendix to this report.

LEVEL OF SERVICE SUMMARY

	AM Peak Hour			PM Peak Hour		
	LOS	Delay	V/C	LOS	Delay	V/C
Beavercreek Road at Meyers Road						
2014 Existing Conditions	B	16	0.80	A	9	0.72
2016 Background	B	17	0.82	B	10	0.75
2016 Background plus Site	B	18	0.83	B	11	0.76
2020 Background	C	23	0.87	B	14	0.81
2020 Background plus Site	C	24	0.88	B	15	0.82
Highway 213 at Glen Oak Road						
2014 Existing Conditions	C	27	0.84	B	17	0.75
2016 Background	C	31	0.89	B	19	0.78
2016 Background plus Site	C	33	0.90	B	19	0.78
2020 Background	C	30	0.87	C	22	0.81
2020 Background plus Site	C	30	0.87	C	22	0.81
Highway 213 at Meyers Road						
2014 Existing Conditions	C	21	0.82	B	17	0.61
2016 Background	C	22	0.85	B	17	0.63
2016 Background plus Site	C	22	0.85	B	17	0.63
2020 Background	C	32	0.98	C	21	0.66
2020 Background plus Site	C	33	0.98	C	21	0.67
Highway 213 at Molalla Avenue						
2014 Existing Conditions	C	23	0.65	C	29	0.67
2016 Background	C	25	0.65	C	31	0.70
2016 Background plus Site	C	25	0.65	C	31	0.71
2020 Background	C	30	0.67	D	40	0.76
2020 Background plus Site	C	30	0.67	D	40	0.76

LOS = Level of Service
Delay = Average Delay per Vehicle in Seconds
V/C = Volume-to-Capacity ratio

Based on the detailed operational analysis, the study area intersections are currently operating acceptably and are projected to continue operating acceptably upon completion of the proposed transportation maintenance facility. No operational mitigations are necessary or recommended.

PASSENGER CAR PARKING

Oregon City's development code does not contain parking requirements for any uses substantially similar to the proposed transportation maintenance facility. Accordingly, it is appropriate to evaluate the expected parking generation characteristics of the site based on other data sources.

A review of parking requirements for other jurisdictions in the greater Portland area revealed no parking provisions specific to this land use; however the City of Hillsboro did have parking requirements for a "Vehicle Storage Parking" land use, with minimum and maximum parking requirements based on the number of employees. This approach to parking generation appears suitable to assessing the parking needs of the bus drivers that will utilize on-site parking. Parking requirements for the office staff and maintenance workers/mechanics were determined based on the gross floor areas of the offices and service bay areas (using *business/office* and *storage warehouse/light industrial* parking code requirements, respectively).

The City of Hillsboro's minimum parking requirement for "Vehicle Storage Parking" is 0.5 spaces per employee, with a maximum of 1.0 spaces per employee. Since the proposed facility would have up to 81 bus drivers, this equates to a range of 41 to 81 parking spaces for bus drivers.

Based on the office floor area of 10,970 square feet, Oregon City requires a minimum of 30 parking spaces and a maximum of 37 parking spaces. Based on the maintenance floor area of 19,981 square feet, the city requires a minimum of 26 parking spaces and a maximum of 32 parking spaces.

Considering the three uses and the fact that peak demands from each of these uses occur at the same time, the proposed facilities were calculated to require a minimum total of 97 parking spaces, and the maximum allowable parking was calculated to be 150 spaces. The proposed development includes 138 parking spaces, which meets the minimum and maximum parking requirements for the proposed transportation maintenance facility.

In addition to examination of the parking requirements for the proposed facilities, the overall parking requirements for the high school campus were considered. The campus parking demands are comprised of parking demands associated with the high school, the sports fields and facilities, and the proposed transportation maintenance facility. Based on data from *PARKING GENERATION, 4TH EDITION*, published by the Institute of Transportation Engineers, the peak parking demands for high schools occur between 2:00 and 3:00 PM. The peak parking demands for sports fields is not well documented; however peak parking demands have been noted as occurring between 3:00 and 4:00 PM. Peak parking demands for the transportation facilities are expected to occur during times when buses are most active, which times align closely with the peak parking demands of the high school and sports fields. Based on the data, the peak parking demands of the three major uses within the site are expected to substantially overlap. Accordingly, the cumulative parking demands of these uses were considered in order to determine a recommended minimum and maximum parking level for the site. This approach is also in keeping with city code, which requires that "In the event that several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements of the several uses computed separately."

For the high school facilities, Oregon City requires a minimum of 0.2 parking spaces and a maximum of 0.3 parking spaces per person for the total number of students and staff. The Oregon City

High School campus currently serves 2,500 students and 250 staff, for a total of 2,750 people. Based on this population, the minimum parking required is 550 spaces, and the maximum allowable parking is 825 spaces.

Oregon City also does not have specific parking requirements for sports fields; however there is data available in the ITE *PARKING GENERATION* manual for sports-related fields. Based on the data, a parking demand range of 13.3 to 70.8 vehicles per field was observed. The 85th percentile demand observed was 60.5 vehicles per field. Accordingly a minimum parking level of 13.3 parking spaces per field and a maximum of 60.5 parking spaces per field is recommended.

For the sports fields within the campus, it is expected that not all sports fields will be active during any one season. However, it is reasonable to expect that half of the fields may be active at the same time during portions of the school year. Accordingly, the parking demand for these facilities was calculated based on a total of five active fields. The minimum required parking was calculated to be 67 spaces and the maximum allowable parking was calculated to be 303 spaces.

Based on the cumulative uses within the campus, the minimum parking recommended was calculated to be 714 spaces, and the maximum parking recommended was calculated to be 1,278 spaces. The proposed development includes 1,176 parking spaces at completion of Phase 1, and 1,121 parking spaces for Phases 2-4. The proposed parking levels fall within the recommended allowable range for the campus as a whole.

Based on the detailed automobile parking analysis, the 138 proposed parking spaces within the transportation maintenance facility site is within the recommended acceptable range of 97 to 150 spaces for this facility as considered alone. The proposed parking supply within the entire campus also falls within the recommended range of 714 to 1,278 parking spaces.

BICYCLE PARKING

Oregon City's development code includes requirements for bicycle parking; however there are no land uses matching the description of the proposed transportation maintenance facility. Accordingly, it is appropriate to make a determination regarding the required bicycle parking for this land use.

A large portion of the subject property is used for school district vehicle storage and maintenance. These vehicles are not used for commuting, and bicycles cannot reasonably be substituted for buses for transporting children, nor can bicycles substitute for maintenance vehicles. Accordingly, it is recommended that no bicycle parking be required based on the parking spaces provided for bus and equipment parking, storage and maintenance within the site.

It is recommended that the parking spaces provided for employee vehicles be treated as equivalent to parking for other employment-related land uses. Using the standard of 1 bicycle parking space per 20 motorized vehicle spaces that is applicable for office land uses appears to be appropriate for the context of this development. Based on the 150 employee parking spaces provided within the site, no fewer than eight bicycle parking spaces should be provided, with at least four covered spaces.

CONCLUSIONS

Based on the detailed review of crash history at the study area intersections, no significant safety hazards were identified and no specific mitigations are recommended.

The study intersections have appropriate left-turn lanes in place. No new left-turn lanes are recommended in conjunction with the proposed development.

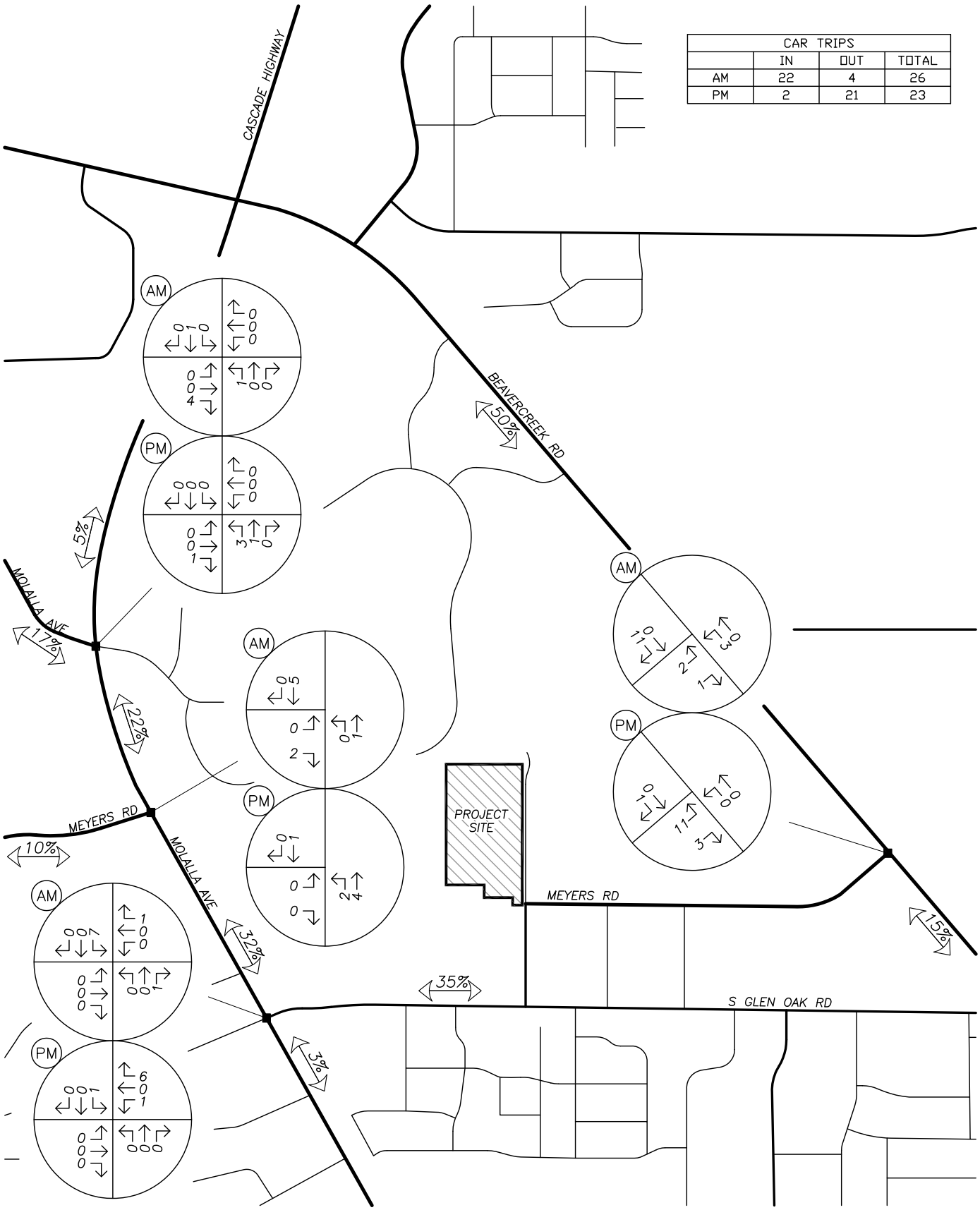
The proposed site access driveways on Meyers Road and High School Avenue should be designed to provide sufficient intersection sight distance for safe operation of the future intersections. There are no significant vertical obstructions to sight distance, and existing vegetation within the site will be cleared as needed to provide safe sight lines.

Based on the operational analysis, the study area intersections currently operate acceptably and are projected to continue operating acceptably under year 2016 and year 2020 traffic conditions either with or without the addition of site trips from the proposed transportation maintenance facility. No operational mitigations are necessary or recommended in conjunction with the proposed development.

Based on the detailed automobile parking analysis, the 138 proposed parking spaces within the transportation maintenance facility site is within the recommended acceptable range of 97 to 150 spaces for this facility as considered alone. The proposed parking supply within the entire campus also falls within the recommended range of 714 to 1,278 parking spaces.

Oregon City does not have explicit requirements for bicycle parking for public school transportation and maintenance facilities. Accordingly, it is recommended that the minimum bicycle parking standard be established based on the number of parking spaces provided for employees and the typical requirement for at least one bicycle parking space per 20 motorized vehicle spaces. Using this approach, a minimum of eight bicycle parking spaces should be provided within the subject property, with at least four spaces covered.

APPENDIX

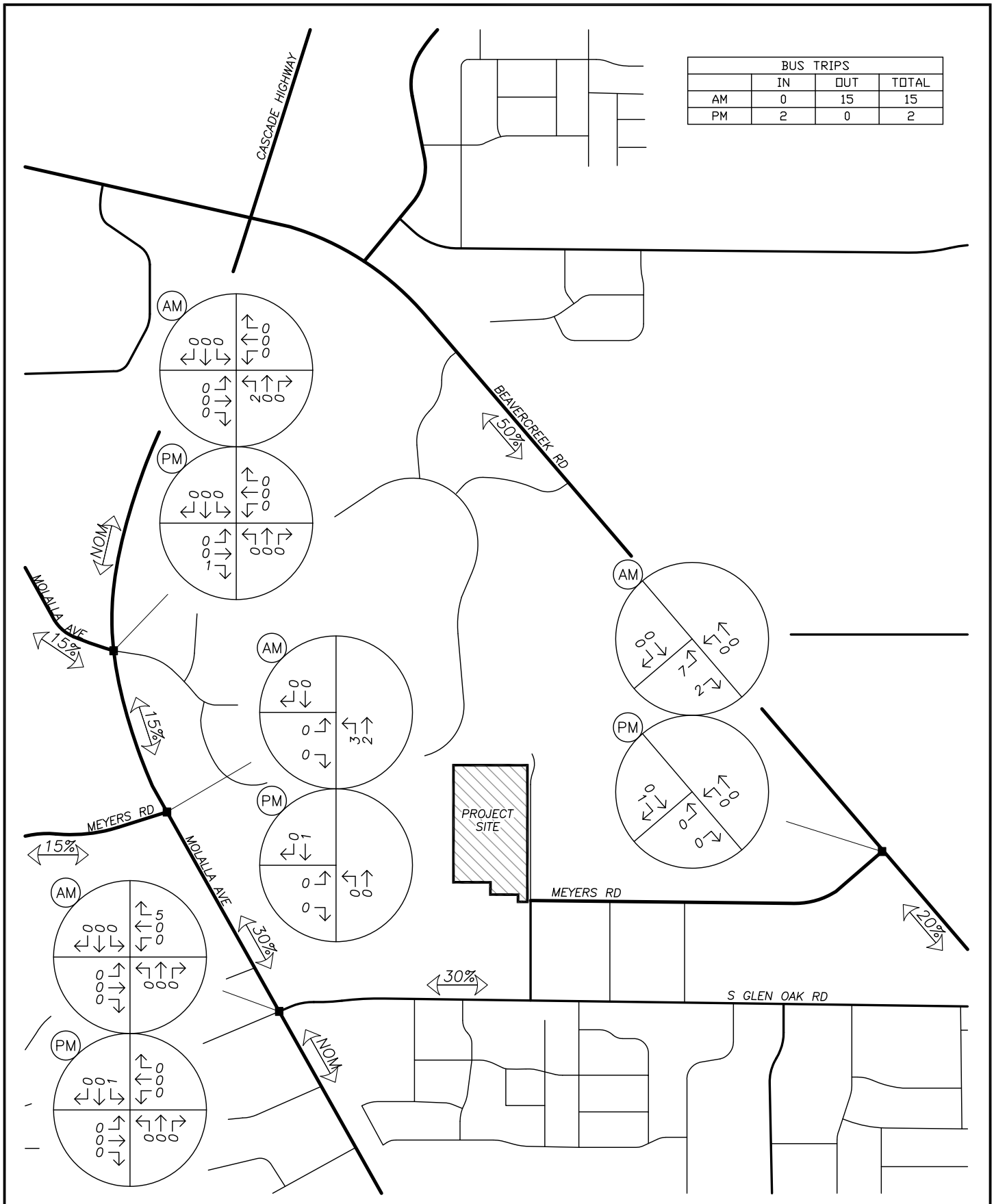


SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Passenger Car Trips
AM & PM Peak Hours

no scale

FIGURE 8

PAGE APP1

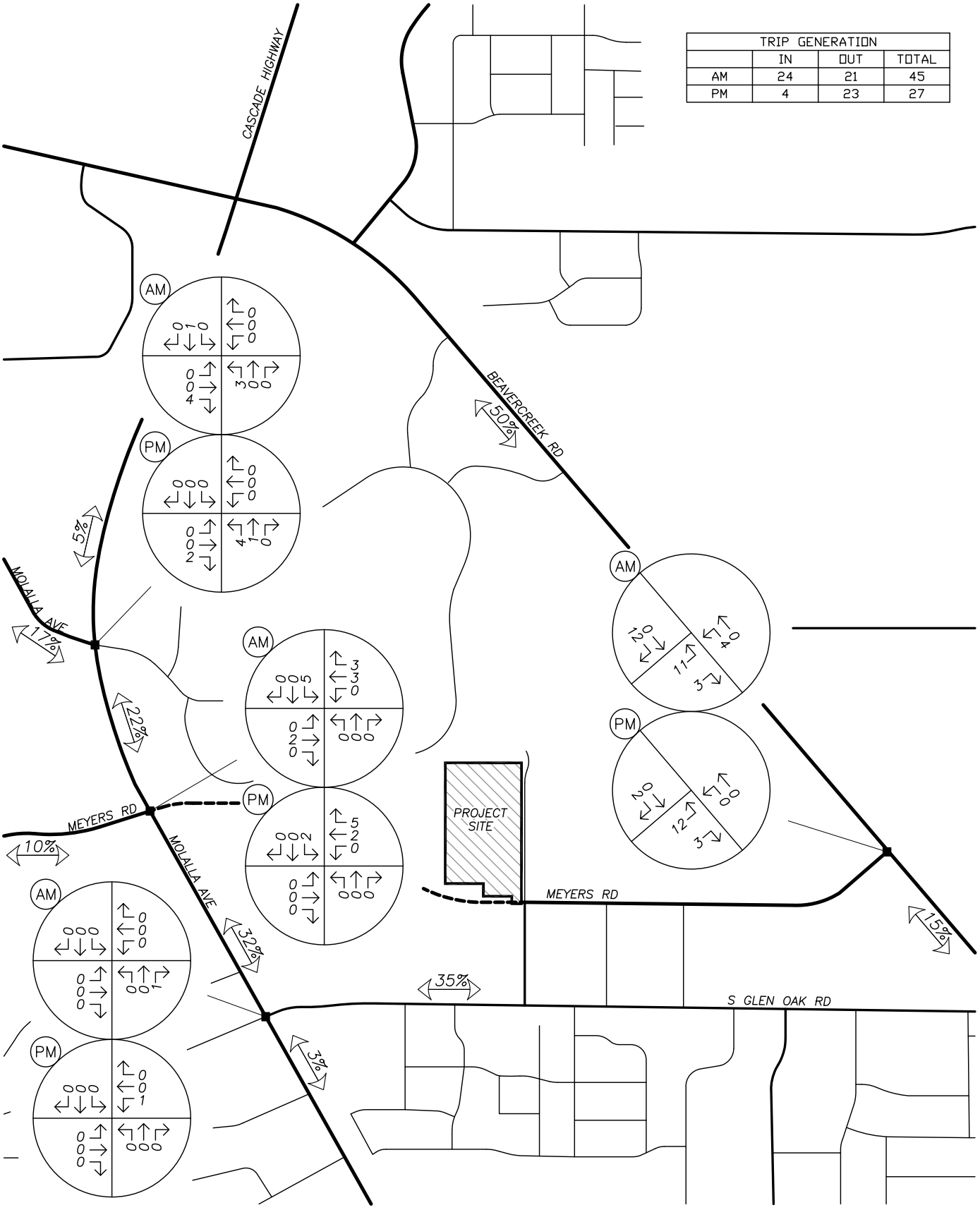


SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Bus Trips
AM & PM Peak Hours

no scale

FIGURE 9

PAGE APP2



SITE TRIP DISTRIBUTION & ASSIGNMENT
Twenty Year Outlook – Total Site Trips
AM & PM Peak Hours

no scale

FIGURE 10

PAGE APP3

LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS

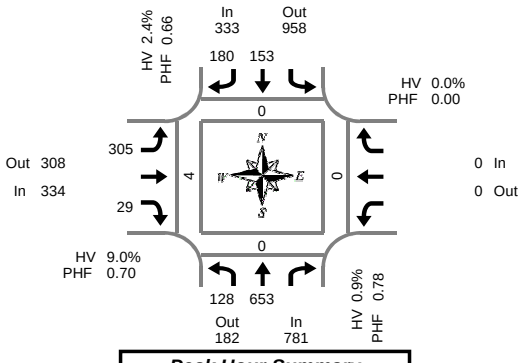
LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:00 AM to 8:00 AM

Beavercreek Rd & Meyers Rd

Thursday, October 23, 2014
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd			Westbound Meyers Rd			Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes	L		R	Bikes			Bikes		North	South	East	West
7:00 AM	5	45		0	10	4	0	17		2	0			0	83	0	0	0	0
7:05 AM	8	59		0	7	8	0	16		2	0			0	100	0	0	0	0
7:10 AM	9	44		0	7	10	0	33		1	0			0	104	0	0	0	1
7:15 AM	5	49		0	12	18	0	25		3	0			0	112	0	0	0	1
7:20 AM	17	73		0	6	17	0	29		1	0			0	143	0	0	0	0
7:25 AM	19	45		0	12	36	0	27		3	0			0	142	0	0	0	0
7:30 AM	37	60		0	14	27	0	34		3	0			0	175	0	0	0	1
7:35 AM	22	61		0	15	23	0	34		7	0			0	162	0	0	0	1
7:40 AM	4	45		0	23	21	0	36		5	0			0	134	0	0	0	0
7:45 AM	2	51		0	17	8	0	29		0	0			0	107	0	0	0	0
7:50 AM	0	70		0	16	3	0	17		0	0			0	106	0	0	0	0
7:55 AM	0	51		0	14	5	0	8		2	0			0	80	0	0	0	0
8:00 AM	0	45		0	9	3	0	16		0	0			0	73	0	0	0	0
8:05 AM	2	42		0	13	2	0	1		0	0			0	60	0	0	0	0
8:10 AM	1	34		0	10	2	0	4		0	0			0	51	0	0	0	0
8:15 AM	1	39		0	14	2	0	8		1	1			0	65	0	0	0	0
8:20 AM	0	40		0	14	2	0	5		1	0			0	62	0	0	0	0
8:25 AM	0	30		0	13	2	0	3		1	0			0	49	0	0	0	0
8:30 AM	2	38		0	13	1	0	6		1	0			0	61	0	0	0	0
8:35 AM	4	40		0	12	0	0	6		0	0			0	62	0	0	0	0
8:40 AM	2	39		0	10	3	0	6		1	0			0	61	0	0	0	0
8:45 AM	1	55		0	13	7	0	10		0	0			0	86	0	0	0	0
8:50 AM	4	38		0	18	6	0	9		3	0			0	78	0	0	0	0
8:55 AM	1	31		0	23	5	0	13		0	0			0	73	0	0	0	0
Total Survey	146	1,124		0	315	215	0	392		37	1			0	2,229	0	0	0	4

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd			Westbound Meyers Rd			Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes	L		R	Bikes			Bikes		North	South	East	West
7:00 AM	22	148		0	24	22	0	66		5	0			0	287	0	0	0	1
7:15 AM	41	167		0	30	71	0	81		7	0			0	397	0	0	0	1
7:30 AM	63	166		0	52	71	0	104		15	0			0	471	0	0	0	2
7:45 AM	2	172		0	47	16	0	54		2	0			0	293	0	0	0	0
8:00 AM	3	121		0	32	7	0	21		0	0			0	184	0	0	0	0
8:15 AM	1	109		0	41	6	0	16		3	1			0	176	0	0	0	0
8:30 AM	8	117		0	35	4	0	18		2	0			0	184	0	0	0	0
8:45 AM	6	124		0	54	18	0	32		3	0			0	237	0	0	0	0
Total Survey	146	1,124		0	315	215	0	392		37	1			0	2,229	0	0	0	4

Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	781	182	963	0	333	958	1,291	0	334	308	642	0	0	0	0	0	1,448	0	0	0	4
%HV	0.9%				2.4%				9.0%				0.0%				3.1%				
PHF	0.78				0.66				0.70				0.00				0.76				

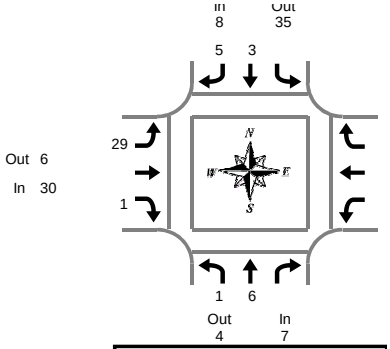
By Movement	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total	T	R	Total	L		R	Total				Total	
Volume	128	653		781	153	180	333	305		29	334				0	1,448
%HV	0.8%	0.9%	NA	0.9%	2.0%	2.8%	2.4%	9.5%	NA	3.4%	9.0%	NA	NA	NA	0.0%	3.1%
PHF	0.41	0.92		0.78	0.68	0.52	0.66	0.73		0.48	0.70				0.00	0.76

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd			Westbound Meyers Rd			Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes	L		R	Bikes			Bikes		North	South	East	West
7:00 AM	128	653		0	153	180	0	305		29	0			0	1,448	0	0	0	4
7:15 AM	109	626		0	161	165	0	260		24	0			0	1,345	0	0	0	3
7:30 AM	69	568		0	172	100	0	195		20	1			0	1,124	0	0	0	2
7:45 AM	14	519		0	155	33	0	109		7	1			0	837	0	0	0	0
8:00 AM	18	471		0	162	35	0	87		8	1			0	781	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Beavercreek Rd & Meyers Rd

Thursday, October 23, 2014
7:00 AM to 9:00 AM

Peak Hour Summary
7:00 AM to 8:00 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd			Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total	L		R	Total			Total	
7:00 AM	0	0		0	1	0	1	4		1	5			0	6
7:05 AM	1	1		2	0	1	1	6		0	6			0	9
7:10 AM	0	0		0	1	0	1	9		0	9			0	10
7:15 AM	0	0		0	0	0	0	4		0	4			0	4
7:20 AM	0	0		0	0	0	0	1		0	1			0	1
7:25 AM	0	0		0	0	2	2	0		0	0			0	2
7:30 AM	0	0		0	0	0	0	2		0	2			0	2
7:35 AM	0	1		1	0	2	2	2		0	2			0	5
7:40 AM	0	1		1	0	0	0	0		0	0			0	1
7:45 AM	0	0		0	0	0	0	0		0	0			0	0
7:50 AM	0	1		1	1	0	1	1		0	1			0	3
7:55 AM	0	2		2	0	0	0	0		0	0			0	2
8:00 AM	0	0		0	0	1	1	1		0	1			0	2
8:05 AM	0	1		1	2	0	2	0		0	0			0	3
8:10 AM	0	0		0	2	0	2	0		0	0			0	2
8:15 AM	0	0		0	0	0	0	1		0	1			0	1
8:20 AM	0	2		2	0	0	0	1		0	1			0	3
8:25 AM	0	1		1	2	1	3	0		0	0			0	4
8:30 AM	0	0		0	0	0	0	0		0	0			0	0
8:35 AM	0	1		1	1	0	1	0		0	0			0	2
8:40 AM	0	1		1	0	0	0	0		0	0			0	1
8:45 AM	0	3		3	1	0	1	0		0	0			0	4
8:50 AM	0	0		0	2	1	3	0		0	0			0	3
8:55 AM	0	0		0	0	0	0	0		0	0			0	0
Total Survey	1	15		16	13	8	21	32		1	33			0	70

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd			Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total	L		R	Total			Total	
7:00 AM	1	1		2	2	1	3	19		1	20			0	25
7:15 AM	0	0		0	0	2	2	5		0	5			0	7
7:30 AM	0	2		2	0	2	2	4		0	4			0	8
7:45 AM	0	3		3	1	0	1	1		0	1			0	5
8:00 AM	0	1		1	4	1	5	1		0	1			0	7
8:15 AM	0	3		3	2	1	3	2		0	2			0	8
8:30 AM	0	2		2	1	0	1	0		0	0			0	3
8:45 AM	0	3		3	3	1	4	0		0	0			0	7
Total Survey	1	15		16	13	8	21	32		1	33			0	70

Heavy Vehicle Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Beavercreek Rd			Southbound Beavercreek Rd			Eastbound Meyers Rd			Westbound Meyers Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	7	4	11	8	35	43	30	6	36	0	0	0	45
PHF	0.58			0.50			0.38			0.00			0.45

By Movement	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total	T	R	Total	L		R	Total				Total	
Volume	1	6		7	3	5	8	29		1	30				0	45
PHF	0.25	0.50		0.58	0.38	0.31	0.50	0.38		0.25	0.38				0.00	0.45

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

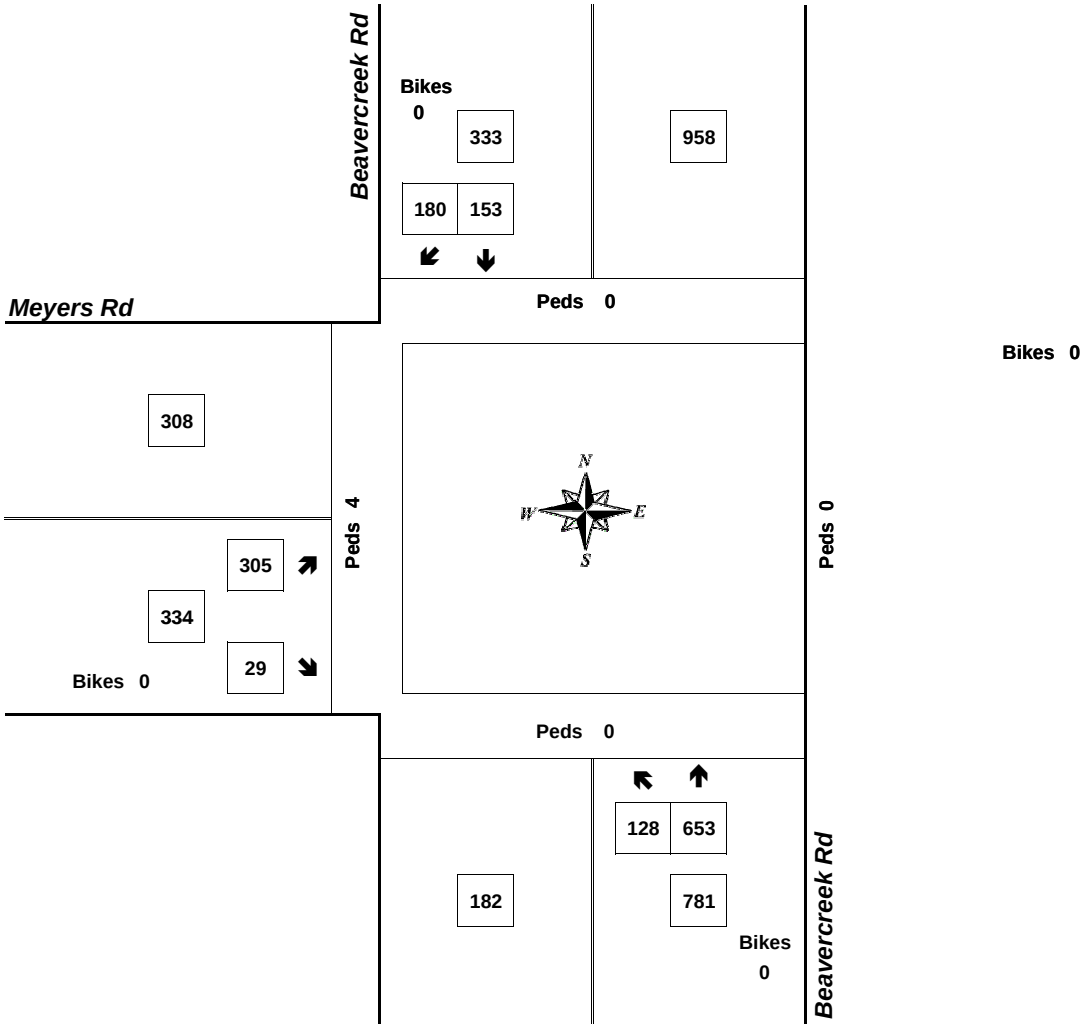
Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd			Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total	L		R	Total				Total	
7:00 AM	1	6		7	3	5	8	29		1	30				0	45
7:15 AM	0	6		6	5	5	10	11		0	11				0	27
7:30 AM	0	9		9	7	4	11	8		0	8				0	28
7:45 AM	0	9		9	8	2	10	4		0	4				0	23
8:00 AM	0	9		9	10	3	13	3		0	3				0	25

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Beavercreek Rd & Meyers Rd

7:00 AM to 8:00 AM
Thursday, October 23, 2014

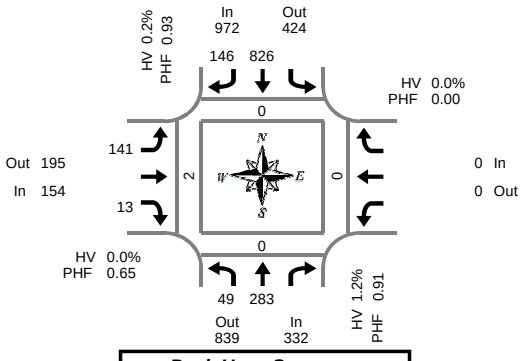


Approach	PHF	HV%	Volume
EB	0.70	9.0%	334
WB	0.00	0.0%	0
NB	0.78	0.9%	781
SB	0.66	2.4%	333
Intersection	0.76	3.1%	1,448

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Beavercreek Rd & Meyers Rd

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

Peak Hour Summary
4:55 PM to 5:55 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes		L		R	Bikes				Bikes		North	South	East	West
4:00 PM	1	29		0	45	8	0		7		1	0				0	91	0	0	0	1
4:05 PM	3	30		0	44	5	0		7		1	0				0	90	0	0	0	0
4:10 PM	0	19		0	53	9	0		5		2	0				0	88	0	0	0	0
4:15 PM	0	28		0	50	8	0		10		1	0				0	97	0	0	0	0
4:20 PM	0	30		0	50	4	0		12		0	0				0	96	0	0	0	0
4:25 PM	0	21		0	52	8	0		7		1	0				0	89	0	0	0	0
4:30 PM	1	21		0	46	13	0		8		0	0				0	89	0	0	0	0
4:35 PM	2	27		0	54	8	0		5		2	0				0	98	0	0	0	0
4:40 PM	1	26		0	39	7	0		3		0	0				0	76	0	0	0	0
4:45 PM	4	21		1	59	9	0		6		0	0				0	99	0	0	0	0
4:50 PM	1	14		0	64	13	0		6		0	0				0	98	0	0	0	0
4:55 PM	4	20		0	57	12	0		9		3	0				0	105	0	0	0	0
5:00 PM	3	26		0	63	13	0		10		2	0				0	117	0	0	0	1
5:05 PM	6	16		0	61	14	0		6		0	0				0	103	0	0	0	0
5:10 PM	5	24		0	90	12	0		7		1	0				0	139	0	0	0	0
5:15 PM	3	25		0	70	15	0		5		0	0				0	118	0	0	0	0
5:20 PM	4	20		0	66	9	0		9		0	0				0	108	0	0	0	0
5:25 PM	8	25		0	73	19	0		8		0	0				0	133	0	0	0	0
5:30 PM	4	27		0	70	12	0		11		0	0				0	124	0	0	0	0
5:35 PM	2	19		0	74	9	0		22		4	0				0	130	0	0	0	0
5:40 PM	6	28		0	60	12	0		12		2	0				0	120	0	0	0	0
5:45 PM	2	20		0	61	14	0		19		0	0				0	116	0	0	0	1
5:50 PM	2	33		0	81	5	0		23		1	0				0	145	0	0	0	0
5:55 PM	1	22		0	57	9	0		7		4	0				0	100	0	0	0	0
Total Survey	63	571		1	1,439	247	0		224		25	0				0	2,569	0	0	0	3

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes		L		R	Bikes				Bikes		North	South	East	West
4:00 PM	4	78		0	142	22	0		19		4	0				0	269	0	0	0	1
4:15 PM	0	79		0	152	20	0		29		2	0				0	282	0	0	0	0
4:30 PM	4	74		0	139	28	0		16		2	0				0	263	0	0	0	0
4:45 PM	9	55		1	180	34	0		21		3	0				0	302	0	0	0	0
5:00 PM	14	66		0	214	39	0		23		3	0				0	359	0	0	0	1
5:15 PM	15	70		0	209	43	0		22		0	0				0	359	0	0	0	0
5:30 PM	12	74		0	204	33	0		45		6	0				0	374	0	0	0	0
5:45 PM	5	75		0	199	28	0		49		5	0				0	361	0	0	0	1
Total Survey	63	571		1	1,439	247	0		224		25	0				0	2,569	0	0	0	3

Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	332	839	1,171	0	972	424	1,396	0	154	195	349	0	0	0	0	0	1,458	0	0	0	2
%HV	1.2%				0.2%				0.0%				0.0%				0.4%				
PHF	0.91				0.93				0.65				0.00				0.94				

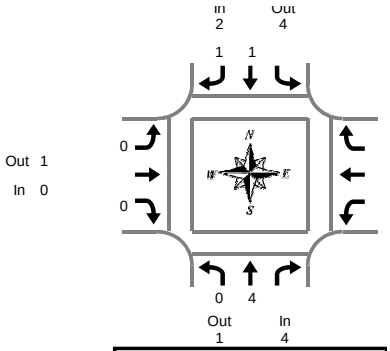
By Movement	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	49	283		332	826	146	972		141		13	154				0	1,458
%HV	0.0%	1.4%	NA	1.2%	0.1%	0.7%	0.2%		0.0%	NA	0.0%	0.0%	NA	NA	NA	0.0%	0.4%
PHF	0.77	0.87		0.91	0.91	0.85	0.93		0.65		0.54	0.65				0.00	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes		L		R	Bikes				Bikes		North	South	East	West
4:00 PM	17	286		1	613	104	0		85		11	0				0	1,116	0	0	0	1
4:15 PM	27	274		1	685	121	0		89		10	0				0	1,206	0	0	0	1
4:30 PM	42	265		1	742	144	0		82		8	0				0	1,283	0	0	0	1
4:45 PM	50	265		1	807	149	0		111		12	0				0	1,394	0	0	0	1
5:00 PM	46	285		0	826	143	0		139		14	0				0	1,453	0	0	0	2

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Beavercreek Rd & Meyers Rd

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

Peak Hour Summary
4:55 PM to 5:55 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	0	0		0	0	0	0		0		0	0				0	0
4:05 PM	0	2		2	1	0	1		0		0	0				0	3
4:10 PM	0	0		0	1	0	1		0		0	0				0	1
4:15 PM	0	2		2	1	0	1		0		0	0				0	3
4:20 PM	0	0		0	0	1	1		0		0	0				0	1
4:25 PM	0	0		0	0	0	0		1		0	1				0	1
4:30 PM	0	3		3	0	0	0		0		0	0				0	3
4:35 PM	0	0		0	1	0	1		0		0	0				0	1
4:40 PM	0	1		1	0	0	0		0		0	0				0	1
4:45 PM	0	0		0	0	0	0		0		0	0				0	0
4:50 PM	0	0		0	0	0	0		0		0	0				0	0
4:55 PM	0	0		0	0	0	0		0		0	0				0	0
5:00 PM	0	0		0	1	0	1		0		0	0				0	1
5:05 PM	0	0		0	0	1	1		0		0	0				0	1
5:10 PM	0	0		0	0	0	0		0		0	0				0	0
5:15 PM	0	0		0	0	0	0		0		0	0				0	0
5:20 PM	0	1		1	0	0	0		0		0	0				0	1
5:25 PM	0	0		0	0	0	0		0		0	0				0	0
5:30 PM	0	1		1	0	0	0		0		0	0				0	1
5:35 PM	0	0		0	0	0	0		0		0	0				0	0
5:40 PM	0	2		2	0	0	0		0		0	0				0	2
5:45 PM	0	0		0	0	0	0		0		0	0				0	0
5:50 PM	0	0		0	0	0	0		0		0	0				0	0
5:55 PM	0	0		0	0	0	0		0		0	0				0	0
Total Survey	0	12		12	5	2	7		1		0	1				0	20

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	0	2		2	2	0	2		0		0	0				0	4
4:15 PM	0	2		2	1	1	2		1		0	1				0	5
4:30 PM	0	4		4	1	0	1		0		0	0				0	5
4:45 PM	0	0		0	0	0	0		0		0	0				0	0
5:00 PM	0	0		0	1	1	2		0		0	0				0	2
5:15 PM	0	1		1	0	0	0		0		0	0				0	1
5:30 PM	0	3		3	0	0	0		0		0	0				0	3
5:45 PM	0	0		0	0	0	0		0		0	0				0	0
Total Survey	0	12		12	5	2	7		1		0	1				0	20

Heavy Vehicle Peak Hour Summary
4:55 PM to 5:55 PM

By Approach	Northbound Beavercreek Rd			Southbound Beavercreek Rd			Eastbound Meyers Rd			Westbound Meyers Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	4	1	5	2	4	6	0	1	1	0	0	0	6
PHF	0.33			0.25			0.00			0.00			0.50

By Movement	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	0	4		4	1	1	2		0		0	0				0	6
PHF	0.00	0.33		0.33	0.25	0.25	0.25		0.00		0.00	0.00				0.00	0.50

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

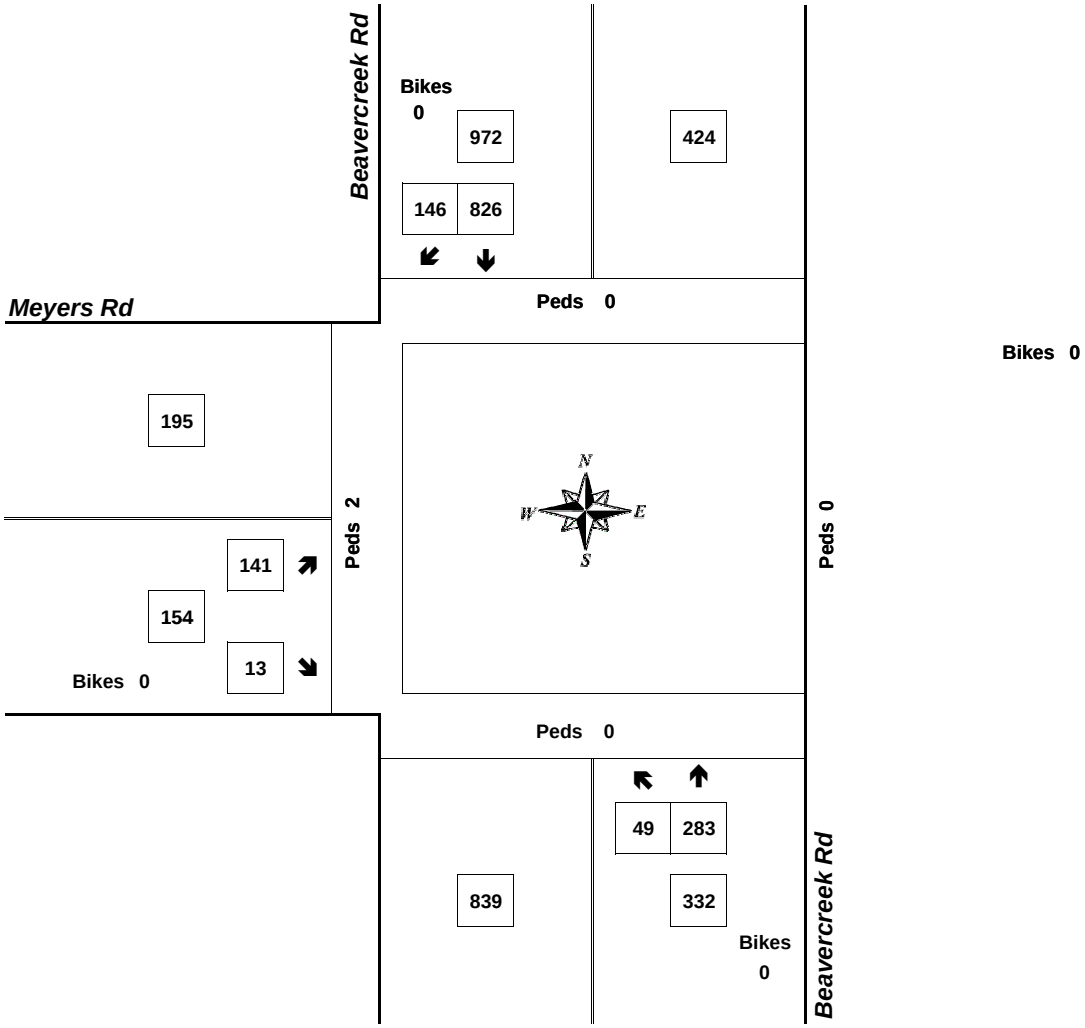
Interval Start Time	Northbound Beavercreek Rd				Southbound Beavercreek Rd				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	0	8		8	4	1	5		1		0	1				0	14
4:15 PM	0	6		6	3	2	5		1		0	1				0	12
4:30 PM	0	5		5	2	1	3		0		0	0				0	8
4:45 PM	0	4		4	1	1	2		0		0	0				0	6
5:00 PM	0	4		4	1	1	2		0		0	0				0	6

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Beavercreek Rd & Meyers Rd

4:55 PM to 5:55 PM
Wednesday, October 22, 2014

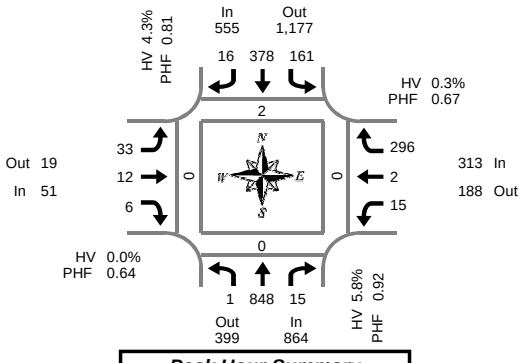


Approach	PHF	HV%	Volume
EB	0.65	0.0%	154
WB	0.00	0.0%	0
NB	0.91	1.2%	332
SB	0.93	0.2%	972
Intersection	0.94	0.4%	1,458

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:10 AM to 8:10 AM

Hwy 213 & Glen Oak Rd

Thursday, October 23, 2014
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	76	4	0	8	26	2	0	9	0	0	0	0	0	15	0	140	0	0	0	0
7:05 AM	0	81	1	0	12	23	1	0	3	2	0	0	1	0	22	0	146	0	0	0	0
7:10 AM	0	84	3	0	14	19	0	0	1	0	0	0	0	0	18	0	139	0	0	0	0
7:15 AM	0	67	2	0	22	37	1	0	3	0	0	0	2	0	21	0	155	0	0	0	0
7:20 AM	0	61	0	0	23	20	1	0	5	1	0	0	2	0	27	0	140	2	0	0	0
7:25 AM	0	65	5	0	31	31	3	0	4	5	0	0	0	0	30	0	174	0	0	0	0
7:30 AM	0	66	1	0	25	20	3	0	2	3	0	0	3	0	38	0	161	0	0	0	0
7:35 AM	0	66	0	0	20	36	2	0	0	2	0	0	3	0	39	0	168	0	0	0	0
7:40 AM	0	79	0	0	2	22	1	0	6	0	0	0	2	1	31	0	144	0	0	0	0
7:45 AM	0	60	0	0	7	35	2	0	4	0	1	0	1	1	26	0	137	0	0	0	0
7:50 AM	0	70	1	0	4	40	1	0	1	0	1	0	2	0	26	0	146	0	0	0	0
7:55 AM	0	75	1	0	2	36	0	0	0	1	1	0	0	0	9	0	125	0	0	0	0
8:00 AM	0	82	1	0	0	40	1	0	2	0	1	0	0	0	16	0	143	0	0	0	0
8:05 AM	1	73	1	0	11	42	1	0	5	0	2	0	0	0	15	0	151	0	0	0	0
8:10 AM	0	69	0	0	3	29	1	1	3	1	0	0	1	0	18	0	125	0	0	0	0
8:15 AM	0	54	1	0	6	43	2	0	3	0	0	0	0	0	10	0	119	0	0	0	0
8:20 AM	0	56	0	0	8	24	2	0	2	0	0	0	0	0	13	0	105	0	0	0	0
8:25 AM	0	56	0	0	9	32	0	0	2	0	1	0	0	0	20	0	120	0	0	0	0
8:30 AM	0	55	0	0	4	26	1	0	4	0	0	0	1	0	7	0	98	0	0	0	0
8:35 AM	0	66	1	0	1	33	0	0	3	0	0	0	0	0	10	0	114	0	0	0	0
8:40 AM	0	80	1	0	7	42	1	0	2	0	0	0	0	0	11	0	144	0	0	0	0
8:45 AM	0	62	0	0	11	43	0	0	3	0	0	0	1	0	9	0	129	0	0	0	0
8:50 AM	0	86	2	0	9	28	0	0	0	0	0	0	1	0	10	0	136	0	0	0	0
8:55 AM	0	54	1	0	8	39	0	0	1	0	0	0	1	0	11	0	115	0	0	0	0
Total Survey	1	1,643	26	0	247	766	26	1	68	15	7	0	21	2	452	0	3,274	2	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	241	8	0	34	68	3	0	13	2	0	0	1	0	55	0	425	0	0	0	0
7:15 AM	0	193	7	0	76	88	5	0	12	6	0	0	4	0	78	0	469	2	0	0	0
7:30 AM	0	211	1	0	47	78	6	0	8	5	0	0	8	1	108	0	473	0	0	0	0
7:45 AM	0	205	2	0	13	111	3	0	5	1	3	0	3	1	61	0	408	0	0	0	0
8:00 AM	1	224	2	0	14	111	3	1	10	1	3	0	1	0	49	0	419	0	0	0	0
8:15 AM	0	166	1	0	23	99	4	0	7	0	1	0	0	0	43	0	344	0	0	0	0
8:30 AM	0	201	2	0	12	101	2	0	9	0	0	0	1	0	28	0	356	0	0	0	0
8:45 AM	0	202	3	0	28	110	0	0	4	0	0	0	3	0	30	0	380	0	0	0	0
Total Survey	1	1,643	26	0	247	766	26	1	68	15	7	0	21	2	452	0	3,274	2	0	0	0

Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	864	399	1,263	0	555	1,177	1,732	0	51	19	70	0	313	188	501	0	1,783	2	0	0	0
%HV	5.8%				4.3%				0.0%				0.3%				4.2%				
PHF	0.92				0.81				0.64				0.67				0.89				

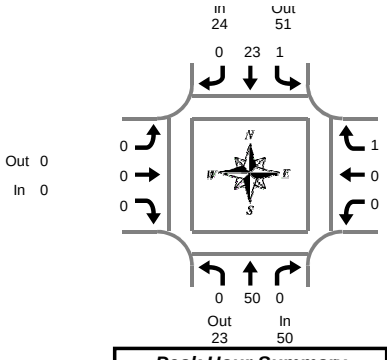
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	848	15	864	161	378	16	555	33	12	6	51	15	2	296	313	1,783
%HV	0.0%	5.9%	0.0%	5.8%	0.6%	6.1%	0.0%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%	4.2%
PHF	0.25	0.92	0.54	0.92	0.51	0.80	0.50	0.81	0.69	0.30	0.38	0.64	0.47	0.25	0.69	0.67	0.89

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	850	18	0	170	345	17	0	38	14	3	0	16	2	302	0	1,775	2	0	0	0
7:15 AM	1	833	12	0	150	388	17	1	35	13	6	0	16	2	296	0	1,769	2	0	0	0
7:30 AM	1	806	6	0	97	399	16	1	30	7	7	0	12	2	261	0	1,644	0	0	0	0
7:45 AM	1	796	7	0	62	422	12	1	31	2	7	0	5	1	181	0	1,527	0	0	0	0
8:00 AM	1	793	8	0	77	421	9	1	30	1	4	0	5	0	150	0	1,499	0	0	0	0

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Hwy 213 & Glen Oak Rd

Thursday, October 23, 2014
7:00 AM to 9:00 AM

Peak Hour Summary
7:10 AM to 8:10 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	3	0	3	0	4	1	5	0	0	0	0	0	0	0	0	8
7:05 AM	0	0	0	0	1	1	0	2	1	0	0	1	0	0	0	0	3
7:10 AM	0	8	0	8	0	3	0	3	0	0	0	0	0	0	0	0	11
7:15 AM	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0	8
7:20 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
7:25 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	4	0	4	1	1	0	2	0	0	0	0	0	0	0	0	6
7:35 AM	0	3	0	3	0	2	0	2	0	0	0	0	0	0	0	0	5
7:40 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	2	0	2	0	3	0	3	0	0	0	0	0	0	1	1	6
7:50 AM	0	8	0	8	0	4	0	4	0	0	0	0	0	0	0	0	12
7:55 AM	0	4	0	4	0	1	0	1	0	0	0	0	0	0	0	0	5
8:00 AM	0	7	0	7	0	3	0	3	0	0	0	0	0	0	0	0	10
8:05 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
8:10 AM	0	1	0	1	0	5	0	5	0	0	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	0	7
8:20 AM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1	1	6
8:25 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
8:30 AM	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0	6
8:35 AM	0	6	1	7	0	2	0	2	0	0	0	0	0	0	1	1	10
8:40 AM	0	4	0	4	0	3	0	3	0	0	0	0	0	0	0	0	7
8:45 AM	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0	6
8:50 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	4
8:55 AM	0	1	0	1	0	7	0	7	0	0	0	0	0	0	0	0	8
Total Survey	0	76	1	77	2	65	1	68	1	0	0	1	0	0	4	4	150

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	11	0	11	1	8	1	10	1	0	0	1	0	0	0	0	22
7:15 AM	0	10	0	10	0	4	0	4	0	0	0	0	0	0	0	0	14
7:30 AM	0	10	0	10	1	3	0	4	0	0	0	0	0	0	0	0	14
7:45 AM	0	14	0	14	0	8	0	8	0	0	0	0	0	0	1	1	23
8:00 AM	0	9	0	9	0	10	0	10	0	0	0	0	0	0	0	0	19
8:15 AM	0	7	0	7	0	9	0	9	0	0	0	0	0	0	1	1	17
8:30 AM	0	12	1	13	0	9	0	9	0	0	0	0	0	0	1	1	23
8:45 AM	0	3	0	3	0	14	0	14	0	0	0	0	0	0	1	1	18
Total Survey	0	76	1	77	2	65	1	68	1	0	0	1	0	0	4	4	150

Heavy Vehicle Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Glen Oak Rd			Westbound Glen Oak Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	50	23	73	24	51	75	0	0	0	1	1	2	75
PHF	0.66			0.75			0.00			0.25			0.69

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	50	0	50	1	23	0	24	0	0	0	0	0	0	1	1	75
PHF	0.00	0.66	0.00	0.66	0.25	0.72	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.69

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	45	0	45	2	23	1	26	1	0	0	1	0	0	1	1	73
7:15 AM	0	43	0	43	1	25	0	26	0	0	0	0	0	0	1	1	70
7:30 AM	0	40	0	40	1	30	0	31	0	0	0	0	0	0	2	2	73
7:45 AM	0	42	1	43	0	36	0	36	0	0	0	0	0	0	3	3	82
8:00 AM	0	31	1	32	0	42	0	42	0	0	0	0	0	0	3	3	77

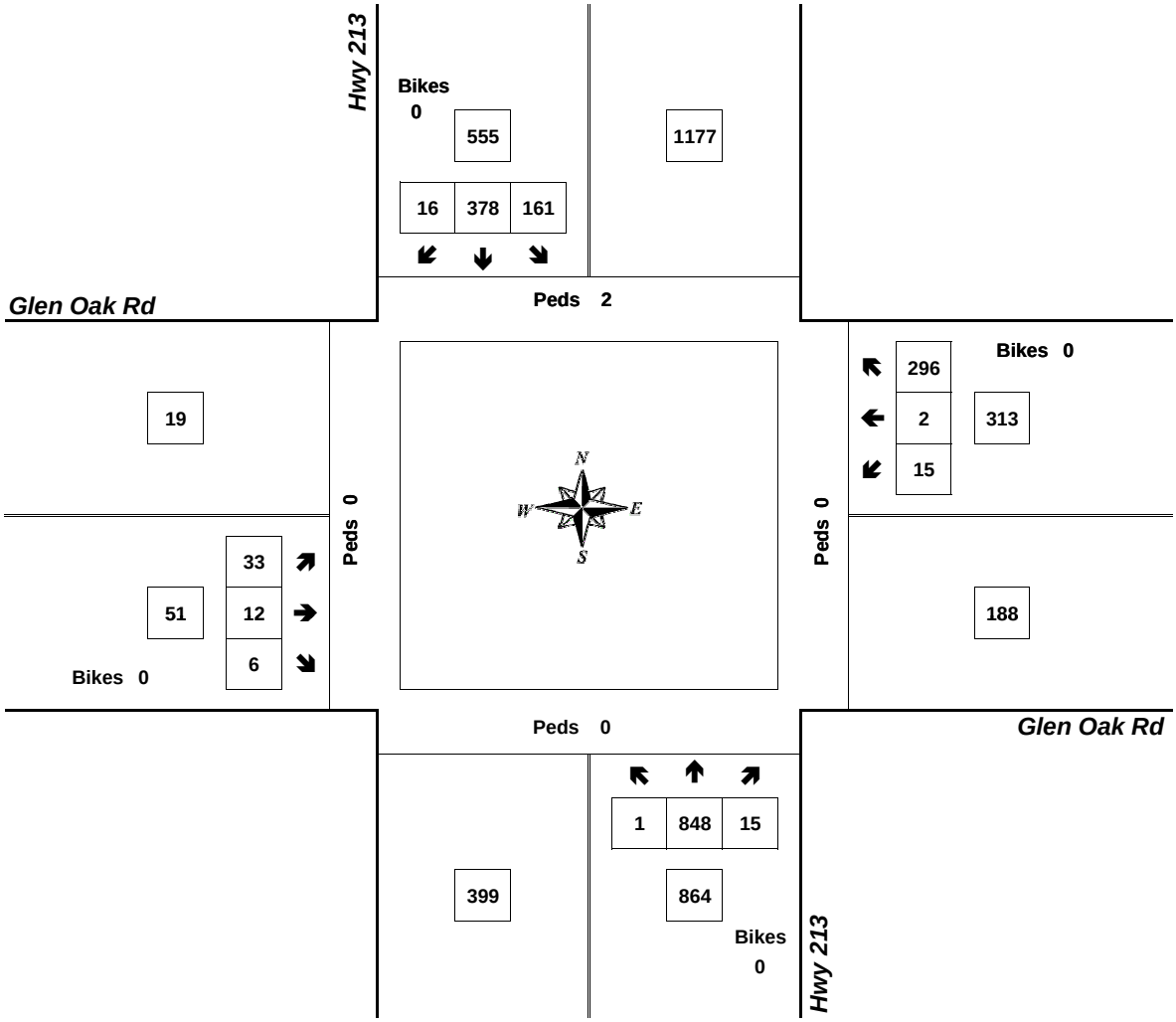
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 213 & Glen Oak Rd

7:10 AM to 8:10 AM
Thursday, October 23, 2014

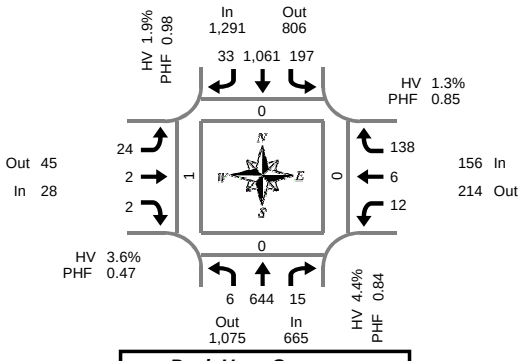


Approach	PHF	HV%	Volume
EB	0.64	0.0%	51
WB	0.67	0.3%	313
NB	0.92	5.8%	864
SB	0.81	4.3%	555
Intersection	0.89	4.2%	1,783

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:00 PM to 5:00 PM

Hwy 213 & Glen Oak Rd

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	61	0	0	15	95	2	0	2	0	0	0	0	2	9	0	186	0	0	0	0
4:05 PM	0	66	4	0	15	95	2	0	0	0	0	0	2	1	15	0	200	0	0	0	0
4:10 PM	0	64	0	0	16	87	1	0	2	0	0	0	1	0	14	0	185	0	0	0	0
4:15 PM	2	57	0	0	18	84	0	0	0	0	0	0	0	1	7	0	169	0	0	0	1
4:20 PM	0	73	3	0	19	99	6	0	1	0	0	0	0	0	9	0	210	0	0	0	0
4:25 PM	1	50	1	0	12	90	1	0	5	1	0	0	0	0	15	0	176	0	0	0	0
4:30 PM	0	42	0	0	18	79	3	0	6	0	1	0	1	0	6	0	156	0	0	0	0
4:35 PM	2	47	0	0	8	94	2	0	1	1	0	0	1	0	9	0	165	0	0	0	0
4:40 PM	1	40	3	0	23	81	3	0	1	0	1	0	2	1	14	0	170	0	0	0	0
4:45 PM	0	45	0	0	11	83	5	0	1	0	0	0	1	0	13	0	159	0	0	0	0
4:50 PM	0	49	2	0	15	94	4	0	3	0	0	0	2	0	8	0	177	0	0	0	0
4:55 PM	0	50	2	0	27	80	4	0	2	0	0	0	2	1	19	0	187	0	0	0	0
5:00 PM	0	45	1	0	19	75	4	0	5	0	1	0	1	1	10	0	162	0	0	0	0
5:05 PM	0	37	1	0	15	88	4	0	0	0	0	0	2	0	15	0	162	0	0	0	0
5:10 PM	0	49	0	0	18	91	1	0	1	0	0	0	0	1	12	0	173	0	0	0	0
5:15 PM	0	36	1	0	17	94	2	0	1	0	0	0	3	0	17	0	171	0	0	0	0
5:20 PM	0	46	5	0	16	96	3	0	0	0	0	0	2	0	21	0	189	0	0	0	0
5:25 PM	0	51	2	0	21	80	8	0	2	0	2	0	2	1	20	0	189	0	0	0	0
5:30 PM	1	36	2	0	26	81	7	0	1	0	1	0	1	0	13	0	169	0	0	0	0
5:35 PM	1	47	2	0	14	82	4	0	3	0	0	0	2	0	16	0	171	0	0	0	0
5:40 PM	0	51	2	0	25	93	3	0	1	0	0	0	2	0	17	0	194	0	0	0	0
5:45 PM	0	51	1	0	22	89	3	0	4	0	0	0	1	0	12	0	183	0	0	0	0
5:50 PM	0	45	4	0	18	76	3	0	2	0	0	0	1	0	17	0	166	0	0	0	0
5:55 PM	1	44	2	0	17	85	3	0	3	0	0	0	1	0	19	0	175	0	0	0	0
Total Survey	9	1,182	38	0	425	2,091	78	0	47	2	6	0	30	9	327	0	4,244	0	0	0	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	191	4	0	46	277	5	0	4	0	0	0	3	3	38	0	571	0	0	0	0
4:15 PM	3	180	4	0	49	273	7	0	6	1	0	0	0	1	31	0	555	0	0	0	1
4:30 PM	3	129	3	0	49	254	8	0	8	1	2	0	4	1	29	0	491	0	0	0	0
4:45 PM	0	144	4	0	53	257	13	0	6	0	0	0	5	1	40	0	523	0	0	0	0
5:00 PM	0	131	2	0	52	254	9	0	6	0	1	0	3	2	37	0	497	0	0	0	0
5:15 PM	0	133	8	0	54	270	13	0	3	0	2	0	7	1	58	0	549	0	0	0	0
5:30 PM	2	134	6	0	65	256	14	0	5	0	1	0	5	0	46	0	534	0	0	0	0
5:45 PM	1	140	7	0	57	250	9	0	9	0	0	0	3	0	48	0	524	0	0	0	0
Total Survey	9	1,182	38	0	425	2,091	78	0	47	2	6	0	30	9	327	0	4,244	0	0	0	1

Peak Hour Summary
4:00 PM to 5:00 PM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	665	1,075	1,740	0	1,291	806	2,097	0	28	45	73	0	156	214	370	0	2,140	0	0	0	1
%HV	4.4%				1.9%				3.6%				1.3%				2.7%				
PHF	0.84				0.98				0.47				0.85				0.94				

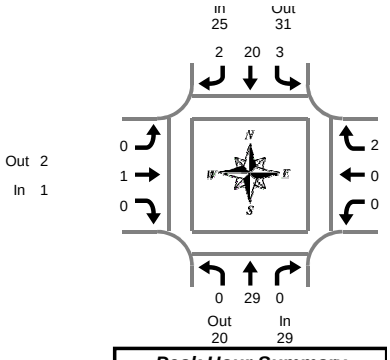
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	6	644	15	665	197	1,061	33	1,291	24	2	2	28	12	6	138	156	2,140
%HV	0.0%	4.5%	0.0%	4.4%	1.5%	1.9%	6.1%	1.9%	0.0%	50.0%	0.0%	3.6%	0.0%	0.0%	1.4%	1.3%	2.7%
PHF	0.50	0.83	0.75	0.84	0.93	0.96	0.63	0.98	0.50	0.25	0.25	0.47	0.60	0.50	0.86	0.85	0.94

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	6	644	15	0	197	1,061	33	0	24	2	2	0	12	6	138	0	2,140	0	0	0	1
4:15 PM	6	584	13	0	203	1,038	37	0	26	2	3	0	12	5	137	0	2,066	0	0	0	1
4:30 PM	3	537	17	0	208	1,035	43	0	23	1	5	0	19	5	164	0	2,060	0	0	0	0
4:45 PM	2	542	20	0	224	1,037	49	0	20	0	4	0	20	4	181	0	2,103	0	0	0	0
5:00 PM	3	538	23	0	228	1,030	45	0	23	0	4	0	18	3	189	0	2,104	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Glen Oak Rd

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

Peak Hour Summary
4:00 PM to 5:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	0	2	1	2	0	3	0	0	0	0	0	0	0	0	5
4:05 PM	0	4	0	4	0	0	1	1	0	0	0	0	0	0	0	0	5
4:10 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	5	0	5	1	0	0	1	0	0	0	0	0	0	1	1	7
4:20 PM	0	4	0	4	0	3	0	3	0	0	0	0	0	0	0	0	7
4:25 PM	0	3	0	3	0	1	0	1	0	1	0	1	0	0	1	1	6
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
4:40 PM	0	2	0	2	0	6	0	6	0	0	0	0	0	0	0	0	8
4:45 PM	0	4	0	4	1	4	0	5	0	0	0	0	0	0	0	0	9
4:50 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4:55 PM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
5:00 PM	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0	8
5:05 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:10 PM	0	3	0	3	1	4	0	5	0	0	0	0	0	0	1	1	9
5:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:20 PM	0	3	0	3	0	2	0	2	0	0	0	0	0	0	1	1	6
5:25 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	1	1	3
5:30 PM	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
5:35 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
5:40 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
5:45 PM	0	1	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
5:50 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	1	1	5
5:55 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
Total Survey	0	51	1	52	4	45	2	51	0	1	0	1	0	0	6	6	110

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	7	0	7	1	2	1	4	0	0	0	0	0	0	0	0	11
4:15 PM	0	12	0	12	1	4	0	5	0	1	0	1	0	0	2	2	20
4:30 PM	0	2	0	2	0	10	0	10	0	0	0	0	0	0	0	0	12
4:45 PM	0	8	0	8	1	4	1	6	0	0	0	0	0	0	0	0	14
5:00 PM	0	8	0	8	1	8	0	9	0	0	0	0	0	0	1	1	18
5:15 PM	0	6	0	6	0	3	0	3	0	0	0	0	0	0	2	2	11
5:30 PM	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0	11
5:45 PM	0	2	1	3	0	9	0	9	0	0	0	0	0	0	1	1	13
Total Survey	0	51	1	52	4	45	2	51	0	1	0	1	0	0	6	6	110

Heavy Vehicle Peak Hour Summary
4:00 PM to 5:00 PM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Glen Oak Rd			Westbound Glen Oak Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	29	20	49	25	31	56	1	2	3	2	4	6	57
PHF	0.60			0.42			0.25			0.25			0.68

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	29	0	29	3	20	2	25	0	1	0	1	0	0	2	2	57
PHF	0.00	0.60	0.00	0.60	0.75	0.36	0.50	0.42	0.00	0.25	0.00	0.25	0.00	0.00	0.25	0.25	0.68

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Glen Oak Rd				Westbound Glen Oak Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	29	0	29	3	20	2	25	0	1	0	1	0	0	2	2	57
4:15 PM	0	30	0	30	3	26	1	30	0	1	0	1	0	0	3	3	64
4:30 PM	0	24	0	24	2	25	1	28	0	0	0	0	0	0	3	3	55
4:45 PM	0	28	0	28	2	20	1	23	0	0	0	0	0	0	3	3	54
5:00 PM	0	22	1	23	1	25	0	26	0	0	0	0	0	0	4	4	53

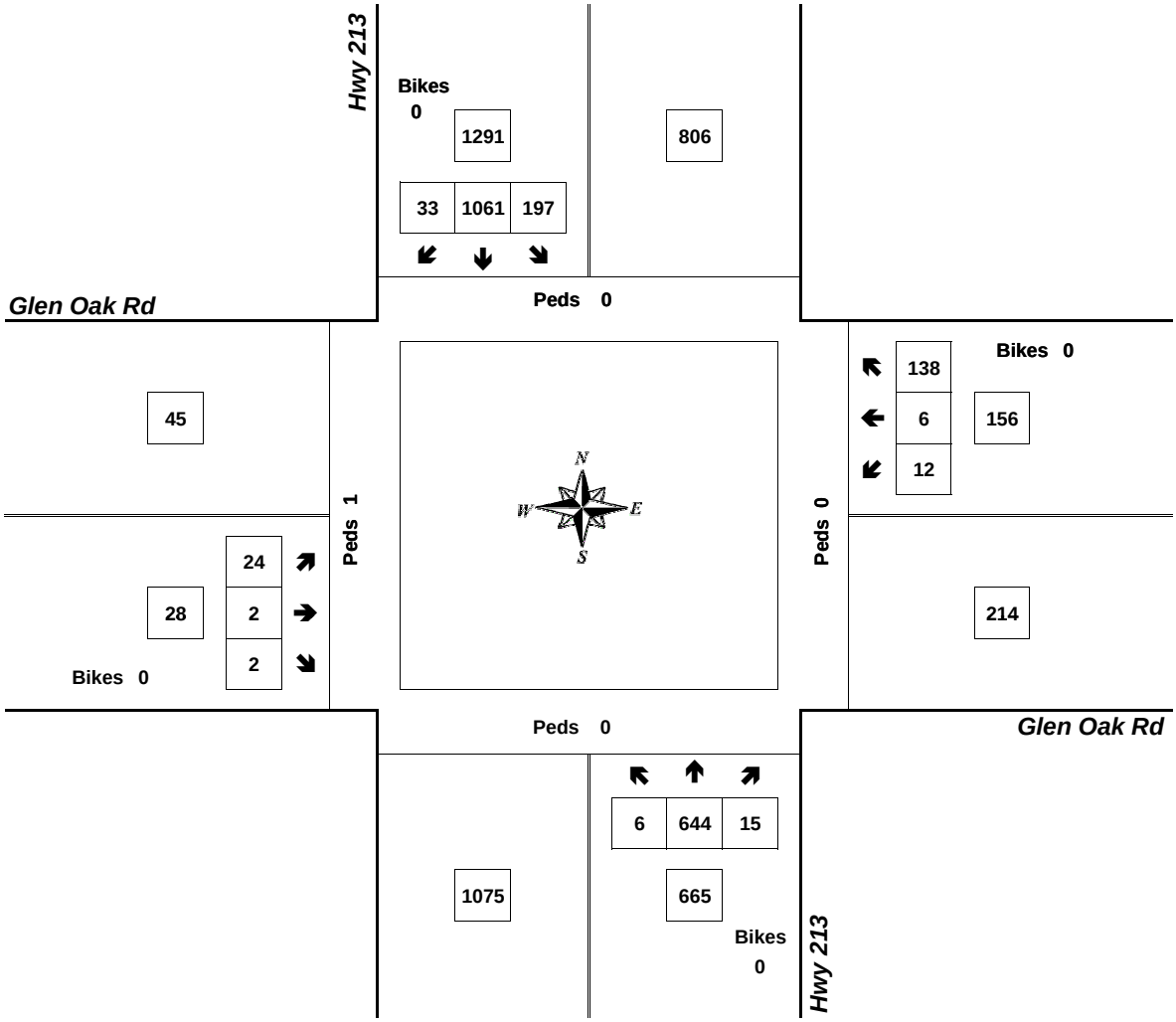
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 213 & Glen Oak Rd

4:00 PM to 5:00 PM
Wednesday, October 22, 2014

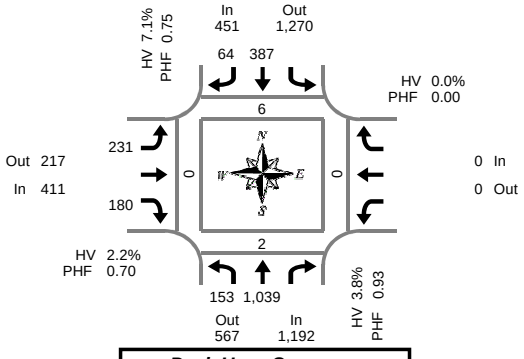


Approach	PHF	HV%	Volume
EB	0.47	3.6%	28
WB	0.85	1.3%	156
NB	0.84	4.4%	665
SB	0.98	1.9%	1,291
Intersection	0.94	2.7%	2,140

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:15 AM to 8:15 AM

Hwy 213 & Meyers Rd

Thursday, October 23, 2014
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	7	96		0	29	3		0	16		6	0				0	157	0	0	0	0
7:05 AM	10	93		0	18	1		0	20		16	0				0	158	0	0	0	0
7:10 AM	14	92		0	27	6		0	17		22	0				0	178	0	0	0	0
7:15 AM	3	86		0	27	3		0	21		25	0				0	165	0	0	0	0
7:20 AM	16	84		0	29	5		0	20		27	0				0	181	0	0	0	0
7:25 AM	10	86		0	27	3		0	15		36	0				0	177	1	1	0	0
7:30 AM	26	83		0	24	6		0	26		22	0				0	187	1	0	0	0
7:35 AM	13	92		0	29	4		0	21		12	0				0	171	0	1	0	0
7:40 AM	14	91		0	27	8		0	23		6	0				0	169	0	0	0	0
7:45 AM	8	83		0	31	5		0	25		9	0				0	161	0	0	0	0
7:50 AM	14	91		0	38	6		0	12		13	0				0	174	0	0	0	0
7:55 AM	4	78		0	24	5		0	20		12	0				0	143	1	0	0	0
8:00 AM	17	85		0	40	7		0	14		8	0				0	171	0	0	0	0
8:05 AM	8	84		0	50	8		1	17		6	0				0	173	3	0	0	0
8:10 AM	20	96		0	41	4		0	17		4	0				0	182	0	0	0	0
8:15 AM	3	60		0	30	5		0	15		5	0				0	118	1	0	0	0
8:20 AM	7	71		0	30	8		0	13		5	0				0	134	0	1	0	0
8:25 AM	11	70		0	32	6		0	19		4	0				0	142	0	0	0	0
8:30 AM	8	63		0	30	9		0	14		5	0				0	129	1	0	0	0
8:35 AM	1	80		0	35	2		0	14		6	0				0	138	0	0	0	0
8:40 AM	7	77		0	41	10		0	18		12	0				0	165	0	1	0	0
8:45 AM	9	69		0	34	2		0	18		9	0				0	141	1	3	0	0
8:50 AM	15	91		0	39	9		0	22		6	0				0	182	1	0	0	0
8:55 AM	12	55		0	24	5		0	16		11	0				0	123	0	0	0	0
Total Survey	257	1,956		0	756	130		1	433		287	0				0	3,819	10	7	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	31	281		0	74	10		0	53		44	0				0	493	0	0	0	0
7:15 AM	29	256		0	83	11		0	56		88	0				0	523	1	1	0	0
7:30 AM	53	266		0	80	18		0	70		40	0				0	527	1	1	0	0
7:45 AM	26	252		0	93	16		0	57		34	0				0	478	1	0	0	0
8:00 AM	45	265		0	131	19		1	48		18	0				0	526	3	0	0	0
8:15 AM	21	201		0	92	19		0	47		14	0				0	394	1	1	0	0
8:30 AM	16	220		0	106	21		0	46		23	0				0	432	1	1	0	0
8:45 AM	36	215		0	97	16		0	56		26	0				0	446	2	3	0	0
Total Survey	257	1,956		0	756	130		1	433		287	0				0	3,819	10	7	0	0

Peak Hour Summary
7:15 AM to 8:15 AM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1,192	567	1,759	0	451	1,270	1,721	1	411	217	628	0	0	0	0	0	2,054	6	2	0	0
%HV	3.8%				7.1%				2.2%				0.0%				4.2%				
PHF	0.93				0.75				0.70				0.00				0.94				

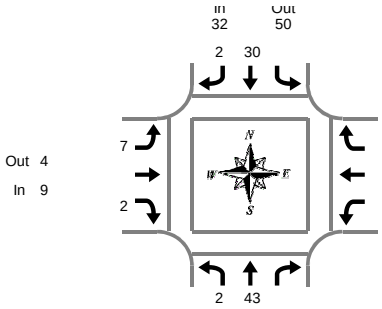
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	153	1,039		1,192	387	64	451		231		180	411				0	2,054
%HV	1.3%	4.1%	NA	3.8%	7.8%	3.1%	7.1%	NA	3.0%	NA	1.1%	2.2%	NA	NA	NA	0.0%	4.2%
PHF	0.72	0.98		0.93	0.74	0.80	0.75		0.83		0.51	0.70				0.00	0.94

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	139	1,055		0	330	55		0	236		206	0				0	2,021	3	2	0	0
7:15 AM	153	1,039		0	387	64		1	231		180	0				0	2,054	6	2	0	0
7:30 AM	145	984		0	396	72		1	222		106	0				0	1,925	6	2	0	0
7:45 AM	108	938		0	422	75		1	198		89	0				0	1,830	6	2	0	0
8:00 AM	118	901		0	426	75		1	197		81	0				0	1,798	7	5	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Meyers Rd

Thursday, October 23, 2014
7:00 AM to 9:00 AM

Peak Hour Summary
7:15 AM to 8:15 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
7:00 AM	0	3		3	4	0	4		0		1	1				0	8
7:05 AM	0	2		2	1	0	1		3		0	3				0	6
7:10 AM	0	7		7	5	0	5		0		0	0				0	12
7:15 AM	1	4		5	4	0	4		0		0	0				0	9
7:20 AM	0	3		3	1	0	1		1		0	1				0	5
7:25 AM	0	2		2	1	0	1		1		0	1				0	4
7:30 AM	1	2		3	2	0	2		1		0	1				0	6
7:35 AM	0	4		4	1	0	1		1		0	1				0	6
7:40 AM	0	2		2	0	0	0		0		0	0				0	2
7:45 AM	0	4		4	4	0	4		1		0	1				0	9
7:50 AM	0	5		5	4	0	4		0		1	1				0	10
7:55 AM	0	7		7	1	0	1		1		1	2				0	10
8:00 AM	0	7		7	4	1	5		1		0	1				0	13
8:05 AM	0	1		1	6	1	7		0		0	0				0	8
8:10 AM	0	2		2	2	0	2		0		0	0				0	4
8:15 AM	0	0		0	4	1	5		0		1	1				0	6
8:20 AM	0	6		6	0	0	0		0		0	0				0	6
8:25 AM	0	2		2	3	0	3		0		0	0				0	5
8:30 AM	1	1		2	5	0	5		0		0	0				0	7
8:35 AM	0	7		7	4	0	4		1		0	1				0	12
8:40 AM	0	4		4	5	1	6		0		0	0				0	10
8:45 AM	0	2		2	2	0	2		0		0	0				0	4
8:50 AM	0	1		1	5	0	5		0		0	0				0	6
8:55 AM	0	0		0	3	0	3		0		0	0				0	3
Total Survey	3	78		81	71	4	75		11		4	15				0	171

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
7:00 AM	0	12		12	10	0	10		3		1	4				0	26
7:15 AM	1	9		10	6	0	6		2		0	2				0	18
7:30 AM	1	8		9	3	0	3		2		0	2				0	14
7:45 AM	0	16		16	9	0	9		2		2	4				0	29
8:00 AM	0	10		10	12	2	14		1		0	1				0	25
8:15 AM	0	8		8	7	1	8		0		1	1				0	17
8:30 AM	1	12		13	14	1	15		1		0	1				0	29
8:45 AM	0	3		3	10	0	10		0		0	0				0	13
Total Survey	3	78		81	71	4	75		11		4	15				0	171

Heavy Vehicle Peak Hour Summary
7:15 AM to 8:15 AM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Meyers Rd			Westbound Meyers Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	45	32	77	32	50	82	9	4	13	0	0	0	86
PHF	0.59			0.57			0.56			0.00			0.65

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	2	43		45	30	2	32		7		2	9				0	86
PHF	0.50	0.57		0.59	0.63	0.25	0.57		0.58		0.25	0.56				0.00	0.65

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
7:00 AM	2	45		47	28	0	28		9		3	12				0	87
7:15 AM	2	43		45	30	2	32		7		2	9				0	86
7:30 AM	1	42		43	31	3	34		5		3	8				0	85
7:45 AM	1	46		47	42	4	46		4		3	7				0	100
8:00 AM	1	33		34	43	4	47		2		1	3				0	84

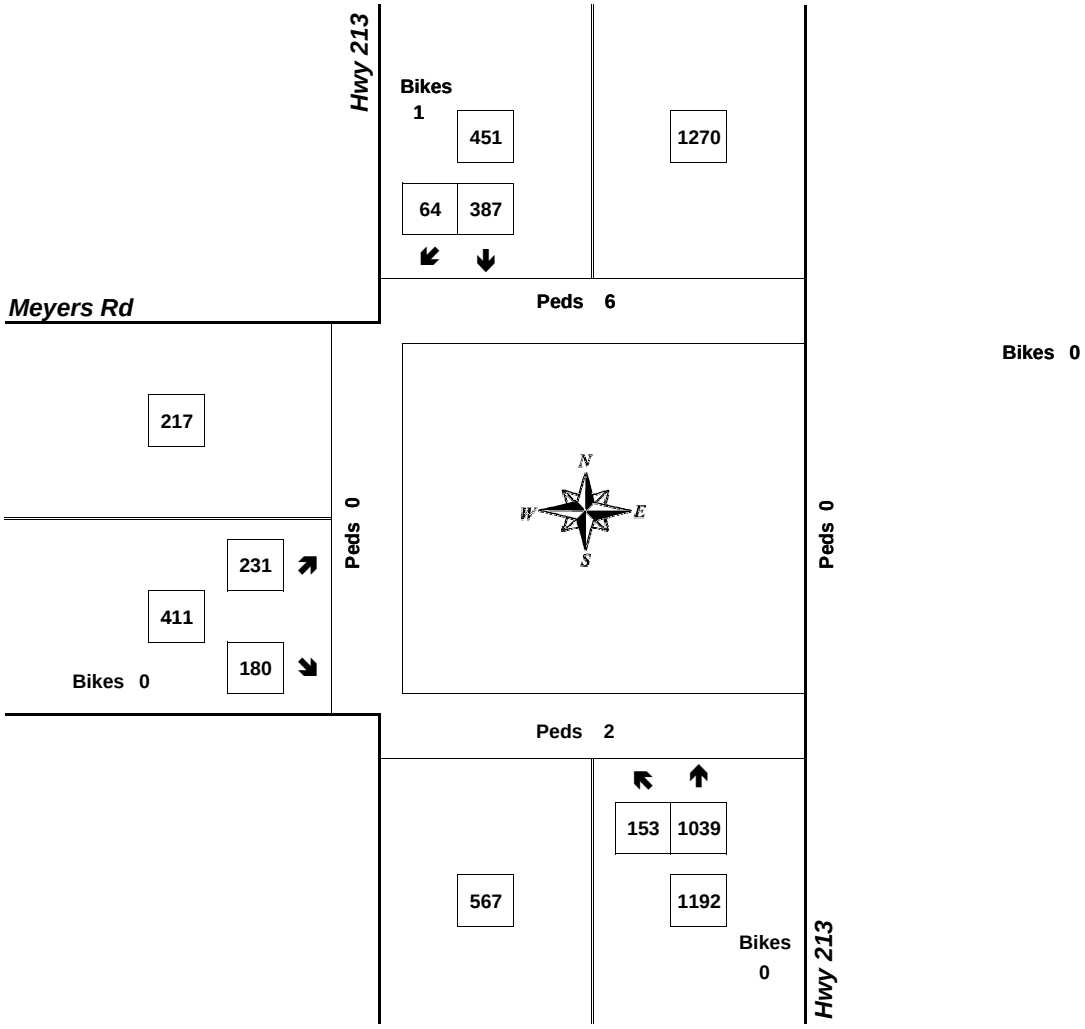
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 213 & Meyers Rd

7:15 AM to 8:15 AM
Thursday, October 23, 2014

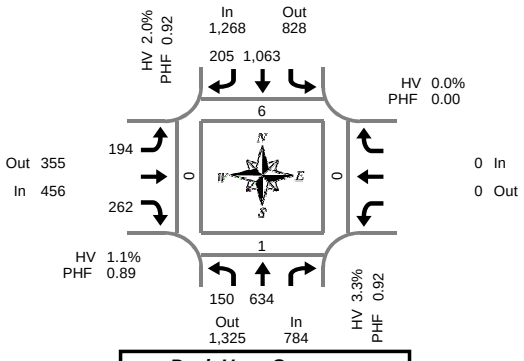


Approach	PHF	HV%	Volume
EB	0.70	2.2%	411
WB	0.00	0.0%	0
NB	0.93	3.8%	1,192
SB	0.75	7.1%	451
Intersection	0.94	4.2%	2,054

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
5:00 PM to 6:00 PM

Hwy 213 & Meyers Rd

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213			Eastbound Meyers Rd			Westbound Meyers Rd			Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes	L	R	Bikes			Bikes		North	South	East	West
4:00 PM	18	61		0	112	24	0	11	10	0			0	236	0	0	0	0
4:05 PM	14	64		0	100	10	0	12	11	0			0	211	1	0	0	0
4:10 PM	12	65		0	84	11	0	24	18	0			0	214	1	0	0	0
4:15 PM	13	58		0	102	11	0	12	12	0			0	208	0	0	0	0
4:20 PM	10	75		0	101	12	0	16	15	0			0	229	0	0	0	0
4:25 PM	10	56		0	84	19	0	15	24	0			0	208	0	0	0	0
4:30 PM	10	53		0	76	17	0	14	15	0			0	185	0	0	0	0
4:35 PM	8	48		0	108	22	0	17	14	0			0	217	1	0	0	0
4:40 PM	7	51		0	79	16	0	10	23	0			0	186	0	0	0	0
4:45 PM	7	51		0	84	12	0	14	13	0			0	181	0	0	0	0
4:50 PM	13	44		0	102	11	0	12	19	0			0	201	0	0	0	1
4:55 PM	16	55		0	86	17	0	6	22	0			0	202	0	0	0	0
5:00 PM	13	45		0	76	12	0	16	32	0			0	194	1	0	0	0
5:05 PM	13	52		0	92	15	0	14	22	0			0	208	0	0	0	0
5:10 PM	7	54		0	90	21	0	9	13	0			0	194	0	0	0	0
5:15 PM	10	44		0	100	17	0	20	17	0			0	208	2	0	0	0
5:20 PM	13	62		0	83	24	0	12	29	0			0	223	0	0	0	0
5:25 PM	17	51		0	97	19	0	11	21	0			0	216	0	0	0	0
5:30 PM	10	41		0	75	9	0	21	28	0			0	184	1	1	0	0
5:35 PM	9	57		0	99	16	0	15	15	0			0	211	0	0	0	0
5:40 PM	12	60		0	93	22	0	18	20	0			0	225	0	0	0	0
5:45 PM	12	57		0	92	21	0	21	23	0			0	226	1	0	0	0
5:50 PM	20	52		0	71	11	0	19	27	0			0	200	0	0	0	0
5:55 PM	14	59		0	95	18	0	18	15	0			0	219	1	0	0	0
Total Survey	288	1,315		0	2,181	387	0	357	458	0			0	4,986	9	1	0	1

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213			Eastbound Meyers Rd			Westbound Meyers Rd			Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes	L	R	Bikes			Bikes		North	South	East	West
4:00 PM	44	190		0	296	45	0	47	39	0			0	661	2	0	0	0
4:15 PM	33	189		0	287	42	0	43	51	0			0	645	0	0	0	0
4:30 PM	25	152		0	263	55	0	41	52	0			0	588	1	0	0	0
4:45 PM	36	150		0	272	40	0	32	54	0			0	584	0	0	0	1
5:00 PM	33	151		0	258	48	0	39	67	0			0	596	1	0	0	0
5:15 PM	40	157		0	280	60	0	43	67	0			0	647	2	0	0	0
5:30 PM	31	158		0	267	47	0	54	63	0			0	620	1	1	0	0
5:45 PM	46	168		0	258	50	0	58	65	0			0	645	2	0	0	0
Total Survey	288	1,315		0	2,181	387	0	357	458	0			0	4,986	9	1	0	1

Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	784	1,325	2,109	0	1,268	828	2,096	0	456	355	811	0	0	0	0	0	2,508	6	1	0	0
%HV	3.3%				2.0%				1.1%				0.0%				2.2%				
PHF	0.92				0.92				0.89				0.00				0.95				

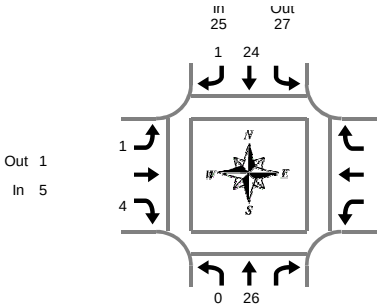
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total		T	R	Total	L		R	Total				Total	
Volume	150	634		784		1,063	205	1,268	194		262	456				0	2,508
%HV	0.0%	4.1%	NA	3.3%	NA	2.3%	0.5%	2.0%	0.5%	NA	1.5%	1.1%	NA	NA	NA	0.0%	2.2%
PHF	0.82	0.91		0.92		0.94	0.83	0.92	0.84		0.84	0.89				0.00	0.95

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213			Eastbound Meyers Rd			Westbound Meyers Rd			Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R	Bikes	L	R	Bikes			Bikes		North	South	East	West
4:00 PM	138	681		0	1,118	182	0	163	196	0			0	2,478	3	0	0	1
4:15 PM	127	642		0	1,080	185	0	155	224	0			0	2,413	2	0	0	1
4:30 PM	134	610		0	1,073	203	0	155	240	0			0	2,415	4	0	0	1
4:45 PM	140	616		0	1,077	195	0	168	251	0			0	2,447	4	1	0	1
5:00 PM	150	634		0	1,063	205	0	194	262	0			0	2,508	6	1	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Meyers Rd

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	0	2		2	3	2	5		1		1	2				0	9
4:05 PM	0	4		4	0	0	0		0		0	0				0	4
4:10 PM	0	2		2	0	0	0		1		0	1				0	3
4:15 PM	1	5		6	2	0	2		0		0	0				0	8
4:20 PM	0	4		4	3	0	3		0		0	0				0	7
4:25 PM	0	4		4	0	0	0		1		0	1				0	5
4:30 PM	0	0		0	2	1	3		0		0	0				0	3
4:35 PM	0	0		0	3	0	3		0		1	1				0	4
4:40 PM	0	2		2	4	0	4		1		0	1				0	7
4:45 PM	0	3		3	4	0	4		0		0	0				0	7
4:50 PM	0	3		3	0	0	0		1		0	1				0	4
4:55 PM	0	1		1	1	0	1		0		0	0				0	2
5:00 PM	0	4		4	3	1	4		0		1	1				0	9
5:05 PM	0	1		1	2	0	2		0		0	0				0	3
5:10 PM	0	4		4	2	0	2		0		1	1				0	7
5:15 PM	0	2		2	1	0	1		1		0	1				0	4
5:20 PM	0	4		4	2	0	2		0		0	0				0	6
5:25 PM	0	2		2	1	0	1		0		0	0				0	3
5:30 PM	0	4		4	1	0	1		0		0	0				0	5
5:35 PM	0	1		1	2	0	2		0		0	0				0	3
5:40 PM	0	1		1	3	0	3		0		0	0				0	4
5:45 PM	0	1		1	2	0	2		0		0	0				0	3
5:50 PM	0	2		2	1	0	1		0		2	2				0	5
5:55 PM	0	0		0	4	0	4		0		0	0				0	4
Total Survey	1	56		57	46	4	50		6		6	12				0	119

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	0	8		8	3	2	5		2		1	3				0	16
4:15 PM	1	13		14	5	0	5		1		0	1				0	20
4:30 PM	0	2		2	9	1	10		1		1	2				0	14
4:45 PM	0	7		7	5	0	5		1		0	1				0	13
5:00 PM	0	9		9	7	1	8		0		2	2				0	19
5:15 PM	0	8		8	4	0	4		1		0	1				0	13
5:30 PM	0	6		6	6	0	6		0		0	0				0	12
5:45 PM	0	3		3	7	0	7		0		2	2				0	12
Total Survey	1	56		57	46	4	50		6		6	12				0	119

Heavy Vehicle Peak Hour Summary
5:00 PM to 6:00 PM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Meyers Rd			Westbound Meyers Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	26	28	54	25	27	52	5	1	6	0	0	0	56
PHF	0.65			0.78			0.63			0.00			0.74

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	0	26		26	24	1	25		1		4	5				0	56
PHF	0.00	0.65		0.65	0.86	0.25	0.78		0.25		0.50	0.63				0.00	0.74

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Meyers Rd				Westbound Meyers Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	1	30		31	22	3	25		5		2	7				0	63
4:15 PM	1	31		32	26	2	28		3		3	6				0	66
4:30 PM	0	26		26	25	2	27		3		3	6				0	59
4:45 PM	0	30		30	22	1	23		2		2	4				0	57
5:00 PM	0	26		26	24	1	25		1		4	5				0	56

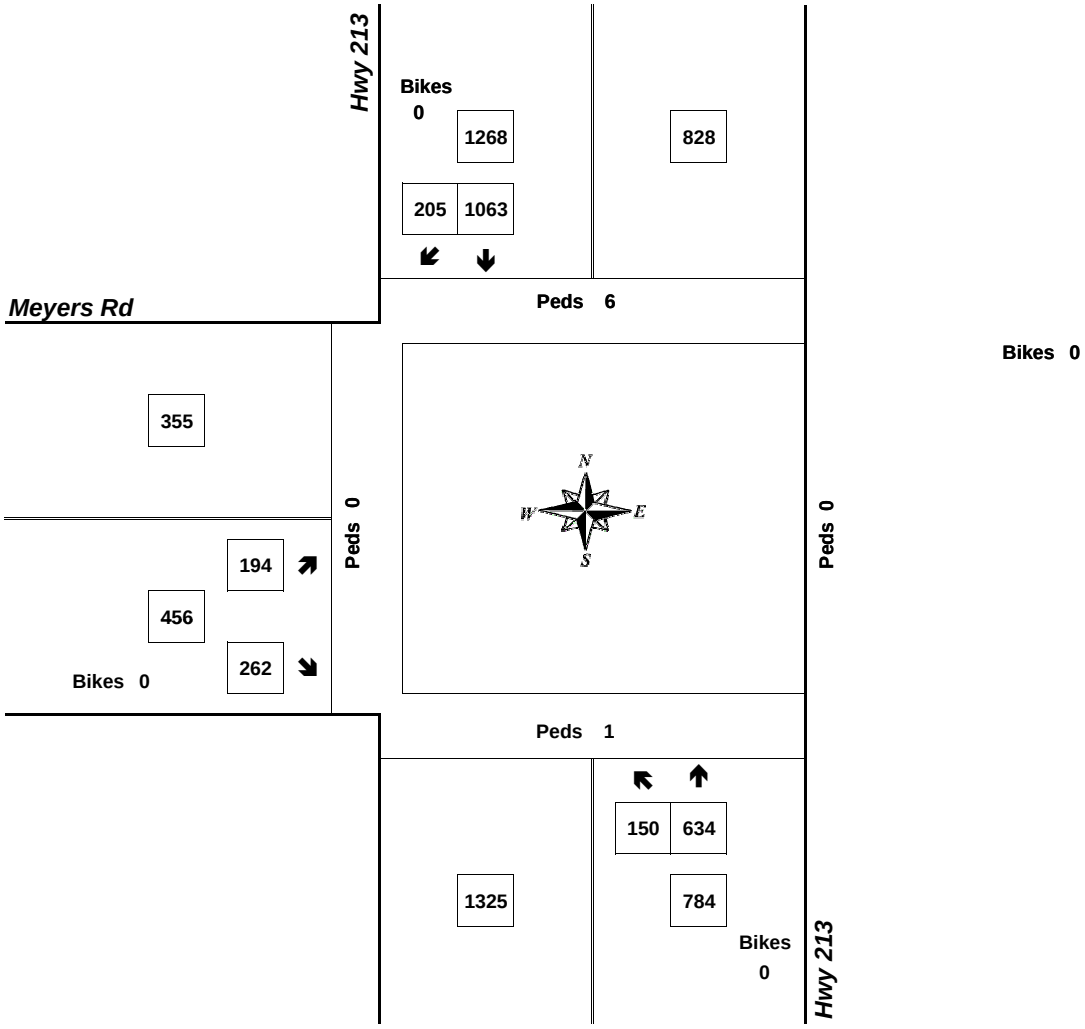
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 213 & Meyers Rd

5:00 PM to 6:00 PM
Wednesday, October 22, 2014

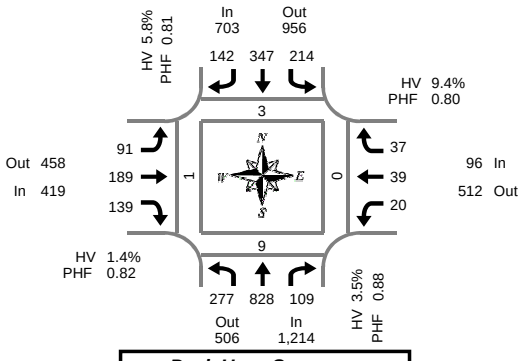


Approach	PHF	HV%	Volume
EB	0.89	1.1%	456
WB	0.00	0.0%	0
NB	0.92	3.3%	784
SB	0.92	2.0%	1,268
Intersection	0.95	2.2%	2,508

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:30 AM to 8:30 AM

Hwy 213 & Molalla Ave

Thursday, October 23, 2014
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	20	92	6	0	5	18	6	0	3	1	5	0	0	2	1	0	159	0	0	0	0
7:05 AM	28	92	3	0	8	12	7	0	4	6	9	0	0	1	2	0	172	0	0	0	0
7:10 AM	9	116	9	0	10	28	11	0	16	5	9	0	2	2	3	0	220	0	0	0	0
7:15 AM	22	87	2	0	15	21	13	0	16	2	9	0	0	2	2	0	191	0	0	0	0
7:20 AM	16	94	5	0	2	26	7	0	3	3	9	0	1	6	2	0	174	0	0	0	0
7:25 AM	21	76	8	0	15	22	18	0	7	9	7	0	0	6	2	0	191	0	1	0	0
7:30 AM	13	91	5	0	17	30	13	0	6	2	11	0	0	2	2	0	192	0	1	0	0
7:35 AM	26	71	8	0	7	21	10	0	13	12	10	0	3	5	3	0	189	0	0	0	0
7:40 AM	19	88	11	0	21	26	10	0	4	11	5	0	2	6	1	0	204	0	0	0	0
7:45 AM	28	74	15	0	14	20	7	0	6	29	13	0	0	3	1	0	210	0	1	0	0
7:50 AM	16	72	21	0	24	38	7	0	6	22	10	0	4	6	2	0	228	0	0	0	0
7:55 AM	20	59	12	0	16	20	16	0	3	28	9	0	2	4	5	0	194	2	0	0	0
8:00 AM	17	65	13	0	26	42	4	0	2	18	12	0	1	3	3	0	206	1	4	0	0
8:05 AM	33	67	6	0	15	37	18	0	5	7	11	0	3	3	5	0	210	0	1	0	0
8:10 AM	19	83	4	0	16	36	23	0	11	10	16	0	0	2	2	0	222	0	2	0	0
8:15 AM	37	47	1	0	18	27	15	0	16	21	13	0	2	1	2	0	200	0	0	0	1
8:20 AM	15	61	7	0	25	18	15	0	8	7	20	0	1	2	6	0	185	0	0	0	0
8:25 AM	34	50	6	0	15	32	4	0	11	22	9	0	2	2	5	0	192	0	0	0	0
8:30 AM	19	48	8	0	26	32	3	0	6	7	4	0	0	2	2	0	157	0	0	0	0
8:35 AM	22	61	8	0	19	37	8	0	3	18	15	0	0	5	3	0	199	0	0	0	0
8:40 AM	18	58	10	0	28	40	15	0	6	5	11	0	2	3	2	0	198	0	0	0	0
8:45 AM	31	54	11	0	26	28	13	0	9	22	13	0	0	4	2	0	213	0	0	0	0
8:50 AM	34	62	25	0	16	39	13	0	4	23	15	0	1	2	7	0	241	1	2	0	0
8:55 AM	32	33	9	0	17	28	15	0	12	26	7	0	3	7	6	0	195	0	0	0	0
Total Survey	549	1,701	213	0	401	678	271	0	180	316	252	0	29	81	71	0	4,742	4	12	0	1

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	57	300	18	0	23	58	24	0	23	12	23	0	2	5	6	0	551	0	0	0	0
7:15 AM	59	257	15	0	32	69	38	0	26	14	25	0	1	14	6	0	556	0	1	0	0
7:30 AM	58	250	24	0	45	77	33	0	23	25	26	0	5	13	6	0	585	0	1	0	0
7:45 AM	64	205	48	0	54	78	30	0	15	79	32	0	6	13	8	0	632	2	1	0	0
8:00 AM	69	215	23	0	57	115	45	0	18	35	39	0	4	8	10	0	638	1	7	0	0
8:15 AM	86	158	14	0	58	77	34	0	35	50	42	0	5	5	13	0	577	0	0	0	1
8:30 AM	59	167	26	0	73	109	26	0	15	30	30	0	2	10	7	0	554	0	0	0	0
8:45 AM	97	149	45	0	59	95	41	0	25	71	35	0	4	13	15	0	649	1	2	0	0
Total Survey	549	1,701	213	0	401	678	271	0	180	316	252	0	29	81	71	0	4,742	4	12	0	1

Peak Hour Summary
7:30 AM to 8:30 AM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1,214	506	1,720	0	703	956	1,659	0	419	458	877	0	96	512	608	0	2,432	3	9	0	1
%HV	3.5%				5.8%				1.4%				9.4%				4.1%				
PHF	0.88				0.81				0.82				0.80				0.95				

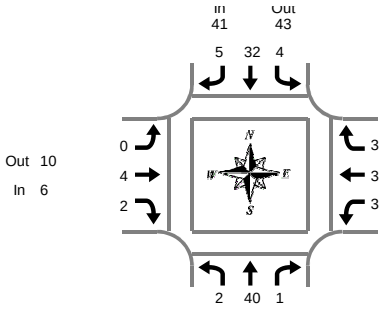
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	277	828	109	1,214	214	347	142	703	91	189	139	419	20	39	37	96	2,432
%HV	0.7%	4.8%	0.9%	3.5%	1.9%	9.2%	3.5%	5.8%	0.0%	2.1%	1.4%	1.4%	15.0%	7.7%	8.1%	9.4%	4.1%
PHF	0.78	0.83	0.57	0.88	0.81	0.75	0.63	0.81	0.65	0.60	0.71	0.82	0.71	0.65	0.71	0.80	0.95

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	238	1,012	105	0	154	282	125	0	87	130	106	0	14	45	26	0	2,324	2	3	0	0
7:15 AM	250	927	110	0	188	339	146	0	82	153	122	0	16	48	30	0	2,411	3	10	0	0
7:30 AM	277	828	109	0	214	347	142	0	91	189	139	0	20	39	37	0	2,432	3	9	0	1
7:45 AM	278	745	111	0	242	379	135	0	83	194	143	0	17	36	38	0	2,401	3	8	0	1
8:00 AM	311	689	108	0	247	396	146	0	93	186	146	0	15	36	45	0	2,418	2	9	0	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Molalla Ave

Thursday, October 23, 2014
7:00 AM to 9:00 AM

Peak Hour Summary
7:30 AM to 8:30 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	3	0	3	1	2	0	3	0	0	1	1	0	1	0	1	8
7:05 AM	1	4	0	5	0	1	0	1	1	1	0	2	0	1	1	2	10
7:10 AM	1	5	1	7	0	5	0	5	0	0	0	0	1	0	0	1	13
7:15 AM	0	3	0	3	1	4	0	5	0	0	0	0	0	0	0	0	8
7:20 AM	0	5	0	5	0	1	0	1	0	0	0	0	0	0	0	0	6
7:25 AM	0	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	4
7:30 AM	0	1	0	1	0	3	0	3	0	1	0	1	0	0	1	1	6
7:35 AM	0	5	0	5	0	1	1	2	0	0	0	0	1	1	0	2	9
7:40 AM	0	3	0	3	0	1	1	2	0	0	0	0	0	0	0	0	5
7:45 AM	0	5	1	6	2	2	0	4	0	1	1	2	0	1	0	1	13
7:50 AM	0	6	0	6	0	4	0	4	0	0	0	0	1	0	0	1	11
7:55 AM	0	6	0	6	1	1	0	2	0	0	0	0	0	0	2	2	10
8:00 AM	0	6	0	6	0	4	0	4	0	0	0	0	0	0	0	0	10
8:05 AM	0	1	0	1	0	5	0	5	0	0	0	0	1	0	0	1	7
8:10 AM	1	1	0	2	0	3	1	4	0	0	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	1	5	1	7	0	2	0	2	0	0	0	0	9
8:20 AM	0	5	0	5	0	0	1	1	0	0	0	0	0	0	0	0	6
8:25 AM	1	1	0	2	0	3	0	3	0	0	1	1	0	1	0	1	7
8:30 AM	0	2	0	2	0	5	0	5	0	0	0	0	0	0	0	0	7
8:35 AM	2	5	0	7	0	4	0	4	1	0	0	1	0	0	0	0	12
8:40 AM	1	3	0	4	0	5	0	5	0	0	0	0	0	0	2	2	11
8:45 AM	0	2	0	2	0	2	1	3	0	1	0	1	0	0	0	0	6
8:50 AM	1	1	0	2	0	6	0	6	0	0	0	0	0	0	0	0	8
8:55 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
Total Survey	8	76	2	86	6	69	7	82	2	6	3	11	4	7	6	17	196

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	12	1	15	1	8	0	9	1	1	1	3	1	2	1	4	31
7:15 AM	0	11	0	11	1	5	0	6	0	0	0	0	0	1	0	1	18
7:30 AM	0	9	0	9	0	5	2	7	0	1	0	1	1	1	1	3	20
7:45 AM	0	17	1	18	3	7	0	10	0	1	1	2	1	1	2	4	34
8:00 AM	1	8	0	9	0	12	1	13	0	0	0	0	1	0	0	1	23
8:15 AM	1	6	0	7	1	8	2	11	0	2	1	3	0	1	0	1	22
8:30 AM	3	10	0	13	0	14	0	14	1	0	0	1	0	0	2	2	30
8:45 AM	1	3	0	4	0	10	2	12	0	1	0	1	0	1	0	1	18
Total Survey	8	76	2	86	6	69	7	82	2	6	3	11	4	7	6	17	196

Heavy Vehicle Peak Hour Summary
7:30 AM to 8:30 AM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Molalla Ave			Westbound Molalla Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	43	37	80	41	43	84	6	10	16	9	9	18	99
PHF	0.60			0.64			0.50			0.56			0.73

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	40	1	43	4	32	5	41	0	4	2	6	3	3	3	9	99
PHF	0.50	0.56	0.25	0.60	0.33	0.62	0.42	0.64	0.00	0.50	0.50	0.50	0.75	0.38	0.38	0.56	0.73

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

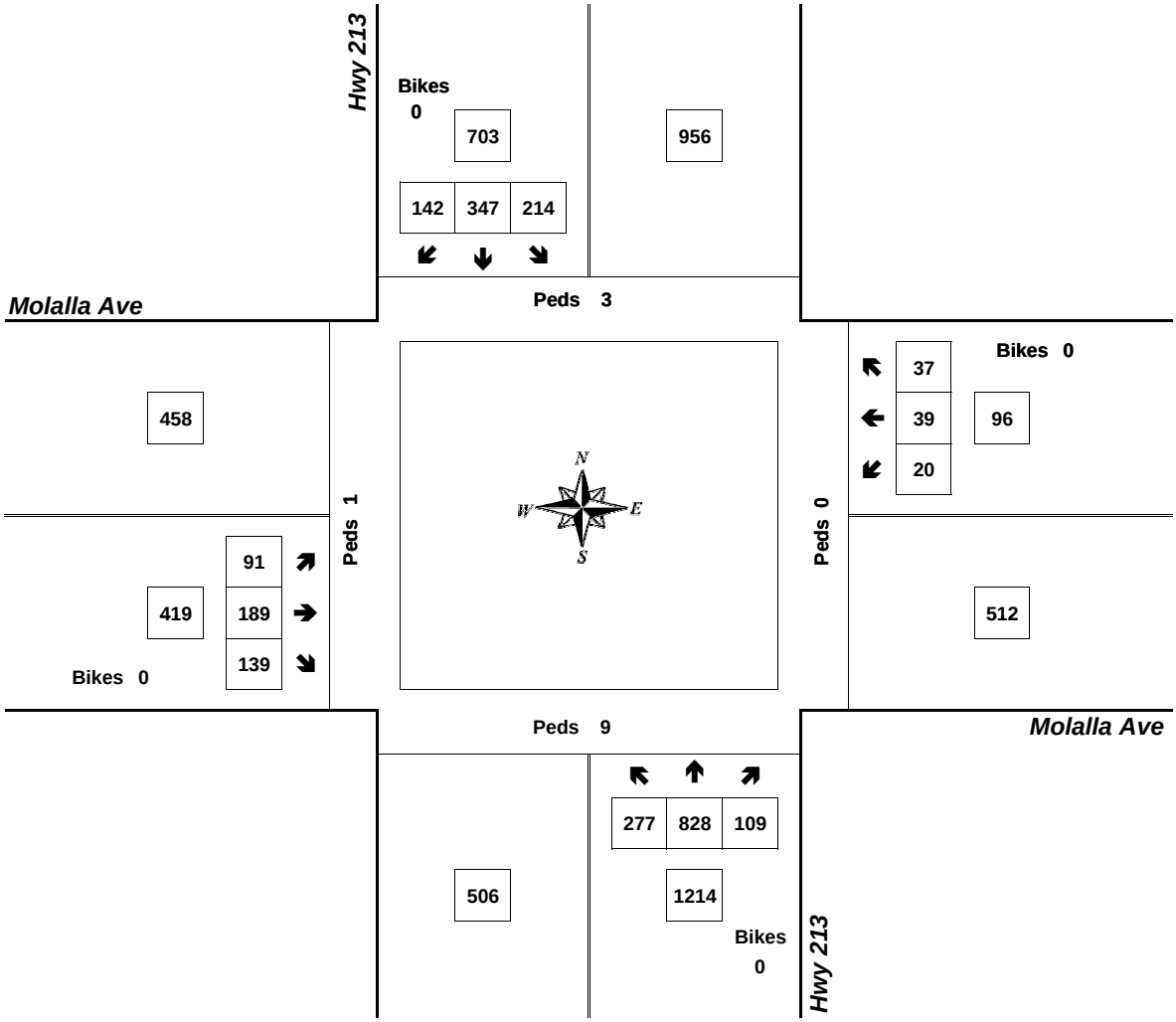
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	49	2	53	5	25	2	32	1	3	2	6	3	5	4	12	103
7:15 AM	1	45	1	47	4	29	3	36	0	2	1	3	3	3	3	9	95
7:30 AM	2	40	1	43	4	32	5	41	0	4	2	6	3	3	3	9	99
7:45 AM	5	41	1	47	4	41	3	48	1	3	2	6	2	2	4	8	109
8:00 AM	6	27	0	33	1	44	5	50	1	3	1	5	1	2	2	5	93

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Molalla Ave

7:30 AM to 8:30 AM
Thursday, October 23, 2014

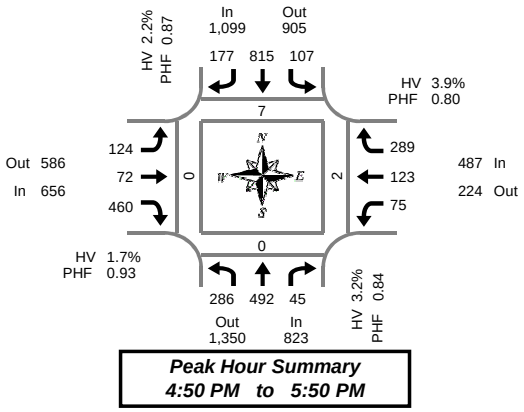


Approach	PHF	HV%	Volume
EB	0.82	1.4%	419
WB	0.80	9.4%	96
NB	0.88	3.5%	1,214
SB	0.81	5.8%	703
Intersection	0.95	4.1%	2,432

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:50 PM to 5:50 PM

Hwy 213 & Molalla Ave

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	14	61	3	0	20	73	21	0	13	7	39	0	20	17	24	0	312	0	0	0	0
4:05 PM	21	44	2	0	9	50	17	0	8	1	49	0	9	19	26	0	255	1	0	0	0
4:10 PM	28	45	2	0	5	58	19	0	10	8	40	0	12	25	26	0	278	3	0	0	0
4:15 PM	28	50	4	0	10	92	25	0	8	8	40	0	7	9	14	0	295	0	0	0	1
4:20 PM	28	41	2	0	12	66	12	0	7	11	38	0	5	15	12	0	249	0	1	0	1
4:25 PM	36	50	5	0	2	53	13	0	10	5	41	0	5	17	17	0	254	1	0	0	0
4:30 PM	13	52	1	0	9	62	15	0	8	8	34	0	5	3	12	0	222	1	0	0	0
4:35 PM	22	44	2	0	4	60	12	0	9	1	43	0	11	6	22	1	236	0	0	0	0
4:40 PM	26	37	3	0	3	70	20	0	8	5	43	0	9	12	23	0	259	0	0	0	0
4:45 PM	16	33	1	0	5	61	23	0	6	6	33	0	4	1	21	0	210	4	0	0	0
4:50 PM	15	51	1	0	14	62	14	0	11	8	37	0	3	4	15	0	235	0	0	0	0
4:55 PM	29	38	1	0	6	57	18	0	9	7	40	0	12	7	24	0	248	2	0	2	0
5:00 PM	16	28	4	0	4	58	14	0	13	5	38	0	7	19	25	0	231	1	0	0	0
5:05 PM	26	36	2	0	5	80	15	0	9	6	30	0	4	15	29	0	257	0	0	0	0
5:10 PM	30	44	3	0	5	58	20	0	9	5	39	0	13	14	27	0	267	0	0	0	0
5:15 PM	19	35	4	0	10	72	13	0	15	6	42	0	5	6	19	0	246	0	0	0	0
5:20 PM	26	35	3	0	15	90	14	0	11	6	37	0	6	11	20	0	274	2	0	0	0
5:25 PM	20	51	4	0	10	79	12	0	11	1	27	0	5	8	28	0	256	0	0	0	0
5:30 PM	21	29	6	0	11	54	13	0	13	5	39	0	3	10	21	0	225	1	0	0	0
5:35 PM	25	42	7	0	11	82	11	0	12	6	36	0	3	12	30	0	277	0	0	0	0
5:40 PM	27	59	5	0	9	70	16	0	5	7	36	0	6	3	30	0	273	1	0	0	0
5:45 PM	32	44	5	0	7	53	17	1	6	10	59	0	8	14	21	0	276	0	0	0	0
5:50 PM	20	33	7	0	12	56	9	0	13	13	24	0	5	3	6	0	201	0	0	0	0
5:55 PM	22	50	11	0	10	50	20	0	10	6	50	0	10	4	8	0	251	0	0	0	0
Total Survey	560	1,032	88	0	208	1,566	383	1	234	151	934	0	177	254	500	1	6,087	17	1	2	2

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	63	150	7	0	34	181	57	0	31	16	128	0	41	61	76	0	845	4	0	0	0
4:15 PM	92	141	11	0	24	211	50	0	25	24	119	0	17	41	43	0	798	1	1	0	2
4:30 PM	61	133	6	0	16	192	47	0	25	14	120	0	25	21	57	1	717	1	0	0	0
4:45 PM	60	122	3	0	25	180	55	0	26	21	110	0	19	12	60	0	693	6	0	2	0
5:00 PM	72	108	9	0	14	196	49	0	31	16	107	0	24	48	81	0	755	1	0	0	0
5:15 PM	65	121	11	0	35	241	39	0	37	13	106	0	16	25	67	0	776	2	0	0	0
5:30 PM	73	130	18	0	31	206	40	0	30	18	111	0	12	25	81	0	775	2	0	0	0
5:45 PM	74	127	23	0	29	159	46	1	29	29	133	0	23	21	35	0	728	0	0	0	0
Total Survey	560	1,032	88	0	208	1,566	383	1	234	151	934	0	177	254	500	1	6,087	17	1	2	2

Peak Hour Summary
4:50 PM to 5:50 PM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	823	1,350	2,173	0	1,099	905	2,004	1	656	586	1,242	0	487	224	711	0	3,065	7	0	2	0
%HV	3.2%				2.2%				1.7%				3.9%				2.6%				
PHF	0.84				0.87				0.93				0.80				0.93				

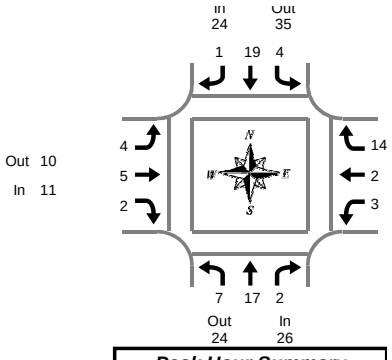
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	286	492	45	823	107	815	177	1,099	124	72	460	656	75	123	289	487	3,065
%HV	2.4%	3.5%	4.4%	3.2%	3.7%	2.3%	0.6%	2.2%	3.2%	6.9%	0.4%	1.7%	4.0%	1.6%	4.8%	3.9%	2.6%
PHF	0.85	0.85	0.63	0.84	0.74	0.85	0.90	0.87	0.84	0.78	0.88	0.93	0.78	0.64	0.89	0.80	0.93

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	276	546	27	0	99	764	209	0	107	75	477	0	102	135	236	1	3,053	12	1	2	2
4:15 PM	285	504	29	0	79	779	201	0	107	75	456	0	85	122	241	1	2,963	9	1	2	2
4:30 PM	258	484	29	0	90	809	190	0	119	64	443	0	84	106	265	1	2,941	10	0	2	0
4:45 PM	270	481	41	0	105	823	183	0	124	68	434	0	71	110	289	0	2,999	11	0	2	0
5:00 PM	284	486	61	0	109	802	174	1	127	76	457	0	75	119	264	0	3,034	5	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Molalla Ave

Wednesday, October 22, 2014
4:00 PM to 6:00 PM

Peak Hour Summary
4:50 PM to 5:50 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	6
4:05 PM	1	2	0	3	1	1	0	2	0	0	0	0	0	0	0	0	5
4:10 PM	1	2	0	3	0	2	1	3	0	0	0	0	0	1	1	2	8
4:15 PM	0	5	0	5	1	1	0	2	0	1	0	1	0	0	0	0	8
4:20 PM	1	2	0	3	2	1	0	3	1	0	1	2	0	0	1	1	9
4:25 PM	1	2	1	4	0	1	1	2	0	0	0	0	0	0	1	1	7
4:30 PM	0	1	0	1	2	4	1	7	0	0	0	0	0	1	0	1	9
4:35 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
4:40 PM	0	4	0	4	0	3	2	5	0	0	0	0	0	0	1	1	10
4:45 PM	0	2	1	3	0	2	0	2	0	0	0	0	0	0	2	2	7
4:50 PM	0	4	0	4	1	0	0	1	0	0	0	0	0	0	0	0	5
4:55 PM	1	0	0	1	0	1	1	2	1	0	1	2	1	0	0	1	6
5:00 PM	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	6
5:05 PM	1	0	0	1	0	3	0	3	1	3	0	4	0	0	0	0	8
5:10 PM	1	2	0	3	0	1	0	1	2	0	0	2	0	0	2	2	8
5:15 PM	0	2	0	2	1	1	0	2	0	0	0	0	0	0	1	1	5
5:20 PM	1	2	0	3	1	2	0	3	0	1	0	1	0	0	0	0	7
5:25 PM	1	1	0	2	0	2	0	2	0	0	0	0	0	0	3	3	7
5:30 PM	1	1	1	3	0	1	0	1	0	0	0	0	0	1	0	1	5
5:35 PM	1	0	0	1	1	1	0	2	0	1	1	2	1	0	1	2	7
5:40 PM	0	2	0	2	0	3	0	3	0	0	0	0	0	0	3	3	8
5:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	1	1	4	6	8
5:50 PM	1	1	0	2	0	2	0	2	0	2	0	2	0	0	2	2	8
5:55 PM	0	0	0	0	0	1	0	1	0	0	1	1	1	0	2	3	5
Total Survey	12	41	4	57	10	43	6	59	5	8	4	17	4	4	24	32	165

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	2	7	0	9	1	6	1	8	0	0	0	0	0	1	1	2	19
4:15 PM	2	9	1	12	3	3	1	7	1	1	1	3	0	0	2	2	24
4:30 PM	0	5	0	5	2	10	3	15	0	0	0	0	0	1	1	2	22
4:45 PM	1	6	1	8	1	3	1	5	1	0	1	2	1	0	2	3	18
5:00 PM	2	5	0	7	0	7	0	7	3	3	0	6	0	0	2	2	22
5:15 PM	2	5	0	7	2	5	0	7	0	1	0	1	0	0	4	4	19
5:30 PM	2	3	1	6	1	5	0	6	0	1	1	2	1	1	4	6	20
5:45 PM	1	1	1	3	0	4	0	4	0	2	1	3	2	1	8	11	21
Total Survey	12	41	4	57	10	43	6	59	5	8	4	17	4	4	24	32	165

Heavy Vehicle Peak Hour Summary
4:50 PM to 5:50 PM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Molalla Ave			Westbound Molalla Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	26	24	50	24	35	59	11	10	21	19	11	30	80
PHF	0.81			0.75			0.46			0.43			0.87

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	7	17	2	26	4	19	1	24	4	5	2	11	3	2	14	19	80
PHF	0.58	0.61	0.50	0.81	0.50	0.68	0.25	0.75	0.33	0.42	0.50	0.46	0.38	0.50	0.44	0.43	0.87

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Molalla Ave				Westbound Molalla Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	5	27	2	34	7	22	6	35	2	1	2	5	1	2	6	9	83
4:15 PM	5	25	2	32	6	23	5	34	5	4	2	11	1	1	7	9	86
4:30 PM	5	21	1	27	5	25	4	34	4	4	1	9	1	1	9	11	81
4:45 PM	7	19	2	28	4	20	1	25	4	5	2	11	2	1	12	15	79
5:00 PM	7	14	2	23	3	21	0	24	3	7	2	12	3	2	18	23	82

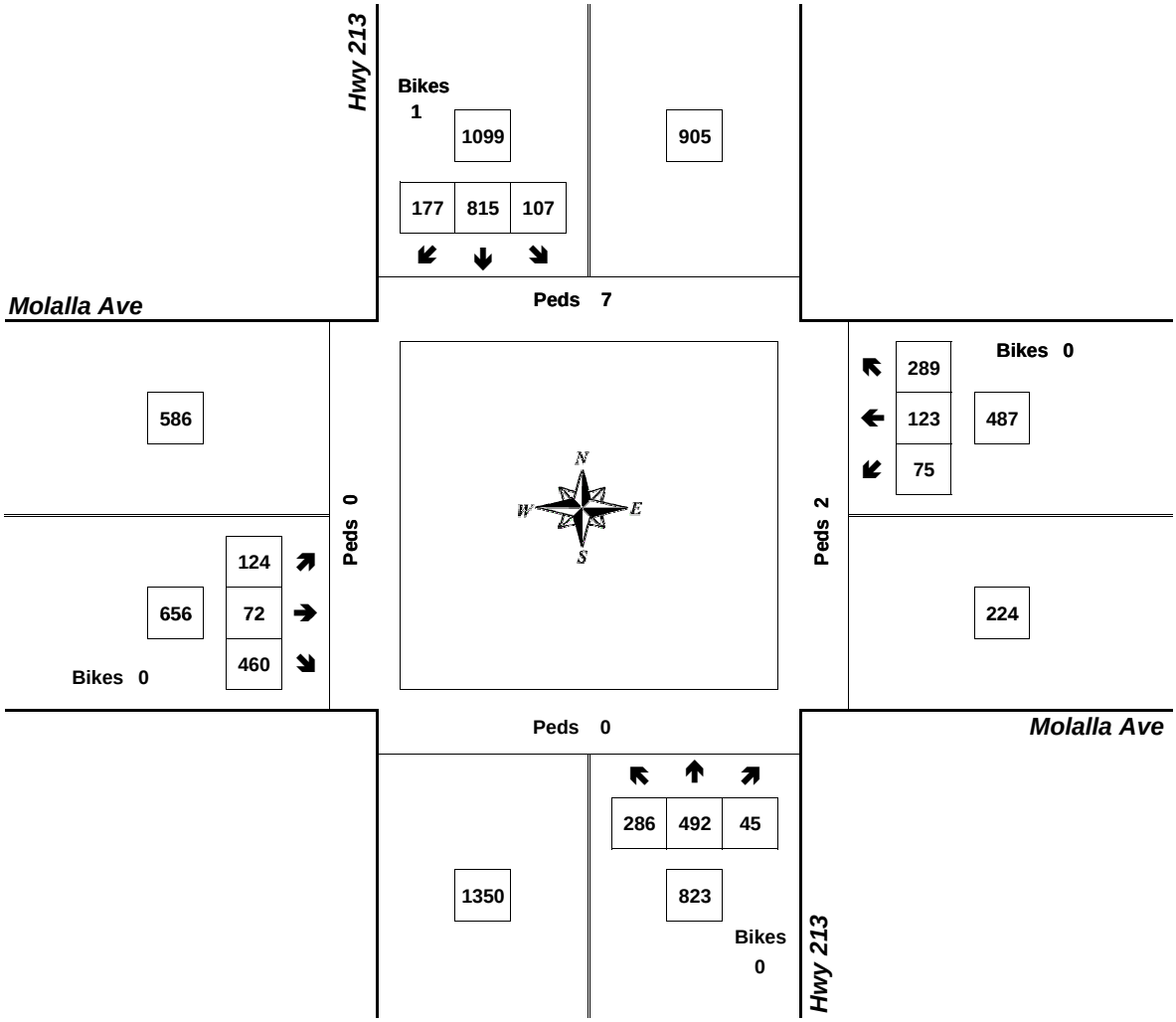
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 213 & Molalla Ave

4:50 PM to 5:50 PM
Wednesday, October 22, 2014

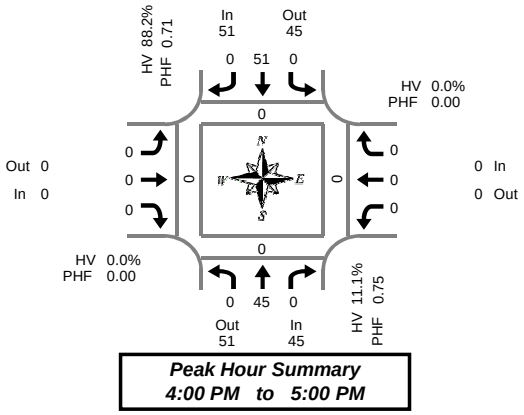


Approach	PHF	HV%	Volume
EB	0.93	1.7%	656
WB	0.80	3.9%	487
NB	0.84	3.2%	823
SB	0.87	2.2%	1,099
Intersection	0.93	2.6%	3,065

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:00 PM to 5:00 PM

S Maple Lane Ct & Driveway Access

Thursday, January 22, 2015
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
4:05 PM	0	1	0	0	0	7	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
4:10 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
4:15 PM	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0
4:20 PM	0	7	0	0	0	6	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0
4:25 PM	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
4:30 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0
4:35 PM	0	6	0	0	0	3	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0
4:40 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
4:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
4:50 PM	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
4:55 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
5:00 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
5:05 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5:10 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
5:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
5:20 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0
5:25 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5:50 PM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	63	0	0	0	55	1	0	0	0	0	0	0	0	0	0	119	0	0	1	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	6	0	0	0	14	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
4:15 PM	0	13	0	0	0	18	0	0	0	0	0	0	0	0	0	0	31	0	0	0	0
4:30 PM	0	13	0	0	0	9	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0
4:45 PM	0	13	0	0	0	10	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0
5:00 PM	0	7	0	0	0	2	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0
5:15 PM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	1	0
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5:45 PM	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Total Survey	0	63	0	0	0	55	1	0	0	0	0	0	0	0	0	0	119	0	0	1	0

Peak Hour Summary
4:00 PM to 5:00 PM

By Approach	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	45	51	96	0	51	45	96	0	0	0	0	0	0	0	0	0	96	0	0	0	0
%HV	11.1%				88.2%				0.0%				0.0%				52.1%				
PHF	0.75				0.71				0.00				0.00				0.77				

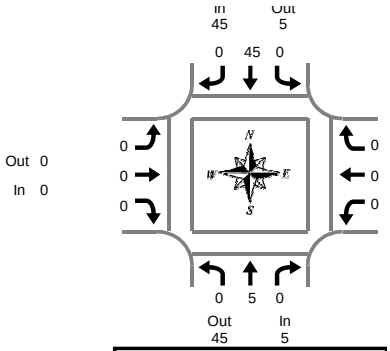
By Movement	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	45	0	45	0	51	0	51	0	0	0	0	0	0	0	0	96
%HV	0.0%	11.1%	0.0%	11.1%	0.0%	88.2%	0.0%	88.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	52.1%
PHF	0.00	0.75	0.00	0.75	0.00	0.71	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	45	0	0	0	51	0	0	0	0	0	0	0	0	0	0	96	0	0	0	0
4:15 PM	0	46	0	0	0	39	0	0	0	0	0	0	0	0	0	0	85	0	0	0	0
4:30 PM	0	40	0	0	0	21	0	0	0	0	0	0	0	0	0	0	61	0	0	1	0
4:45 PM	0	29	0	0	0	12	0	0	0	0	0	0	0	0	0	0	41	0	0	1	0
5:00 PM	0	18	0	0	0	4	1	0	0	0	0	0	0	0	0	0	23	0	0	1	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



S Maple Lane Ct & Driveway Access

Thursday, January 22, 2015
4:00 PM to 6:00 PM

Peak Hour Summary
4:00 PM to 5:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
4:05 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	6
4:10 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	0	7
4:20 PM	0	1	0	1	0	6	0	6	0	0	0	0	0	0	0	0	7
4:25 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	5
4:30 PM	0	1	0	1	0	4	0	4	0	0	0	0	0	0	0	0	5
4:35 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
4:40 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
4:45 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
4:50 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
4:55 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	5	0	5	0	47	0	47	0	0	0	0	0	0	0	0	52

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	13	0	13	0	0	0	0	0	0	0	0	13
4:15 PM	0	1	0	1	0	18	0	18	0	0	0	0	0	0	0	0	19
4:30 PM	0	2	0	2	0	7	0	7	0	0	0	0	0	0	0	0	9
4:45 PM	0	2	0	2	0	7	0	7	0	0	0	0	0	0	0	0	9
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Survey	0	5	0	5	0	47	0	47	0	0	0	0	0	0	0	0	52

Heavy Vehicle Peak Hour Summary
4:00 PM to 5:00 PM

By Approach	Northbound S Maple Lane Ct			Southbound S Maple Lane Ct			Eastbound Driveway Access			Westbound Driveway Access			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	45	50	45	5	50	0	0	0	0	0	0	50
PHF	0.42			0.63			0.00			0.00			0.66

By Movement	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	5	0	5	0	45	0	45	0	0	0	0	0	0	0	0	50
PHF	0.00	0.42	0.00	0.42	0.00	0.63	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

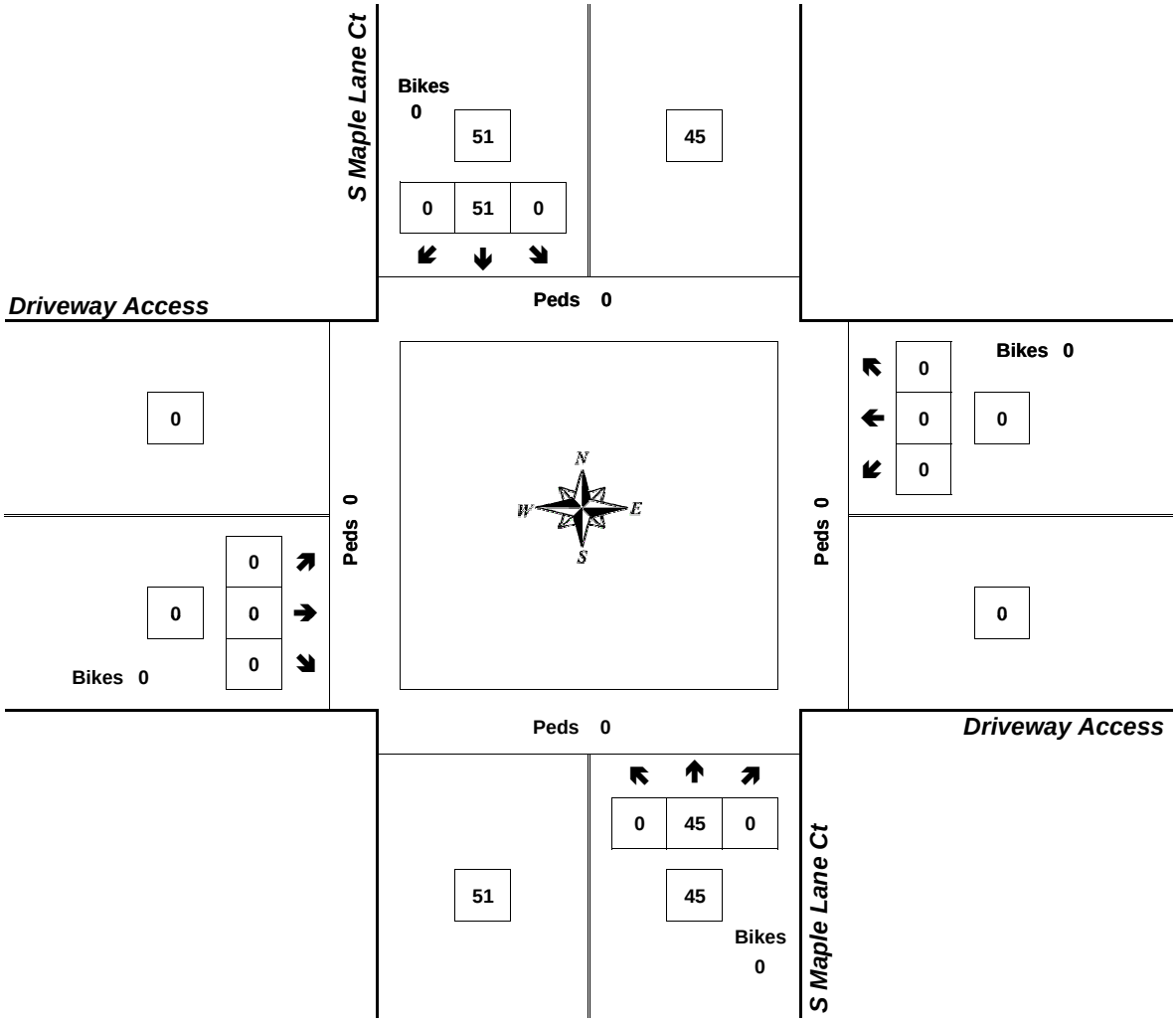
Interval Start Time	Northbound S Maple Lane Ct				Southbound S Maple Lane Ct				Eastbound Driveway Access				Westbound Driveway Access				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	5	0	5	0	45	0	45	0	0	0	0	0	0	0	0	50
4:15 PM	0	5	0	5	0	32	0	32	0	0	0	0	0	0	0	0	37
4:30 PM	0	4	0	4	0	14	0	14	0	0	0	0	0	0	0	0	18
4:45 PM	0	2	0	2	0	7	0	7	0	0	0	0	0	0	0	0	9
5:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

S Maple Lane Ct & Driveway Access

4:00 PM to 5:00 PM
Thursday, January 22, 2015



Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.00	0.0%	0
NB	0.75	11.1%	45
SB	0.71	88.2%	51
Intersection	0.77	52.1%	96

Count Period: 4:00 PM to 6:00 PM

OREGON CITY SCHOOL DISTRICT

ENROLLMENT FORECASTS

2014-15 TO 2023-24

Portland State
UNIVERSITY
Population Research
Center



JUNE, 2014

Table A3

Oregon City S.D., Low Range Enrollment Forecasts, 2014-15 to 2023-24

	Actual	Forecast									
Grade	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
K	554	532	534	532	543	551	555	563	565	569	571
1	577	570	556	539	537	548	556	557	566	568	571
2	587	590	587	573	555	553	564	569	571	581	582
3	540	593	599	596	582	564	561	570	576	578	588
4	567	534	589	595	592	579	560	555	565	571	572
5	605	571	541	597	603	600	586	565	561	571	576
6	554	622	590	559	616	623	619	603	581	577	587
7	570	547	617	585	554	611	617	612	596	574	570
8	616	574	554	624	592	561	618	622	617	601	579
9	653	631	589	569	641	608	576	633	638	633	616
10	649	647	627	585	565	636	604	571	628	633	628
11	641	637	636	616	575	555	625	593	561	617	622
12	593	648	645	644	624	582	562	632	600	568	624
US	30	30	30	30	30	30	30	30	30	30	30
Total	**7,736**	**7,726**	**7,694**	**7,644**	**7,609**	**7,601**	**7,633**	**7,675**	**7,655**	**7,671**	**7,716**
Annual change		*-10*	*-32*	*-50*	*-35*	*-8*	*32*	*42*	*-20*	*16*	*45*
		-0.1%	*-0.4%*	*-0.6%*	*-0.5%*	*-0.1%*	*0.4%*	*0.6%*	*-0.3%*	*0.2%*	*0.6%*
K-5	3,430	3,390	3,406	3,432	3,412	3,395	3,382	3,379	3,404	3,438	3,460
6-8	1,740	1,743	1,761	1,768	1,762	1,795	1,854	1,837	1,794	1,752	1,736
9-12*	2,566	2,593	2,527	2,444	2,435	2,411	2,397	2,459	2,457	2,481	2,520

	2013-14 to 2018-19		2018-19 to 2023-24		2013-14 to 2023-24	
	5 yr. chg.	Pct.	5 yr. chg.	Pct.	10 yr. chg.	Pct.
K-5	-35	*-1.0%*	65	*1.9%*	30	*0.9%*
6-8	55	*3.2%*	-59	*-3.3%*	-4	*-0.2%*
9-12	-155	*-6.0%*	109	*4.5%*	-46	*-1.8%*
Total	**-135**	***-1.7%***	**115**	***1.5%***	**-20**	***-0.3%***

Population Research Center, Portland State University, May 2014.



Table A4

Oregon City S.D., Middle Range Enrollment Forecasts, 2014-15 to 2023-24

	Actual	Forecast									
Grade	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
K	554	541	538	543	549	558	564	574	579	586	591
1	577	580	568	551	556	562	572	580	592	598	604
2	587	595	600	587	570	575	582	588	598	610	615
3	540	597	607	612	599	581	587	591	598	608	619
4	567	537	595	605	610	597	579	583	587	594	604
5	605	575	546	604	615	620	607	586	590	594	601
6	554	626	596	566	626	638	643	626	605	609	613
7	570	551	624	594	564	624	636	637	621	600	604
8	616	578	560	634	604	573	635	643	645	629	607
9	653	634	596	578	654	623	591	653	661	664	647
10	649	651	632	594	576	652	621	588	650	658	661
11	641	640	642	624	586	568	644	612	580	641	648
12	593	651	651	653	635	596	578	654	622	589	651
US	30	30	30	30	30	30	30	30	30	30	30
Total	**7,736**	**7,786**	**7,785**	**7,775**	**7,774**	**7,797**	**7,869**	**7,945**	**7,958**	**8,010**	**8,095**
Annual change		*50*	*-1*	*-10*	*-1*	*23*	*72*	*76*	*13*	*52*	*85*
		0.6%	*0.0%*	*-0.1%*	*0.0%*	*0.3%*	*0.9%*	*1.0%*	*0.2%*	*0.7%*	*1.1%*
K-5	3,430	3,425	3,454	3,502	3,499	3,493	3,491	3,502	3,544	3,590	3,634
6-8	1,740	1,755	1,780	1,794	1,794	1,835	1,914	1,906	1,871	1,838	1,824
9-12*	2,566	2,606	2,551	2,479	2,481	2,469	2,464	2,537	2,543	2,582	2,637

	2013-14 to 2018-19		2018-19 to 2023-24		2013-14 to 2023-24	
	5 yr. chg.	**Pct.**	**5 yr. chg.**	**Pct.**	**10 yr. chg.**	**Pct.**
K-5	63	*1.8%*	141	*4.0%*	204	*5.9%*
6-8	95	*5.5%*	-11	*-0.6%*	84	*4.8%*
9-12	-97	*-3.8%*	168	*6.8%*	71	*2.8%*
Total	**61**	***0.8%***	**298**	***3.8%***	**359**	***4.6%***

Population Research Center, Portland State University, May 2014.

Table A5

Oregon City S.D., High Range Enrollment Forecasts, 2014-15 to 2023-24

	Actual		Forecast								
Grade	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
K	554	551	551	555	566	583	586	604	614	621	626
1	577	587	584	572	573	594	611	609	630	640	645
2	587	604	612	608	595	596	617	630	629	651	660
3	540	605	620	627	623	610	610	627	642	641	662
4	567	543	607	621	628	624	610	606	624	639	637
5	605	581	555	619	634	641	636	616	612	630	645
6	554	633	606	578	645	660	667	653	633	629	647
7	570	556	633	605	577	644	658	658	645	625	621
8	616	582	567	644	616	587	655	662	663	650	629
9	653	639	602	586	666	637	606	673	680	681	668
10	649	655	640	602	586	666	637	604	671	678	679
11	641	644	649	634	596	580	659	629	596	663	669
12	593	656	658	662	647	608	592	670	640	607	674
US	30	30	30	30	30	30	30	30	30	30	30
Total	**7,736**	**7,866**	**7,914**	**7,943**	**7,982**	**8,060**	**8,174**	**8,271**	**8,309**	**8,385**	**8,492**
Annual change		*130*	*48*	*29*	*39*	*78*	*114*	*97*	*38*	*76*	*107*
		1.7%	*0.6%*	*0.4%*	*0.5%*	*1.0%*	*1.4%*	*1.2%*	*0.5%*	*0.9%*	*1.3%*
K-5	3,430	3,471	3,529	3,602	3,619	3,648	3,670	3,692	3,751	3,822	3,875
6-8	1,740	1,771	1,806	1,827	1,838	1,891	1,980	1,973	1,941	1,904	1,897
9-12*	2,566	2,624	2,579	2,514	2,525	2,521	2,524	2,606	2,617	2,659	2,720

	2013-14 to 2018-19		**2018-19 to 2023-24**		**2013-14 to 2023-24**	
	5 yr. chg.	**Pct.**	**5 yr. chg.**	**Pct.**	**10 yr. chg.**	**Pct.**
K-5	218	*6.4%*	227	*6.2%*	445	*13.0%*
6-8	151	*8.7%*	6	*0.3%*	157	*9.0%*
9-12	-45	*-1.8%*	199	*7.9%*	154	*6.0%*
Total	**324**	***4.2%***	**432**	***5.4%***	**756**	***9.8%***

Population Research Center, Portland State University, May 2014.

CITY OF OREGON CITY, CLACKAMAS COUNTY

MEYERS RD at S BEAVERCREEK RD, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 2

SER# / INVEST	S P E D	A L C	U G S	R H L	S C K	W O R	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
01098	N	N	N				03/23/2012	16	S BEAVERCREEK RD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE							FR	0	MEYERS RD	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000	00
							10A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	F	UNK		026	000	07
																								UNK				
																02	NONE 0	STOP										
																	PRVTE	NW-SE									011	00
																	PSNGR CAR		01	DRVR	NONE	57	M	OR-Y		000	000	00
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NW-SE									011	00
																	PSNGR CAR		02	PSNG	INJC	46	F			000	000	00
00131	N	N	N				01/11/2013	16	S BEAVERCREEK RD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE							FR	0	MEYERS RD	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000	00
							10A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	68	F	OR-Y		026	000	07
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NW-SE									011	00
																	PSNGR CAR		01	DRVR	INJC	55	M	OR-Y		000	000	00
																								OR<25				

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

MEYERS RD at HIGH SCHOOL AVE, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

No Rows to Display

SER# / INVEST	S P E D	A L C	U G S	C H L	O R K	W	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF OREGON CITY, CLACKAMAS COUNTY

GLEN OAK RD at S BEAVERCREEK RD, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 6

SER# / INVEST	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES / EX	PED LOC	ERROR	ACT EVENT	CAUSE
03107	N	N	N			08/22/2013	17	S BEAVERCREEK RD	INTER	3-LEG	N	N	CLR	O-1STOP	01	NONE 0	BACK										10
NONE						TH	0	GLEN OAK RD	SW		STOP SIGN	N	DRY	BACK		PRVTE	NE-SW									000	00
						1P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	76	F	OR-Y OR<25		011	000	10
															02	NONE 0	STOP										
																PRVTE	SW-NE									011	00
																PSNGR CAR		01	DRVR	NONE	00	M	UNK OR<25		000	000	00
03778	N	N	N	N	N	10/10/2011	17	S BEAVERCREEK RD	INTER	3-LEG	N	N	CLD	ANGL-OTH	01	NONE 0	TURN-L										08
CITY						MO	0	GLEN OAK RD	W		L-GRN-SIG	N	DRY	TURN		PRVTE	SE-W									000	00
						3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	78	F	OR-Y OR<25		002,007	000	08
															02	NONE 0	STOP										
																PRVTE	W -E									012	00
																PSNGR CAR		01	DRVR	NONE	16	F	OR-Y OR<25		000	000	00
00070	N	N	N			01/02/2009	16	S BEAVERCREEK RD	INTER	3-LEG	N	N	CLD	ANGL-OTH	01	NONE 0	TURN-L										02
CITY						FR	0	GLEN OAK RD	CN		STOP SIGN	N	WET	TURN		PRVTE	W -NW									000	00
						2P			04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	56	M	OR-Y OR<25		028	000	02
															02	NONE 0	STOP										
																PRVTE	SE-NW									012	00
																PSNGR CAR		01	DRVR	NONE	43	F	OR-Y OR<25		000	000	00
01167	N	N	N			03/29/2012	17	S BEAVERCREEK RD	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT										02
NO RPT						TH	0	GLEN OAK RD	CN		STOP SIGN	N	WET	TURN		PRVTE	NW-SE									000	00
						8A			03	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	INJC	18	M	OR-Y OR<25		000	000	00
															02	NONE 0	TURN-L										
																PRVTE	SW-NW									015	00
																PSNGR CAR		01	DRVR	NONE	38	M	OR-Y OR<25		028	000	02
00958	N	N	N	N	N	03/20/2013	16	S BEAVERCREEK RD	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT										02
CITY						WE	0	GLEN OAK RD	CN		STOP SIGN	N	WET	TURN		PRVTE	NW-SE									000	00
						8A			03	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	INJC	37	M	OTH-Y N-RES		000	000	00
															02	NONE 0	TURN-L										
																PRVTE	SW-NW									015	00
																PSNGR CAR		01	DRVR	NONE	25	F	OR-Y OR<25		028	000	02
															02	NONE 0	TURN-L										
																PRVTE	SW-NW									015	00
																PSNGR CAR		02	PSNG	NO<5	04	F			000	000	00
01266	N	N	N			04/12/2013	16	S BEAVERCREEK RD	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										02
NO RPT						FR	0	GLEN OAK RD	CN		STOP SIGN	N	DRY	TURN		PRVTE	NW-SE									000	00
						2P			01	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	62	M	OR-Y OR<25		000	000	00
															02	NONE 0	TURN-L										
																PRVTE	SW-NW									015	00
																PSNGR CAR		01	DRVR	NONE	68	F	OR-Y		028	000	02

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CITY OF OREGON CITY, CLACKAMAS COUNTY

GLEN OAK RD at S BEAVERCREEK RD, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 6

SER# / INVEST	SPEED	ALCHL	DRUGS	CMV	HAZMT	DAY OF WEEK / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	SPCL USE / TRLR QTY / OWNER / V# / TYPE	MOVE / FROM / TO	PRTC / P# / TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
																					OR<25				

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CITY OF OREGON CITY, CLACKAMAS COUNTY

GLEN OAK RD at HIGH SCHOOL AVE, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 2

SER# / INVEST	S P E D	A L C	U G S	R H L	S C K	W O R	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04849	N	N	N				12/17/2010	19	HIGH SCHOOL AVE	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE	STRGHT											07
NONE							FR	0	GLEN OAK RD	N		STOP SIGN	N	DRY	REAR		PRVTE	N -S									000		00
							7A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK		026	000		07
																								UNK				
																02	NONE	STOP										
																	PRVTE	N -S									011	00
																	PSNGR CAR		01	DRVR	NONE	36	F	OR-Y		000	000		00
																								OR<25				
00623	N	N	N				02/22/2013	17	HIGH SCHOOL AVE	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
NONE							FR	0	GLEN OAK RD	N		STOP SIGN	N	WET	REAR		PRVTE	N -S									000		00
							3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	M	OR-Y		026	000		07
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	N -S									011	00
																	PSNGR CAR		01	DRVR	INJB	18	F	OR-Y		000	000		00
																								OR<25				

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CITY OF OREGON CITY, CLACKAMAS COUNTY

GLEN OAK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 5

SER# / INVEST	SPEED	ALCOHOL	DRUGS	SCHOOL	WORK	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES / OR<25	PED LOC	ERROR	ACT	EVENT	CAUSE
00486	N	Y	N	N	N	02/07/2010	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	32,07
STATE						SU		GLEN OAK RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000		00
						6P			06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		052,026	000		32,07
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	SE-NW									011	013	00
																PSNGR CAR		01	DRVR	INJC	25	M	OR-Y		000	000		00
																							OR<25					
															03	NONE 0	STOP											
																PRVTE	SE-NW									022		00
																PSNGR CAR		01	DRVR	NONE	19	F	OR-Y		000	000		00
																							OR<25					
01081	N	N	N			03/31/2013	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						SU		GLEN OAK RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000		00
						12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	51	F	OR-Y		026	000		07
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	SE-NW									011		00
																PSNGR CAR		01	DRVR	INJC	67	F	OR-Y		000	000		00
																							OR<25					
02545	Y	Y	N	N	N	07/22/2010	14	CASCADE HY SOUTH	INTER	CROSS	N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT										040	01
STATE						TH		GLEN OAK RD	NW		TRF SIGNAL	N	DRY	FIX		PRVTE	SE-NW									000	040	00
						11P			05	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	31	F	SUSP		047,080,081	000		01
																							OR<25					
02301	N	N	N			06/13/2011	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						MO		GLEN OAK RD	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000		00
						6P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	49	M	OR-Y		026	000		07
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	NW-SE									011		00
																PSNGR CAR		01	DRVR	INJC	62	F	OR-Y		000	000		00
																							OR<25					
00191	N	N	N			01/17/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07,26
NONE						TH		GLEN OAK RD	CN		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
						5P			03	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK		026	000		07
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	W -SE									013		00
																PSNGR CAR		01	DRVR	NONE	18	F	OR-Y		000	000		26
																							OR<25					

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CITY OF OREGON CITY, CLACKAMAS COUNTY

MEYERS RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 21

SER# / INVEST	SPEED	ALCOHOL	DRUGS	SCHL ZONE	WORK ZONE	DAY / TIME	CLASS / DIST / FROM	STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES / EJECT	PED LOC	ERROR	ACT EVENT	CAUSE
02508	N	N	N	N	N	07/10/2009	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
STATE						FR		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00
						5P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	59	F	OR-Y OR<25		026,043	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	20	M	OR-Y OR<25		000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		02	PSNG	INJC	46	F			000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		03	PSNG	INJC	17	F			000	000	00
03154	N	N	N			08/21/2009	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						FR		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00
						2P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	21	M	OR-Y OR<25		000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		02	PSNG	INJC	20	F			000	000	00
03106	N	N	N			09/01/2010	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						WE		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00
						6P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	49	M	OR-Y OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	33	M	OR-Y OR<25		000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		02	PSNG	INJC	33	F			000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		03	PSNG	NO<5	04	F			000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		04	PSNG	NO<5	02	M			000	000	00
03874	N	N	N			09/29/2010	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						WE		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00
						6P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y		026	000	07

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CITY OF OREGON CITY, CLACKAMAS COUNTY

MEYERS RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 21

SER# / INVEST	S P E L D	A L C	D R S L	S W C H	O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	36	M	OR-Y		000	000	00
																							OR<25				
04005	N	N	N			10/31/2010	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						SU		MEYERS RD	SE		L-TURN REF	N	DRY	REAR		PRVTE	SE-NW									000	00
						12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	37	M	OR-Y		026	000	07
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	SE-NW									012	00
																PSNGR CAR		01	DRVR	INJC	29	F	OR-Y		000	000	00
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	SE-NW									012	00
																PSNGR CAR		02	PSNG	NO<5	04	F			000	000	00
04318	N	N	N			11/16/2010	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										27
NONE						TU		MEYERS RD	SE		TRF SIGNAL	N	WET	REAR		PRVTE	SE-NW									000	00
						6P			06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y		016	000	27
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																							UNK				
02526	N	N	N			07/16/2011	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										07
NONE						SA		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00
						4P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y		042	000	07
																							UNK				
															02	NONE 0	STRGHT										
																PRVTE	SE-NW									000	00
																PSNGR CAR		01	DRVR	NONE	33	F	OR-Y		000	000	00
																							OR<25				
02681	N	N	N	N	N	07/27/2011	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY						WE		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00
						9A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	49	M	OR-Y		026	000	07
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	NONE	47	F	OR-Y		000	000	00
																							OR<25				
04126	Y	N	Y	N	N	11/03/2011	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										32,01
STATE						TH		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00
						12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	60	F	OR-Y		052,047,026	000	32,01
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	SE-NW									012	00
																PSNGR CAR		01	DRVR	NONE	34	F	OR-Y		000	000	00
																							OR<25				
04218	N	N	N			11/09/2011	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						WE		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000	00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

MEYERS RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 21

SER# / INVEST	S P E D	A L C	R U G S	S C H L	W O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
						2P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y OR<25		026	000		07
															02	NONE 0	STOP											
																PRVTE	SE-NW									011		00
																PSNGR CAR		01	DRVR	NONE	44	F	OR-Y OR<25		000	000		00
02133	N	N	N			06/13/2012	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						WE		MEYERS RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000		00
						5P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	M	OR-Y OR<25		026	000		07
															02	NONE 0	STOP											
																PRVTE	SE-NW									011		00
																PSNGR CAR		01	DRVR	INJC	37	F	OR-Y OR<25		000	000		00
03450	N	N	N			09/16/2012	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						SU		MEYERS RD	SE		UNKNOWN	N	DRY	REAR		PRVTE	SE-NW									000		00
						6P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	72	F	OR-Y OR<25		026	000		07
															02	NONE 0	STOP											
																PRVTE	SE-NW									011		00
																PSNGR CAR		01	DRVR	NONE	37	F	OR-Y OR<25		000	000		00
03069	N	N	N	N	N	08/18/2010	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY						WE		MEYERS RD	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW-NE									000		00
						8P			06	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		026	000		07
															02	NONE 0	STOP											
																PRVTE	SW-NE									011		00
																PSNGR CAR		01	DRVR	NONE	57	M	OR-Y OR<25		000	000		00
00146	N	N	N			01/12/2012	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	07
NONE						TH	0	MEYERS RD	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW-NE									000		00
						11A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y OR<25		026	000		07
															02	NONE 0	STOP											
																PRVTE	SW-NE									011	004	00
																PSNGR CAR		01	DRVR	NONE	48	M	OR-Y OR<25		000	000		00
00406	N	N	N			02/04/2013	17	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
NONE						MO	0	MEYERS RD	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW-NE									000		00
						5P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	M	OR-Y OR<25		026	000		07
															02	NONE 0	STOP											
																PRVTE	SW-NE									011	013	00
																PSNGR CAR		01	DRVR	INJB	62	M	OR-Y OR<25		000	000		00
															03	NONE 0	STOP											
																PRVTE	SW-NE									022		00
																PSNGR CAR		01	DRVR	NONE	44	F	OR-Y OR<25		000	000		00
00281	N	N	N			01/23/2009	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,07

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CITY OF OREGON CITY, CLACKAMAS COUNTY

MEYERS RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 21

SER# / INVEST	S P E D / A L D	U C S	O H L	W R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
NONE					FR		MEYERS RD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E										000	00
					2P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	32	F	OR-Y OR<25		016,026	000	27,07
														02	NONE 0	STOP										
															PRVTE	W -E									011	00
															PSNGR CAR		01	DRVR	INJC	28	F	OR-Y OR<25		000	000	00
01597	N	N	N		04/25/2011	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE					MO		MEYERS RD	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000	00
					UNK			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	44	F	OR-Y OR<25		026	000	07
														02	UNKN 0	STOP										
															UNKN	NW-SE									011	00
															UNKNOWN		01	DRVR	NONE	00	Unk	UNK UNK		000	000	00
01681	N	N	N	N	05/15/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
CITY					WE		MEYERS RD	NW		TRF SIGNAL	N	WET	REAR		PRVTE	NW-SE									000	00
					11A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	59	F	OTH-Y OR<25		026	000	07
														02	NONE 0	STOP										
															PRVTE	NW-SE									011	00
															PSNGR CAR		01	DRVR	INJC	19	F	OR-Y OR<25		000	000	00
														02	NONE 0	STOP										
															PRVTE	NW-SE									011	00
															PSNGR CAR		02	PSNG	INJC	23	F			000	000	00
00155	N	N	N	N	01/13/2011	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 0	TURN-L											07
STATE					TH		MEYERS RD	CN		TRF SIGNAL	N	WET	REAR		PRVTE	SW-NW									000	00
					12P			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	F	OR-Y OR<25		043,026	000	07
														02	NONE 0	STOP										
															PRVTE	SW-NW									013	00
															PSNGR CAR		01	DRVR	INJC	25	M	OR-Y OR<25		000	000	00
81696	N	N	N		02/16/2012	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT											04
NO RPT					TH		MEYERS RD	CN		TRF SIGNAL	N	WET	TURN		PRVTE	N -S									000	00
					10P			03	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y OR<25		020	000	04
														02	NONE 0	TURN-L										
															PRVTE	W -N									000	00
															PSNGR CAR		01	DRVR	NONE	58	M	OR-Y OR<25		000	000	00
02761	N	N	N	N	07/30/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	O-1TURN	01	NONE 0	STRGHT											04
CITY					TU		MEYERS RD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	NW-SE									000	00
					11P			03	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	51	F	OR-Y OR<25		020	000	04
														02	NONE 0	TURN-L										
															PRVTE	SE-SW									000	00
															PSNGR CAR		01	DRVR	NONE	19	F	OTH-Y OR<25		000	000	00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

CASCADE HY SOUTH at MOLALLA AVE, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 25

SER# / INVEST	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
03386	N	N	N	N	N	09/20/2010	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLD	BIKE	01	NONE 0	STRGHT										14,19
STATE						MO		MOLALLA AVE	N		TRF SIGNAL	N	WET	ANGL		PRVTE	N -S									000	00
						6A			06	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	NONE	42	M	OR-Y OR<25		000	000	00
																	- STRGHT E W	01	BIKE	INJB	32	F		I XWLK	020	035	14,19
00863	N	N	N			03/11/2011	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										27,07
NONE						FR		MOLALLA AVE	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						7A			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	17	F	OR-Y OR<25		016,026	000	27,07
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	INJC	56	F	OR-Y OR<25		000	000	00
03954	N	N	N	N	N	10/21/2011	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										27,07
CITY						FR		MOLALLA AVE	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	34	F	OR-Y OR<25		016,026	000	27,07
															02	NONE 1	STOP										
																PRVTE	N -S									011	00
																SEMI TOW		01	DRVR	NONE	41	M	OR-Y OR>25		000	000	00
04071	N	N	N			10/31/2011	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										27,07
NONE						MO		MOLALLA AVE	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	32	M	OR-Y OR<25		016,026	038	27,07
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	INJC	21	F	OR-Y OR<25		000	000	00
03885	N	N	N			10/17/2012	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						WE		MOLALLA AVE	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						2P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	56	M	OR-Y OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	NONE	57	F	OR-Y OR<25		000	000	00
01196	N	N	N			04/08/2010	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						TH		MOLALLA AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000	00
						8A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	36	F	OR-Y OR<25		016,026	000	07
															02	NONE 0	STOP										
																PRVTE	E -W									012	00
																PSNGR CAR		01	DRVR	INJC	54	M	OR-Y OR<25		000	000	00
00866	N	N	N			03/06/2009	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						FR		MOLALLA AVE	S		UNKNOWN	N	DRY	REAR		PRVTE	N -S									000	00

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

CASCADE HY SOUTH at MOLALLA AVE, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 25

SER# / INVEST	S P E D / A L C / U G S / C H L / O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
		8P			06	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK OR<25		026	000	07
											02	NONE 0	STOP										
												PRVTE	N -S									011	00
												PSNGR CAR		01	DRVR	NONE	25	M	OR-Y OR<25		000	000	00
02497	N N N	07/07/2009	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE		TU		MOLALLA AVE	S		UNKNOWN	N	DRY	REAR		PRVTE	S -N									000	00
		6A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	46	M	OR-Y OR<25		026	000	07
											02	NONE 0	STOP										
												PRVTE	S -N									011	00
												PSNGR CAR		01	DRVR	NONE	59	M	OR-Y OR<25		000	000	00
00405	N N N	02/05/2010	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										27
COUNTY		FR		MOLALLA AVE	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
		3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y OR<25		024,016,026	000	27
											02	NONE 0	STOP										
												PRVTE	S -N									011	00
												PSNGR CAR		01	DRVR	INJC	56	F	OR-Y OR<25		000	000	00
											02	NONE 0	STOP										
												PRVTE	S -N									011	00
												PSNGR CAR		02	PSNG	INJC	11	F			000	000	00
00267	Y N N N N	01/20/2012	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										01,07
CITY		FR		MOLALLA AVE	S		L-GRN-SIG	N	DRY	REAR		PRVTE	S -N									000	00
		4P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	16	M	OR-Y OR<25		047,026	000	01,07
											02	NONE 0	STOP										
												PRVTE	S -N									012	00
												PSNGR CAR		01	DRVR	NONE	70	F	OR-Y OR<25		000	000	00
04514	N N N	11/07/2013	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE		TH		MOLALLA AVE	S		TRF SIGNAL	N	DRY	REAR		UNKN	S -N									000	00
		3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y UNK		026	000	07
											02	NONE 0	STOP										
												PRVTE	S -N									011	00
												PSNGR CAR		01	DRVR	INJC	55	M	OR-Y OR<25		000	000	00
04438	N N N	11/15/2013	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	O-OTHER	01	NONE 0	TURN-L										02
NONE		FR		MOLALLA AVE	W		TRF SIGNAL	N	DRY	TURN		PRVTE	S -W									000	00
		9P			05	1		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	18	F	OR-Y OR<25		028	000	02
											02	NONE 0	TURN-R										
												PRVTE	N -W									000	00
												PSNGR CAR		01	DRVR	NONE	70	M	OR-Y OR<25		000	000	00
00361	Y N N N N	01/30/2013	14	CASCADE HY SOUTH	INTER	CROSS	N	N	RAIN	ANGL-STP	01	NONE 0	STRGHT										04,01

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

CASCADE HY SOUTH at MOLALLA AVE, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 25

SER# / INVEST	S P E D / A L C	R S W U C O H R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
CITY			WE		MOLALLA AVE	NW		TRF SIGNAL	N	WET	ANGL		UNKN	N -S									001	00
			8P			06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		047,020	000	04,01
																					UNK			
												02	NONE 0	STOP										
													PRVTE	W -E									012	00
													PSNGR CAR		01	DRVR	NONE	45	M	OR-Y		000	000	00
																					OR<25			
00559	N N N		02/09/2009	16	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE			MO	0	MOLALLA AVE	NW		UNKNOWN	N	DRY	REAR		PRVTE	SE-NW									000	00
			7A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	18	M	OR-Y		026	000	07
																					OR<25			
												02	NONE 0	STOP										
													PRVTE	SE-NW									011	00
													PSNGR CAR		01	DRVR	NONE	00	M	OR-Y		000	000	00
																					UNK			
01798	N N N		05/29/2010	14	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE			SA	0	MOLALLA AVE	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000	00
			1P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	71	M	OR-Y		026	000	07
																					OR<25			
												02	NONE 0	STOP										
													PRVTE	NW-SE									011	00
													PSNGR CAR		01	DRVR	NONE	62	M	OR-Y		000	000	00
																					OR<25			
04782	N N N		12/12/2011	16	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE			MO	0	MOLALLA AVE	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000	00
			6P			06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK		026	000	07
																					UNK			
												02	NONE 0	STOP										
													PRVTE	NW-SE									011	00
													PSNGR CAR		01	DRVR	NONE	19	M	OR-Y		000	000	00
																					OR<25			
01543	Y N N		04/26/2012	16	CASCADE HY SOUTH	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										01,07
NONE			TH	0	MOLALLA AVE	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000	00
			12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	51	M	OR-Y		047,026	000	01,07
																					OR<25			
												02	NONE 0	STOP										
													PRVTE	NW-SE									011	00
													PSNGR CAR		01	DRVR	INJC	86	M	OR-Y		000	000	00
																					OR<25			
05111	N N N		12/22/2012	16	CASCADE HY SOUTH	INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 0	STRGHT										07
NONE			SA	0	MOLALLA AVE	NW		TRF SIGNAL	N	WET	REAR		UNKN	NW-SE									000	00
			4P			06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	21	M	OR-Y		026	000	07
																					UNK			
												02	NONE 0	STOP										
													PRVTE	NW-SE									011	00
													PSNGR CAR		01	DRVR	INJC	37	F	OTH-Y		000	000	00
																					OR<25			
01434	N N N N N		05/20/2010	14	CASCADE HY SOUTH	INTER	CROSS	N	N	RAIN	O-1TURN	01	NONE 0	STRGHT										04
STATE			TH		MOLALLA AVE	CN		TRF SIGNAL	N	WET	TURN		PRVTE	S -N									000	00
			4P			04	0		Y	DAY	FAT		PSNGR CAR		01	DRVR	NONE	38	F	OR-Y		020	000	04
																					OR<25			

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CITY OF OREGON CITY, CLACKAMAS COUNTY

CASCADE HY SOUTH at MOLALLA AVE, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 25

SER# / INVEST	S P E D	A L C	D R S	S W L	C O K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E	01	DRVR	NONE	83 M	OR-Y OR<25		000	019 000		00 00
															02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E	02	PSNG	KILL	76 F			000	019 000		00 00
03264 NO RPT	N	N	N	N	N	08/10/2011 WE 10P	14	CASCADE HY SOUTH MOLALLA AVE	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DLIT	O-1TURN TURN INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT N -S	01	DRVR	INJB	30 M	OR-Y OR<25		097	000 000		04 00 00
															02	NONE 0 PRVTE PSNGR CAR	TURN-L S -NW	01	DRVR	NONE	66 M	OR-Y OR<25		097	000 000		00 00
02047 CITY	N	N	N	N	N	06/05/2012 TU 3P	14	CASCADE HY SOUTH MOLALLA AVE	INTER CN 04	CROSS 0	N TRF SIGNAL	N N N	CLD DRY DAY	S-1TURN TURN PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT S -N	01	DRVR	NONE	24 M	SUSP OR<25		043,026	000 000		07 00 07
															02	NONE 0 PRVTE PSNGR CAR	TURN-R S -E	01	DRVR	NONE	65 M	OR-Y OR<25		000	000 000		00 00
04077 STATE	N	N	N	N	N	10/30/2012 TU 11A	14	CASCADE HY SOUTH MOLALLA AVE	INTER CN 02	CROSS 0	N TRF SIGNAL	N N N	RAIN WET DAY	ANGL-OTH TURN INJ	01	NONE 1 PRVTE SEMI TOW	STRGHT S -N	01	DRVR	NONE	36 M	OR-Y OR<25		000	000 000		02 00 00
															02	NONE 0 PRVTE PSNGR CAR	TURN-R E -N	01	DRVR	INJC	18 F	OR-Y OR<25		028	000 000		00 02
04414 CITY	Y	N	N	N	N	11/17/2012 SA 7P	14	CASCADE HY SOUTH MOLALLA AVE	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	RAIN WET DARK	NON-COLL OTH INJ	01	NONE 0 PRVTE MTRCYCLE	TURN-L N -E	01	DRVR	INJB	31 M	OR-Y OR<25		047	000 017	124 124	01 00 01
00299 OTHER	N	N	N			01/25/2013 FR 8P	14	CASCADE HY SOUTH MOLALLA AVE	INTER CN 04	CROSS 0	N TRF SIGNAL	N N N	FOG WET DLIT	ANGL-OTH ANGL PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT S -N	01	DRVR	NONE	70 F	OR-Y OR>25		020	000 000		04 00 04
															02	NONE 0 PUBLC OTH BUS	STRGHT W -E	01	DRVR	NONE	56 M	OTH-Y N-RES		000	000 000		00 00
03944 CITY	N	N	N	N	N	10/16/2013 WE 5P	14	CASCADE HY SOUTH MOLALLA AVE	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	O-1TURN TURN INJ	01	NONE 0 PRVTE PSNGR CAR	TURN-L S -W	01	DRVR	INJC	17 F	OR-Y OR<25		003	000 000	013 013	04 00 04
															02	NONE 0 PRVTE PSNGR CAR	TURN-R N -W	01	DRVR	NONE	30 F	OR-Y		000	000 000		00 00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

CASCADE HY SOUTH at MOLALLA AVE, City of Oregon City, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 25

SER# / INVEST	S P E D	A L C	U G S	C H L	O R K	W DAY TIME	CLASS DIST FROM	CITY STREET FIRST STREET SECOND STREET	RD CHAR DIRECT LOCTN	INT-TYPE (MEDIAN) (#LANES)	INT-REL TRAF- CONTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH COLL SVRTY	V#	SPCL USE TRLR QTY OWNER TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	A G E	S X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
															03	NONE 0	STOP						OR<25				
																PRVTE	W -E									022	00
																PSNGR CAR		01	DRVR	NONE	45	F	OR-Y		000	000	00
																							OR<25				

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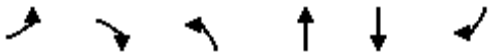


Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1689		1781	1881	1703	1524
Flt Permitted	1.00		0.43	1.00	0.95	1.00
Satd. Flow (perm)	1689		806	1881	1703	1524
Volume (vph)	158	173	117	636	289	25
Peak-hour factor, PHF	0.73	0.73	0.73	0.73	0.73	0.73
Adj. Flow (vph)	216	237	160	871	396	34
RTOR Reduction (vph)	47	0	0	0	0	24
Lane Group Flow (vph)	406	0	160	871	396	10
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	3%	3%	1%	1%	6%	6%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	36.1		36.1	36.1	19.2	19.2
Effective Green, g (s)	36.1		36.1	36.1	19.2	19.2
Actuated g/C Ratio	0.57		0.57	0.57	0.30	0.30
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	963		460	1073	517	462
v/s Ratio Prot	0.24			c0.46	c0.23	
v/s Ratio Perm			0.20			0.01
v/c Ratio	0.42		0.35	0.81	0.77	0.02
Uniform Delay, d1	7.7		7.3	10.9	20.0	15.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		0.5	4.8	6.7	0.0
Delay (s)	8.0		7.7	15.6	26.7	15.5
Level of Service	A		A	B	C	B
Approach Delay (s)	8.0			14.4	25.8	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	63.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1786			1793	1599	1703	1788		1736	1816	
Flt Permitted		0.81			0.78	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1493			1460	1599	1703	1788		1736	1816	
Volume (vph)	33	12	6	15	2	296	1	848	15	161	378	16
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	37	13	7	17	2	333	1	953	17	181	425	18
RTOR Reduction (vph)	0	6	0	0	0	207	0	1	0	0	1	0
Lane Group Flow (vph)	0	51	0	0	19	126	1	969	0	181	442	0
Confl. Peds. (#/hr)			2	2								
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.0			11.0	11.0	0.8	54.4		10.8	64.4	
Effective Green, g (s)		11.0			11.0	11.0	0.8	54.4		10.8	64.4	
Actuated g/C Ratio		0.12			0.12	0.12	0.01	0.62		0.12	0.73	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		186			182	199	15	1103		213	1326	
v/s Ratio Prot							0.00	c0.54		c0.10	0.24	
v/s Ratio Perm		0.03			0.01	c0.08						
v/c Ratio		0.27			0.10	0.64	0.07	0.88		0.85	0.33	
Uniform Delay, d1		35.0			34.2	36.7	43.3	14.1		37.9	4.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			0.3	6.5	1.9	10.0		25.8	0.7	
Delay (s)		35.8			34.5	43.2	45.2	24.1		63.7	4.9	
Level of Service		D			C	D	D	C		E	A	
Approach Delay (s)		35.8			42.7			24.2			22.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1549	1736	1827	3343	1464
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1549	1736	1827	3343	1464
Volume (vph)	231	198	147	1035	373	66
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	246	211	156	1101	397	70
RTOR Reduction (vph)	0	174	0	0	0	31
Lane Group Flow (vph)	246	37	156	1101	397	39
Confl. Peds. (#/hr)	2	6				
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	2%	2%	4%	4%	8%	8%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	15.4	15.4	12.3	65.0	48.7	48.7
Effective Green, g (s)	15.4	15.4	12.3	65.0	48.7	48.7
Actuated g/C Ratio	0.17	0.17	0.14	0.74	0.55	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	308	270	242	1343	1842	807
v/s Ratio Prot	c0.14		0.09	c0.60	0.12	
v/s Ratio Perm		0.02				0.03
v/c Ratio	0.80	0.14	0.64	0.82	0.22	0.05
Uniform Delay, d1	35.0	30.9	36.0	7.8	10.1	9.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.4	0.2	5.8	5.7	0.3	0.1
Delay (s)	48.5	31.1	41.8	13.5	10.4	9.3
Level of Service	D	C	D	B	B	A
Approach Delay (s)	40.4			17.0	10.2	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

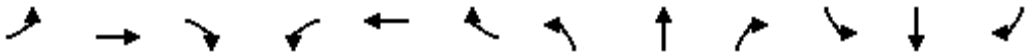
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1573	1641	1727	1435	1736	3471	1553	1703	3406	1524
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	1881	1573	1641	1727	1435	1736	3471	1553	1703	3406	1524
Volume (vph)	87	148	115	18	48	31	240	960	115	182	331	134
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	93	157	122	19	51	33	255	1021	122	194	352	143
RTOR Reduction (vph)	0	0	104	0	0	30	0	0	38	0	0	86
Lane Group Flow (vph)	93	157	18	19	51	3	255	1021	84	194	352	57
Confl. Peds. (#/hr)			3			8						
Heavy Vehicles (%)	1%	1%	1%	10%	10%	10%	4%	4%	4%	6%	6%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.9	11.0	11.0	2.6	5.7	5.7	14.6	32.2	32.2	11.4	29.0	29.0
Effective Green, g (s)	7.9	11.0	11.0	2.6	5.7	5.7	14.6	32.2	32.2	11.4	29.0	29.0
Actuated g/C Ratio	0.11	0.15	0.15	0.04	0.08	0.08	0.20	0.44	0.44	0.16	0.40	0.40
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	193	283	236	58	134	112	346	1527	683	265	1349	604
v/s Ratio Prot	0.05	c0.08		0.01	c0.03		c0.15	c0.29		0.11	0.10	
v/s Ratio Perm			0.01			0.00			0.05			0.04
v/c Ratio	0.48	0.55	0.08	0.33	0.38	0.02	0.74	0.67	0.12	0.73	0.26	0.09
Uniform Delay, d1	30.7	28.8	26.7	34.4	32.1	31.2	27.5	16.3	12.1	29.4	14.9	13.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	2.4	0.1	3.3	1.8	0.1	8.0	2.3	0.4	10.0	0.5	0.3
Delay (s)	32.6	31.2	26.9	37.7	33.9	31.3	35.4	18.6	12.5	39.4	15.4	14.2
Level of Service	C	C	C	D	C	C	D	B	B	D	B	B
Approach Delay (s)		30.1			33.8			21.1			21.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1837		1787	1881	1787	1599
Flt Permitted	1.00		0.17	1.00	0.95	1.00
Satd. Flow (perm)	1837		326	1881	1787	1599
Volume (vph)	826	143	46	285	139	14
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	879	152	49	303	148	15
RTOR Reduction (vph)	7	0	0	0	0	13
Lane Group Flow (vph)	1024	0	49	303	148	2
Confl. Peds. (#/hr)		2	2			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	52.8		52.8	52.8	11.0	11.0
Effective Green, g (s)	52.8		52.8	52.8	11.0	11.0
Actuated g/C Ratio	0.74		0.74	0.74	0.15	0.15
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1351		240	1383	274	245
v/s Ratio Prot	c0.56			0.16	c0.08	
v/s Ratio Perm			0.15			0.00
v/c Ratio	0.76		0.20	0.22	0.54	0.01
Uniform Delay, d1	5.7		3.0	3.0	28.1	25.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5		0.4	0.1	2.2	0.0
Delay (s)	8.2		3.4	3.1	30.2	25.8
Level of Service	A		A	A	C	C
Approach Delay (s)	8.2			3.1	29.8	
Approach LOS	A			A	C	

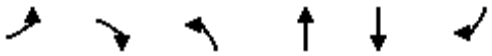
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.96			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1769			1786	1583	1736	1816		1770	1851	
Flt Permitted		0.75			0.75	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1379			1405	1583	1736	1816		1770	1851	
Volume (vph)	23	0	4	18	3	189	3	538	23	228	1030	45
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	24	0	4	19	3	197	3	560	24	238	1073	47
RTOR Reduction (vph)	0	4	0	0	0	179	0	1	0	0	1	0
Lane Group Flow (vph)	0	24	0	0	22	18	3	583	0	238	1119	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		7.5			7.5	7.5	0.7	46.1		14.9	60.3	
Effective Green, g (s)		7.5			7.5	7.5	0.7	46.1		14.9	60.3	
Actuated g/C Ratio		0.09			0.09	0.09	0.01	0.57		0.19	0.75	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		128			131	147	15	1040		328	1387	
v/s Ratio Prot							0.00	0.32		c0.13	c0.60	
v/s Ratio Perm		c0.02			0.02	0.01						
v/c Ratio		0.19			0.17	0.12	0.20	0.56		0.73	0.81	
Uniform Delay, d1		33.7			33.6	33.5	39.6	10.8		30.9	6.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			0.6	0.4	6.5	2.2		7.8	5.1	
Delay (s)		34.4			34.2	33.9	46.1	13.0		38.6	11.5	
Level of Service		C			C	C	D	B		D	B	
Approach Delay (s)		34.4			33.9			13.2			16.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1565	1752	1845	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1787	1565	1752	1845	3539	1583
Volume (vph)	194	262	150	634	1063	205
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	204	276	158	667	1119	216
RTOR Reduction (vph)	0	228	0	0	0	101
Lane Group Flow (vph)	204	48	158	667	1119	115
Confl. Peds. (#/hr)	1	6				
Heavy Vehicles (%)	1%	1%	3%	3%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	14.6	14.6	12.6	61.2	44.6	44.6
Effective Green, g (s)	14.6	14.6	12.6	61.2	44.6	44.6
Actuated g/C Ratio	0.17	0.17	0.15	0.73	0.53	0.53
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	311	273	263	1347	1884	843
v/s Ratio Prot	c0.11		c0.09	0.36	c0.32	
v/s Ratio Perm		0.03				0.07
v/c Ratio	0.66	0.18	0.60	0.50	0.59	0.14
Uniform Delay, d1	32.3	29.5	33.3	4.8	13.4	9.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	0.3	3.8	1.3	1.4	0.3
Delay (s)	37.2	29.8	37.1	6.1	14.8	10.2
Level of Service	D	C	D	A	B	B
Approach Delay (s)	32.9			12.0	14.1	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1553	1719	1810	1538	1752	3505	1568	1770	3539	1550
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1553	1719	1810	1538	1752	3505	1568	1770	3539	1550
Volume (vph)	127	76	457	75	119	264	284	486	61	109	802	174
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	83	497	82	129	287	309	528	66	118	872	189
RTOR Reduction (vph)	0	0	388	0	0	248	0	0	37	0	0	125
Lane Group Flow (vph)	138	83	109	82	129	39	309	528	29	118	872	64
Confl. Peds. (#/hr)			5									
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.4	10.7	10.7	9.5	10.8	10.8	16.3	35.1	35.1	8.1	26.9	26.9
Effective Green, g (s)	9.4	10.7	10.7	9.5	10.8	10.8	16.3	35.1	35.1	8.1	26.9	26.9
Actuated g/C Ratio	0.12	0.13	0.13	0.12	0.14	0.14	0.21	0.44	0.44	0.10	0.34	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	210	251	209	206	246	209	360	1549	693	181	1199	525
v/s Ratio Prot	c0.08	0.04		0.05	c0.07		c0.18	0.15		0.07	c0.25	
v/s Ratio Perm			0.07			0.03			0.02			0.04
v/c Ratio	0.66	0.33	0.52	0.40	0.52	0.19	0.86	0.34	0.04	0.65	0.73	0.12
Uniform Delay, d1	33.5	31.1	32.0	32.3	31.9	30.4	30.4	14.6	12.6	34.3	23.0	18.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.2	0.8	2.2	1.3	2.0	0.4	18.0	0.6	0.1	8.1	3.9	0.5
Delay (s)	40.7	31.9	34.1	33.6	33.9	30.8	48.4	15.2	12.7	42.4	26.9	18.6
Level of Service	D	C	C	C	C	C	D	B	B	D	C	B
Approach Delay (s)		35.1			32.1			26.3			27.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	79.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1689		1781	1881	1703	1524
Flt Permitted	1.00		0.42	1.00	0.95	1.00
Satd. Flow (perm)	1689		779	1881	1703	1524
Volume (vph)	164	180	122	662	301	26
Peak-hour factor, PHF	0.73	0.73	0.73	0.73	0.73	0.73
Adj. Flow (vph)	225	247	167	907	412	36
RTOR Reduction (vph)	46	0	0	0	0	24
Lane Group Flow (vph)	426	0	167	907	412	12
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	3%	3%	1%	1%	6%	6%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	38.8		38.8	38.8	20.3	20.3
Effective Green, g (s)	38.8		38.8	38.8	20.3	20.3
Actuated g/C Ratio	0.58		0.58	0.58	0.30	0.30
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	977		450	1088	515	461
v/s Ratio Prot	0.25			c0.48	c0.24	
v/s Ratio Perm			0.21			0.01
v/c Ratio	0.44		0.37	0.83	0.80	0.03
Uniform Delay, d1	8.0		7.6	11.5	21.5	16.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		0.5	5.6	8.7	0.0
Delay (s)	8.3		8.1	17.1	30.2	16.5
Level of Service	A		A	B	C	B
Approach Delay (s)	8.3			15.7	29.1	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	67.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1786			1792	1599	1703	1788		1736	1816	
Flt Permitted		0.81			0.78	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1497			1465	1599	1703	1788		1736	1816	
Volume (vph)	34	12	6	16	2	308	1	882	16	168	393	17
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	38	13	7	18	2	346	1	991	18	189	442	19
RTOR Reduction (vph)	0	6	0	0	0	196	0	1	0	0	1	0
Lane Group Flow (vph)	0	52	0	0	20	150	1	1008	0	189	460	0
Confl. Peds. (#/hr)			2	2								
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.9			11.9	11.9	0.8	54.4		11.0	64.6	
Effective Green, g (s)		11.9			11.9	11.9	0.8	54.4		11.0	64.6	
Actuated g/C Ratio		0.13			0.13	0.13	0.01	0.61		0.12	0.72	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		199			195	213	15	1089		214	1314	
v/s Ratio Prot							0.00	c0.56		c0.11	0.25	
v/s Ratio Perm		0.03			0.01	c0.09						
v/c Ratio		0.26			0.10	0.70	0.07	0.93		0.88	0.35	
Uniform Delay, d1		34.8			34.0	37.0	43.9	15.6		38.5	4.6	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			0.2	10.1	1.9	14.4		32.0	0.7	
Delay (s)		35.5			34.2	47.1	45.8	30.1		70.5	5.3	
Level of Service		D			C	D	D	C		E	A	
Approach Delay (s)		35.5			46.4			30.1			24.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1549	1736	1827	3343	1464
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1549	1736	1827	3343	1464
Volume (vph)	240	206	153	1077	388	69
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	255	219	163	1146	413	73
RTOR Reduction (vph)	0	180	0	0	0	33
Lane Group Flow (vph)	255	39	163	1146	413	40
Confl. Peds. (#/hr)	2	6				
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	2%	2%	4%	4%	8%	8%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	15.7	15.7	12.5	65.0	48.5	48.5
Effective Green, g (s)	15.7	15.7	12.5	65.0	48.5	48.5
Actuated g/C Ratio	0.18	0.18	0.14	0.73	0.55	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	313	274	245	1339	1828	800
v/s Ratio Prot	c0.14		0.09	c0.63	0.12	
v/s Ratio Perm		0.03				0.03
v/c Ratio	0.81	0.14	0.67	0.86	0.23	0.05
Uniform Delay, d1	35.1	30.8	36.1	8.5	10.4	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.9	0.2	6.7	7.2	0.3	0.1
Delay (s)	50.0	31.0	42.8	15.7	10.7	9.5
Level of Service	D	C	D	B	B	A
Approach Delay (s)	41.3			19.1	10.5	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1573	1641	1727	1434	1736	3471	1553	1703	3406	1524
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	1881	1573	1641	1727	1434	1736	3471	1553	1703	3406	1524
Volume (vph)	91	154	120	19	50	32	250	999	120	189	344	139
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	97	164	128	20	53	34	266	1063	128	201	366	148
RTOR Reduction (vph)	0	0	106	0	0	30	0	0	39	0	0	93
Lane Group Flow (vph)	97	164	22	20	53	4	266	1063	89	201	366	56
Confl. Peds. (#/hr)			3			8						
Heavy Vehicles (%)	1%	1%	1%	10%	10%	10%	4%	4%	4%	6%	6%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.7	13.0	13.0	2.7	8.0	8.0	15.3	31.7	31.7	11.8	28.2	28.2
Effective Green, g (s)	7.7	13.0	13.0	2.7	8.0	8.0	15.3	31.7	31.7	11.8	28.2	28.2
Actuated g/C Ratio	0.10	0.17	0.17	0.04	0.11	0.11	0.20	0.42	0.42	0.16	0.37	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	183	325	272	59	184	153	353	1463	655	267	1277	572
v/s Ratio Prot	0.05	c0.09		0.01	c0.03		c0.15	c0.31		0.12	0.11	
v/s Ratio Perm			0.01			0.00			0.06			0.04
v/c Ratio	0.53	0.50	0.08	0.34	0.29	0.02	0.75	0.73	0.14	0.75	0.29	0.10
Uniform Delay, d1	32.0	28.2	26.1	35.4	31.0	30.1	28.2	18.1	13.3	30.3	16.5	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	1.2	0.1	3.4	0.9	0.1	8.8	3.2	0.4	11.4	0.6	0.3
Delay (s)	35.0	29.4	26.2	38.8	31.8	30.2	37.0	21.3	13.8	41.7	17.0	15.6
Level of Service	C	C	C	D	C	C	D	C	B	D	B	B
Approach Delay (s)		29.7			32.6			23.5			23.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

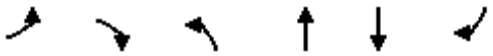
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1837		1787	1881	1787	1599
Flt Permitted	1.00		0.15	1.00	0.95	1.00
Satd. Flow (perm)	1837		290	1881	1787	1599
Volume (vph)	859	149	48	297	145	15
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	914	159	51	316	154	16
RTOR Reduction (vph)	7	0	0	0	0	14
Lane Group Flow (vph)	1066	0	51	316	154	2
Confl. Peds. (#/hr)		2	2			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	54.2		54.2	54.2	11.3	11.3
Effective Green, g (s)	54.2		54.2	54.2	11.3	11.3
Actuated g/C Ratio	0.74		0.74	0.74	0.15	0.15
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1355		214	1387	275	246
v/s Ratio Prot	c0.58			0.17	c0.09	
v/s Ratio Perm			0.18			0.00
v/c Ratio	0.79		0.24	0.23	0.56	0.01
Uniform Delay, d1	6.0		3.1	3.0	28.8	26.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1		0.6	0.1	2.6	0.0
Delay (s)	9.1		3.7	3.1	31.4	26.4
Level of Service	A		A	A	C	C
Approach Delay (s)	9.1			3.2	30.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	73.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.96			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770			1785	1583	1736	1816		1770	1851	
Flt Permitted		0.75			0.75	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1376			1400	1583	1736	1816		1770	1851	
Volume (vph)	24	0	4	19	3	197	3	560	24	237	1072	47
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	25	0	4	20	3	205	3	583	25	247	1117	49
RTOR Reduction (vph)	0	4	0	0	0	186	0	1	0	0	1	0
Lane Group Flow (vph)	0	25	0	0	23	19	3	607	0	247	1165	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		7.6			7.6	7.6	0.7	46.0		15.2	60.5	
Effective Green, g (s)		7.6			7.6	7.6	0.7	46.0		15.2	60.5	
Actuated g/C Ratio		0.09			0.09	0.09	0.01	0.57		0.19	0.75	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		129			132	149	15	1034		333	1386	
v/s Ratio Prot							0.00	0.33		c0.14	c0.63	
v/s Ratio Perm		c0.02			0.02	0.01						
v/c Ratio		0.20			0.17	0.13	0.20	0.59		0.74	0.84	
Uniform Delay, d1		33.8			33.7	33.6	39.8	11.3		30.9	6.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.8			0.6	0.4	6.5	2.4		8.6	6.3	
Delay (s)		34.5			34.3	34.0	46.3	13.7		39.6	13.2	
Level of Service		C			C	C	D	B		D	B	
Approach Delay (s)		34.5			34.0			13.9			17.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1565	1752	1845	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1787	1565	1752	1845	3539	1583
Volume (vph)	202	273	156	660	1106	213
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	213	287	164	695	1164	224
RTOR Reduction (vph)	0	236	0	0	0	106
Lane Group Flow (vph)	213	51	164	695	1164	118
Confl. Peds. (#/hr)	1	6				
Heavy Vehicles (%)	1%	1%	3%	3%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	14.9	14.9	12.8	61.1	44.3	44.3
Effective Green, g (s)	14.9	14.9	12.8	61.1	44.3	44.3
Actuated g/C Ratio	0.18	0.18	0.15	0.73	0.53	0.53
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	278	267	1342	1866	835
v/s Ratio Prot	c0.12		c0.09	0.38	c0.33	
v/s Ratio Perm		0.03				0.07
v/c Ratio	0.67	0.18	0.61	0.52	0.62	0.14
Uniform Delay, d1	32.3	29.4	33.3	5.0	14.0	10.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	0.3	4.2	1.4	1.6	0.4
Delay (s)	37.8	29.7	37.4	6.4	15.6	10.5
Level of Service	D	C	D	A	B	B
Approach Delay (s)	33.1			12.4	14.7	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1553	1719	1810	1538	1752	3505	1568	1770	3539	1550
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1553	1719	1810	1538	1752	3505	1568	1770	3539	1550
Volume (vph)	132	79	475	78	124	275	295	506	63	113	834	181
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	143	86	516	85	135	299	321	550	68	123	907	197
RTOR Reduction (vph)	0	0	382	0	0	257	0	0	38	0	0	132
Lane Group Flow (vph)	143	86	134	85	135	42	321	550	30	123	907	65
Confl. Peds. (#/hr)			5									
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.6	11.3	11.3	9.6	11.3	11.3	17.0	35.4	35.4	8.2	26.6	26.6
Effective Green, g (s)	9.6	11.3	11.3	9.6	11.3	11.3	17.0	35.4	35.4	8.2	26.6	26.6
Actuated g/C Ratio	0.12	0.14	0.14	0.12	0.14	0.14	0.21	0.44	0.44	0.10	0.33	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	211	262	218	205	254	216	370	1541	690	180	1169	512
v/s Ratio Prot	0.08	0.05		0.05	c0.07		c0.18	0.16		0.07	c0.26	
v/s Ratio Perm			c0.09			0.03			0.02			0.04
v/c Ratio	0.68	0.33	0.62	0.41	0.53	0.19	0.87	0.36	0.04	0.68	0.78	0.13
Uniform Delay, d1	34.0	31.2	32.6	32.8	32.1	30.6	30.7	15.0	12.9	34.9	24.3	18.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	0.7	5.1	1.4	2.1	0.4	18.8	0.6	0.1	10.2	5.1	0.5
Delay (s)	42.3	31.9	37.7	34.2	34.3	31.0	49.5	15.6	13.0	45.1	29.3	19.3
Level of Service	D	C	D	C	C	C	D	B	B	D	C	B
Approach Delay (s)		37.9			32.4			27.0			29.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

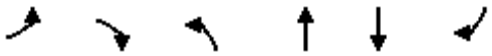


Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.98		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1685		1781	1881	1703	1524
Flt Permitted	1.00		0.40	1.00	0.95	1.00
Satd. Flow (perm)	1685		754	1881	1703	1524
Volume (vph)	164	191	125	662	310	29
Peak-hour factor, PHF	0.73	0.73	0.73	0.73	0.73	0.73
Adj. Flow (vph)	225	262	171	907	425	40
RTOR Reduction (vph)	49	0	0	0	0	26
Lane Group Flow (vph)	438	0	171	907	425	14
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	3%	3%	1%	1%	6%	6%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	39.1		39.1	39.1	21.0	21.0
Effective Green, g (s)	39.1		39.1	39.1	21.0	21.0
Actuated g/C Ratio	0.57		0.57	0.57	0.31	0.31
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	967		433	1080	525	470
v/s Ratio Prot	0.26			c0.48	c0.25	
v/s Ratio Perm			0.23			0.01
v/c Ratio	0.45		0.39	0.84	0.81	0.03
Uniform Delay, d1	8.3		8.0	11.9	21.7	16.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		0.6	5.9	9.0	0.0
Delay (s)	8.7		8.6	17.8	30.7	16.5
Level of Service	A		A	B	C	B
Approach Delay (s)	8.7			16.3	29.5	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1786			1792	1599	1703	1787		1736	1816	
Flt Permitted		0.81			0.78	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1500			1469	1599	1703	1787		1736	1816	
Volume (vph)	34	12	6	16	2	314	1	882	17	175	393	17
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	38	13	7	18	2	353	1	991	19	197	442	19
RTOR Reduction (vph)	0	6	0	0	0	195	0	1	0	0	1	0
Lane Group Flow (vph)	0	52	0	0	20	158	1	1009	0	197	460	0
Confl. Peds. (#/hr)			2	2								
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		12.2			12.2	12.2	0.8	54.4		11.0	64.6	
Effective Green, g (s)		12.2			12.2	12.2	0.8	54.4		11.0	64.6	
Actuated g/C Ratio		0.14			0.14	0.14	0.01	0.61		0.12	0.72	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		204			200	218	15	1085		213	1309	
v/s Ratio Prot							0.00	c0.56		c0.11	0.25	
v/s Ratio Perm		0.03			0.01	c0.10						
v/c Ratio		0.25			0.10	0.72	0.07	0.93		0.92	0.35	
Uniform Delay, d1		34.6			33.9	37.1	44.0	15.9		38.9	4.7	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			0.2	11.3	1.9	15.0		41.0	0.7	
Delay (s)		35.3			34.1	48.4	45.9	30.9		79.9	5.4	
Level of Service		D			C	D	D	C		E	A	
Approach Delay (s)		35.3			47.6			30.9			27.7	
Approach LOS		D			D			C			C	

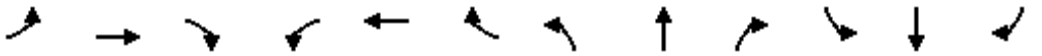
Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1549	1736	1827	3343	1464
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1549	1736	1827	3343	1464
Volume (vph)	240	208	156	1080	393	69
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	255	221	166	1149	418	73
RTOR Reduction (vph)	0	182	0	0	0	33
Lane Group Flow (vph)	255	39	166	1149	418	40
Confl. Peds. (#/hr)	2	6				
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	2%	2%	4%	4%	8%	8%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	15.7	15.7	12.6	65.0	48.4	48.4
Effective Green, g (s)	15.7	15.7	12.6	65.0	48.4	48.4
Actuated g/C Ratio	0.18	0.18	0.14	0.73	0.55	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	313	274	247	1339	1824	799
v/s Ratio Prot	c0.14		0.10	c0.63	0.13	
v/s Ratio Perm		0.03				0.03
v/c Ratio	0.81	0.14	0.67	0.86	0.23	0.05
Uniform Delay, d1	35.1	30.8	36.1	8.5	10.5	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.9	0.2	7.0	7.3	0.3	0.1
Delay (s)	50.0	31.1	43.1	15.8	10.8	9.5
Level of Service	D	C	D	B	B	A
Approach Delay (s)	41.2			19.3	10.6	
Approach LOS	D			B	B	

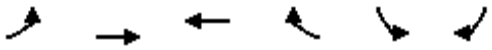
Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	88.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1573	1641	1727	1434	1736	3471	1553	1703	3406	1524
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	1881	1573	1641	1727	1434	1736	3471	1553	1703	3406	1524
Volume (vph)	91	154	124	19	50	32	253	999	120	189	345	139
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	97	164	132	20	53	34	269	1063	128	201	367	148
RTOR Reduction (vph)	0	0	109	0	0	30	0	0	39	0	0	93
Lane Group Flow (vph)	97	164	23	20	53	4	269	1063	89	201	367	55
Confl. Peds. (#/hr)			3			8						
Heavy Vehicles (%)	1%	1%	1%	10%	10%	10%	4%	4%	4%	6%	6%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.7	13.0	13.0	2.7	8.0	8.0	15.4	31.7	31.7	11.9	28.2	28.2
Effective Green, g (s)	7.7	13.0	13.0	2.7	8.0	8.0	15.4	31.7	31.7	11.9	28.2	28.2
Actuated g/C Ratio	0.10	0.17	0.17	0.04	0.11	0.11	0.20	0.42	0.42	0.16	0.37	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	183	325	272	59	183	152	355	1461	654	269	1276	571
v/s Ratio Prot	0.05	c0.09		0.01	c0.03		c0.15	c0.31		0.12	0.11	
v/s Ratio Perm			0.01			0.00			0.06			0.04
v/c Ratio	0.53	0.50	0.08	0.34	0.29	0.02	0.76	0.73	0.14	0.75	0.29	0.10
Uniform Delay, d1	32.1	28.2	26.2	35.4	31.0	30.2	28.2	18.2	13.4	30.3	16.5	15.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	1.2	0.1	3.4	0.9	0.1	8.9	3.2	0.4	10.8	0.6	0.3
Delay (s)	35.0	29.5	26.3	38.8	31.9	30.2	37.1	21.4	13.8	41.0	17.1	15.6
Level of Service	D	C	C	D	C	C	D	C	B	D	B	B
Approach Delay (s)		29.8			32.7			23.6			23.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	184	21	236	25	20	96
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Hourly flow rate (vph)	263	30	337	36	29	137
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		698				
pX, platoon unblocked						
vC, conflicting volume	373				911	355
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	373				911	355
tC, single (s)	4.1				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	78				88	80
cM capacity (veh/h)	1186				229	671

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	293	373	166
Volume Left	263	0	29
Volume Right	0	36	137
cSH	1186	1700	504
Volume to Capacity	0.22	0.22	0.33
Queue Length 95th (ft)	21	0	36
Control Delay (s)	8.2	0.0	15.6
Lane LOS	A		C
Approach Delay (s)	8.2	0.0	15.6
Approach LOS			C

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		



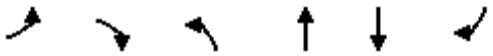
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1836		1787	1881	1787	1599
Flt Permitted	1.00		0.15	1.00	0.95	1.00
Satd. Flow (perm)	1836		279	1881	1787	1599
Volume (vph)	859	151	48	297	156	18
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	914	161	51	316	166	19
RTOR Reduction (vph)	7	0	0	0	0	16
Lane Group Flow (vph)	1068	0	51	316	166	3
Confl. Peds. (#/hr)		2	2			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	52.9		52.9	52.9	11.5	11.5
Effective Green, g (s)	52.9		52.9	52.9	11.5	11.5
Actuated g/C Ratio	0.73		0.73	0.73	0.16	0.16
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1341		204	1374	284	254
v/s Ratio Prot	c0.58			0.17	c0.09	
v/s Ratio Perm			0.18			0.00
v/c Ratio	0.80		0.25	0.23	0.58	0.01
Uniform Delay, d1	6.3		3.2	3.2	28.2	25.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4		0.6	0.1	3.1	0.0
Delay (s)	9.7		3.9	3.2	31.3	25.7
Level of Service	A		A	A	C	C
Approach Delay (s)	9.7			3.3	30.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.96			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770			1785	1583	1736	1816		1770	1851	
Flt Permitted		0.75			0.75	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1378			1396	1583	1736	1816		1770	1851	
Volume (vph)	24	0	4	20	3	203	3	560	24	239	1072	47
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	25	0	4	21	3	211	3	583	25	249	1117	49
RTOR Reduction (vph)	0	4	0	0	0	191	0	1	0	0	1	0
Lane Group Flow (vph)	0	25	0	0	24	20	3	607	0	249	1165	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		7.7			7.7	7.7	0.7	46.1		15.2	60.6	
Effective Green, g (s)		7.7			7.7	7.7	0.7	46.1		15.2	60.6	
Actuated g/C Ratio		0.10			0.10	0.10	0.01	0.57		0.19	0.75	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		131			133	150	15	1034		332	1385	
v/s Ratio Prot							0.00	0.33		c0.14	c0.63	
v/s Ratio Perm		c0.02			0.02	0.01						
v/c Ratio		0.19			0.18	0.13	0.20	0.59		0.75	0.84	
Uniform Delay, d1		33.8			33.7	33.6	39.9	11.3		31.1	6.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			0.7	0.4	6.5	2.4		9.2	6.3	
Delay (s)		34.5			34.4	34.0	46.4	13.7		40.3	13.2	
Level of Service		C			C	C	D	B		D	B	
Approach Delay (s)		34.5			34.0			13.9			18.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	81.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



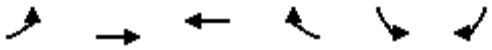
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1565	1752	1845	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1787	1565	1752	1845	3539	1583
Volume (vph)	202	273	158	664	1108	213
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	213	287	166	699	1166	224
RTOR Reduction (vph)	0	236	0	0	0	106
Lane Group Flow (vph)	213	51	166	699	1166	118
Confl. Peds. (#/hr)	1	6				
Heavy Vehicles (%)	1%	1%	3%	3%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	14.9	14.9	12.9	61.1	44.2	44.2
Effective Green, g (s)	14.9	14.9	12.9	61.1	44.2	44.2
Actuated g/C Ratio	0.18	0.18	0.15	0.73	0.53	0.53
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	278	269	1342	1862	833
v/s Ratio Prot	c0.12		c0.09	0.38	c0.33	
v/s Ratio Perm		0.03				0.07
v/c Ratio	0.67	0.18	0.62	0.52	0.63	0.14
Uniform Delay, d1	32.3	29.4	33.2	5.0	14.1	10.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	0.3	4.2	1.4	1.6	0.4
Delay (s)	37.8	29.7	37.4	6.5	15.7	10.5
Level of Service	D	C	D	A	B	B
Approach Delay (s)	33.1			12.4	14.8	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1553	1719	1810	1538	1752	3505	1568	1770	3539	1550
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1553	1719	1810	1538	1752	3505	1568	1770	3539	1550
Volume (vph)	132	79	477	78	124	275	298	507	63	113	834	181
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	143	86	518	85	135	299	324	551	68	123	907	197
RTOR Reduction (vph)	0	0	381	0	0	257	0	0	38	0	0	132
Lane Group Flow (vph)	143	86	137	85	135	42	324	551	30	123	907	65
Confl. Peds. (#/hr)			5									
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.7	11.4	11.4	9.6	11.3	11.3	17.2	35.5	35.5	8.2	26.5	26.5
Effective Green, g (s)	9.7	11.4	11.4	9.6	11.3	11.3	17.2	35.5	35.5	8.2	26.5	26.5
Actuated g/C Ratio	0.12	0.14	0.14	0.12	0.14	0.14	0.21	0.44	0.44	0.10	0.33	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	213	263	219	204	253	215	373	1542	690	180	1162	509
v/s Ratio Prot	0.08	0.05		0.05	c0.07		c0.18	0.16		0.07	c0.26	
v/s Ratio Perm			c0.09			0.03			0.02			0.04
v/c Ratio	0.67	0.33	0.62	0.42	0.53	0.19	0.87	0.36	0.04	0.68	0.78	0.13
Uniform Delay, d1	34.0	31.2	32.6	33.0	32.3	30.7	30.7	15.0	12.9	35.0	24.5	19.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.1	0.7	5.5	1.4	2.2	0.4	18.8	0.6	0.1	10.2	5.2	0.5
Delay (s)	42.0	31.9	38.1	34.3	34.4	31.1	49.4	15.7	13.0	45.2	29.7	19.5
Level of Service	D	C	D	C	C	C	D	B	B	D	C	B
Approach Delay (s)		38.1			32.5			27.1			29.6	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	43	220	178	5	5	48
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	51	259	209	6	6	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		637				
pX, platoon unblocked						
vC, conflicting volume	215				572	212
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	215				572	212
tC, single (s)	4.1				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	96				99	93
cM capacity (veh/h)	1355				451	808

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	309	215	62
Volume Left	51	0	6
Volume Right	0	6	56
cSH	1355	1700	752
Volume to Capacity	0.04	0.13	0.08
Queue Length 95th (ft)	3	0	7
Control Delay (s)	1.6	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	1.6	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.98		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1682		1781	1881	1703	1524
Flt Permitted	1.00		0.37	1.00	0.95	1.00
Satd. Flow (perm)	1682		691	1881	1703	1524
Volume (vph)	178	209	188	716	333	59
Peak-hour factor, PHF	0.73	0.73	0.73	0.73	0.73	0.73
Adj. Flow (vph)	244	286	258	981	456	81
RTOR Reduction (vph)	39	0	0	0	0	40
Lane Group Flow (vph)	491	0	258	981	456	41
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	3%	3%	1%	1%	6%	6%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	50.2		50.2	50.2	27.0	27.0
Effective Green, g (s)	50.2		50.2	50.2	27.0	27.0
Actuated g/C Ratio	0.59		0.59	0.59	0.32	0.32
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	991		407	1108	540	483
v/s Ratio Prot	0.29			c0.52	c0.27	
v/s Ratio Perm			0.37			0.03
v/c Ratio	0.50		0.63	0.89	0.84	0.08
Uniform Delay, d1	10.1		11.5	15.0	27.1	20.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4		3.2	8.7	11.6	0.1
Delay (s)	10.5		14.7	23.7	38.7	20.5
Level of Service	B		B	C	D	C
Approach Delay (s)	10.5			21.8	36.0	
Approach LOS	B			C	D	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	85.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1788			1792	1599	1703	1789		1736	1816	
Flt Permitted		0.80			0.84	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1479			1581	1599	1703	1789		1736	1816	
Volume (vph)	37	14	7	14	2	266	1	958	14	145	429	18
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	42	16	8	16	2	299	1	1076	16	163	482	20
RTOR Reduction (vph)	0	4	0	0	0	186	0	0	0	0	1	0
Lane Group Flow (vph)	0	62	0	0	18	113	1	1092	0	163	501	0
Confl. Peds. (#/hr)			2	2								
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.8			11.8	11.8	0.8	73.0		13.2	85.4	
Effective Green, g (s)		11.8			11.8	11.8	0.8	73.0		13.2	85.4	
Actuated g/C Ratio		0.11			0.11	0.11	0.01	0.66		0.12	0.78	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		159			170	172	12	1187		208	1410	
v/s Ratio Prot							0.00	c0.61		c0.09	0.28	
v/s Ratio Perm		0.04			0.01	c0.07						
v/c Ratio		0.39			0.11	0.66	0.08	0.92		0.78	0.36	
Uniform Delay, d1		45.7			44.3	47.2	54.2	16.0		47.0	3.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		0.87	0.97	
Incremental Delay, d2		1.6			0.3	8.8	3.0	12.8		16.9	0.7	
Delay (s)		47.3			44.6	56.0	57.2	28.8		57.7	4.4	
Level of Service		D			D	E	E	C		E	A	
Approach Delay (s)		47.3			55.3			28.8			17.4	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.86		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1763	1562		1758	1592		1736	1826		1671	3343	1464
Flt Permitted	0.71	1.00		0.37	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1320	1562		687	1592		1736	1826		1671	3343	1464
Volume (vph)	260	12	211	3	8	59	158	1107	3	24	396	74
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	13	222	3	8	62	166	1165	3	25	417	78
RTOR Reduction (vph)	0	176	0	0	49	0	0	0	0	0	0	35
Lane Group Flow (vph)	274	59	0	3	21	0	166	1168	0	25	417	43
Confl. Peds. (#/hr)	2		6	6		2						
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	8%	8%	8%
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	23.0	23.0		23.0	23.0		14.6	72.6		2.4	60.4	60.4
Effective Green, g (s)	23.0	23.0		23.0	23.0		14.6	72.6		2.4	60.4	60.4
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.13	0.66		0.02	0.55	0.55
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	276	327		144	333		230	1205		36	1836	804
v/s Ratio Prot		0.04			0.01		c0.10	c0.64		0.01	0.12	
v/s Ratio Perm	c0.21			0.00								0.03
v/c Ratio	0.99	0.18		0.02	0.06		0.72	0.97		0.69	0.23	0.05
Uniform Delay, d1	43.4	35.8		34.6	34.9		45.8	17.6		53.4	12.8	11.5
Progression Factor	1.00	1.00		1.00	1.00		1.23	0.48		0.87	0.71	0.45
Incremental Delay, d2	51.9	0.3		0.1	0.1		4.8	11.3		44.0	0.3	0.1
Delay (s)	95.4	36.0		34.6	34.9		61.0	19.8		90.3	9.3	5.3
Level of Service	F	D		C	C		E	B		F	A	A
Approach Delay (s)		68.0			34.9			24.9			12.6	
Approach LOS		E			C			C			B	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1570	1641	1727	1427	1736	3471	1553	1703	3406	1524
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	1881	1570	1641	1727	1427	1736	3471	1553	1703	3406	1524
Volume (vph)	98	167	130	20	54	35	270	1081	130	205	373	151
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	104	178	138	21	57	37	287	1150	138	218	397	161
RTOR Reduction (vph)	0	0	116	0	0	34	0	0	31	0	0	88
Lane Group Flow (vph)	104	178	22	21	57	3	287	1150	107	218	397	73
Confl. Peds. (#/hr)			3			8						
Heavy Vehicles (%)	1%	1%	1%	10%	10%	10%	4%	4%	4%	6%	6%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.1	17.5	17.5	3.9	9.3	9.3	22.7	53.6	53.6	19.0	49.9	49.9
Effective Green, g (s)	12.1	17.5	17.5	3.9	9.3	9.3	22.7	53.6	53.6	19.0	49.9	49.9
Actuated g/C Ratio	0.11	0.16	0.16	0.04	0.08	0.08	0.21	0.49	0.49	0.17	0.45	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	197	299	250	58	146	121	358	1691	757	294	1545	691
v/s Ratio Prot	0.06	c0.09		0.01	c0.03		c0.17	c0.33		0.13	0.12	
v/s Ratio Perm			0.01			0.00			0.07			0.05
v/c Ratio	0.53	0.60	0.09	0.36	0.39	0.03	0.80	0.68	0.14	0.74	0.26	0.11
Uniform Delay, d1	46.3	43.0	39.4	51.8	47.7	46.2	41.5	21.6	15.5	43.2	18.6	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.87	0.87	1.00	1.00	1.00
Incremental Delay, d2	2.5	3.2	0.2	3.8	1.7	0.1	5.8	1.0	0.2	9.7	0.4	0.3
Delay (s)	48.8	46.1	39.6	55.7	49.4	46.3	53.5	19.9	13.7	52.8	19.0	17.6
Level of Service	D	D	D	E	D	D	D	B	B	D	B	B
Approach Delay (s)		44.6			49.5			25.5			28.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1835		1787	1881	1787	1599
Flt Permitted	1.00		0.11	1.00	0.95	1.00
Satd. Flow (perm)	1835		208	1881	1787	1599
Volume (vph)	930	170	90	321	168	61
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	989	181	96	341	179	65
RTOR Reduction (vph)	6	0	0	0	0	55
Lane Group Flow (vph)	1164	0	96	341	179	10
Confl. Peds. (#/hr)		2	2			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	62.4		62.4	62.4	13.3	13.3
Effective Green, g (s)	62.4		62.4	62.4	13.3	13.3
Actuated g/C Ratio	0.75		0.75	0.75	0.16	0.16
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1368		155	1402	284	254
v/s Ratio Prot	c0.63			0.18	c0.10	
v/s Ratio Perm			0.46			0.01
v/c Ratio	0.85		0.62	0.24	0.63	0.04
Uniform Delay, d1	7.4		5.0	3.3	32.9	29.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.3		7.2	0.1	4.5	0.1
Delay (s)	12.7		12.2	3.4	37.4	29.9
Level of Service	B		B	A	D	C
Approach Delay (s)	12.7			5.3	35.4	
Approach LOS	B			A	D	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	83.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

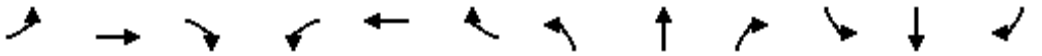
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.96			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1767			1787	1583	1736	1818		1770	1851	
Flt Permitted		0.75			0.75	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1373			1402	1583	1736	1818		1770	1851	
Volume (vph)	26	0	5	16	3	170	3	611	21	206	1164	51
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	27	0	5	17	3	177	3	636	22	215	1212	53
RTOR Reduction (vph)	0	5	0	0	0	164	0	1	0	0	1	0
Lane Group Flow (vph)	0	27	0	0	20	13	3	657	0	215	1264	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.0			8.0	8.0	1.3	72.2		17.8	88.7	
Effective Green, g (s)		8.0			8.0	8.0	1.3	72.2		17.8	88.7	
Actuated g/C Ratio		0.07			0.07	0.07	0.01	0.66		0.16	0.81	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		100			102	115	21	1193		286	1493	
v/s Ratio Prot							0.00	0.36		c0.12	c0.68	
v/s Ratio Perm		c0.02			0.01	0.01						
v/c Ratio		0.27			0.20	0.11	0.14	0.55		0.75	0.85	
Uniform Delay, d1		48.3			48.0	47.7	53.8	10.2		44.0	6.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.17	1.65	
Incremental Delay, d2		1.5			0.9	0.4	3.1	1.8		8.5	4.9	
Delay (s)		49.7			48.9	48.1	56.9	12.0		60.0	15.6	
Level of Service		D			D	D	E	B		E	B	
Approach Delay (s)		49.7			48.2			12.2			22.0	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.86		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1784	1572		1770	1633		1752	1843		1770	3539	1583
Flt Permitted	0.73	1.00		0.21	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1366	1572		393	1633		1752	1843		1770	3539	1583
Volume (vph)	218	10	285	4	8	35	161	679	5	41	1156	231
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	229	11	300	4	8	37	169	715	5	43	1217	243
RTOR Reduction (vph)	0	207	0	0	29	0	0	0	0	0	0	92
Lane Group Flow (vph)	229	104	0	4	16	0	169	720	0	43	1217	151
Confl. Peds. (#/hr)	1		6									
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	22.6	22.6		22.6	22.6		14.9	70.5		4.9	60.5	60.5
Effective Green, g (s)	22.6	22.6		22.6	22.6		14.9	70.5		4.9	60.5	60.5
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.14	0.64		0.04	0.55	0.55
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	281	323		81	336		237	1181		79	1946	871
v/s Ratio Prot		0.07			0.01		c0.10	c0.39		0.02	0.34	
v/s Ratio Perm	c0.17			0.01								0.10
v/c Ratio	0.81	0.32		0.05	0.05		0.71	0.61		0.54	0.63	0.17
Uniform Delay, d1	41.7	37.2		35.1	35.1		45.5	11.6		51.5	17.0	12.3
Progression Factor	1.00	1.00		1.00	1.00		0.87	1.34		0.97	0.48	0.18
Incremental Delay, d2	16.4	0.6		0.3	0.1		8.4	2.0		4.4	0.9	0.3
Delay (s)	58.1	37.7		35.3	35.1		48.2	17.6		54.2	9.0	2.5
Level of Service	E	D		D	D		D	B		D	A	A
Approach Delay (s)		46.4			35.1			23.4			9.2	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1548	1719	1810	1538	1752	3505	1568	1770	3539	1550
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1548	1719	1810	1538	1752	3505	1568	1770	3539	1550
Volume (vph)	143	86	515	84	134	297	320	547	69	123	903	196
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	155	93	560	91	146	323	348	595	75	134	982	213
RTOR Reduction (vph)	0	0	355	0	0	277	0	0	34	0	0	136
Lane Group Flow (vph)	155	93	205	91	146	46	348	595	41	134	982	77
Confl. Peds. (#/hr)			5									
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.6	19.2	19.2	9.9	15.5	15.5	25.3	52.2	52.2	12.7	39.6	39.6
Effective Green, g (s)	13.6	19.2	19.2	9.9	15.5	15.5	25.3	52.2	52.2	12.7	39.6	39.6
Actuated g/C Ratio	0.12	0.17	0.17	0.09	0.14	0.14	0.23	0.47	0.47	0.12	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	219	325	270	155	255	217	403	1663	744	204	1274	558
v/s Ratio Prot	0.09	0.05		0.05	c0.08		c0.20	0.17		0.08	c0.28	
v/s Ratio Perm			c0.13			0.03			0.03			0.05
v/c Ratio	0.71	0.29	0.76	0.59	0.57	0.21	0.86	0.36	0.06	0.66	0.77	0.14
Uniform Delay, d1	46.3	39.4	43.2	48.1	44.2	41.8	40.7	18.3	15.6	46.6	31.2	23.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.94	1.35	1.00	1.00	1.00
Incremental Delay, d2	10.0	0.5	11.6	5.6	3.1	0.5	14.2	0.5	0.1	7.4	4.6	0.5
Delay (s)	56.3	39.9	54.8	53.7	47.2	42.3	61.1	17.7	21.1	54.0	35.7	24.2
Level of Service	E	D	D	D	D	D	E	B	C	D	D	C
Approach Delay (s)		53.4			45.4			32.8			35.7	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.98		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1678		1781	1881	1703	1524
Flt Permitted	1.00		0.35	1.00	0.95	1.00
Satd. Flow (perm)	1678		664	1881	1703	1524
Volume (vph)	178	221	192	716	344	62
Peak-hour factor, PHF	0.73	0.73	0.73	0.73	0.73	0.73
Adj. Flow (vph)	244	303	263	981	471	85
RTOR Reduction (vph)	42	0	0	0	0	41
Lane Group Flow (vph)	505	0	263	981	471	44
Confl. Peds. (#/hr)		4	4			
Heavy Vehicles (%)	3%	3%	1%	1%	6%	6%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	50.8		50.8	50.8	27.9	27.9
Effective Green, g (s)	50.8		50.8	50.8	27.9	27.9
Actuated g/C Ratio	0.59		0.59	0.59	0.32	0.32
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	983		389	1102	548	490
v/s Ratio Prot	0.30			c0.52	c0.28	
v/s Ratio Perm			0.40			0.03
v/c Ratio	0.51		0.68	0.89	0.86	0.09
Uniform Delay, d1	10.6		12.3	15.5	27.6	20.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		4.6	9.2	12.7	0.1
Delay (s)	11.1		16.9	24.7	40.3	20.6
Level of Service	B		B	C	D	C
Approach Delay (s)	11.1			23.1	37.3	
Approach LOS	B			C	D	

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1788			1792	1599	1703	1788		1736	1816	
Flt Permitted		0.80			0.84	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1479			1581	1599	1703	1788		1736	1816	
Volume (vph)	37	14	7	14	2	266	1	958	15	145	429	18
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	42	16	8	16	2	299	1	1076	17	163	482	20
RTOR Reduction (vph)	0	4	0	0	0	186	0	0	0	0	1	0
Lane Group Flow (vph)	0	62	0	0	18	113	1	1093	0	163	501	0
Confl. Peds. (#/hr)			2	2								
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		11.8			11.8	11.8	0.8	73.0		13.2	85.4	
Effective Green, g (s)		11.8			11.8	11.8	0.8	73.0		13.2	85.4	
Actuated g/C Ratio		0.11			0.11	0.11	0.01	0.66		0.12	0.78	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		159			170	172	12	1187		208	1410	
v/s Ratio Prot							0.00	c0.61		c0.09	0.28	
v/s Ratio Perm		0.04			0.01	c0.07						
v/c Ratio		0.39			0.11	0.66	0.08	0.92		0.78	0.36	
Uniform Delay, d1		45.7			44.3	47.2	54.2	16.0		47.0	3.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00		0.87	0.94	
Incremental Delay, d2		1.6			0.3	8.8	3.0	12.9		16.9	0.7	
Delay (s)		47.3			44.6	56.0	57.2	28.9		57.8	4.3	
Level of Service		D			D	E	E	C		E	A	
Approach Delay (s)		47.3			55.3			28.9			17.4	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		0.99	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.86		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1763	1565		1758	1605		1736	1826		1671	3343	1464
Flt Permitted	0.71	1.00		0.37	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1312	1565		679	1605		1736	1826		1671	3343	1464
Volume (vph)	260	14	211	3	11	62	158	1107	3	29	396	74
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	15	222	3	12	65	166	1165	3	31	417	78
RTOR Reduction (vph)	0	176	0	0	51	0	0	0	0	0	0	35
Lane Group Flow (vph)	274	61	0	3	26	0	166	1168	0	31	417	43
Confl. Peds. (#/hr)	2		6	6		2						
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	8%	8%	8%
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	23.0	23.0		23.0	23.0		14.6	72.6		2.4	60.4	60.4
Effective Green, g (s)	23.0	23.0		23.0	23.0		14.6	72.6		2.4	60.4	60.4
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.13	0.66		0.02	0.55	0.55
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	274	327		142	336		230	1205		36	1836	804
v/s Ratio Prot		0.04			0.02		c0.10	c0.64		0.02	0.12	
v/s Ratio Perm	c0.21			0.00								0.03
v/c Ratio	1.00	0.19		0.02	0.08		0.72	0.97		0.86	0.23	0.05
Uniform Delay, d1	43.5	35.8		34.6	35.0		45.8	17.6		53.6	12.8	11.5
Progression Factor	1.00	1.00		1.00	1.00		1.23	0.48		0.87	0.71	0.46
Incremental Delay, d2	54.4	0.3		0.1	0.1		4.8	11.3		93.8	0.3	0.1
Delay (s)	97.9	36.1		34.6	35.1		61.0	19.8		140.3	9.4	5.4
Level of Service	F	D		C	D		E	B		F	A	A
Approach Delay (s)		69.2			35.0			24.9			16.5	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1570	1641	1727	1427	1736	3471	1553	1703	3406	1524
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	1881	1570	1641	1727	1427	1736	3471	1553	1703	3406	1524
Volume (vph)	98	167	134	20	54	35	273	1081	130	205	374	151
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	104	178	143	21	57	37	290	1150	138	218	398	161
RTOR Reduction (vph)	0	0	120	0	0	34	0	0	31	0	0	88
Lane Group Flow (vph)	104	178	23	21	57	3	290	1150	107	218	398	73
Confl. Peds. (#/hr)			3			8						
Heavy Vehicles (%)	1%	1%	1%	10%	10%	10%	4%	4%	4%	6%	6%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.1	17.5	17.5	3.9	9.3	9.3	22.9	53.6	53.6	19.0	49.7	49.7
Effective Green, g (s)	12.1	17.5	17.5	3.9	9.3	9.3	22.9	53.6	53.6	19.0	49.7	49.7
Actuated g/C Ratio	0.11	0.16	0.16	0.04	0.08	0.08	0.21	0.49	0.49	0.17	0.45	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	197	299	250	58	146	121	361	1691	757	294	1539	689
v/s Ratio Prot	0.06	c0.09		0.01	c0.03		c0.17	c0.33		0.13	0.12	
v/s Ratio Perm			0.01			0.00			0.07			0.05
v/c Ratio	0.53	0.60	0.09	0.36	0.39	0.03	0.80	0.68	0.14	0.74	0.26	0.11
Uniform Delay, d1	46.3	43.0	39.5	51.8	47.7	46.2	41.4	21.6	15.5	43.2	18.7	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.87	0.88	1.00	1.00	1.00
Incremental Delay, d2	2.5	3.2	0.2	3.8	1.7	0.1	5.8	1.0	0.2	9.7	0.4	0.3
Delay (s)	48.8	46.1	39.6	55.7	49.4	46.3	53.4	19.9	13.8	52.8	19.1	17.7
Level of Service	D	D	D	E	D	D	D	B	B	D	B	B
Approach Delay (s)		44.6			49.5			25.5			28.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1834		1787	1881	1787	1599
Flt Permitted	1.00		0.11	1.00	0.95	1.00
Satd. Flow (perm)	1834		199	1881	1787	1599
Volume (vph)	930	172	90	321	180	64
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	989	183	96	341	191	68
RTOR Reduction (vph)	6	0	0	0	0	57
Lane Group Flow (vph)	1166	0	96	341	191	11
Confl. Peds. (#/hr)		2	2			
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type			Perm			Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	62.5		62.5	62.5	13.8	13.8
Effective Green, g (s)	62.5		62.5	62.5	13.8	13.8
Actuated g/C Ratio	0.74		0.74	0.74	0.16	0.16
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1360		148	1395	293	262
v/s Ratio Prot	c0.64			0.18	c0.11	
v/s Ratio Perm			0.48			0.01
v/c Ratio	0.86		0.65	0.24	0.65	0.04
Uniform Delay, d1	7.7		5.4	3.4	33.0	29.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	5.6		9.4	0.1	5.1	0.1
Delay (s)	13.3		14.8	3.5	38.1	29.8
Level of Service	B		B	A	D	C
Approach Delay (s)	13.3			6.0	35.9	
Approach LOS	B			A	D	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	84.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.96			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1767			1786	1583	1736	1818		1770	1851	
Flt Permitted		0.74			0.78	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1371			1449	1583	1736	1818		1770	1851	
Volume (vph)	26	0	5	17	3	170	3	611	21	206	1164	51
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	27	0	5	18	3	177	3	636	22	215	1212	53
RTOR Reduction (vph)	0	5	0	0	0	164	0	1	0	0	1	0
Lane Group Flow (vph)	0	27	0	0	21	13	3	657	0	215	1264	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Perm			Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		8.0			8.0	8.0	1.3	72.1		17.9	88.7	
Effective Green, g (s)		8.0			8.0	8.0	1.3	72.1		17.9	88.7	
Actuated g/C Ratio		0.07			0.07	0.07	0.01	0.66		0.16	0.81	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		100			105	115	21	1192		288	1493	
v/s Ratio Prot							0.00	0.36		c0.12	c0.68	
v/s Ratio Perm		c0.02			0.01	0.01						
v/c Ratio		0.27			0.20	0.11	0.14	0.55		0.75	0.85	
Uniform Delay, d1		48.3			48.0	47.7	53.8	10.2		43.9	6.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.17	1.64	
Incremental Delay, d2		1.5			0.9	0.4	3.1	1.8		8.1	4.9	
Delay (s)		49.7			48.9	48.1	56.9	12.1		59.5	15.5	
Level of Service		D			D	D	E	B		E	B	
Approach Delay (s)		49.7			48.2			12.3			21.9	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.86		1.00	0.88		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1784	1572		1770	1641		1752	1843		1770	3539	1583
Flt Permitted	0.72	1.00		0.21	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1356	1572		397	1641		1752	1843		1770	3539	1583
Volume (vph)	218	10	285	4	10	40	161	679	5	43	1156	231
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	229	11	300	4	11	42	169	715	5	45	1217	243
RTOR Reduction (vph)	0	207	0	0	33	0	0	0	0	0	0	92
Lane Group Flow (vph)	229	104	0	4	20	0	169	720	0	45	1217	151
Confl. Peds. (#/hr)	1		6									
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	22.7	22.7		22.7	22.7		14.9	69.0		6.3	60.4	60.4
Effective Green, g (s)	22.7	22.7		22.7	22.7		14.9	69.0		6.3	60.4	60.4
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.14	0.63		0.06	0.55	0.55
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	280	324		82	339		237	1156		101	1943	869
v/s Ratio Prot		0.07			0.01		c0.10	c0.39		0.03	0.34	
v/s Ratio Perm	c0.17			0.01								0.10
v/c Ratio	0.82	0.32		0.05	0.06		0.71	0.62		0.45	0.63	0.17
Uniform Delay, d1	41.7	37.1		35.0	35.1		45.5	12.5		50.2	17.0	12.4
Progression Factor	1.00	1.00		1.00	1.00		0.87	1.35		0.97	0.48	0.19
Incremental Delay, d2	16.7	0.6		0.2	0.1		8.4	2.2		1.8	0.9	0.3
Delay (s)	58.4	37.7		35.2	35.1		48.1	19.1		50.6	9.0	2.5
Level of Service	E	D		D	D		D	B		D	A	A
Approach Delay (s)		46.4			35.1			24.6			9.2	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1548	1719	1810	1538	1752	3505	1568	1770	3539	1550
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1548	1719	1810	1538	1752	3505	1568	1770	3539	1550
Volume (vph)	143	86	517	84	134	297	324	548	69	123	903	196
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	155	93	562	91	146	323	352	596	75	134	982	213
RTOR Reduction (vph)	0	0	355	0	0	277	0	0	34	0	0	137
Lane Group Flow (vph)	155	93	207	91	146	46	352	596	41	134	982	76
Confl. Peds. (#/hr)			5									
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	3%	3%	3%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.6	19.3	19.3	9.9	15.6	15.6	25.6	52.1	52.1	12.7	39.2	39.2
Effective Green, g (s)	13.6	19.3	19.3	9.9	15.6	15.6	25.6	52.1	52.1	12.7	39.2	39.2
Actuated g/C Ratio	0.12	0.18	0.18	0.09	0.14	0.14	0.23	0.47	0.47	0.12	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	219	327	272	155	257	218	408	1660	743	204	1261	552
v/s Ratio Prot	0.09	0.05		0.05	c0.08		c0.20	0.17		0.08	c0.28	
v/s Ratio Perm			c0.13			0.03			0.03			0.05
v/c Ratio	0.71	0.28	0.76	0.59	0.57	0.21	0.86	0.36	0.06	0.66	0.78	0.14
Uniform Delay, d1	46.3	39.4	43.2	48.1	44.1	41.8	40.5	18.4	15.7	46.6	31.5	24.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.13	0.95	1.35	1.00	1.00	1.00
Incremental Delay, d2	10.0	0.5	11.9	5.6	2.9	0.5	13.8	0.5	0.1	7.4	4.8	0.5
Delay (s)	56.3	39.8	55.1	53.7	46.9	42.2	59.5	17.8	21.3	54.0	36.3	24.5
Level of Service	E	D	E	D	D	D	E	B	C	D	D	C
Approach Delay (s)		53.6			45.3			32.4			36.2	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Table 12.50.320-3:
Required Vehicle Parking Spaces for Industrial Uses
(required spaces are per 1000 sq. ft. Net Floor Area (NFA)
or per student/employee on the largest shift, unless otherwise specified)

Use Type	Minimum	Maximum	
		Zone A	Zone B
Industrial Services			
All Uses	2	None	None
Manufacturing and Production			
All Uses	1.6	2.5	None
Solid Waste Treatment and Recycling			
All Uses	2	None	None
Vehicle Storage			
All Uses	0.5/employee	1.0/employee	None
Warehouse and Freight Movement			
All Uses	0.3	0.4	0.5
Wholesale sales			
All Uses	3	3	None

REPLINGER & ASSOCIATES LLC
TRANSPORTATION ENGINEERING

May 4, 2015

Ms. Kelly Moosbrugger
City of Oregon City
PO Box 3040
Oregon City, OR 97045

SUBJECT: REVIEW OF TRANSPORTATION IMPACT STUDY – OREGON CITY SCHOOL DISTRICT HIGH SCHOOL AND MAINENANCE FACILITY CAMPUS – CP15-03

Dear Mr. Moosbrugger:

In response to your request, I have reviewed the Traffic Impact Study (TIS) in support of the proposed of the establishment of a bus storage and maintenance facility immediately west of the existing high school and changes associated with the entire campus. The land use application also involves a master plan allowing for phases with various on-site changes for the school campus. The TIS was prepared by Michael T. Ard, PE of Lancaster Engineering. The Final TIS is dated February 23, 2015.

The TIS describes a proposal by the Oregon City School District (OCSD) to construct a bus maintenance and storage facility on approximately 7 acres in the northwest quadrant of the intersection of Meyers Road and High School Avenue. The site for the maintenance facility is immediately west of the existing Oregon City High School. The TIS assumes the maintenance and school bus storage facility will be completed and be operational by 2016.

Overall

I find the TIS addresses the city's requirements and provides an adequate basis to evaluate impacts of the proposed development.

Comments

1. ***Study Area.*** The study addresses the appropriate intersections. It includes an analysis of the following intersections:

    - Highway 213/Molalla Avenue/Clackamas Community College Entrance
    - Highway 213/Meyers Road
    - Highway 213/Glen Oak Road/Caufield Road
    - Beavercreek Road/Meyers Road

Two additional intersections received a limited analysis. These were: High School Avenue/Meyers Road and High School Avenue/Glen Oak Road. The applicant should be required to provide some additional information for these intersections as a condition of approval.

These intersections are appropriate for the purposes of assessing the impact of the development.

2. ***Traffic Counts.*** The traffic counts were conducted in October 2014 during the AM and PM peak periods. The counts appear reasonable. Traffic counts were not conducted during the "end of school day" period as would normally be done when a school is being modified. As pointed out by the engineer, during the end-of-school period, the school buses are already at the school getting ready for departure or are on their routes. The relocation of the maintenance facility from the north part of the city to this location makes essentially no difference during this period. I concur with this analysis and conclusion.

3. ***Trip Generation.*** The TIS relies upon trip generation information from the OCSD's existing site on Maplelane Court and on a detailed analysis of the arrivals and departures of school buses on their routes serving the district's schools. A key factor in the analysis is that it focuses on the AM and PM peak hour of street traffic on the major street network. Inbound and outbound traffic at the maintenance facility is unique with moderately high levels of activity several times during the course of the day. The activities include arrivals and departures of drivers in their personal vehicles, mechanics and administrative staff and the separate arrivals and departures of school buses making both morning and afternoon runs. As is evident from a review of the counts at the existing maintenance facility, relatively little of this activity occurs during the AM and PM peak hours.

   For the year of opening (2016), the engineer calculated that the facility would produce 41 AM peak hour trips (22 entering and 19 exiting); 25 PM peak hour trips (4 entering and 21 exiting); and 744 weekday trips (equal inbound and outbound).

   To provide a long-term forecast of site operations, the engineer used school enrollment forecasts produced by Portland State University (PSU). Using the middle range school enrollment forecasts produced by PSU, the engineer extrapolated a 20-year Oregon City School District enrollment increase of ten percent. He assumed activities at the maintenance facility would increase by a like percentage. For year 2035, he calculated the facility would produce 45 AM peak hour trips (24 entering and 21 exiting); 27 PM peak hour trips (4 entering and 23 exiting); and 814 weekday trips (equal inbound and outbound).

For those more familiar with other types of employment sites, the predicted traffic for the school bus maintenance facility might initially appear to be low, but the facility does have unique travel characteristics. I found the engineer's explanation and calculations of peak hour trips to be reasonable and justified.

4. ***Trip Distribution.*** According to the engineer, the trip distribution for buses is based detailed information about bus routes and schedules. For passenger vehicles it is based on area travel patterns, the location of major transportation facilities and likely trip origins. I found the trip distribution developed by the engineer for the AM and PM peak hours to be reasonable.

5. ***Traffic Growth.*** The TIS uses a two percent annual growth rate for traffic through 2020. For the intersection of Highway 213 and Meyers Road, the engineer assumes it will be a four-leg intersection in 2020. For the 2020 traffic analysis, he uses what might be a low estimate of traffic volumes on Meyers Road and its new connection to Highway 213. Future traffic volumes on Meyers Road and the impact of its connection to Highway 213 will be refined in the Meyers Road Concept Plan that is currently underway.

6. ***Analysis.*** Traffic operations analyses were conducted for the AM and PM peak hours for 2014 existing conditions; 2016 background conditions; 2016 total conditions with the maintenance facility; 2020 background conditions with the Meyers Road extension; and 2020 total conditions with Meyers Road extension and the maintenance facility.

   Because the AM and PM peak hour traffic volumes generated by the facility are small and because the distribution patterns cause traffic to disperse to both Beavercreek Road and Highway 213, the analysis shows the impact of the facility to be minimal for both 2016 and 2020. According to the engineer's analysis, all four intersections are predicted to meet the applicable city and Oregon Department of Transportation mobility standards with and without the maintenance facility through 2020.

   As indicated in #1, above, a limited analysis was conducted for the intersections of High School Avenue/Meyers Road and High School Avenue/Glen Oak Road. In his analysis, the engineer used traffic volumes collected elsewhere along Glen Oak Road to perform his calculation of intersection operations. While this is sufficient to demonstrate that these two intersections are likely to meet intersection performance standards, the lack of recent traffic counts at these two intersections makes it difficult for the city or the applicant to have a valid starting point for assessing traffic impacts associated with the proposed facility once the planned Meyers Road extension is constructed. Since the city's TIA Guidelines require the analysis require traffic counts and analyses of intersections on the city's collector network, the applicant should be required as a condition of approval to provide recent traffic counts and a complete assessment of operations for these two intersections. The analysis submitted by the applicant is

sufficient to determine that operational standards are met at these two intersections as well as those subject to the complete analysis.

I concur with the engineer's analysis showing that the impact of the proposed development is not significant and the performance of all intersections is likely to meet mobility standards without or with the proposed maintenance facility.

7. ***Turn Lanes.*** TIS indicates that left-turn lanes are in place at the key intersections and the configuration of Meyers Road is planned to include a left-turn lane at the site driveways. The configuration satisfies the need to analyze turn lanes at the site.

8. ***Crash Information***. The TIS provided a five-year crash history for the intersections in the study area. Even the intersection with the most crashes (Highway 213/Molalla Avenue) was calculated to have a modest crash rate. All other intersections have experienced lower crash rates and no particular patterns were evident. The engineer concluded that no significant safety hazards were identified and no mitigations are recommended. I concur.

9. ***Pedestrian and Bicycle Facilities.*** The site plan indicates sidewalks would be provided along the frontage for both High School Avenue and Meyers Road. Bike lanes are also indicated along Meyers Road, consistent with the specifications for a minor arterial street.

10. ***Site Plan and Access.*** The TIS and conceptual site plan indicate two access points on Meyers Road and three on High School Avenue. The most southerly access on High School Avenue will provide access to the "staff parking lot" located in the southeastern portion of the site. The other four driveways provide access to the operational areas of the maintenance facility.

    The "staff parking lot" is located outside the perimeter fence associated with the maintenance facility and will be used exclusively by automobiles and small trucks. The staff parking lot would be used by bus drivers and other employees by day and would be available for public use during the evening hours and on weekends.

    The other access points would be utilized by school buses and others needing access to the maintenance facility itself. Gates would prevent access during non-operating hours.

    The TIS did not provide a prediction of the inbound and outbound traffic volumes at the site access points. Such information is important for evaluating the length of turn lanes on the adjacent roads and related issues. Submittal of this information should be a condition of approval.

11. ***Intersection Spacing.*** No new intersections are created by this development proposal. The location of Meyers Road and High School Avenue is already established. This development will result in the westerly extension of Meyers Road.

12. ***Sight Distance.*** The engineer recommends the site access be designed at each access point to provide adequate sight distance. He recommends sight distance of 390 feet in each direction along Meyers Road based on an assumed speed of 35 mph. For High School Avenue, the engineer recommends a sight distance of 225 to the south based on an assumed speed of 20 mph and 290 feet to the north based on an assumed speed of 20 mph. These are reasonable recommendations. Some adjustment could occur depending on the outcome of the Meyers Road Concept Plan currently underway, but the importance of proving adequate sight distance should not be underestimated. Plans for signing, fencing and vegetation should take sight distance into account.

13. ***Consistency with the TSP.*** The planned extension of Meyers Road along the south boundary of the facility and to the west toward Highway 213 is consistent with the TSP. The site plan and related materials indicate the frontage improvements will comply with the TSP and city code requirements.

14. ***Parking.*** The TIS provides analyses and discussion of the parking associated with the maintenance facility and for the campus as a whole. The discussion presents information from the Oregon City code, City of Hillsboro requirements, and the Institute of Transportation Engineers' *Parking Generation.*

    With regard to the maintenance facility, the TIS provides a breakdown of parking needs using office space, maintenance space, and for "vehicle storage yards." The first two are based on an interpretation of the Oregon City code; the third is based on a City of Hillsboro requirement, which the engineer cites as being a possibly relevant specification from a comparable community. A maximum of 81 bus drivers, which represent the majority of users, would account for between 41 and 81 spaces under the Hillsboro code. The engineer calculates office uses would require 30 to 37 spaces and the maintenance bays would require 26 to 32 spaces. That yields a total of 97 to 150 spaces. This compares with a proposal to provide 138 spaces in the staff lot.

    With regard to the larger campus, the TIS includes a discussion about the school, the athletic fields, and the maintenance facility. The engineer suggests that peak use will overlap to a considerable degree though he states that the period of peak parking demand for sports fields is not well documented. He calculates school parking based on 0.2 to 0.3 spaces per person for 2750 persons. He calculates athletic parking at the rate of 13.3 to 60.5 spaces per field for five athletic fields. Added to the maintenance facility parking cited above, he calculates a total need for the campus in the range of 714 to 1278 spaces. He states that the proposal for the campus is 1176 spaces at the end of phase 1 and 1121 spaces for phases 2 through 4.

The easy availability of free or inexpensive parking is generally acknowledged to contribute to low vehicle occupancy. Given the region's and the city's commitment to trying to reduce per capita vehicle miles of travel, it might be cause for concern that this proposal seeks to provide parking near the maximum value of the range.

Providing parking in the range of one space per employee at the maintenance facility does not seem to provide much incentive for carpooling or other mode choices that reduce vehicle miles of travel. Limited parking in combination with other transportation demand management strategies can be effective means of reducing employees' tendency toward driving alone to work.

The assumption of overlap of peak demand for school parking and athletic field parking does not seem well supported. On the contrary, many of the users of athletic fields during weekday afternoons would seem to be student-athletes from the same school who do not have to travel to and park at the site. When athletic competitions or practices involve those from other schools, the travel time for the visitors would likely provide plenty of time for the majority of the host school's students to depart. Though I can offer no data to support a specific alternative calculation, I think the existing proposal errs on the high side in the provision of parking by assuming overlapping peak parking demand.

Making the staff parking lot at maintenance facility available for public use after hours is a definite positive. It will provide needed parking in close proximity to the planned city park on the south side of Meyers Road and to the athletic fields on the east side of High School Avenue during evenings and weekends.

In conclusion, assumptions about parking needs in this proposal and plans to provide the number of parking spaces proposed could have the effect of encouraging high levels of motor vehicle use in conflict with regional and city goals. The proposal is based on providing nearly one parking space per employee at the maintenance facility and assumes overlapping demand for the school, athletic fields, and maintenance facility. This leads to a proposal to provide parking near the top of the calculated range on the campus. The city and the OCSD might be better served by reducing the total allowable parking and instituting transportation demand management programs to better meet regional goals that include a reduction in per capita vehicle travel and achieving a non-single occupancy vehicle mode share of 40 to 45 percent.

15. ***Conclusions and Recommendations.*** The engineer concludes that all study area intersections will meet mobility standards in 2016 and in 2020 even with the completion of the proposed maintenance facility. This is due in part to the traffic characteristics of the OCSD's bus operations since little traffic occurs during the AM and PM peak periods. The engineer concludes that mitigation for traffic associated with the

maintenance facility is not necessary. The analysis of safety issues reveals on areas needing attention. I concur with his conclusions.

Conclusion and Recommendations

I find the TIS generally meets city requirements. Some items normally addressed in a TIS were lacking and should be provided as a condition of approval. These consist of: recent AM and PM peak hour traffic counts at the intersections of High School Avenue/Meyers Road and High School Avenue/Glen Oak Road; an operational analysis of these two intersections under current conditions; and estimates of AM and PM peak period traffic forecast at each proposed site access.

The TIS indicates that maintenance facility will cause only minor increases in traffic during the AM and PM peak hours. During these key periods, the effect of the additional traffic is minimal. The operational analysis indicates the mobility standards will be met at all locations with the development in year 2016 and year 2020. I concur that no off-site mitigation is required.

The frontage improvements associated with the maintenance facility will facilitate the implementation of Meyers Road, a minor arterial street specified in the Transportation System Plan (TSP) and upgrades to High School Avenue.

The applicant proposes that the staff parking lot be available for public parking during hours not needed for the facility's operation. This is a positive step in meeting parking needs associated with the planned park to the south and the athletic fields to the east. The amount of parking proposed by the applicant is a concern. The TIS describes in fair detail the assumptions used in calculating the parking needs. The proposed parking for the maintenance facility appears to be approximately one space per employee. This level of parking does little to help the city and the OCSD achieve city and regional goals that seek to reduce per capita vehicle miles of travel or the objective of significantly reducing daily single-occupancy vehicle commuting. On a campus-wide basis, the TIS also makes the assumption that peak parking demand for the school, athletic facilities, and the maintenance facility will overlap to a great degree. By making this assumption rather than assuming non-overlapping demand, the proposal inflates the predicted peak parking demand. This could lead to an overabundance of parking and encourage more, rather than less, vehicle travel and single-occupancy vehicle use. I recommend that the applicant and the city review the assumptions and refine the parking proposal to come to an agreement on a reduced number of spaces that is more supportive of regional and city goals. I further recommend that the OCSD commit to a transportation demand management program focused on the maintenance facility to help achieve the broader transportation goals and reduce the need for parking at that site.

In the TIS, the engineer also recommended that adequate sight distance be provided at the access points. I concur with his recommendations and suggest that during the design and construction process special care be taken with the selection and installation of signs, fences and plantings to assure that sight distance is maximized and meet the minimums recommended by the applicant's engineer.

If you have any questions or need any further information concerning this review, please contact me at replinger-associates@comcast.net.

Sincerely,



John Replinger, PE
Principal

Oregon City\2015\CP15-03

TRANSPORTATION DEMAND MANAGEMENT PLAN

LANCASTER
engineering

OREGON CITY HIGH SCHOOL

Transportation Demand Management Plan

Introduction

The need for an expanded and centralized high school campus was identified by the School District. The existing Moss Campus was selected as the new school site after a considerable amount of analysis and public involvement. The Moss Campus is an attractive location because the District will be able to make use of an existing building rather than shoulder the burden and expense of acquiring land for a new site and constructing a new facility. The most important reason the site was chosen is the close proximity to Clackamas Community College. Some high school students currently attend classes at the college, and the potential for sharing of facilities would be significant with the schools located near each other.

Currently high school students in Oregon City are split, with the Freshman class at the Moss Campus and the remaining students at the Jackson Campus near downtown Oregon City. Many classes for Jackson students are held at the Moss Campus and students either provide their own transportation between the two schools, or they are bused. Also, as previously stated, some classes are also held at the college, which necessitates additional vehicle trips between campuses.

With the new campus completed, all students will be at one location and the current student traffic between the campuses will be eliminated. In addition, convenient pedestrian and bicycle facilities will be in place between the college campus and the new high school. This will reduce current vehicular trips between the high school and the college as well as offer the potential for even more sharing of academic facilities between the schools. Also, the favorable Tri-Met service to the college will offer increased transportation options for both students and staff at the new high school.

The Transportation Demand Management Plan is focused on the two most significant groups that will contribute to the school's traffic impacts: the students and the staff. The needs of each group are not the same, and accordingly, each has been targeted with a group of measured aimed at reducing the number of vehicular trips to the school, or the timing of the trips to reduce impacts during the critical morning and evening peak hours.

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Demand Management Measures for Students

The Oregon City School District presently offers outstanding alternative means of transportation to and from the school. Bus service is available to all students in the District, except those residing within an approximate one-mile radius of the site. Also, over 50 percent of the student population is under the age of 16 and therefore must seek alternative means of transportation to and from school. Students driving separate vehicles to school are possibly the largest contribution to peak-hour traffic impacts. A successful Transportation Demand Management (TDM) Plan will identify and implement measures that encourage driving-age students to use the alternative transportation resources that will be available to them. TDM measures that the School District is planning to implement for students are described below.

1. Classes that begin both before and after the regular start of the school day are currently available to high school students and will continue to be available at the new campus. Currently 65 students at the Moss Campus and 255 students at the Jackson Campus attend an early class. Thirty students attend a late class at the Moss Campus, and 35 students attend a late class at the Jackson Campus. This serves to reduce the school's peak hour trip generation by allowing some trips to occur either before or after the typical school peaks.

2. Events planned at the school such as theater performances and sporting events will be scheduled during off-peak times so that school impacts during critical adjacent street peak hours are minimized.

3. Carpooling will be encouraged by reserving preferred parking spaces for carpools of two or more students. Also, reserved parking will be available for honor students and for drivers of electric or natural gas hybrid vehicles.

4. The District currently charges students for reserved parking stalls. Additional incentive to use other modes of transportation would be provided by offering a reduced, or possibly complementary parking for carpools. Also, higher rates could be charged to students that will drive to school as a single occupancy vehicle.

5. Bicycle and pedestrian facilities will be available throughout the new campus. The pedestrian and bicycle route between Clackamas Community College and the high school will be a very important link. This connection will enable high school students taking classes at the college to walk between campuses, rather than adding vehicle trips to the nearby roadways. Also, Tri-Met offers favorable transit service to the college. High school students will be able to take advantage of this service if public transportation is faster or more convenient than riding the school bus.

6. Tri-Met transit passes will be made available to students at a reduced rate, so that students that would be well served by transit will be encourage to ride the bus.

7. Bicycle racks will be located at strategic and convenient locations throughout the campus to make bicycling an attractive option. If possible, students who ride to school could receive a "student discount" at participating bike shops.

8. The benefits of utilizing alternative modes of transportation will be part of required curriculum in health and science classes. As part of this curriculum, students would be asked to provide input on what type of programs or services would best serve their needs for using alternative modes.

Demand Management Measures for Staff

While the student populations contributes the most to traffic impacts, school staff is also an important factor. Several TDM measures planned for staff are described below:

1. The District currently uses a centralized courier service to minimize trips made by individuals delivering materials between schools or to the Post Office. This service will continue with the new campus completed. Current employees of the District have indicated that the courier service makes a significant reduction in trips by staff.

2. Similar to the plan for students, preferred parking spaces will be made available for staff. To qualify for the preferred parking, carpools must have two or more members.

3. Teleconferencing facilities are planned for the library of the new campus. These facilities will allow interactive video conferencing that can be used by staff in lieu of traveling outside the area. These facilities could also be available to students for instructional purposes.

4. Tri-Met passes will also be offered to staff at a reduced rate. Since school bus service is not available to staff, the convenience of the transit center at Clackamas Community College and the pedestrian connection to the new campus could be an attractive option for employees.

Implementation

The TDM measures explained above that are currently offered will continue to be offered at the new campus. Implementation of new programs will be the responsibility of the School District when the new campus opens. The TDM program will be the part-time responsibility of a faculty member, who will oversee the coordination of the TDM plan. The School District currently assess the need for additional bus service on a yearly basis. As part of that assessment, the TDM measures in use will be revisited and examined for effectiveness. The TDM measures should be changed or altered to best suit the needs of the students and staff.

SITE PLAN – DESIGN REVIEW

MARK

MOSS CAMPUS SITE CONDITIONS (SP01-06)

Response to Conditions of Approval (Date: October. 25, 2001) **February. 26, 2002**

CONCLUSION AND DECISION:

Based on the analysis and findings as described above, staff concludes that the proposed application for the site improvements exclusive of the building footprint and areas within 5 feet of these buildings meet the approval criteria with the following conditions:

CONDITIONS:

General

1. The property owner shall combine tax lots 500 and 600 with tax lot 1300 or the lot lines otherwise amended so that applicable zoning and land division standards are satisfied. Such lot line adjustments or combinations shall be accomplished prior to issuance of occupancy permits. In addition, the property owner (project proponent) shall demonstrate ownership of tax lot 1200 by the time of a request for building permits for the entire site. Portions of tax lots 1000 and 1001 as outlined in the application shall be configured via lot line adjustment or other legal means. This will occur prior to building permit issuance for any site improvements.

   Tax lots 500, 600, 1200, 1300, and 1301 are not a part of any recorded subdivision and therefore no lot line adjustment would be required. Consolidation of the lots to be accomplished by the District at the Assessors office. The acting City Planning Director has advised that changing of the zoning is not required. The title company has supplied through Metroscan and research proof of ownership for the High School property. This record will be transmitted under separate cover.

2. This decision is subject to the conditions of approval contained in conditional use file CU 01-01, V 01-01, SP 01-06, Phase I and WR 01-06.

   The School District understands it meets conditions of approval unless notified otherwise.

3. The property owner's erosion control methodology and plan must be approved under separate permit by the City's Erosion Control Officer prior to issuance of construction permits. The plan must clearly indicate location(s) for construction staging. The applicant shall comply with all requirements of Section 17.47.

   Sheet C1.11 of the civil portion of the construction plans illustrates necessary erosion control. A NPDES Permit 1200C has been submitted to the DEQ with approval obtained for the entire site.

4. Prior to issuance of site plan construction permits, the property owner will post a financial guarantee acceptable to the City for the construction costs of Glen Oak Road, Beavercreek Road and the traffic signals at Glen Oak/213 and the new Beavercreek/Meyers Road intersections. Additional performance guarantee and security will be required for erosion and sediment control. The financial guarantee for erosion control will be required prior to site construction. The financial amounts of each guarantee will be based on City-approved engineer's cost estimates (provided by the property owner).

Construction plans for Glen Oak Road, Beavercreek Road, and Meyers Road have been submitted to Oregon City in September, October, November 2001 without response as of February 8, 2002. Beavercreek Road is under Clackamas County jurisdiction and a permit will be issued by the County. A financial guarantee to the City for this work appears inappropriate. The School contractor is costing these features. These costs will be used for the determination of the guarantee amounts.

5. The tree cover is described in general but location of trees (6 inches or greater) must be properly identified on the pre-construction conditions and site development plan. Any trees that were removed as part of preliminary site grading must be identified. The property owner shall provide a site plan and an pre-construction condition map indicating the location of these trees in the areas where project grading is to occur (or has occurred). A revised Landscape/Mitigation Plan for the site must demonstrate replacement of all removed trees necessitated by construction at a ratio of 1.5(new):1(removed). Replacement trees shall be minimum 3" caliper or greater and shall be approved by City staff prior to construction permit issuance. The property owner shall also supply documentation for compliance with Section 17.62.050.11 to City staff for their approval prior to construction permit issuance.

   Supplemental plans will be prepared for mitigation of the detention pond and replaced buffer around the small wetland. C1.11 illustrates specific trees and not the general location. Directions, from the City, were not received until February 20,2002 as to the location of mitigation area.

6. The property owner shall demonstrate site plan improvement compliance with the required Water Quality Resource Area in the Glen Oak Road area south of the site. The property owner shall provide complete documentation of the resource area and vegetated corridor sufficient for proper review of the Site Plan and Design Review Standards. The map and materials shall be provided by the property owner and subsequently reviewed by the City prior to issuance of neighborhood collector, private roadway, Glen Oak Road half street and other construction permits at the south portion of the site.

   The Water Quality Resource Area extends on to tax lot 1200 but is effectively cut off by the existing Glen Oak Road. The use of the property prior to development by the School was a private residence and filbert orchard. The construction plans show necessary street improvements which are, confined to the north side of the existing Glen Oak Road. A and a detention/water quality facility has been sited north of the street improvements.

7. Site Plan and Design Review Phase II construction permits include any construction permits exclusive of Buildings A through M on Site Plan A1.00 (9/14/01) and areas within 5 feet of these buildings, previously approved under City Permit SP 01-06, Phase 1. No Phase II permits on tax lot 1200 shall be issued prior to the property owner providing evidence that the portions of tax lots 1000 and 1001 (Clackamas County Map 3S-2E-9D) have been legally added to the project property.

   As stated in Condition 1 consolidation of the tax lots to be accomplished by the District. The title company has provided documents with show the School District is in control of tax lot 1200. No construction, grading or other activity is requested for the triangular portion of tax lot 1000.

8. The Water Quality Resource Area boundary, work boundaries and clearing limits shall be clearly flagged and trees shall be properly protected and not used to anchor or stabilize the work equipment. These limit lines and protections shall be in place prior to commencement of work and shall remain in place throughout the construction process.

   The work boundaries were established in the Phase I work and remain essentially the same in Phase II. The clearing limits are illustrated on C1.11 of the civil construction plans.

9. The property owner must comply with all storm sewer, stormwater, grading, erosion control, and water resources comments, geotechnical, drainage facilities, and other infrastructure requirements identified in the attached comments and policies of Exhibits 7, 9 and 10. All improvements shall be in place prior to certificate of occupancy of Phase 1 unless specific written agreement is reached with the City of Oregon City.

The Phase I storm system has been installed including erosion control facilities as requested by the DEQ. The detention/water quality pond in the northwesterly portion of the project is currently being used as a sediment pond for the first phase of construing. Final grading and planning will follow in the 2002 summer season.

Stormwater

10. Pre-development drainage patterns shall be outlined on an pre-construction conditions plan for the entire site. These criteria are in addition to those required in Condition # 8 of WR 01-06. The drainage plan must clearly indicate pre- and post-development topography and both the Caufield and Newell drainage basins. Drainage solutions shall not take stormwater out of an existing basin and into the other. The property owner shall provide map materials clarifying how pre and post drainage shall not move drainage from one basin to another prior to construction permit issuance.

The pre-developed drainage patterns and both the pre and post development topography are illustrated on C1.11 and supplemental drawings based on field measurements. These maps indicated in the Caufield and Newell drainage basins and will be submitted in the final drainage report. The final drainage solution does not change the pre-existing drainage patterns. The final drainage report will illustrate and clarify the drainage.

11. The project's Water Resources Report and Stormwater Report do not adequately address hydraulic design computations or downstream analysis. The plan shall be revised to keep basin flows within each respective basin and to accommodate other changes necessitated by these conditions of approval. Adequate map documentation, hydraulic design (quantity and quality) calculations and downstream analysis reflecting the revised plan revisions shall be provided for City review and approval. The hydrology information must include determination that the project would achieve minimum levels of Total Suspended Solids (TSS) removal. In addition, evidence that an NPDES 1200-CA permit has been obtained needs to be provided to the City Erosion Control Officer prior to issuance of construction permits. City approvals for each of the items in this condition must occur prior to issuance of construction permits.

Due to ongoing changes in the base plan, a final storm water report is still in progress. Field survey data collected off-site including interviews with off-site residents have been made to confirm pre-existing drainage patterns. The NPDES 1200-CA permit has been obtained from the DEQ and will be made available to the City Erosion Control Officer.

12. Construction Permit drawings shall incorporate design standards in conformance with Chapter 13.12, Stormwater Management.

The civil plans including standard details demonstrate the collection and disposal of the storm water using the standards and practices of the City.

Connectivity

13. The on-site pedestrian walkways must be hard surfaced, well-drained and at least five feet wide. These walkways shall meet the requirements of Section 17.52.070 of the Code. All pedestrian walkways shall meet these standards at the construction document stage prior to issuance of construction permits. An additional walkway must be permitted and built connecting the parking lot

south of the existing gymnasium building to the walkway on the west side of the new campus buildings. This pathway shall be built prior to final occupancy of phase 2 building construction.
The property owner shall also provide direct pedestrian connection from the main school area to the soccer area off of Glen Oak Road. The connection access point will be at the northeast corner of the two field area (under the power lines) at the new Meyers Road area. This will alleviate having to walk around extensive lengths of fencing. Adequate access must be approved by the City prior to approval of construction permits for the soccer field improvements. This access improvement must be approved and built prior to certificate of occupancy for the soccer fields and associated parking lot.

a) **All of our site pedestrian walkways are a minimum 5'-0" wide, the majority of concrete construction. There are two 5'-0" wide asphaltic concrete walkways connecting the south parking lot to the existing baseball field and the north parking lot to new softball fields (Drawing A1.00).**

b) **Exterior concrete stairs and sidewalk have been added at the west side of existing gym to provide connectivity to the lower gym, track and west portion of the buildings (Drawing A1.00 and 2-A1.03).**

c) **A crosswalk across the Meyer Road extension will be included as part of the Meyer Road work to provide connection to the SW soccer fields (Drawing A1.00).**

14. The proposed gates on public streets, the private roadway and at the emergency access crossing of the wetland area shall be approved by the Fire Department and the Oregon City Police Department prior to issuance of construction permits for the roads.

    a) **The vehicle access gates provide security and emergency access on the high school site at the wetland crossing and the private road connecting the softball field to the Meyer Road extension (Drawing A1.00 and 3-A1.02)**

15. All pedestrian crossings of the exclusive bus lane in front of the buildings shall have slip resistant concrete paving or similar material to differentiate the crossing areas from the asphalt pavement. These crossings shall be clearly marked with signage. These crossings shall meet the requirements of Section 17.52.070 of the Code.

    These crossings are concrete and comply with Section 17.52.070 of the Code. (A1.00, 1 & 2 – A1.02).

16. All auto and pedestrian access improvements, shall meet American Disabilities Act (ADA) requirements. Proposed handicap parking in the north student parking lot must be placed as close as possible to the proposed ROTC building. These requirements shall be reviewed and approved as part of preliminary drawing revisions and construction permit design drawings.

    Pedestrian access meets ADA requirements. The current plan has located an additional two accessible spaces approximately 140 feet from Building M with an accessible walkway leading to the building. The current site plan includes 22 handicapped parking spaces; this is one above the Code-required minimum. (Drawing A1.00 and C1.15 thru C1.20).

17. On-site bike lanes and the proposed neighborhood collector shall have bike lanes on both sides of the driveways and roadway or should be completely separated from these auto/bus routes. Revised preliminary plans with these revisions must be approved prior to issuance of site construction permits.

Also, the property owner shall provide a bus stop with a protected shelter for future Tri-Met bus connection. The property owner will either build the bus stop to Tri-Met specifications or provide an easement and post a bond with the city that will allow the future development of the stop. The property owner must obtain City staff approval for a bus stop to be shown on the site plans, prior to issuance of site construction permits. If the owner chooses not to build the improvement an interim landscape plan shall also be required for the stop area and vehicle approach, to be approved by staff prior to issuance of site construction permits. Necessary easements will be recorded prior to occupancy of any of the new buildings.

No on site bike lanes required or requested in the application. The District is willing to dedicate bus stop easement.

For off-site street improvement, bike lanes and access, see: Beavercreek (Drawings 6/7 & 7/7); Meyers Road (Drawing 3/4).

Parking

18. The property owner shall demonstrate compliance with minimum number of parking spaces requirement in Section 17.52.010 prior to the issuance of construction permits.

The District is providing 1,000 parking spaces. The minimum required is 727 based on Section 17.52.010, as demonstrated below. (Drawing A1.00, Parking Tabulation).

1 space/classroom = 95 teaching stations	**= 95**	**Required spaces**
1 space administrative employee = 32	**= 32**	**Required spaces**
1 space/ea. 4 seats of gym	**= 600**	**Required spaces**
	727	**Required spaces**

19. The property owner shall revise the site layout to meet the requirements of Section 17.52.020 which states that parking spaces must be within 500 feet of the building or use they are required to serve, measured from the building. The buildings on campus have a minimum number of parking spaces that are required (See 17.52.010 and Condition #11). 211 parking spaces do not meet the 500 foot criteria. The property owner shall receive planning staff approval for a revised site plan that meets this (and all other) requirements prior to the issuance of construction permits.

Section 17.52.010 states that required spaces shall not be more than 500 ft. from the building for the use they are required to serve. The current site plan meets this requirement because 789 spaces are within the 500 ft. distance. The Code requires 727 spaces. The 211 spaces beyond this distance will serve adjacent sport fields and court activities. It should be noted that a program requirement called for the new soccer field and tennis courts to be adjacent to the new school facility for access supervision. Meeting this requirement resulted in locating approximately 211 additional spaces closer to the fields and beyond the 500 ft (Drawing A1.00).

20. The property owner shall designate a minimum of 5% of the total main school parking area for exclusive carpool and vanpool parking and meet the requirements of Section 17.52.040.A. Staff approval and required signage shall be required prior to certificate of occupancy.

We meet the 5% car and vanpool requirement of the parking area within 500' of the buildings served: 789 x 5% = 39.5 required spaces. Current plans indicate 40 spaces. The required signage will be provided. (Drawings A1.00 & C1.21)

21. Prior to obtaining a construction permit, the applicant must submit information showing:
    - the location of 20 additional bicycle parking spaces required by the Code (for a total of 190 spaces);
    - the location of the 40 (or more) spaces to be provided in the first phase (at the opening of the school campus); the applicant must also submit a phasing plan for provision of future phases (e.g., number of spaces provided in each future phase, what triggers the future phase development, and approximate time frame).
    - that all of the required 190 bicycle parking spaces shall be located within 500 feet of a main building entrance; with optional additional bicycle parking provided at the sports fields.
    - the location, size, and text of any signs indicating bike parking area locations;
    - that all bicycle parking on the campus shall have a minimum lighting level of three foot-candles;
    - the type of bicycle racks to be provided and demonstrating how they shall be securely anchored to the ground or a structure;
    - that proposed bicycle parking (the additional and relocated, if any, bike parking areas) addresses the standards of Section 17.52.060.

A future building addition shown on the site plan near the north entrance to the school buildings would eliminate 40 proposed bike parking spaces as well as auto parking spaces. Prior to obtaining construction permits for the future addition, the applicant must demonstrate how those bicycle and motor vehicle parking spaces would be replaced and still meet all applicable requirements. Replaced spaces must receive permit approvals and be constructed prior to the certificate of occupancy for the future building addition being issued.

Pursuant to the C.U.P. Appeal, the Planning Commission required the District to provide a minimum of 40 bike spaces at the opening of the campus with a program to add additional bike spaces as the need arises.

The current plan provides bike parking for 80 bikes when the campus opens and will comply with the finding of the Planning Commission to provide the required 190 spaces as the need arises. Revised plans indicate placement of the additional 110 spaces.
(Drawings 1.00, 1, 2 & 8-A1.02 and 1-A1.04).

All bike parking is located adjacent the main entrances or within 500' of the buildings bicycle rack construction and anchorage detail (Drawing 4-A1.02).

Bicycle parking areas provided with minimum 3 foot-candles illumination. (Drawings EPH1.0 & EPH1.1).

Relocation of bicycle and auto parking spaces affecting the future addition will be indicated prior to obtaining permits for the future addition.

Lighting

22. The property owner shall demonstrate compliance with the outdoor lighting requirements in 17.62.050.10 and 17.62.070.C, prior to issuance of construction permits. This will require a lighting plan for the entire site based on the 9/14/01 site plan and any changes required by these conditions. Plans must include matched lighting details and confirmation regarding maximum foot-candle illumination at the property lines and minimum foot-candle illumination on the walkways, pedestrian paths and bike rack areas.

    Site lighting plan with foot-candle illumination is provided. (Drawings EPH1.0 & EPH1.1)

Landscaping

23. All parking areas must contain a minimum landscape width of five feet per Section 17.52.090.C.2. The areas of interior landscaping are not correctly measured by the applicant as identified on the applicant's drawing L-5 dated 4/06/01. The measurements include areas that are not "interior landscaped area" but are "perimeter parking lot landscaping." The parking lots shall need to be redesigned to reflect the needed percentage of interior landscape area required by this code section. Also, the revised parking area near the future Meyers Road/Beavercreek Road intersection shall accommodate pedestrian crossing of the parking area within a walkway that is at near-right angles to the movement of autos within this lot. All improved access points on Beavercreek Road, Meyers Road, the new north-south neighborhood collector and Glen Oak Road shall provide landscape vegetation that will not impede line of site distance requirements indicated in Chapter 10.32 of the City Code. Revised drawings that meet these requirements must be approved by staff prior to issuance of any site construction permits.

    Parking lots contain 5' minimum landscape area.

    Interior parking lot landscaping meet the 10% minimum requirement as shown. (Drawing L-6)

    The diagonal sidewalk in the southeast parking lot was reviewed; it was agreed that the point where it terminates with the new Meyer Road extension sidewalk should be moved 100 ft. to the west. The resultant new walk crosses the traffic lane closer to perpendicular. (Drawing A1.00)

24. The property owner shall provide an irrigation plan to be approved by the City staff prior to the issuance of construction permits. The plans shall reflect revised site design (see other conditions in this permit) and shall meet the requirements of Section 17.52.090.

    Landscape irrigation will meet criteria of 17.52.090.6. Plans will be submitted to city for review.

25. Revised preliminary drawings must meet the requirements of Section 17.52.090.7 and 17.52.090.8. These revised drawings shall clearly indicate the locations for garbage receptacles and other ancillary features for staff review and approval prior to issuance of construction permits. Elevation drawings shall indicate how the adequate screening will be provided.

    The garbage collection area/loading dock. (Drawings 9, 10, 11/A1.05) is screened by an 8 ft. high ornamental steel fence.

26. Construction permit drawings shall include parking lot landscape trees with a three-inch minimum caliper size, according to American Nurseryman Standards.

    3-inch caliper trees are noted. (Drawing L-1 thru L-4)

Other

27. Existing and proposed on and off-site easements must meet the requirements of Engineering Policy 00-01. Easement shall also be added to the pre-construction conditions plan to be submitted to the City Planning Division and City Engineering Division. Also, confirmation from the power line easement holder (unidentified on maps as to holder) shall be provided, confirming the legitimacy of proposed improvements within the easement area. These items must be complete prior to issuance of construction permits.

    PGE has been contacted multiple times on this issue. PGE policy is that any development within easement must be compatible. PGE has been provided plans for their review, they have provided no written statement that development is not in compliance or not compatible. Prior or previous development allowed within easement include the City drives and baseball field.

28. The property owner shall sign a non-remonstrance agreement for the purpose of making sanitary sewer, storm sewer, water or street improvements in the future that benefit the property assessing the cost to benefited properties pursuant to the City's capital improvement regulations in effect at the time of such improvement.

    The District is in the process of completing the non-remonstrance agreement.

    The City Engineer has agreed to allow submittal on remaining easements after completion of construction.

EXHIBITS:

1. Pre-Application Notes
2. Tax Assessor's Map
3. Application form
4. Pacific Habitat Water Resources Report
5. Applicant's Original Set of Plans
6. Addended Sheets A1.00, A1.01, C1.11, and C1.12
7. Engineering Policy 00-01
8. Applicant's Geotechnical Report
9. Clackamas County Department of Transportation and Development Comments
10. Engineering Division Comments
11. Wetland Delineation
12. Army Corps of Engineers "Compliance Certification"
13. Public Comments
14. Water Quality Resource District Comments – Nancy Kraushaar
15. Traffic Engineer's Comments
16. Conditions of Approval from SP 01-06, Phase 1
17. Conditions of Approval from WR 01-06
18. Conditions of Approval from CU 01-01
19. Land Use Decision from V 01-01
20. Applicant's Narrative
21. Applicant's Traffic Study

DAVID EVANS
AND ASSOCIATES INC.

MEMORANDUM

DATE: May 4, 2015

TO: Kelly Moosbrugger
City of Oregon City
221 Molalla Avenue
Oregon City, OR

FROM: Anneke Van der Mast

SUBJECT: DRAFT Chapter 17.49 NROD Type III Review

PROJECT: Oregon City School District
Proposed Transportation Maintenance Facility

CC: file

The City of Oregon City (the City) has contracted with David Evans and Associates, Inc. (DEA), to review permit applications located within the Natural Resource Overlay District (NROD) and mitigation plans, as applicable, to ensure they are complete and meet Oregon City zoning code criteria. This memorandum provides DEA's findings related to the Applicant's development application. This review is based on the materials provided and a site visit conducted by an ecologist on April 23, 2015.The proposed project includes construction of a new Transportation Maintenance Facility and associated vehicle parking and sitework.

Impacts to the NROD for the proposed project result from grading for the western detention pond, the installation of sub-surface storm facility piping, and the installation of a stormwater outfall with scour protection/rip rap. Grading associated with the western pond encroaches into the NROD, affecting an area of approximately 27 square feet and removing four Oregon white oak trees within the NROD area. The proposed stormwater outfall would consist of a rip-rap pad that provides scour protection from stormwater discharge that would be piped from both detention ponds. It would be located partially within the NROD and is situated in the lowest area north of the western pond. This permanent feature would affect 25 square feet of NROD and would result in the removal of one Oregon white oak tree. The area will not be re-vegetated as the rip-rap substrate precludes plant establishment.

General

17.49.[0]40 NROD Permit

Because the project could not avoid removing a portion of the forest canopy, the applicant has requested an adjustment from standards in section 17.49.155 and addressed the standards of 17.49.200; therefore the application is a Type III review.

17.49.[0]50 –Emergencies. (Do not apply to project.)

17.49.[0]60 – Consistency and relationship to other regulations.

MEMORANDUM

DATE: May 4, 2015 **FROM:** Anneke Van der Mast

TO: Kelly Moosbrugger **SUBJECT:** DRAFT Chapter 17.49 NROD Type III Review

The DSL concurred with the findings of the wetland delineation in December 2014. No jurisdictional wetland would be affected as part of the proposed project. The applicant will submit the DEQ 1200-C NPDES Stormwater Discharge Permit once the City provides Conditions of Approval for the Land Use application.

17.49.[0]70 –Prohibited uses. (Do not apply to project.)

17.49.[0]80 –Uses allowed outright (Exempted). (Do not apply to project.)

Prohibited, exempted, and regulated uses

17.49.[0]90 – Uses allowed under prescribed conditions.
The proposed project is categorized as a stormwater facility (I.) and therefore is subject to Section 17.49.155.

Development standards

17.49.100 – General development standards.
The proposed project complies with the general development standards. Native trees are only being removed when they are within 10 feet of the stormwater facility (A.). All vegetation planting identified in the mitigation plan are on the Oregon City Native Plant List (C.) except for slender rye (which is also not on the Metro and City of Portland native plant lists). However, a DEA licensed landscape architect has agreed that it is native to the area and a good addition to the identified seed mix. A grading plan has been provided for review as required (D.). The applicant is requesting neither a reduction (E.) nor an increase (F.) in setbacks. A fence will be installed along the edge of the stormwater facility both inside and along the edge of the disturbance, but will not further introduce on the NROD (G.). No lighting is proposed near the NROD area (H.). There is no 100-year floodplain on site (I.). A mitigation plan has been provided for impacts to the regulated buffer (J.).

17.49.110 – Width of Vegetated Corridor.
The slope adjacent to the wetland was determined by Pacific Habitat Services, Inc. (PHS) to be less than 25 percent, resulting in a 50-foot wide vegetated corridor according to Table 17.49.110 of the Oregon City NROD code. This was confirmed by a DEA ecologist on April 23, 2015

17.49.120-17.49.150 (Do not apply to the project.)

17.49.155 – Standards for Stormwater Facilities

Grading for the western detention pond, the installation of sub-surface storm facility piping, and the installation of a stormwater outfall with scour protection/rip rap will result in disturbance of the forest canopy within the dripline of existing trees (A.) See response to 17.49.180 regarding native plants (B.). An adjustment to standards is requested for this reason. There will be 325 square feet of permanent and temporary impacts (E.). The proposed stormwater facility will not encroach greater than one-half the distance of the NROD corridor (D.). A mitigation plan has been submitted and is reviewed in more detail in the response to Section 17.49.180 (C.).

MEMORANDUM

DATE: May 4, 2015 **FROM:** Anneke Van der Mast

TO: Kelly Moosbrugger **SUBJECT:** DRAFT Chapter 17.49 NROD Type III Review

17.49.160 – Standards for land divisions (Do not apply to the project.)

17.49.170 – Standards for trails (Do not apply to the project.)

17.49.180 – Mitigation Standards
The proposed disturbance area is 325 square feet. The area is heavily vegetated. Therefore, the total proposed mitigation planting area is 43,964 square feet because the plantings will be infilled into existing canopy openings. The areas that will be planted are expected to cumulatively exceed the required two-to-one planting ratio (A.) in the NROD area (C.) of the site (B.). Option 1 (E.) was used to determine mitigation plantings because it resulted in the greatest number of trees and shrubs to be planted: Sixteen (16) replacement trees and thirty (30) replacement shrubs will be planted according to size, spacing, and diversity standards in the NROD area. The plants and shrubs are on the Oregon City Native Plant List. Invasive species will be removed to the maximum extent practicable and bare ground will be planted or seeded with native grasses and ground cover species. The mitigation plan includes a 5-year maintenance and monitoring plan (F.) that includes annual progress reports including survival rates and remedial actions if necessary, submitted to the City's planning division. The applicant will record a restrictive covenant or conservation easement (G.) including a financial guarantee (H.) in the form provided by the city, that will require owners and assigns of the property to comply with the applicable mitigation. This will be included as a Condition of Approval for the application.

17.49.190 – Alternative Mitigation Standards

Due to the existing canopy, the total proposed mitigation planting area is 43,964 square feet because the plantings will be infilled into existing canopy openings. Therefore it exceeds the required two-to-one ratio of mitigation area to proposed disturbance area but meets the requirement (b) by meeting the minimum two-to-one ratio of mitigation area A mitigation plan is included with the application.

17.49.200 – Adjustment from Standards

The proposed detention pond grading, storm drainpipe, and stormwater outfall impact areas within the NROD have been minimized to the greatest extent possible while still providing adequate capacity for the stormwater facility (C.). The proposed project largely avoids adverse impacts to NROD resources and their functions within the parcel by minimizing impacts within the NROD (B.). As the affected NROD has dense canopy coverage, completely avoiding forest canopy impacts was not possible (A.). The wetland complex/tributary to Caufield Creek that flows through the project area is not mapped as providing habitat for migratory fish (StreamNet 20151). ODFW field verified that fish do not occur in the wetland complex/tributary (ODFW-ODF 19942) (D.). All other NROD standards ca be met (E.) An adequate mitigation plan has been submitted for the project (F.).

The trees that the applicant specified to be planted are large and would require frequent watering during establishment. The reviewing landscape architect and ecologist concur that this size of tree is rarely successfully established because of the intensive watering needs. Instead, the proposed project should include an adjustment from the tree size to plant smaller, and less demanding trees that are more likely to establish successfully.

17.49.210 – 17.49.230. The applicant was deemed complete.

MEMORANDUM

DATE: May 4, 2015 **FROM:** Anneke Van der Mast

TO: Kelly Moosbrugger **SUBJECT:** DRAFT Chapter 17.49 NROD Type III Review

Recommended Conditions of Approval

DEA recommends the following conditions of approval for the project:

1. Provide a weed/invasive species removal plan.
2. Personnel hired to remove invasive species must be licensed and trained to use herbicides in the vicinity of water bodies, if such chemicals are to be used.
3. Provide a detailed stormwater detention pond plan that shows and labels:
    a. The permanent and temporary features designed for the flow between the pond outfall and the wetland.
    b. The method of accommodating the flow.
    c. The flow control measures in the vegetated corridor.
    d. Contour lines between the outfall and the wetland.
    e. The trees downslope of the outfall.
    f. A planting plan for the detention pond side slopes, outside of the berm, and the pond bottoms.

    The stormwater plan must ensure that:

    a. The discharge from the outfall into the wetlands occurs at multiple points to slowly recharge the groundwater.
    b. The oak trees will not be negatively affected by increased hydrology at their roots.
4. All undisturbed areas, including remaining trees and their root systems, should be identified and protected from grading and vehicle damage by flags, fencing, or a combination of both.
5. Submit a final planting plan that specifies smaller trees than in the original application and includes a temporary irrigation plan prior to the grading permit and ensure frequent watering during establishment.
6. If additional trees are removed additional mitigation will be required in accordance with section 17.49.180, Mitigation Standards if the.
7. Submit the DEQ 1200-C NPDES Stormwater Discharge Permit prior to grading permit.
8. Record a restrictive covenant or conservation easement that requires the owners to implement and comply with mitigation and monitoring and includes a financial guarantee in the form provided by the city.
9. Clearing of vegetation (trees and shrubs) shall occur outside of the nesting season in accordance with the Migratory Bird Treaty Act.

Supplemental Narrative
Oregon City School District Transportation Maintenance Facility
08 May 2015

Introduction

The Oregon City School District is planning to construct a new state-of-the-art facility to house and maintain buses and other transportation service and district maintenance vehicles. The facility will house related supervisory and maintenance staff, and bus drivers. This modern facility is envisioned to address the District's needs for at least the next 30 years. The goal is to provide a building that is functional, durable, constructed of low maintenance materials, and modern in its appearance.

Site Layout and Function

The new facility will provide shop areas (with support spaces) that need to be secured within a fenced compound. Bus parking and other District vehicles need to also be within the fenced compound. On the other hand, staff and visitor parking needs to be outside the bounds of the fenced compound with its own separate direct access to office areas (and Drivers Lounge) of the facility. Site geometry is not adequate in size or shape to accommodate these requirements if the building were positioned close to the Meyers Road frontage.

The placement of the staff/visitor parking lot at the Southeast corner of the property (at the intersection of Meyers Road and High School Avenue) also provides beneficial access for public use given its proximity to the High School play fields on the East side of High School Avenue and the proposed City park being planned on the South side of Meyers Road.

Functionally, the Bus Maintenance and Facility Maintenance shops need direct access to service yards and bus parking areas which occupy the West and East sides of the facility. Bus Maintenance shops are most efficient and safe with a "drive-through" layout requiring circulation and bus wash areas occupying the third (North) side of the facility. These functional requirements leave only the fourth (South) side of the facility available for staff and driver parking, making it impossible to locate the building closer to the street.

The site layout, as designed, fulfills the need for separate bus parking and staff parking access/egress off Meyers Road. It also allows for drive through bus service bays. In essence, there is a formal public side of the facility to the South (with staff/visitor parking) and a less formal, more utilitarian, private side of the facility to the North and with buses and other district vehicles stored to the West, North and East of the building.) In particular, the bus parking and circulation have been laid out to allow bus movement that avoids the need for buses to back up.

Architectural Style

Modern and clean in its appearance, the architectural style is modest and straightforward with enough variety in its shape and wall materials to provide visual interest and detail.

Tree Removal

The nature of the facility requires open expanses of paved storage areas for buses and other transportation and maintenance vehicles. Opportunities to retain trees outside of the wetland and its buffer zone were extremely limited.

As noted in previous narratives, the District has exhausted all available locations for planting new trees. The district will opt to pay the fee-in-lieu for many of the needed trees.

It is our position that the paved fenced compound area should be considered a part of the "construction zone" when determining tree counts for mitigation since a main function of the proposed facility is the storage of the District's vehicle fleet. The means to construct this parking compound requires grading and activities which prohibited saving perimeter trees at the west boundary.

Supplemental Narrative
Oregon City School District Transportation Maintenance Facility
08 May 2015

Covered Storage Area

Paved areas within the fenced compound are storage areas for various vehicles, materials, and equipment, some requiring cover for protection from the elements (such as lawn mowers, fork lifts, and other maintenance equipment. Covered storage needs for vehicle equipment and materials can vary from year to year and covered areas can change in area and height, depending on need and what needs protection. Therefore, a portion of the paved storage areas has been identified as a zone for covered storage to consolidate those areas on the site rather than occurring in scattered locations.

17.62 Standards

17.62.055.H.2. *Facades greater than one hundred feet in length, measured horizontally, shall incorporate wall plane projections or recesses having a depth of at least three percent of the length of the facade and extending at least twenty percent of the length of the facade. No uninterrupted length of any facade shall exceed one hundred horizontal feet.*

The front façade (facing Meyers Road to the South) is designed to present a modern, clean appearance. (Refer to attached colored rendering of view from Meyers Road.) The façade is faced with two metal panel types, and the projections and recesses from the main plane of the wall include:

Projecting sunshades at windows
Projected entrance element clad in a third metal panel type (a flat, smooth textured metal) to differentiate the public building entry from the main façade
Windows and the metal panels below them are recessed from the plane of the façade
Trees which may be required as a condition of approval in planter beds between the sidewalk and building face further break up the appearance of the building façade.

The 119' – 1 ½" long façade is interrupted by the entrance projection which is 11 feet in width. (The minimum required 3% projection depth is therefore 3.57 feet; the actual entrance projection equals 4 feet.)

17.62.050.A.21.c. *Special material standards: The following materials are allowed if they comply with the requirements found below:*

Metal siding. Metal siding shall have visible corner moldings and trim and incorporate masonry or other similar durable/permanent material near the ground level (first two feet above ground level).

To help meet the District's desire for low maintenance materials, 3 types of metal siding have been juxtaposed on the building's front façade to introduce variety in lieu of moldings and trim that would be inconsistent with the clean look of the building.

The introduction of masonry at the ground level would be inconsistent with that clean look and would provide no additional durability or permanence. Instead, the general metal wall panel type has been interrupted with a second type of metal panel at the base of window to add an alternative form of visual interest. (These panels and the windows are recessed from the plane of the main wall panels.)

The material selections at the various portions of the building define use. Metal siding was selected at office areas. Concrete and concrete masonry are being used at high impact maintenance portions of the building.

17.62.055.D.3. *Entryways. The primary entranceway for each commercial or retail establishment shall face the major street. The entrance may be recessed behind the property line a maximum of five feet unless a larger setback is approved pursuant to Section17.62.055.D.1 and shall be accessed from a public sidewalk. Primary building entrances shall be clearly defined, highly visible and recessed or framed by a sheltering element including at least four of the following elements, listed below.*

The primary entranceway faces Meyers Road. As discussed above, the location is greater than 5 feet from the property line because of the placement of staff/visitor (public) parking which serves not only the Transportation Maintenance Facility but also the High School Play Fields and the future City Park. Six of the following elements have been included to clearly define the entry:

a. *Canopies or porticos;*
Included; refer to discussion below re: vertical and horizontal portico-like entrance canopy element.

b. *Overhangs;*
Included; refer to discussion below re: horizontal portion of the portico-like entrance element and to description of overhanging sunshades at windows.

c. *Recesses/projections;*
Included; see discussion above and below re: projecting vertical and horizontal entrance element. See discussions below re: projecting sunshades at windows, recessed window (and siding panels below).

d. *Arcades;*

e. *Raised corniced parapets over the door;*

f. *Peaked roof forms;*

g. *Arches;*

h. *Outdoor patios;*
Included; see discussion below re: paved area at entrance

i. *Display windows;*
Included; see discussion below re: windows at entrance and offices.

j. *Architectural details such as tile work and moldings which are integrated into the building structure and design;*
Included: see discussion below re: contrasting metal siding treatment.

k. *Integral planters or wing walls that incorporate landscaped areas and/or places for sitting.*

l. *Planter boxes and street furniture placed in the right-of-way shall be approved for use according to materials, scale and type.*
Included: See discussion below re: bicycle parking rack and flagpole.

The main entryway on the South façade is clearly defined by elements differing from those listed above. Nonetheless, these elements are as effective in clearly defining the entrance location. These elements include:

a. Canopies or Porticos & Overhangs: A vertical and horizontal portico-like entrance canopy element, clad in smooth metal panels and modestly projecting from the front plane of the building, to "announce" the main entrance to the facility. The horizontal element represents a modern geometric alternative to corniced parapets. (Peaked roof forms or arches are not necessary to add emphasis to this entrance element. Its smooth texture is in obvious contrast to the surrounding textured metal panel wall plane and adequately and clearly defines the front entrance.)

b. Recesses/Projections & Display Windows: Window shapes have been carefully employed to differentiate the office areas from the horizontal entrance element. The recessed office windows run in horizontal bands and have projecting sun shades, whereas the entrance element glazing is vertical in shape. (First and second floor glazing at the entrance is less interrupted by metal wall panels as they are in other areas and clearly display entrance and stairway.)

c. Projections: A series of projecting sun shades at the generous windows at the office areas that are aligned along the building frontage provide a visual break in the plane of the building facades.

d. Architectural Details: The selection and detailing of varied metal panel types along the front building plane, interrupted by the vertical and horizontal entrance element serves as a strong contrast to better focus one's attention to the main entrance.

e. Outdoor Patios & Street Furniture: Outdoor paved area at entrance with bicycle parking and lit flagpole.

Draft Condition of Approval Item 27

"27. There shall be two driveways on the Meyer Road extension for the bus parking area, which shall be approximately 200 feet apart. The driveway nearest to the Meyers Road and High School Avenue intersection shall be for "entrance" only.

For buses to safely circulate and avoid the need to back up, it is imperative that buses can exit both driveways. There should be no conflict between entering and exiting buses, since they enter and exit at different times of the day. It should also be remembered that these two driveways serve District vehicles only and are not accessible by the public. Site geometry does not offer opportunities for alternative bus parking layouts that would maintain safe circulation to and from and within the bus parking areas.

