CITY OF MILWAUKIE
PLANNING COMMISSION
MINUTES
Milwaukie City Hall
10722 SE Main Street
TUESDAY, July 24, 2012
6:30 PM

COMMISSIONERS PRESENT
Lisa Batey, Chair
Chris Wilson
Mark Gamba
Scott Churchill
Clare Fuchs
Shaun Lowcock

STAFF PRESENT
Scot Siegel, Interim Planning Director
Brett Kelver, Associate Planner
Li Alligood, Associate Planner
Peter Watts, City Attorney

1.0 Call to Order – Procedural Matters*
Chair Batey called the meeting to order at 6:30 p.m. and read the conduct of meeting format into the record.

***Note**: The information presented constitutes summarized minutes only. The meeting video is available by clicking the Video link at http://www.ci.milwaukie.or.us/meetings.*

2.0 Planning Commission Minutes
2.1 June 12, 2012

Commissioner Fuchs moved to approve the June 12, 2012, Planning Commission minutes as presented. Commissioner Churchill seconded the motion, which passed unanimously.

3.0 Information Items

Chair Batey clarified that at the July 10th, 2012, Planning Commission meeting there was a tie vote for the Vice Chair position between Commissioners Churchill and Fuchs. The Commissioner elected would fulfill the Vice Chair position through the end of the year.

Chair Batey moved to elect Commissioner Fuchs as Vice Chair. Commissioner Churchill seconded the motion, which passed unanimously.

4.0 Audience Participation –This is an opportunity for the public to comment on any item not on the agenda. There was none.

5.0 Public Hearings
5.1 Summary: North Clackamas Park Restoration
Applicant/Owner: Clackamas County Water Environment Services/City of Milwaukie
Address: 5440 SE Kellogg Creek Dr
File: NR-12-02
Staff: Ryan Marquardt (not present)

Chair Batey opened the public hearing for NR-12-02 and read the conduct of minor quasi-judicial hearing into the meeting record.

Commissioner Gamba moved to continue the hearing for NR-12-02 to the special meeting of the Planning Commission on July 31, 2012. Commissioner Fuchs seconded the motion, which passed unanimously.

5.2 Summary: Natural Resource Review for Crystal Creek (Light Rail) *continued from 7/10/12*
Applicant/Owner: KLK Consulting/TriMet
Addresses: 2519, 2525, & 2535 SE Harrison St
File: NR-12-01
Staff: Brett Kelver

Chair Batey opened the public hearing for NR-12-01 and read the conduct of continued minor quasi-judicial hearing into the meeting record.

Commissioner Gamba declared a potential but not actual conflict of interest.

Chair Batey opened the record so that staff might present new information requested by the Planning Commission at the last hearing.

Brett Kelver, Associate Planner, presented the staff report via PowerPoint. He entered new information from the applicant into the record as Exhibit 2. He reminded the Commission of the three approval criteria that the application avoided impacts, minimized unavoidable impacts, and mitigated for impacts. Staff recommendation was to approve with revised findings and conditions.

Jeb Doran, TriMet, summarized the additional information provided to the Commission that addressed chemical weed control, potential trackway pollutants, water quality and hydrology issues, and best management practices for water quality resources. He noted the additional 2,700 sq ft of mitigation area and plantings. He explained that the request for water quality monitoring would be difficult due to the amount and variety of surrounding sources of potential pollutants. The MSDS for Rodeo Herbicide was entered into the record as Exhibit 3.

Commissioner Churchill inquired about chemical application coverage, saturation, and rate of application.

Mr. Doran noted that the application met and exceeded the City's requirements for the project, and TriMet worked to be a good partner.

Commissioner Fuchs pointed out that Condition 1-C.ii should read 2,700 sq ft of mitigation area rather than 2,900 sq ft.

Chair Batey closed public testimony.

The Commission discussed the proposed use of chemicals on the trackway; applicable City criteria; and the appropriate number of mitigation plantings.

Commissioner Gamba moved to approve NR-12-01, Natural Resource Review for Crystal Creek (Light Rail), with amendments to the findings and conditions with additional square footage of mitigation are and plantings, and updated exhibits, as discussed. Commissioner Fuchs seconded the motion, which passed with Commissioner Churchill opposing.

5.3 Summary: PMLR Signal and Communications Building
Applicant/Owner: KLK Consulting/TriMet
Address: 2103 SE Adams St
File: CSU-12-07, DR-12-05, VR-12-04
Staff: Li Alligood

Chair Batey opened the public hearing for CSU-12-07, DR-12-05, VR-12-04 and read the conduct of minor quasi-judicial hearing into the meeting record.

Li Alligood, Associate Planner, presented the staff report via PowerPoint. She reviewed key issues and potential impacts, and noted that conditions were written to mitigate those potential impacts. She read into the record an additional proposed condition of approval requiring green roof, should funding become available. She clarified the conditions regarding the easement. Staff recommendation was to approve with the proposed findings and conditions.

Mr. Doran and Bob Hastings, TriMet, reviewed the project elements and related site and street improvements. They reviewed roof design options, including the Design and Landmarks Committee's preference for a green roof. The design includes improved access for the neighboring site. They requested approval with the recommended conditions in the staff report.

Commissioners Fuchs and Churchill asked questions about the woven wire panels proposed for the exterior of the building.

Mr. Hastings and Mr. Doran addressed their questions about the material and also described some general architectural considerations.

Design and Landmarks Committee (DLC) Chair Greg Hemer and **DLC Member Becky Ives** reported on the DLC meeting and their recommended conditions of approval.

Greg Hemer, Milwaukie Lumber, 10998 SE 21st Ave, was concerned about TriMet trucks blocking access for the neighboring property's trucks. He also had concerns about safety and security.

Ms. Alligood described the Type I Development Review process, which would be invoked if there were proposed design changes after the Planning Commission hearing. She also clarified that any proposed new construction would require Type III Design Review.

Peter Watts, City Attorney, addressed Mr. Hemer's concern about truck access.

Mr. Doran and Mr. Hastings addressed the access and safety concerns.

Ms. Alligood and Mr. Watts proposed a new Finding and a new Condition to address the green roof.

Commissioner Gamba moved to approve CSU-12-07, DR-12-05, VR-12-04, PMLR Signal and Communications Building, with the additional finding and condition. Commissioner Churchill seconded the motion, which was approved unanimously.

6.0 Worksession Items

7.0 Planning Department Other Business/Updates

7.1 Planning Commission Notebook Replacement Pages – Zoning Ordinance Map

8.0 Planning Commission Discussion Items

8.1 Planning Department vacancies

Scot Siegel, Interim Planning Director, reported that recruitment was underway to hire a new Planning Director and Senior Planner, with the goal of filling the Director position by early September and the Senior Planner position to follow.

9.0 Forecast for Future Meetings:

July 31, 2012	1. Public Hearing: NR-12-02 North Clackamas Park Restoration Project
August 14, 2012	1. Public Hearing: CSU-12-07 PMLR Signal and Communications Building *continued tentative* 2. Public Hearing: NR-12-02 North Clackamas Park Restoration Project *continued tentative*

Meeting adjourned at approximately 8:33 p.m.

Respectfully submitted,

Alicia Martin, Administrative Specialist II
Marcia Hamley, Administrative Specialist II

Lisa M. Batey

Lisa Batey, Chair

AGENDA

MILWAUKIE PLANNING COMMISSION
Tuesday July 24, 2012, 6:30 PM

MILWAUKIE CITY HALL
10722 SE MAIN STREET

1.0 Call to Order - Procedural Matters

2.0 Planning Commission Minutes – Motion Needed

2.1 June 12, 2012 *(to be sent in supplemental packet)*

3.0 Information Items

4.0 Audience Participation – This is an opportunity for the public to comment on any item not on the agenda

5.0 Public Hearings – Public hearings will follow the procedure listed on reverse

5.1 Summary: North Clackamas Park Restoration Project *(to be opened and continued to 7/31/12*
Applicant/Owner: Clackamas County Water Environment Services/City of Milwaukie
Address: 5440 SE Kellogg Creek Dr
File: NR-12-02
Staff: Ryan Marquardt

5.2 Summary: Natural Resource Review for Crystal Creek (Light Rail) *continued from 7/10/12*
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Address: 2103 SE Adams St
File: CSU-12-07, DR-12-05, VR-12-04
Staff: Li Alligood

6.0 Worksession Items

7.0 Planning Department Other Business/Updates

7.1 Planning Commission Notebook Replacement Pages – Zoning Ordinance Map

8.0 Planning Commission Discussion Items – This is an opportunity for comment or discussion for items not on the agenda.

9.0 Forecast for Future Meetings:

July 31, 2012	1. Public Hearing: NR-12-02 North Clackamas Park Restoration Project
August 14, 2012	1. Public Hearing: CSU-12-07 PMLR Signal and Communications Building *continued tentative* 2. Public Hearing: NR-12-02 North Clackamas Park Restoration Project *continued tentative*

Milwaukie Planning Commission Statement

The Planning Commission serves as an advisory body to, and a resource for, the City Council in land use matters. In this capacity, the mission of the Planning Commission is to articulate the Community's values and commitment to socially and environmentally responsible uses of its resources as reflected in the Comprehensive Plan

1. **PROCEDURAL MATTERS.** If you wish to speak at this meeting, please fill out a yellow card and give to planning staff. Please turn off all personal communication devices during meeting. For background information on agenda items, call the Planning Department at 503-786-7600 or email planning@ci.milwaukie.or.us. Thank You.

2. **PLANNING COMMISSION MINUTES.** Approved PC Minutes can be found on the City website at www.cityofmilwaukie.org

3. **CITY COUNCIL MINUTES** City Council Minutes can be found on the City website at www.cityofmilwaukie.org

4. **FORECAST FOR FUTURE MEETING.** These items are tentatively scheduled, but may be rescheduled prior to the meeting date. Please contact staff with any questions you may have.

5. **TIME LIMIT POLICY.** The Commission intends to end each meeting by 10:00pm. The Planning Commission will pause discussion of agenda items at 9:45pm to discuss whether to continue the agenda item to a future date or finish the agenda item.

Public Hearing Procedure

Those who wish to testify should come to the front podium, state his or her name and address for the record, and remain at the podium until the Chairperson has asked if there are any questions from the Commissioners.

1. **STAFF REPORT.** Each hearing starts with a brief review of the staff report by staff. The report lists the criteria for the land use action being considered, as well as a recommended decision with reasons for that recommendation.

2. **CORRESPONDENCE.** Staff will report any verbal or written correspondence that has been received since the Commission was presented with its meeting packet.

3. **APPLICANT'S PRESENTATION.**

4. **PUBLIC TESTIMONY IN SUPPORT.** Testimony from those in favor of the application.

5. **NEUTRAL PUBLIC TESTIMONY.** Comments or questions from interested persons who are neither in favor of nor opposed to the application.

6. **PUBLIC TESTIMONY IN OPPOSITION.** Testimony from those in opposition to the application.

7. **QUESTIONS FROM COMMISSIONERS.** The commission will have the opportunity to ask for clarification from staff, the applicant, or those who have already testified.

8. **REBUTTAL TESTIMONY FROM APPLICANT.** After all public testimony, the commission will take rebuttal testimony from the applicant.

9. **CLOSING OF PUBLIC HEARING.** The Chairperson will close the public portion of the hearing. The Commission will then enter into deliberation. From this point in the hearing the Commission will not receive any additional testimony from the audience, but may ask questions of anyone who has testified.

10. **COMMISSION DISCUSSION AND ACTION.** It is the Commission's intention to make a decision this evening on each issue on the agenda. Planning Commission decisions may be appealed to the City Council. If you wish to appeal a decision, please contact the Planning Department for information on the procedures and fees involved.

11. **MEETING CONTINUANCE.** Prior to the close of the first public hearing, *any person* may request an opportunity to present additional information at another time. If there is such a request, the Planning Commission will either continue the public hearing to a date certain, or leave the record open for at least seven days for additional written evidence, argument, or testimony. The Planning Commission may ask the applicant to consider granting an extension of the 120-day time period for making a decision if a delay in making a decision could impact the ability of the City to take final action on the application, including resolution of all local appeals.

The City of Milwaukie will make reasonable accommodation for people with disabilities. Please notify us no less than five (5) business days prior to the meeting.

Milwaukie Planning Commission:

Lisa Batey, Chair
Scott Churchill
Chris Wilson
Mark Gamba
Clare Fuchs
Shaun Lowcock

Planning Department Staff:

Scot Siegel, Interim Planning Director
Brett Kelver, Associate Planner
Ryan Marquardt, Associate Planner
Li Alligood, Associate Planner
Alicia Martin, Administrative Specialist II

MILWAUKIE
Dogwood City of the West

To: **Planning Commission**

Through: **Scot Siegel, Interim Planning Director**

From: **Ryan Marquardt, Associate Planner**

Date: **July 18, 2012, for July 24, 2012, Public Hearing**

Subject: **File:** NR-12-02, CSU-12-06

Applicant: City of Milwaukie, Clackamas County Water Environment Services

Owner(s): City of Milwaukie

Address: 5440 SE Kellogg Creek Drive

Legal Description (Map & Taxlot): 22E06AC00100, 22E06AD01000, 22E06AB00617, 22E06AB00417

NDA: Lake Road

ACTION REQUESTED

Approve application NR-12-02 and CSU-12-06 and adopt the recommended Findings and Conditions of Approval found in Attachments 1 and 2. This action would allow for stream and riparian restoration activity for Mt. Scott Creek and Camas Creek, placement of 2 creek overlooks, and replacement of a pedestrian bridge across Camas Creek.

BACKGROUND INFORMATION

A. Site and Vicinity

The site is located at 5440 SE Kellogg Creek Drive. The site is home to North Clackamas Park, and contains numerous park features including baseball fields, picnic and play areas, Milwaukie Center, the Sara Hite Memorial Rose Garden, an off-leash area for dogs, and natural resource areas. Surrounding properties consist of mostly of large-lot residential properties and lands that are vacant or being farmed.

B. Zoning Designation

The site is zoned Residential zone R-10 (R10). Portions of the site have received Community Service Use (CSU) or Community Service Overlay (CSO) approvals. Much of the northern half of the site has Water Quality Resource (WQR) areas or Habitat Conservation Areas (HCA).

C. Comprehensive Plan Designation

The site has a Comprehensive Plan designation of Public (P).

D. Land Use History

- **1980:** A-80-07, annexation of North Clackamas Park and adjacent property into the City.
- **1992:** CSO-92-04, approved an addition to the Milwaukie Center.
- **1996:** Sara Hite Memorial Rose Garden was approved as a modification to CSO-92-04.
- **2001:** NR-01-04, approved modification to install raised garden beds to the community garden at the Milwaukie Center
- **2005:** CSO-05-02, approved a major modification of a Community Service Overlay for baseball fields, including new lighting for the ball fields and parking lot.
- **2007**
    - Minor modification allowing expansion of the maintenance area in the southwest area of the park.
    - Minor modification for replacement of a trailer or RV for a park caretaker's residence.
    - Minor modification for the reconfiguration of the horse arena in the southwest portion of the park.
- **2009:** CSU -09-08, approved installation of an electronic readerboard sign at the park
- **2010**
    - CPA-10-01, master plan for the northern portion of North Clackamas Park. Planning Commission recommended approval on May 22, 2012, and a hearing before City Council is scheduled for August 7, 2012.
    - CSU-10-02, approved enclosure of covered space at the Milwaukie Center for the Meal of Wheels program.
    - CSU-10-03, approved construction of an accessory structure for wood splitting.

E. Proposal

The applicant is seeking land use approvals for restoration of the stream and riparian habitats of Mt. Scott Creek and Camas Creek, the installation of 2 stream overlooks, and replacement of a pedestrian bridge over Camas Creek. The restoration proposal includes the following:

1. Stream Bank Restoration –Stabilized banks with logs, strategically place large woody debris and boulders along stream bank, plant native trees, and remediate soil.
2. Riparian Area Enhancement – Decommission trails, and plant native trees, shrubs, and groundcover.

3. Culvert Removal and Restoration at Camas Creek Confluence – Remove culvert, concrete debris, and asphalt path; regrade the confluence area; and stabilize the banks with logs, woody debris, and boulders.
4. Alcove – Create an alcove downstream from the confluence of Camas Creek and Mt. Scott Creek to improve fish habitat.

The project requires approval of the following applications:

1. Natural Resource Review

   The project requires natural resource review because it affects Habitat Conservation Area (HCA) and Water Quality Resource (WQR) areas. Different parts of the project are subject to different portions of natural resource regulations in Milwaukie Municipal Code (MMC) 19.402.

   A. Natural Resource Management Plans (MMC 19.402.10)

      Natural resource management or restoration plans authorize limited disturbance within the HCA and WQR for the purpose of improving the function and health of these areas. A large amount of the proposed work is being reviewed as a natural resource restoration plan for Mt. Scott Creek and Camas Creek. This includes stream bank restoration, riparian area enhancement, culvert removal, and creation of the alcove.

      Resource management and restoration plans have simpler review criteria than the criteria for evaluating development within the WQR and HCA. The criteria in MMC 19.402.10.C require only that the plan improves the overall health and/or function of the natural area. Resource plans are eligible for this review only if the plan has been prepared in accordance with or is approved by a natural resource group or agency, such as Oregon Watershed Enhancement Board, Oregon Department of Fish and Wildlife, or a similar entity.

   B. General Discretionary Review (MMC 19.402.12)

      Elements of the proposal that are not strictly related to resource management or restoration are reviewed through the general discretionary review process. Elements of the plan subject to this review are the 2 overlook areas and the replacement of the pedestrian bridge over Camas Creek. These elements are all within the WQR area and are reviewed in the same manner that other development with impacts to the WQR would be evaluated.

2. Community Service Use

   Portions of North Clackamas Park that are within a mapped WQR area are not considered to have existing CSU approval as a park. As such, park elements and uses in these areas must be reviewed as a new CSU, as opposed to the modification of an existing CSU. The elements subject to CSU review are the installation of the overlooks, modifications to the trial network, and the replacement of the bridge. The restoration activity by itself is not considered a modification of a park element and is not subject to CSU review.

The table below summarizes which project elements are subject to the various review types.

Project Element	Natural Resource Restoration Review	General Discretionary Review	CSU Review
Bridge Replacement		✓	✓
Stream Overlooks		✓	✓
Trail Decommissioning, Culvert removal	✓		✓
Stream Restoration – alcove, woody debris	✓		
Riparian area restoration	✓		

KEY ISSUES

Summary

Staff has identified the following key issues for the Planning Commission's deliberation. Aspects of the proposal not listed below are addressed in the Findings (see Attachment 1) and generally require less analysis and discretion by the Commission.

A. Do the overlooks and bridge replacement meet the general discretionary review criteria?

B. Do the overlooks, bridge replacement, and changes to trails satisfy the criteria for establishing a Community Service Use?

Analysis

A. Do the overlooks and bridge replacement meet the general discretionary review criteria?

The general discretionary criteria require an evaluation of impacts, analysis of alternatives, and demonstration that impacts have been avoided as much as practicable, minimized where impacts do occur, and that the impacts are appropriately mitigated. This review is required for placement of the overlook areas and replacement of the pedestrian bridge.

Impact Evaluation

The log jam overlook would add an area of about 770 sq ft of crushed rock within the WQR, including the 5 ft wide trail and overlook area itself. The overlook at the confluence of Camas Creek and Mt. Scott Creek would add an area of about 70 sq ft of crushed rock within the WQR, and an overlook deck of about 340 sq ft, supported by anchored rocks, posts, and a short retaining wall made of plastic lumber. The replacement of the pedestrian bridge would have about 65 sq ft of bridge deck over the WQR area of Camas Creek. The supports for the deck would be located outside of the WQR.

The primary impact of the overlook areas is that they occupy areas that could be replanted and restored with native plantings. The primary impact of the bridge is that it would shade parts of the WQR and alter the plants that grow in this area.

Alternatives

Alternatives for the overlook areas are eliminating them from the project, including only one outlook, and the placement of outlooks in other areas.

Eliminating the outlooks from the project would allow more of the project area to be restored and vegetated. This would also eliminate the benefits of creating spaces where visitors can view the resource areas. It would also eliminate the ability to educate visitors about the project and natural areas through interpretive displays and signs.

Including only 1 overlook at the confluence point was considered because this area has the highest scenic value and educational potential. Having 1 overlook allows more of the project area to be restored and vegetated. The applicant opted to have a second overlook to provide a smaller, more intimate space to view the natural area. This increases the diversity of places where the public can see the creek, and provides access in a location that appears to be the most frequently visited portion of the natural area.

Placing the outlooks in areas further away from the resource allows more of the project area to be restored and vegetated. Placement at a greater distance from the resource diminishes visitor's ability to see the resource and may create an incentive for people to walk through the restoration areas to get a closer view.

Alternatives for the pedestrian bridge include the no-build option of leaving the existing bridge, and using the existing bridge abutments to support a new bridge structure, rather than removing and replacing the bridge and abutments. The existing bridge does not meet width standards from the Americans with Disabilities Act (ADA), and leaving it in place would not accomplish the project purpose of having ADA access on paths between the northern and southern sides of Camas Creek. Leaving the existing abutments in place and building a new bridge on top of them would minimize the disturbance of removing the existing abutments and installing new abutments. The applicant examined this alternative and found that the existing abutments would have to be widened to support a new bridge, which would disturb the wetland areas where the abutments are located. The proposed new abutments would be located outside of the delineated wetland areas.

Avoidance of Impacts

The alternatives analysis demonstrates that the elements described above need to be located in the WQR area of the project site. Given the function of these elements, there is no practicable way to avoid their presence and related impacts to the WQR areas.

Minimization of Impacts

The impacts to the WQR area are minimized because the elements within the WQR are not larger than needed to accomplish their functions. The paths to the overlooks are 5 ft wide, which is a typical minimum width for a park path and meets ADA requirements. The overlook areas are adequate to accommodate multiple visitors and not overly-large given the likely number of visitors at any time. Impacts are further minimized by placing new bridge abutments outside of the delineated wetland area and removing the existing abutments.

Temporary impacts are also minimized to an acceptable extent. Material storage and staging areas would be located outside of any WQR or HCA areas.

Mitigation of Impacts

The total surface area of permanent WQR area impacts is approximately 2,000 sq ft. The areas of temporary disturbance will be restored to as good or better condition at the

completion of the project. The restoration areas for the project consist of 2,400 sq ft of upland riparian area replanting, 1,900 sq ft of bank stabilization planting, and 350 sq ft of emergent wetland planting. The replanting will improve the overall health and function of the riparian and wetland areas, and appropriately mitigate for the areas disturbed by the overlooks and bridge.

Overall, staff finds the applicant's rationale is acceptable and justifies the proposed location and design of the overlooks and bridge replacement. Including public access near natural features is a compromise between maximizing the potential restoration area and allowing the public to view and learn about the area with facilities designed to contain and limit visitor impacts. The city's on-call natural resource consultant noted that the applicant appears to have chosen the alternatives that have the least impacts to the areas while also providing public education opportunities.

B. Do the overlooks, bridge replacement, and changes to trails satisfy the criteria for establishing a Community Service Use?

The criteria for establishment of a community service use are set forth in MMC 19.904.4. Staff believes that the proposal meets these criteria as follows:

Base zone and CSU-specific requirements for the proposed development are met

The structures in the proposal are minimal and set over 150 ft away from property lines. The development standards are either not applicable or easily met.

Hours and levels of proposed use are reasonably compatible with surrounding uses

The hours of operation for these elements would be the same as those for North Clackamas Park overall. The levels of use for these elements should be the same as the current activity levels for these areas.

Public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood

The public benefits of the project elements are that they would allow ADA access across Camas Creek, remove portions of the bridge's support structure from a wetland area, allow public access to view natural resources and the restoration project in a manner that limits impacts to the resource area, and removes trails that have been established in an ecologically unsound manner.

The overlooks, bridge replacement, and culvert removal are projects identified by the draft master plan for the northern portion of North Clackamas Park. This document has not yet been adopted by the City, though the Planning Commission did recommend approval of the plan with these project elements in May 2012. Staff believes that there is a public benefit in carrying out projects in accordance with long range plans for a site.

Staff has not identified any potential impacts to the neighborhood from the project. The basic arrangement of and level of uses within the park should remain as they are now. The nearest property to the project site is over 150 ft away, and the nearest residential structure is over 300 ft away. One impact of the project on park use is that removal of the culvert would require users to travel over 400 ft east to cross Camas Creek, making the north side of the park less accessible from the western portion of the park south of the creek. However, this is not an impact to the surrounding neighborhood, and the impact is offset by the benefit of restoring an ecologically important confluence. The Planning

Commission previously indicated that in concept this configuration is acceptable through their recommendation on the north side master plan.

The location is appropriate for the type of use proposed

Staff believes the location of these project elements is appropriate. The elements are in the positions proposed in the master plan document. The replaced bridge aligns with existing paths on either side of the Camas Creek. By their purpose, the overlook areas need to be in proximity to the natural features being viewed. The trails to the two overlook areas retain access to these natural areas in an appropriate manner, and offset the loss of access from the trail decommissioning and culvert removal.

CONCLUSIONS

A. Staff recommendation to the Planning Commission is as follows:

1. Approve the Natural Resource Review and Community Service Use application for the North Clackamas Park Mt. Scott restoration project. This will result in stream and riparian area restoration and enhancement, installation of 2 overlook areas, replacement of a pedestrian bridge over Camas Creek, and modification of trail paths within the project area.
2. Adopt the attached Findings and Conditions of Approval in Attachments 1 and 2.

B. Conditions of approval (see Attachment 2 for the full list of Conditions of Approval)**:**

The recommended conditions of approval do not contain any key conditions necessary to resolve deficiencies related to the zoning ordinance requirements. The recommended conditions are mostly about permit review following land use approval and do not, in staff's assessment, significantly alter the proposed project.

CODE AUTHORITY AND DECISION-MAKING PROCESS

The proposal is subject to the following provisions of the Milwaukie Zoning Ordinance, which is Title 19 of the Milwaukie Municipal Code (MMC).

- Subsection 19.402, Natural Resources
- Subsection 19.904, Community Service Uses

This application is subject to Type III review, which requires the Planning Commission to consider whether the applicant has demonstrated compliance with the code sections shown above. In Type III reviews, the Commission assesses the application against review criteria and development standards and evaluates testimony and evidence received at the public hearing.

The Commission has 4 decision-making options as follows:

A. Approve the application subject to the recommended Findings and Conditions of Approval.

B. Approve the application with modified Findings and Conditions of Approval. Such modifications need to be read into the record.

C. Deny the application upon finding that it does not meet approval criteria.

D. Continue the hearing to provide allow additional information to be gathered and presented, or allow additional time for presentations, testimony or deliberation. Due to closing of the

time later this summer when in-water work can occur, the applicant would like to receive land use approval in time to complete the in-water work this year.

The final decision on these applications, which includes any appeals to the City Council, must be made by October 18, 2012, in accordance with the Oregon Revised Statutes and the Milwaukie Zoning Ordinance. The applicant can waive the time period in which the application must be decided.

Staff anticipates that there will be little to no time at the meeting for this hearing due to the continuation of one hearing from July 10th and the opening of CSU-12-07. Staff has communicated with the applicant and we concur that it is best to open this hearing and continue the hearing until July 31st. That meeting was scheduled specifically to allow for continuation of this application.

COMMENTS

Notice of the proposed changes was given to the following agencies and persons: City of Milwaukie Building and Engineering Departments, Lake Road Neighborhood District Association (NDA), and Clackamas County Fire District #1. The following is a summary of the comments received by the City. See Attachment 4 for further details.

- **Zach Weigel, Civil Engineer, Engineering Department:** No recommended conditions of approval for the project. Advisory notes to the applicant detail what information needs to be provided about flood hazard area regulations and stormwater management for the project permits.
- **Tom Larsen, Building Official, Building Department:** No comments regarding the project. The Building Official provided advisory notes to the applicant regarding ADA regulations and the need for structural permits for the overlooks.
- **Paul Hawkins, Lake Road NDA Land Use Committee Member:** No comment on the application, and looking forward to completion of the project.

ATTACHMENTS

Attachments are provided only to the Planning Commission unless noted as being attached. All material is available for viewing upon request.

1. Recommended Findings in Support of Approval (attached)
2. Recommended Conditions of Approval (attached)
3. Applicant's Narrative and Supporting Documentation dated June 1, 2012

   All of Attachment 3 provided to Planning Commissioners on July 3, 2012. The portions of Attachment 3 listed below are included in the publically available electronic and hard copy versions of this report.

   a. Application narrative and addendum for alcove (attached)

   b. Project plans and addendum for alcove (attached)
4. Project assessment from city's on-call natural resources consultant (attached)
5. Comments Received
6. Exhibits List

Recommended Findings in Support of Approval

Sections of the Milwaukie Municipal Code that are not addressed in these findings are found to not be applicable decision criteria for the development proposal.

1. The City of Milwaukie and Clackamas County Water Environment Services (applicants) have submitted a Natural Resource and Community Service Use application (File #NR-12-02 and CSU-12-06). The applicants are seeking approval for projects within North Clackamas Park; specifically, in-stream and riparian area restoration for Mt. Scott Creek and Camas Creek, including removal of formal and informal trails, and removal of a culvert at and restoration of the confluence of Mt. Scott Creek and Camas Creek; replacement of a pedestrian bridge over Camas Creek; and installation of overlooks and paths to the overlooks at the confluence area and at the southern bank of Mt. Scott Creek. The application materials were initially submitted April 25, 2012 and revised materials were submitted June 1, 2012. City staff deemed the application complete on June 21, 2012.

2. The project site is 5440 SE Kellogg Creek Drive, Tax Lots 22E06AC00100, 22E06AD01000, 22E06AB00617, and 22E06AB00417. The site is home to North Clackamas Park, and contains numerous park features, including baseball fields, picnic and play areas, Milwaukie Center, the Sara Hite Memorial Rose Garden, an off-leash area for dogs, and natural resource areas. Surrounding properties primarily consist of large-lot residential uses and lands that are vacant or being farmed. The site is surrounded on the north, east, and south by unincorporated Clackamas County.

3. The base zone of the site is Residential R-10 (R-10), and the Comprehensive Plan land use designation is Public. Portions of the site have received Community Service Use (CSU) or Community Service Overlay (CSO) approvals. Much of the northern half of the site has Water Quality Resource (WQR) areas or Habitat Conservation Areas (HCA).

4. The provisions of Milwaukie Municipal Code (MMC) 19.402, Natural Resources, apply to the project elements occuring within areas designated as Water Quality Resource (WQR) areas and/or Habitat Conservation Areas (HCAs).

    A. MMC 19.402.10 allows the approval of plans that provide for natural resource management or restoration, including plans that authorize limited disturbance of WQR areas or HCAs for the purpose of improving the natural resource area conditions.

        i) The following elements of the proposed plan are considered restoration activities: creating an alcove in Mt. Scott Creek, placing boulders and engineered woody debris near stream banks, removing the culvert and regrading the confluence areas of Camas Creek and Mt. Scott Creek, decommissioning trails, and replanting riparian areas. The applicant's materials establish that the plans for these elements have been prepared in accordance with standards and guidelines from Oregon Department of Fish and Wildlife, Oregon Division of State Lands, and US Army Corps of Engineers. As such, Subsections 19.402.10.A and B make the plans for these elements eligible for approval under Subsection 19.402.10.

        ii) Subsection 19.402.10.C contains approval criteria for resource management plans. The Planning Commission finds that the stream and riparian areas that are the subject of the plan have been degraded as

described in the appendices of the applicant's narrative, and the work proposed in the restoration plans will have the beneficial impacts described in criteria 1-3 of this subsection. As conditioned, impacts from creating the alcove will be minimized by reaching the work area via existing foot paths that have been informally established by park users prior to decommissioning of such paths. The Planning Commission approves the proposed natural resource management plan, which allows work pursuant to the plan per Subsection 19.402.4.A.2.

iii) Subsection 19.402.10.D requires a construction management plan with each natural resource management plan. As conditioned, this requirement it met.

iv) The Planning Commission finds that the applicant has demonstrated that ongoing maintenance, as required by Subsection 19.402.10.E, is part of the proposed resource plan with involvement from North Clackamas Parks and Recreation District staff, Friends of Trees, the Milwaukie Center, and Friends of Kellogg and Mt. Scott Creek.

v) Subsection 19.402.10.F establishes time limits for the validity of an approved resource management plan. As conditioned, the resource management plan will be valid for 5 years and may be renewed per this section.

B. The installation of the overlook areas and their paths and replacement of a pedestrian bridge over Camas Creek are not considered part of a restoration plan. These elements are located within WQR area and are subject to Subsection 19.402.12, General Discretionary Review.

i) The application materials were prepared by a professional environmental design firm, and the materials and supporting documentation satisfy the requirements for an impact evaluation and alternatives analysis as described in Subsection 19.402.12.A.

ii) The Planning Commission finds that the approval criteria under general discretionary review in Subsection 19.402.12.B are satisfied, as follows.

a) There are no practicable ways to avoid impacts to the WQR area. The bridge's function is to allow crossing of Camas Creek and needs to be located in the WQR. The function of the overlook areas is to allow access near the resource areas and restoration project; locating them outside of the area defeats the intended purpose and could create an incentive for people to walk through the restoration areas.

b) The impacts of the proposed features are minimized to the extent practicable. The bridge footings would be located outside of the delineated wetland where they are currently located, and the bridge would not be in contact with the ground in the delineated wetland area. The bridge's width is adequate and not overly large given the amount of foot traffic for the site area and the intent to meet ADA standards for accessibility. The paths to the overlooks are 5 ft wide, which is a typical minimum width for a park path. The overlook areas are adequate to accommodate multiple visitors and not overly-large given the likely number of visitors at

any time. The overlook for Mt. Scott Creek is at grade and would require a minimal amount of excavation to create. The overlook at the confluence is on sloping terrain and would be supported by posts, which minimizes the need to grade near the resource and minimizes impacts.

c) The mitigation for the impacts of these elements would be accomplished through the work in the natural resource management plan. The permanent impacts of these features are that they take away area that could be planted with native vegetation. There total permanent impacts to the area are approximately 2,000 sq ft. The areas of temporary disturbance will be restored to as good or better condition at the completion of the project. The restoration areas for the project are 2,400 sq ft of upland riparian area replanting, 1,900 sq ft of bank stabilization planting, and 350 sq ft of emergent wetland planting. The replanting will improve the overall health and function of the riparian and wetland areas, and appropriately mitigate for the areas disturbed by the overlooks and bridge. The restoration project in the proposed natural resource management plan is the required mitigation that meets the standards of Subsection 19.402.12.B.1.c regarding mitigation being located on the same site, use of native plants and work during approved in-water work periods. As conditioned, the mitigation planting will be maintained as described by Subsection19.402.11.B.9, and the mitigation is required to be implemented on the timelines specified in the applicant's materials.

C. A construction management plan as described in Subsection 19.402.9 is required for all project elements within 100 ft of WQR and HCA areas. As conditioned, the application meets this standard.

D. Subsection 19.402.11 contains development standards for work in resource areas and requirements for mitigation. As conditioned, the final project plans shall conform with the standards of this subsection.

E. Subsection 19.402.13 requires verification of the natural resource boundaries. The applicant's materials meet the requirements of this subsection with regard to depicting the boundaries of water quality resource features and their buffers, and HCAs.

5. The North Clackamas Park site was annexed into the City in 1980 (File #A-80-7). Since that time, portions of the site have received approval as a Community Service Overlay or Community Service Use (CSU). The proposed project areas have not received either of these approvals. Per a Planning Director's Interpretation dated January 30, 2009, a site or portion of a site located within a mapped WQR area with a land use allowed as a Community Service Use that has not received such approval is not considered to have de facto Community Service Use approval. Modification to uses in this situation requires the use to be evaluated as the establishment of a new Community Service Use. The Planning Commission finds that the replacement of the pedestrian bridge over Camas Creek, installation of overlooks, and modification of the paths in the project area constitute use modifications, and require approval as a new Community Service Use.

6. Subsection 19.904.4 contains approval criteria for establishing a Community Service Use. The Planning Commission finds that these approval criteria are satisfied as follows. The Planning Commission finds that additional conditions of approval pursuant to Subsection 19.904.5.B are not necessary in order to assure compatibility with other uses in the vicinity.

   A. Subsection 19.904.4.A.1 requires that the building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone are met. Where a specific standard is not proposed in the CSU, the standards of the underlying zone are met. The project elements requiring CSU approval are located over 150 ft from any property line, do not have heights of more than 5 ft, and do not appreciably affect standards of lot coverage or minimum vegetation for the site.

   B. Subsection 19.904.4.A.1 requires that specific standards for the proposed uses as found in Subsections 19.904.7-11are met. Subsection 19.904.9 contains general standards for uses such as parks that are not specifically covered by other standards in Subsections 19.904.7-11. The project elements requiring CSU approval either meet the standards of Subsection 19.904.9, have no effect on the site's compliance with the standards, or the standards are not applicable.

   C. Subsection 19.904.4.A.1 requires that the hours and levels of operation of the proposed use are reasonably compatible with surrounding uses. The hours of operation for the project elements requiring CSU approval would be the same as those for North Clackamas Park overall, which are open half an hour before sunrise and closed half an hour before sunset unless otherwise established by the Parks Director and posted on park signage. The levels of use for these elements will be the same as the current activity levels for these areas. These hours and level of operation are reasonably compatible with surrounding uses.

   D. Subsection 19.904.4.A.1 requires that the public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood. The public benefits of the project elements are that they would allow ADA access across Camas Creek, remove portions of the bridge's support structure from a wetland area, allow public access to view natural resources and the restoration project in a manner that limits impacts to the resource area, and removes trails that have been established in an ecologically unsound manner.

      The overlooks, bridge replacement, and culvert removal are projects identified by the draft master plan for the northern portion of North Clackamas Park. This document has not yet been adopted by the City, though the Planning Commission did recommend approval of the plan with these project elements in May 2012. Staff believes that there is a public benefit in carrying out projects in accordance with long range plans for a site.

      There are not any potential adverse impacts to the neighborhood from the project. The basic arrangement of and level of uses within the park will remain as they are now. The nearest property to the project site is over 150 ft away, and the nearest residential structure is over 300 ft away. One impact of the project on park use is that removal of the culvert would require users to travel over 400 ft east to cross Camas Creek, making the north side of the park less accessible from the western portion of the park south of the creek. However, this is not an impact to the surrounding neighborhood, and the impact is offset by the benefit of restoring an ecologically important confluence.

E. Subsection 19.904.4.A.1 requires that the location is appropriate for the type of use proposed. The location of these project elements is appropriate. The replaced bridge aligns with existing paths on either side of the Camas Creek. By their purpose, the overlook areas need to be in proximity to the natural features being viewed. The trails to the two overlook areas retain access to these natural areas in an appropriate manner, and offset the loss of access from the trail decommissioning and culvert removal.

7. Subsection 19.904.3 requires Type III review for evaluation of a CSU. Subsection 19.402.8.A requires Type III review for activities permitted through general discretionary review per Subsection 19.402.12. Natural resource management plans are subject to either Type I or II review per Subsection 19.402.10.A-B. Per Subsection 19.1001.6.B.1, these applications have been processed concurrently and are subject to Type III review. The application referral, public mailed notice, and posted sign notice, and public hearing held on July 24, 2012 and continued to July 31, 2012 by the Planning Commission are in accordance with MMC Section 19.1006, Type III Review.

8. Subsection 19.906.2 requires a development review permit for new development and modifications of existing development. As conditioned, Milwaukie Planning Department review of permits for the proposed project requires a Type I Development Review permit.

9. Per MMC 19.1001.7.E.1, land use approvals expire if the approved development is not constructed and completed within specified periods of time. As conditioned, this land use approval will expire within 4 years of this land use approval unless the conditions in MMC 19.1001.7.E.1 are met or an extension is granted per MMC 19.908. The natural resource management plan is subject only to the timelines established in Subsection 19.402.10.F.

10. The proposal was referred to the following agencies: City of Milwaukie Engineering Department, City of Milwaukie Building Department, Clackamas County Fire District #1 and the Lake Road Neighborhood District Association (NDA) Chairs and Land Use Committees. Comments received are summarized below. No other responses from the application referral were received.

    Zach Weigel, Civil Engineer, Engineering Department: No recommended conditions of approval for the project. Advisory notes to the applicant detail what information needs to be provided about flood hazard area regulations and stormwater management for the project permits.

    Tom Larsen, Building Official, Building Department: No comments regarding the project. The Building Official provided advisory notes to the applicant regarding ADA regulations and the need for structural permits for the overlooks.

    Paul Hawkins, Lake Road NDA Land Use Committee Member: No comment on the application, and looking forward to completion of the project.

ATTACHMENT 2

Recommended Conditions of Approval

1. Prior to commencement of any work, the following items shall be resolved.
   A. Submit and obtain approval for a construction management plan for the proposed, pursuant to Subsection 19.402.9.
   B. Submit and obtain approval for a Type I Development Review application. The materials submitted with the application shall be insubstantial conformance with the plans approved in File #NR-12-02. The materials shall include plans that conform with Subsection 19.402.11 and a narrative describing how the plans conform with that subsection. Materials shall also specify that impacts from creating the alcove will be minimized by reaching the work area via existing paths that have been informally established by park users prior to decommissioning of such paths.
   C. Submit and obtain approval for project permits required from the Milwaukie Building Department and Engineering Department.
2. Land use approval for project elements requiring Community Service Use approval or approval per the general discretionary review standards in Subsection 19.402.12 are subject to expiration per Subsection 19.1001.7.E.1. Elements that are part of the natural resource management plan per Subsection 19.402.10 are subject to expiration per Subsection 19.402.10.F.
3. Required mitigation measures shall be completed as proposed in the applicant's materials. The Planning Director has the authority to allow for minor adjustments to the completion timelines.

ATTACHMENT 3a

Mt Scott Creek Restoration

Clackamas County Water Environment Services

Written Statement for
City of Milwaukie Land Use Permitting Applications
Community Service Uses
Natural Resources

Prepared For:
Clackamas County Water Environment Services
150 Beavercreek Road, Suite 430
Oregon City, Oregon 97045
Contact: Gail Shaloum
503.742.4597

Prepared by:
GreenWorks PC
24 NW 2nd Ave.
Portland OR 97209
Contact: Dave Elkin
503.222.5612

Mt. Scott Creek Restoration

Land Use Application

Table of Contents

SECTION 2: WRITTEN STATEMENTS

1. Summary Information

Project Summary

Clackamas County Water Environment Services, North Clackamas Parks and Recreation District, Oregon Department of Fish and Wildlife, and the City of Milwaukie are seeking approval of a community service use and natural resource management plan for a habitat restoration project proposed at the confluence of Camas Creek and Mt Scott Creek in North Clackamas Park. This project involves the construction of overlooks and pathways for interpretive activities, planting of native vegetation, stabilizing stream bank with log and boulder structures, and the removal of a culvert to restore and enhance fish habitat.

Co-Applicants

City of Milwaukie (Property Owner)
10722 SE Main Street
Milwaukie, OR 97222
Contact: JoAnn Herrigel
503.786.7508

Clackamas County Water Environment Service
150 Beavercreek Road, Suite 430
Oregon City, Oregon 97045
Contact: Gail Shaloum
503.742.4597

City of Milwaukie Land Use Permit Applications

Community Service Use
Natural Resource Review

Pre application Conference

12-003PA, March 22, 2012

Address:

North Clackamas Park
5440 SE Kellogg Creek Drive
Tax Lot IDs - 22E06AC00100; 22E06AB00417; 22E06AB00617

Total Lot Size

47 acres

Zoning:

Community Service Use
Residential Zone R-10

2. Applicable Regulations

- Milwaukie Municipal Code (MMC) Section 19.301 Development Standards, Section 19.402 Natural Resource Review, and Section 19.904 Community Service Use (CSU).

3. Existing Conditions

Mt. Scott Creek is one of eight major sub-basins located within the 10,300 acre Kellogg / Mt. Scott Creek Watershed. The Kellogg / Mt. Scott watershed is a highly developed urban watershed that is approximately 34 percent impervious. The general challenges and concerns are typical for an urban watershed such as this one, and include fish passage issues, lack of riparian vegetation, in-stream erosion, and water quality concerns. Adult salmon, steelhead, and cutthroat trout have been documented in Mt. Scott Creek. The creek flows from the northeast corner of the watershed near Happy Valley, west to its confluence with Kellogg Creek. Our project falls within the lower reach of Mt. Scott Creek. This section of creek collects runoff from approximately 1,622 acres, and is approximately 45 percent impervious. This section of Mt. Scott Creek can be characterized as lacking in overhead canopy, deep pools, large woody debris, and can experience high summer water temperatures.

Existing Park Conditions

Just upstream of the confluence of Mt. Scott Creek and Kellogg Creek, is the 47 acre North Clackamas Park. Mt. Scott Creek flows along the northern border of the park. Within the park, Mt. Scott creek is 10 to 20 feet wide. The stream banks are generally low and rise one to two feet above the stream bed. Areas of erosion and undercutting are apparent on the banks. The creek is covered with a riparian forest that includes native species such as Red Alder, Western Red Cedar, Sitka Willow, Douglas Spiraea, and Red-Osier Dogwood. Typical infestations of non-native plant species occur throughout North Clackamas Park such as Himalayan Blackberry and large stands of English Ivy. These plants are especially prevalent within the riparian forest bordering Mt. Scott Creek.

Camas Creek is a shallow tributary to Mt. Scott Creek that originates in a palustrine emergent wetland in the northeastern portion of the park and meets Mt. Scott Creek in the western portion of the park. North Clackamas Park is divided into a northern half and southern half by Camas Creek. The small creek is covered with a mixed Oregon Ash/Oregon White Oak forest located along its banks. There is an existing culvert located at the mouth of Camas Creek as it flows into Mt. Scott Creek.

North Clackamas Park is a large community park maintained by the North Clackamas Parks and Recreation District (NCPRD). It contains a number of recreation amenities such as four baseball / softball fields, equestrian facility, picnic shelters, off-leash dog area, walking trails, and play structures. Previous successful restoration projects have taken place within the park to remove invasive non-native species and restore the creek buffers and riparian forest canopies.

4. Project Description

Water Environment Services (WES) received funds through Metro's Nature in Neighborhoods Capital Grant program to improve in-stream and riparian areas along lower Mt. Scott Creek within North Clackamas Park. The project will enhance ecological functions and habitat diversity for fish and wildlife. Additional elements of the project will improve watershed health awareness, provide community stewardship opportunities, increase educational opportunities, and enhance access to nature. Specifically, the Mt. Scott Creek Restoration project includes the following elements: 48,000 total square feet of restored and protected riparian forest habitat, 4 large woody debris installations for fish habitat - including approximately 45 logs total, 320 linear feet of stream bank stabilization and restoration (within the total 550 lf section of creek in the project area), 530 linear feet of decommissioned trail, 30 linear foot pedestrian bridge for ADA access over wetlands, 2 unique and sustainably designed creek overlooks with educational interpretive signs, 1 culvert removal and bank restoration at Camas Creek confluence for fish passage.

1. **Stream Bank Restoration** – (320 LF of stream bank improvements) Provide log stabilized banks and back will with soils and plants. Strategically place large woody debris and boulders along stream bank. Soil remediation to improve compacted soils and plant native trees, shrubs and herbaceous species.
2. **Riparian Enhancement Area** – (12,720 SF planting, 400 LF of trail decommissioning, and 540 LF of new fencing) Decommission trails and add woody debris barriers. Soil remediation to improve compacted soils. Plant native trees, shrubs and groundcover with a fence addition to protect the new planting areas.
3. **Log Jam Overlook**– (260 SF overlook, with 190 lf of new trail) Create views of the creek habitat and native vegetation. Use a naturalistic style of construction to blend the overlook into the seating. Use the log jam to create habitat opportunities in the creek.
4. **Camas Creek Confluence Overlook** – (400 SF overlook, 35 LF of trail) Create a raised overlook deck near the confluence to take advantage of views up both creeks. Offer a unique experience that reduces human impact in and around the confluence that also conveys the restoration story through interpretive signs.
5. **Culvert Removal and Restoration at Camas Creek Confluence** – (20 LF of culvert removal, 45 LF trail decommissioning, 150 LF of bank stabilization, 5,000 SF of restoration planting) Remove the culvert, other concrete debris, and asphalt path. Re-grade the confluence stream banks to stabilize them and create habitat with woody debris and boulders. Use logs to stabilize head cutting in Camas Creek with 6" maximum drops. Plant with native riparian trees and shrubs.
6. **New ADA Pedestrian Bridge** – (30 LF) Construct new pedestrian bridge across Camas Creek. Incorporate the bridge into the existing trail system and provide restoration planting in disturbed areas. The increased span of the new pedestrian bridge will allow for 130 SF of newly restored wetland and open up the Camas Creek channel. The new bridge will also provide ADA access to the playground located to the north of Camas Creek.

Partnerships

Clackamas County Water Environment Services (WES), North Clackamas Parks and Recreation District (NCPRD) and the City of Milwaukie worked together to develop a concept plan and apply for a Metro Nature in Neighborhoods capital grant in 2011. Several other partners supported the proposal, have been actively engaged in developing the project and have committed to provide financial or in-kind support for the project. These partners will continue to work together through permitting and planning for construction, as well as coordination of planting events and continued maintenance of the plantings and removal of invasive species. The following list describes each partner's role and commitment:

Organization	Role	Project Commitments
WES	Project manager	Funding toward concept development, design and construction
NCPRD	Park provider	Assistance with concept development, design and partial funding of construction, continued management of the site
City of Milwaukie	Property owner	Assistance with concept development, design and permitting, continued use of property as park and natural area
ODFW	Advisory	Assistance/participation in planning, technical expertise
Friends of Trees	Restoration planting lead	Assistance with restoration planting design and coordination of community planting events, continued maintenance of plantings
North Clack. Urban Watersheds Council	Project participants	Assist in community outreach and public involvement, provide volunteers to assist with planting and maintenance of planting
Friends of Kellogg and Mt Scott Cr.	Creek health advocates	Assist in coordinating citizen participation, invasive plant removal and ongoing maintenance of plantings
Friends of North Clack. Parks	Park support and citizen education	Assist in coordinating citizen participation, invasive plant removal and ongoing maintenance of plantings
Milwaukie Center	Park neighbor and steward	Continued support for older adults using the park, continued stewardship

In 2008-9, the Oregon Department of Fish and Wildlife (ODFW) and WES collaborated to assess the health of aquatic ecosystems in the county's urban streams. ODFW field staff conducted fish and

habitat surveys in two areas of urban Clackamas County, including Mt. Scott Creek. Fish presence and abundance were surveyed and analyzed, and habitat conditions were assessed. The reach of Mt. Scott Creek in the project area is described as "Park/rural residential/industrial; degraded riparian w/deciduous vegetation dominant; Heavy bamboo infestation through N. Clackamas Park; Small wood present w/limited key pieces; moderate fine sediment load; in-stream habitat limited by lack of complex structures; partial fish passage barrier at culvert."

ODFW also developed recommendations for restoration and protection of priority stream reaches. For the reach of Mt. Scott Creek in the project area, the report noted that "…these areas would greatly benefit from focused habitat restoration projects (particularly fish passage), increased protection of riparian/floodplain areas, increased public awareness, and outreach related to understanding of watershed health issues." The report developed objectives for this reach to improve in-stream habitat for rearing Chinook, Coho, and Steelhead; and to remove invasive vegetation and replace with natives. It called for placing large wood structures at strategic locations within Mt. Scott Reach 1 to benefit rearing juvenile salmonids from within Mt. Scott and Kellogg creeks, and outside from the Willamette River. It also called for removing invasive vegetation and replacing with natives, with an emphasis on conifers such as Western Red Cedar to greatly improve riparian zone conditions (ODFW 2009). This proposed project was developed and designed to carry out the ODFW recommendations.

See Section 4, Appendix 10 for a Letter of Support from Todd Alsbury, District Fish Biologist, ODFW-North Willamette Watershed District.

5. Community Service Use Review (Section 19.301 and 19.904)

Development Standards R-10 Residential Zone (Section 19.301)

The project site is located in an Urban Standard Density (R10) District (§19.301.1). The zone permits recreational facilities – public and/or privately owned parks and other similar uses as determined by the Planning Commission as a community service use (CSU). The project is being submitted to receive approval for a new CSU for the proposed recreational elements within the natural resource overlay. The areas of North Clackamas Park covered by the natural resource overlay are not considered to have existing approval as a CSU by the Planning Commission. Therefore, the applicant is applying for a new CSU for the small overlooks, pathways, and pedestrian bridge referred to as the recreational elements in this document.

The approval criteria of the underlying base zone (R10) do not apply to restoration or enhancement projects like the one proposed.

Community Service Use Approval Criteria (Subsection 19.904.4)

Community service use approval criteria and design requirements for this project are reviewed in the following section:

A. *An application for a community service use may be allowed if the following criteria are met:*

1. *The building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone are met. Where a specific standard is not proposed in the CSU, the standards of the underlying zone are met;*
2. *Specific standards for the proposed uses as found in Subsections 19.904.7-11are met;*

Response: These design guidelines are not applicable due to the scope of the proposed work as described in the project description and written statement above. No buildings are proposed as a part of the project.

3. The hours and levels of operation of the proposed use are reasonably compatible with surrounding uses;

Response: The hours and levels of operation will be consistent with the current hours and levels of operation at North Clackamas Park. These items are set by North Clackamas Parks and Recreation and follow the standards hours and levels of operation for parks in our region.

4. The public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood; and

Response: No negative impacts on the neighborhood will occur due to the improvements proposed for this project. Elements of the project will improve watershed health awareness, provide community stewardship opportunities, increase educational opportunities, and enhance access to nature. The placement of the overlooks will benefit the larger park by providing a location in the park to gather and learn about the ecological enhancement of fish habitat in the Kellogg-Mt. Scott Creek Watershed. The broader community will benefit from the promotion of fish habitat at the confluence of Mt Scott Creek and Camas Creek. The removal of the culvert and restoration of the confluence will offer the highest level of habitat enhancement. Currently, the culvert presents as a hazard to the public during high water events when water rushes over the top and erodes the bank. The culvert hydraulically disconnects Camas Creek from Mt Scott Creek causing flooding in that area of the park. Although removal of the culvert will impact the park by limiting access to the north side of Camas Creek, a crossing in this

location would prevent the ability to design a space for learning at the confluence. Also, this area is needed for placement of large wood for fish habitat enhancement, to allow resting and hiding places for migrating fish, especially during high flows in Mt Scott Creek. Upgrading the pedestrian bridge upstream of the confluence will help promote access to the north side of Camas Creek at that access point. Furthermore, crossings over the Water Quality Resource and Habitat Conservation Area should be limited to alleviate erosion caused by heavy foot traffic in the natural areas of the park and to limit disturbance to fish and wildlife habitats. The restoration of Mt Scott Creek will provide a unique juxtaposition of community uses with the ball fields to the south showing the public how a healthy stream corridor looks and functions. Public access will be controlled near the stream edge which may be perceived as decreasing the public access. An interpretive sign will be posted along the trails in that area of the park to alleviate that concern by explaining the ecological benefits of protecting the stream bank. The recreational elements are located away from adjacent property boundaries. Activities related to these improvements will not increase the noise levels or cause a negative impact on the neighborhood, except potentially--temporary impacts during construction.

5. The location is appropriate for the type of use proposed.

Response: The project is located within the 47-acre North Clackamas Park, along Mt. Scott Creek. Mt Scott Creek was identified by the City as a primary protected water feature. Based on multiple assessment reports, the restoration activities, trail decommissioning and bank restoration are appropriate for this reach of Mt. Scott Creek. The recreational elements are appropriate for the current park setting; the locations of the elements are supported by the proposed NCPRD Master Plan. See Section 4, Appendix 5 for North Clackamas Park Master Plan.

6. Response to Natural Resources Review (Section 19.402)

Natural Resource Management Plans Review (Subsection 19.402.10)

Natural resource management plan regulations apply to all properties containing protected water features as identified on the City's Water Quality Resource (WQR) and Metro's Habitat Conservation Area (HCA) maps. Both Mt. Scott Creek and Camas Creek are primary protected water features and are identified on the City's WQR/HCA maps. The reach of WQR within our project boundary is classified as Class B where the combination of trees, shrubs, and ground cover are 80% present and the canopy coverage is between 25-50%. Patches of the WQR along the stream bank are classified as Class C where bare ground and erosion is present. The plans have been prepared in accordance with standards and guidelines appropriate to natural resource agency. Oregon Department of Fish and Wildlife (ODFW) is a partner with WES in preparing the plans for this project. See description of ODFW involvement under Partnerships and Section 4, Appendix 2 for ODFW Habitat Assessment of Streams in Clackamas County. The natural resource management plans will be reviewed by the planning commission because the proposed recreational elements (pathways, pedestrian bridge, and overlooks) require approval as a Community Service Use. See General Discretionary Review (Subsection 19.402.12) of this narrative for detailed information about the proposed recreational elements.

C. Approval Criteria

Every plan prepared for approval under Section 19.402 shall demonstrate that it encourages restoration activities…

Response: The proposed project will make important alterations along Mt Scott Creek that will improve the conditions for salmanoid species. Restoration and enhancement efforts will significantly improve riparian habitat where channelization and compacted soils have caused significant channel degradation.

The project will enhance ecological functions and diversity for fish and wildlife by restoring forest riparian habitat, enhancing the stream bank with log stabilization and other woody debris, planting native plant species, decommissioning an underutilized trail and remediating compacted soils. See full description of restoration activities under the General Discretionary Review (Subsection 19.402.12) of this narrative.

D. Construction Management Plans

Response: The construction management plan addresses all items outlined in Subsection 19.402.9 and is included as a part of this application. See Section 3 of this narrative for detailed construction plans.

E. Ongoing Maintenance

Natural resource management plans shall demonstrate how ongoing maintenance is part of the associated restoration or enhancement activities.

Response: NCPRD manages and maintains North Clackamas Park, including maintenance of native vegetation that has been installed in other areas of the park. NCPRD will continue to be responsible for overall maintenance activities and to coordinate with Friends of Trees for maintenance of this area. WES has an ongoing relationship with Friends of Trees (FOT) to install restoration plantings and maintain them on multiple sites; maintenance typically continues for 3 to 5 years after installation on these partner projects. FOT recruits citizens from the neighborhoods surrounding the restoration site and beyond to volunteer in these efforts. FOT is available to serve in a similar role for this project.

Development Standards (Subsection 19.402.11)

A. Protection of Natural Resources during Site Development.

1. Restore the WQR and HCA Area

Response: The sole purpose of the project is to enhance the condition of existing habitat within the project area, which includes both WQR area and HCA. By approving the proposed community service use and natural resource management plan, the Planning Commission will authorize the applicant to carry out the project and its attendant mitigation measures, which will be addressed below in response to MMC 19.402.12.

2. Protect Existing Vegetation

Response: Except for the invasive vegetation that will be removed, existing vegetation will be protected and left in place to the extent possible. Where existing vegetation must be removed to allow access for equipment and materials, it will be replaced prior to completion of the project. Work areas will be marked and minimized to limit potential damage to the resource area.

3. Native Soils

Response: Native soils shall be protected and enhanced, by loosening compacted areas.

4. Erosion and Sediment Control to Prevent runoff into WQR area

Response: Erosion and sediment control measures will be installed and maintained throughout the project as shown on plan sheet L1.00 and detail sheet L3.00 of Section 3 (Plans and Graphics).

5. Limit post-development Stormwater Flows

Response: Minimal development is proposed, therefore, no new stormwater flows will results from this project. Furthermore, the restoration work being proposed on this project will result in a net loss of impervious surface with the removal of 1,950 SF of asphalt removal.

6. Flag and fence the WQR and HCA area

Response: Since restoration work will be occurring within the WQR area and HCAs, it is not practicable to flag the entire resource area. Work areas will be marked to minimize disturbance and eliminate the potential for unnecessary disturbance to the resource area.

7. Preserve existing corridors of canopy and natural vegetation

Response: The entire area of the project is designated as either a WQR or HCA. Construction will be phased to minimize the impacts of the new pathways, overlooks and pedestrian bridge. All work, including the restoration work, will be completed within the In-Water work period for July 15th to September 30th as established by ODFW. All areas disturbed by construction shall be restored as shown in Planting Plan. See Section 3, Plans, Sheet L2.01.

8. Shield lights

Response: The project is not proposing any permanent lights. In the event that site lighting is necessary during the construction, lights will be shielded to minimize impacts to other parts of the resource area on the site.

9. Shall conform to a construction management plan

Response: All work on the property shall conform to the construction management plan provided as part of the application. The construction management plan follows the standards outlined in 19.402.9. See Section 3 of this narrative for detailed construction plans.

B. General Standards for Required Mitigation for WQR and HCA areas

Response: The entire project area is designated as either WQR area or HCA. The construction of two overlooks, additional pathways, and pedestrian bridge will disturb approximately 2,120 square feet. In accordance with the mitigation requirements, the proposed project will meet and exceed the required 22 new trees and 106 new shrubs with the restoration activities. Open soil areas remaining after the tree and shrub plantings will be seeded to provide the required 100% surface coverage. Except for the removal of invasive plants and the removal of vegetation necessary to allow equipment access to the site, existing vegetation will remain in place. New plantings will increase the overall connectivity of vegetation on the site. Any impacts relating to disturbance of the resource will be mitigated on the project site. Work areas will be marked to limit unnecessary disturbance to the resource. Planting is scheduled for winter 2012-2013, a few months after the completion of in-stream work. Bare-root stock will be used for planting. Survival rates for bare-root stock are highest if planted mid-winter. As a partner in this project, Friends of Trees will lead the restoration and mitigation planting. Friends of Trees and NCPRD will monitor and maintain the trees and shrubs for at least 3 years after completion and will meet a minimum 80% survival rate. Friends of Trees and NCRPD maintain a strong partnership outside of this project and both organizations are devoted to ongoing enhancement projects within North Clackamas Park. See Section 3 of this narrative for the detailed planting plan and legend. The project will follow all Development Standards (Subsection 19.402.11) as stated above.

General Discretionary Review (Subsection 19.402.12)

The general discretionary review will provide Planning Commission specific information to analyze the impacts of development on WQRs and HCAs, including measures to prevent negative impacts and requirements for mitigation and enhancement.

Application Requirements

1. *Topographic Site Map*

Response: See Section 3, Plans, Sheet L1.00 Existing Conditions Plan for topographic information (1-ft contours as well as demarcation of the WQR and HCA area. Mt. Scott Creek and Camas Creek are both identified as "primary protected water features."

2. *Natural Features and Location of Wetlands*

Response: See Section 3, Plans, Sheet L1.00 Existing Conditions Plan for the location of the largest trees within our project area (over 6 inches in diameter at breast height). Sheet L1.00 also shows the existing wetland boundaries which have received concurrence from DSL. See Section 4, Appendix 6 for DSL Wetland Delineation and Concurrence Letter.

3. *Assessment of WQR area and HCA area*

Response: NCPRD, working with volunteers, have made initial efforts to restore and enhance the WQR corridor onsite. Several areas just outside our specific project area are in Good condition. Due to the need for restoration activities, our project area consists of Marginal condition (upper bank areas) or Poor condition (scatter patches of bare ground). The riparian area adjacent to the south bank of Mt. Scott Creek, west of the Camas Creek Confluence will benefit from restoration. Habitat deficiencies exist, including homogeneity, bank erosion, lack of large woody debris, lack of overhanging cover and invasive species. Heavy foot traffic has trampled vegetation and caused soil compaction and erosion. The HCA in the project would generally be described as mostly lawn. The HCA located to the north of the Camas Creek is mostly open lawn which is used as a dog park. A playground is also located within that area of HCA. On the southern edge of Mt Scott Creek and Camas Creek, the HCA overlaps with the WQR zone and is classified as wetland and riparian. Efforts have been made to remove invasive species in these areas but there is still a presence of invasive species within this zone of the HCA. Along the edge of the HCA, an existing asphalt path meanders around the ball fields and the HCA edge is lawn. See Section 4, Appendix 3-4 for more detailed information about the previous planning efforts that have assessed the WQR and HCA riparian area within our project area.

4. *Vegetation Inventory*

Response: See Section 3, Plans, Sheet L1.00 Existing Conditions Plan, which documents all the largest trees within our project area (over 6 inches in diameter at breast height). Approximately 60% of the project area is covered by tree canopy and another 10% by other groundcover, with several significant patches of bare ground.

A. Alternatives Analysis

WES retained GreenWorks PC and Inter-Fluve, Inc. to design the recreational elements and the proposed restoration plans. GreenWorks worked with WES, NCRPD, and ODFW to locate the overlooks, pathways and pedestrian bridge. These three recreational elements have been identified as elements that would offer a unique experience of the natural resource that reduces the human impact in and around Mt. Scott Creek and Camas Creek. Inter-Fluve is based in Hood River, Oregon, and has extensive experience in integrating natural science with water resources engineering to create long term sustainable design solutions for stream and river restoration. Inter-Fluve has a strong understanding of

engineered log jams and log placement, fisheries biology, hydrology, hydraulics, sediment, fluvial geomorphology, and wetland ecology. Inter-Fluve used hydrologic modeling and analysis to determine what conditions would be most suitable to salmonid fishery in this reach of Mt. Scott. The proposed management plans are based on the results of that analysis.

As required by this subsection, a proposal must provide satisfactory responses to the following criteria:

1. No practicable alternatives

Response: By its very nature, restoration work "disturbs" the resource area, though it does so for positive impact that enhances the resource. While some enhancement approaches may be more or less effective than others, restoration is, by definition, a positive impact to the resource. The primary alternative to enhancing the resource area on the project site is to do nothing to improve the resource, which is counter to the intent of the WQR and HCA regulations as expressed in MMC 19.402

Overlook Alternative Analysis:

A no-build option for the overlooks is an option. The permanent impact of an overlook takes away from the natural landscape along the stream bank. However, the design team and all stakeholders involved felt that if areas were not designed for people to gather along the stream bank erosion and compaction would continue to be an issue due to heavy foot traffic. Recreational amenities like overlooks and interpretive signage are promoted in WQR and HCA overlays because agencies like Metro wish to educate the public about the natural resources in our neighborhoods. In most cases, low-impact outdoor recreation facilities for public use including overlooks and interpretive and educational displays are limited exemptions in HCA overlays. The design team explored the alternative of only one overlook at the confluence of Mt Scott Creek and Camas Creek to limit impact. This location was maintained in this alternative because the confluence has the highest scenic value and environmental education potential. After further discussion, a secondary overlook was considered to provide a smaller more intimate space to view the natural area. The preferred alternative includes both locations to offer a diversity experience for the public along the riparian edge and provide controlled access to the natural resource in locations that appear to be highest in demand, according to current use.

Bridge Alternative Analysis:

A no-build option for the pedestrian bridge is not a viable alternative. The existing bridge limits access to the playground on the north side of Camas Creek because it is not ADA accessible. The width of the bridge does not meet current ADA standards of egress required for a person in a mobility device. The second alternative examined was to use the existing concrete abutments and replace the top portion of the bridge with the desired width. After careful analysis of the existing abutments it was found that the abutments would need to be extended to allow for a wider bridge on top which would impact the surrounding wetlands just as much as removing them and moving the abutments. The preferred alternative is to remove the existing abutments and lengthen the bridge to expand wetland area underneath. The new pedestrian bridge follows the same alignment as the old bridge to minimize impact to the adjacent creek channel and wetland. This alternative removes permanent impact to the WQR and enhances the wetland by opening flows and planting native wetland vegetation.

2. Limit of Disturbance

Response: The project is limited to the South side of the bank therefore, no river crossings will be necessary for this restoration work. The proposed project involves installing several large engineered wood habitat structures and sizeable boulders within the stream channel. This work requires that some

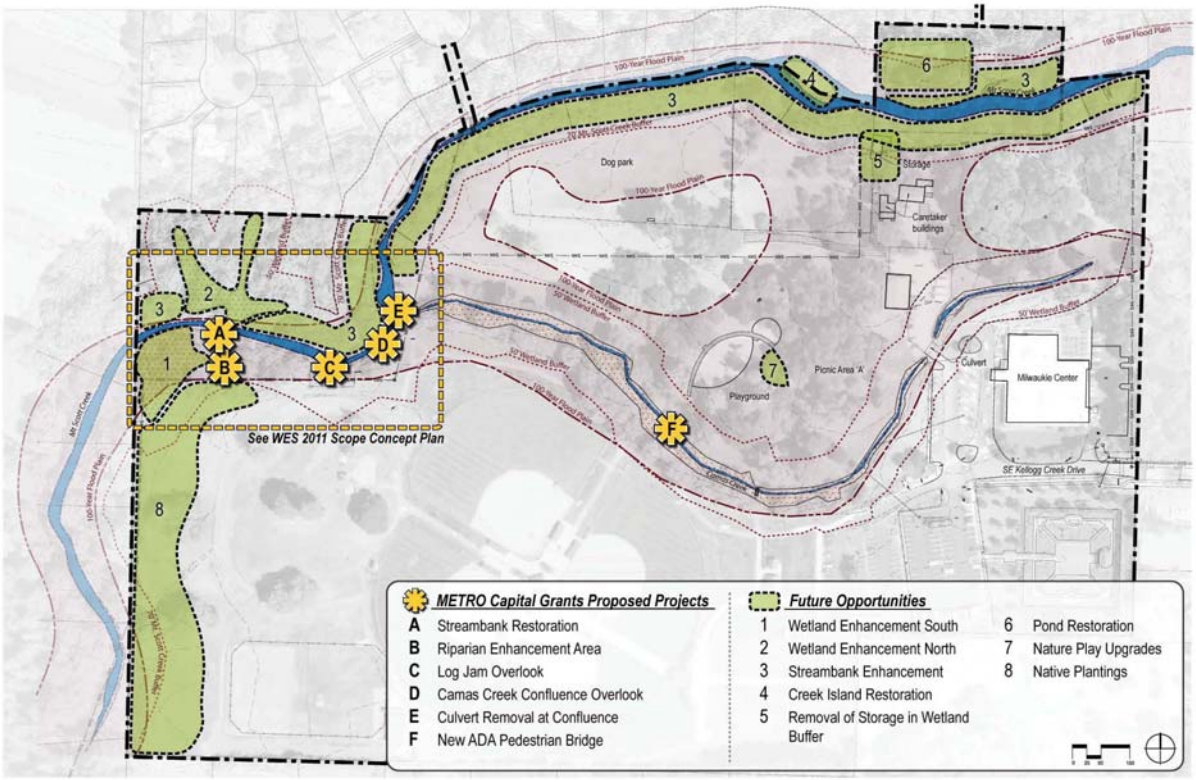
large equipment will need access to the project site. The additional disturbances from the proposed recreational elements include minimal grading for the sole purpose of providing ADA access to the new amenities and grading to remove soil from the streambank to make room for the large wood structures. As stated in the development standards, all work areas will be flagged to ensure the protection of habitat outside the work area.

3. Restoration

Response: The primary objective of the proposed project is to improve the conditions of the resource area, which is a "wildland" area (undeveloped) in Marginal to Poor condition, as categorized in MMC Table 19.402.9.C. Disturbed soil areas will be replanted with native vegetation, infilling where gaps exist. Throughout the project area, invasive plants will be removed and replaced with native vegetation selected from the schedule for "Deciduous Forested Wetlands and Floodplains" found in the Portland Plant List (see Section 4, Appendix 7). The installation of large engineered wood habitat structures and boulders in the stream itself will greatly improve the quality of fish habitat.

4. Alternative Rationale

As stated throughout this narrative, three previous studies were conducted identifying this reach of Mt Scott Creek in need of restoration and enhancement work. These studies used a set of criteria to develop a priority list of enhancement projects. (Refer to Section 4, Appendix 2, Metro Nature In Neighborhoods Capital Grant Application for a summary of the three studies that recommend the restoration work and site improvements.) The graphic below identifies all the recommended restoration and recreation projects in this stretch of creek.



Site Opportunities Map

MT. SCOTT CREEK - Clackamas County Water Environment Services

January 12th, 2011

The starred areas and the green areas on the site map above represent all the opportunities addressed in the previous studies. (Refer to the Metro Grant application under the "Previous Studies" section for a summary narrative of all opportunities identified at North Clackamas Park.) Prior to the submission for the Metro Capital Grant, the design team analyzed all of the proposed options and developed priorities. An open house was held to solidify which opportunities should have the highest priority, by observing current site conditions (flooding), and talking with staff from all involved partners. In the diagram above, the starred items denote the work proposed in the Metro Capital Grant and this Land Use Application. The rationale outlined in these studies resulted in the final design work being proposed. (Review the full reports in the Section 4, the Appendix of this application.)

5. Mitigation Plan

a. *Adverse Impacts*

Response: This section describes the temporary and permanent impacts to the WQR and HCA area. All the project improvements are located within the WQR and HCA overlay. The permanent impacts include the two overlooks and the upgraded pedestrian bridge. All but the concrete abutments and footings for the confluence overlooks and the pedestrian bridge are constructed of permeable sustainable materials. The pin foundations used for the overlook reduce the permanent and temporary impact of the deck construction. Regarding the temporary construction impacts, the temporary construction entrance, staging area, and construction access drive are located outside the WQR and HCA overlay. Equipment will be positioned on the bank above the stream to assist with installation of the large engineered wood habitat and placement of boulders, but some in-stream work will be necessary. A temporary coffer dam will be utilized to isolate the in-stream work.

New Pedestrian Bridge - The existing bridge and concrete footings will be removed using a crane and excavator. New footings will be poured in place in close proximity to the existing footings and outside the wetland boundaries. Wetland incidental impact protection measures will take the form of silt fence placed along the outer edge of the wetland. No work within the identified wetlands is proposed.

Culvert Removal - The existing metal culvert that conveys Camas Creek under an asphalt walking trail will be removed using an excavator. This portion of the asphalt trail will be abandoned and rehabilitated (Sheet L1.00). No stream flows are anticipated in Camas Creek during the construction so flow control or dewatering measures will not be necessary. Upon removal, the area will be graded to match the existing gentle slopes. A grade control structure will be constructed at the confluence of Camas Creek and Mt. Scott Creek. Logs will be placed within Camas Creek to serve as grade controls near the confluence and prevent a head cut from forming and moving upstream within Camas Creek.

Engineered Log Jams (ELJ) and Bank Stabilization - The plan view of the ELJ and bank protection portions of the project are shown in Sheet C1.00. Prior to construction the entire ELJ and bank protection work area will be isolated from Mt. Scott Creek through the construction of a sand bag and plastic sheeting coffer dam. Anticipated flows at the time of construction will be between 2-4 CFS. The upstream end of the coffer dam will extend to the bank and downstream end will be left open. Biologists or other individuals experienced in fish capture and removal procedures will make several passes with seines and dip nets to herd fish out of the isolated area. Once it has been determined that no fish remain within the isolated area, the downstream end of the coffer dam will be closed and extended to the bank of the river. In order to reduce the chance of siltation, the isolated area will not be dewatered, and construction will be conducted in the wet.

The bank protection and ELJ features will be constructed using industry accepted methods with an excavator. An initial footer log will be partially buried at the level of the stream bed to serve as a base for the remaining LWD pieces. Approximately 165 CY of material will be temporarily excavated from the bank and need to facilitate footer log installation. Subsequent LWD pieces will be ballasted with buried and surface boulders and cables. Due to the urban location of the features and downstream infrastructure, the individual LWD pieces will be cabled together. Ballast and cabling details are presented in Sheet C1.01. Following the completion of construction activities, all sediment will be allowed to settle out of suspension and the coffer dam will be removed.

b. *Avoiding/Minimizing Impacts*

Response: Prior to construction, silt fence will be installed to prevent siltation of waterways and wetlands during construction. Measures to reduce impacts during the proposed in-water work will include the utilization of temporary coffer dams to isolate the work area, constructing the project within the approved in-water work window, and following appropriate fish removal operations. In addition to the erosion control measures in and around the work, the construction access plan and details (Section 3, Plans, Sheet G1.02 and Sheet L3.00) shows that the contractor will be required to install a temporary gravel construction entrance, a gravel access road, and a staging area clear of the floodplain.

c. *Mitigation Map*

Response: See Section 3, Plans, Sheet L1.00 and Sheet L3.00 for Erosion control measures to be installed. Within the project area, invasive plants will be removed and disturbed areas will be replanted and replaced with native plant species shown on Sheet L2.00, Planting Legend. Required mitigation from the recreational elements will be exceeded as stated under Development Standards (Subsection 19.402.11).

d. *Implementation Schedule*

Response: In-stream work will be conducted within the allowable window for in-water work as designated by ODFW, approximately July 15th to September 30th. The construction of the two overlooks and adjoining pathways will be constructed with in the same timeframe.

6. Application forms

Response: An application form for WQR review and the Submittal Requirements checklist are included with this submittal. The project area is comprised of several properties under the ownership of the City of Milwaukie. A copy of the deed is included in Section 4, Appendix 9.

7. Fee

Response: The application fee has been waived because the City of Milwaukie is the property owner and co-applicant on the project. However, the fee required to cover the costs of reviewing the technical report ($2,000) is included with this application submittal.

7. Other Requirements (Title 18 and Public Works Standards)

Flood Hazard Regulations (Section 18.04)

Response: In accordance with Section 18.04.170, development in the floodway will not occur. FEMA has issued an appendix (Appendix E – Policy on Fish Enhancement Structures in the Floodway) allowing a waiver of a full no-rise analysis. In lieu of a no-rise analysis, the applicant shall have a qualified professional provide a feasibility analysis and certification that the project was designed to keep any rise in the 100-year flood levels as close to zero as practically possible and that no structures would be impacted by the potential rise as outlined in the Policy. Per the City of Milwaukie's request, we have provided a preliminary analysis as demonstrated by the signed memorandum in Section 4, Appendix 8 of this narrative.

Public Works Standards (Section 2 – Stormwater Design Standards)

Response: In accordance with the thresholds stated in the Stormwater Management Manual, this project does not require the implementation of stormwater management facilities. The project is developing under 500 square feet of impervious surface; only approximately 80 square feet of impervious surface is being proposed to re-grade the existing path to provide ADA access to the new pedestrian bridge across Camas Creek. See Section 3 for construction plans.

Amendment: Mt Scott Creek Restoration Project

Clackamas County Water Environment Services

And

North Clackamas Parks and Recreation District

Supplemental Written Statement for
City of Milwaukie Land Use Permitting Applications for Additional Alcove Element
Natural Resources

Supplemental Mt. Scott Creek Restoration

Land Use Application

Table of Contents

SECTION 2: WRITTEN STATEMENTS

1. Summary Information

Project Summary

Clackamas County Water Environment Services, North Clackamas Parks and Recreation District, Oregon Department of Fish and Wildlife, and the City of Milwaukie are natural resource management plan for a habitat restoration project proposed adjacent to Mt Scott Creek in North Clackamas Park. This amendment to the Mt Scott Creek Restoration Project application involves the construction of a backchannel alcove, planting of native vegetation, stabilizing alcove bank with log and boulder structures to restore and enhance fish habitat and will be constructed at the same time as the proposed Mt Scott Creek Restoration Project. The proposed backchannel alcove is located on the north side of Mount Scott Creek within the same project area as the Mt Scott Creek Restoration Project.

Co-Applicants

City of Milwaukie (Property Owner)
10722 SE Main Street
Milwaukie, OR 97222
Contact: JoAnn Herrigel
503.786.7508

Clackamas County Water Environment Service
150 Beavercreek Road, Suite 430
Oregon City, Oregon 97045
Contact: Gail Shaloum
503.742.4597

City of Milwaukie Land Use Permit Applications

Natural Resource Review

Pre application Conference

12-003PA, March 22, 2012

Address:

North Clackamas Park
5440 SE Kellogg Creek Drive
Tax Lot IDs - 22E06AC00100; 22E06AB00417; 22E06AB00617

Total Lot Size

47 acres

Zoning:

Community Service Use
Residential Zone R-10

2. Applicable Regulations

- Milwaukie Municipal Code (MMC) Section 19.402 Natural Resource Review,

3. Existing Conditions

See Mt Scott Creek Restoration project application Existing Conditions. This specific element, alcove backchannel creation, will take place within the same project area; however, it will be located on the north side of Mt Scott Creek. This area of the park is reserved as a natural resource area. The project aims to construct a backchannel alcove where a current spring joins Mt Scott Creek. Common vegetation species include carex species, skunk cabbage, Oregon Ash trees, willow species and many invasive plants that NCPRD staff has begun to control in the fall of 2011. This area similar to the other areas within the projects site is inundated with water during high water events.

4. Project Description

This project has several funding sources including Water Environment Services (WES), The Nature Conservancy (TNC) PGE Salmon Fund, Oregon Watershed Enhancement Board (OWEB), NCPRD, and Soil and water Conservation District with the goal to improve in-stream and riparian areas along lower Mt. Scott Creek within North Clackamas Park. The project will enhance ecological functions and habitat diversity for fish and wildlife. Additionally elements of the project will improve watershed health awareness, provide community stewardship opportunities. Specifically, this portion of the Mt. Scott Creek Restoration project includes the following elements: approximately 0.5 acre of restored and protected riparian forest habitat, 4 large woody debris installations for fish habitat - including approximately 20 logs total, 2,000 sq ft of new backchannel alcove and restoration.

1. **Backchannel Alcove**–Construct a backchannel alcove on the north side of MSC where a current spring joins MSC (2,000 sq ft). Grade soil to make the spring channel deeper and wider so that it retains water minimum of 9 months to enhanced fish habitat. Use large wood and boulders to stabilize the banks and provide a protected environment for fish to reside. Plant native trees and shrubs (21,780 sq ft).

Partnerships

North Clackamas Parks and Recreation District (NCPRD) worked with ODFW, Clackamas County Water Environment Services (WES), and the City of Milwaukie to develop a concept plan. Several grants were applied for to acquire the funding needed to implement this portion of the project. Several other partners supported the proposal, and have committed support for the project. All partners will continue to work together through construction, as well as coordination of planting events and continued maintenance of the plantings and removal of invasive species. The following list describes each partner's role and commitment:

Organization	Role	Project Commitments
WES	Project manager	Funding toward concept development, design and construction
NCPRD	Co Project Manager and Park provider	Funding toward concept development, design and construction, continued management of the site
City of Milwaukie	Property owner	Assistance with concept development, design and permitting, use of property as park and natural area
CCSWCD	Partner and grantor	The CC Soil and water Conservation District is supporting the project through professional assistance and financial support.
ODFW	Advisory	Assistance/participation in planning, technical expertise
Friends of Trees	Restoration planting lead	Support of project and assistance with planting plan
North Clack. Urban Watersheds Council	Project participants	Assist in community outreach and public involvement
Friends of Kellogg and Mt Scott Cr.	Creek health advocates	Assist in coordinating citizen participation, invasive plant removal and ongoing maintenance of plantings
Friends of North Clack. Parks	Park support and citizen education	Assist in coordinating citizen participation, invasive plant removal and ongoing maintenance of plantings
Milwaukie Center	Park neighbor and steward	Continued support for older adults using the park, continued stewardship

In 2008-9, the Oregon Department of Fish and Wildlife (ODFW) and WES collaborated to assess the health of aquatic ecosystems in the county's urban streams. ODFW field staff conducted fish and habitat surveys in two areas of urban Clackamas County, including Mt. Scott Creek. Fish presence and abundance were surveyed and analyzed, and habitat conditions were assessed. The reach of Mt. Scott Creek in the project area is described as "Park/rural residential/industrial; degraded riparian w/deciduous vegetation dominant; Heavy bamboo infestation through N. Clackamas Park; Small wood present w/limited key pieces; moderate fine sediment load; in-stream habitat limited by lack of complex structures; partial fish passage barrier at culvert."

ODFW also developed recommendations for restoration and protection of priority stream reaches. For the reach of Mt. Scott Creek in the project area, the report noted that "…these areas would greatly benefit from focused habitat restoration projects (particularly fish passage), increased protection of riparian/floodplain areas, increased public awareness, and outreach related to understanding of watershed health issues." The report developed objectives for this reach to improve in-stream habitat for rearing Chinook, Coho, and Steelhead; and to remove invasive vegetation and replace with natives. It called for placing large wood

structures at strategic locations within Mt. Scott Reach 1 to benefit rearing juvenile salmonids from within Mt. Scott and Kellogg creeks, and outside from the Willamette River. It also called for removing invasive vegetation and replacing with natives, with an emphasis on conifers such as Western Red Cedar to greatly improve riparian zone conditions (ODFW 2009). This proposed project was developed and designed to carry out the ODFW recommendations.

See Mt Scott Creek restoration project application Section 4, Appendix 10 for a Letter of Support from Todd Alsbury, District Fish Biologist, ODFW-North Willamette Watershed District.

5. Response to Natural Resources Review (Section 19.402)

Natural Resource Management Plans Review (Subsection 19.402.10)

Natural resource management plan regulations apply to all properties containing protected water features as identified on the City's Water Quality Resource (WQR) and Metro's Habitat Conservation Area (HCA) maps. Mt. Scott Creek is a primary protected water features and are identified on the City's WQR/HCA maps. The reach of WQR within our project boundary is classified as Class B where the combination of trees, shrubs, and ground cover are 80% present and the canopy coverage is between 25-50%. Patches of the WQR along the stream bank are classified as Class C where bare ground and erosion is present. The plans have been prepared in accordance with standards and guidelines appropriate to natural resource agency. Oregon Department of Fish and Wildlife (ODFW) is a partner with NCPRD and WES in preparing the plans for this project. See description of ODFW involvement under Partnerships and within the Mt Scott Creek restoration project application Section 4, Appendix 2 for ODFW Habitat Assessment of Streams in Clackamas County. The natural resource management plans will be reviewed by the planning commission because the proposed recreational elements (pathways, pedestrian bridge, and overlooks) require approval as a Community Service Use. See General Discretionary Review (Subsection 19.402.12) of this narrative for detailed information about the proposed recreational elements.

C. Approval Criteria

Every plan prepared for approval under Section 19.402 shall demonstrate that it encourages restoration activities…

Response: The proposed project will make important alterations to an area adjacent to Mt Scott Creek within a backchannel alcove that will improve the conditions for salmanoid species. The project will enhance ecological functions and diversity for fish and wildlife by restoring forest riparian habitat, creating an alcove backchannel for fish to rest and feed out of the main channel, planting native plant species.

The creation of an alcove/backchannel along this stretch of Mt Scott Creek will provide refuge habitat for anadromous fish, focusing on Coho salmon. During high flow events, it will serve as a slack-water refuge for Coho -- a place for them to feed, rest, save energy, and increase in size. Large wood will be installed in the alcove to provide overhead cover and protect the fish from predators, as well as to provide food (e.g., macroinvertebrates that inhabit the woody structures).

The water in the alcove is expected to be cooler due to its location near a small seep and surrounding spring and groundwater-fed wetlands. Coho will be attracted to the cold, still water. Other fish species will directly benefit as well. Coho are the dominant fish species in the system. If there is not sufficient backchannel habitat for them, they can compete with steelhead and other native fish species for in-stream habitat. The alcove will provide Coho with an extremely important habitat feature that is in limited supply in Portland area streams.

Steelhead, chum, and other native fish species will use this alcove at times, but Coho and cutthroat trout will be the primary users.

Oregon DSL and Army Corps of Engineers were consulted about the backchannel alcove portion of the project and they verified and support the project.

The backchannel alcove will be created on the north side of Mount Scott Creek (see Alcove plans and designs pg. 4). Although the project does propose crossing the creek the engineers have worked with the ODFW to design a strategy for the creek crossing that minimally impacts the in-stream habitat. A series of logs will be placed to span the channel and allow equipment movement back and forth with minimal disturbance to the streambed. There are provisions attached within the alcove designs pgs. 2-3 and 6. Anticipated flows at the time of construction will be between 2-4 CFS. Prior to the construction of the alcove backchannel a sandbag dam will be created to keep out waters from Mt. Scott Creek as the alcove is being constructed. At this time no fish reside within the new alcove site area because the depth of water is not sufficient. The alcove and all ELJ features will be constructed using industry accepted methods with an excavator. A maximum of 200 cubic yards of soil will be removed from the alcove site area to create the alcove. The 200 CY of native soil that will be retained on site to an area within the park that is located above the floodplain (see Alcove plans and designs page 4). Thus, the total net removal is 200 CY and zero fill. Due to the urban location of the features and downstream infrastructure, the individual LWD pieces will be cabled together to greatly reduce the chance of individual logs becoming dislodged and threatening downstream structures. Ballast and cabling details are presented in Alcove Designs pg. 6 and 7. Following the completion of construction activities, all sediment will be allowed to settle out of suspension and the sandbag dam will be removed.

This element was added because we saw an opportunity to get additional habitat benefits under the same permits and to decrease mobilization costs by eliminating a second phase. Therefore, the team has acquired the funding and designs to include the alcove backchannel and additional large wood within this project.

D. Construction Management Plans

Response: Within the alcove designs we have provided BMP's that the contractor will follow which include; a spill containment and control plan with notification and procedure, cleanup and disposal instructions; procedure for checking for and repairing and documenting equipment fuel leaks; having watertight equipment in saturated soils and cleaning equipment at washing stations; pressure wash equipment especially if operated below bankfull elevation; Diaper all stationary power equipment operated within 150 feet of any streams, or wetland to prevent leaks unless suitable containment is provided; ensuring that erosion control measures are implemented prior to ground disturbance and that emergency materials for erosion control are onsite; monitoring turbidity in the creek and inspect erosion control daily during wet season and weekly during dry; All exposed soils shall be protected from erosion by mulching, plastic sheeting, hydroseed covering or other approved measures within one week of ground disturbance.; prepare a spill response prevention control and counter measure (SPCC) plan and implement required measures to control pollutants (See Alcove plans and designs). See Alcove plans and designs of this narrative for detailed construction plans.

Both consultants and ODFW representatives will be onsite to oversee construction.

E. Ongoing Maintenance

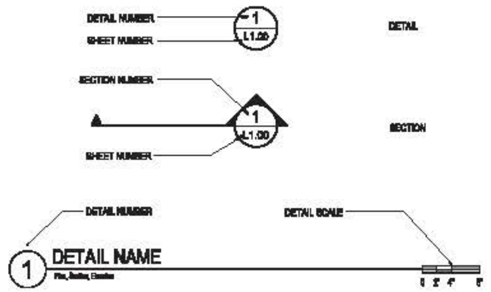
Natural resource management plans shall demonstrate how ongoing maintenance is part of the associated restoration or enhancement activities.

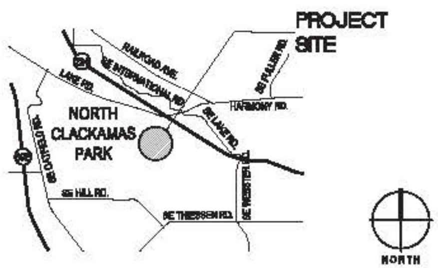
Response: NCPRD manages and maintains North Clackamas Park, including maintenance of native vegetation that has been installed in other areas of the park. NCPRD will continue to be responsible for overall maintenance activities.

ABBREVIATIONS

APPROX.	= APPROXIMATE
ABBEV.	= ABBREVIATED
A.C.	= ASPHALT CONCRETE
B&B	= BALLED AND BURLAP
BF	= BOTTOM OF FOUNTAIN
BR	= BOTTOM OF RAMP
BS	= BOTTOM OF STAIR
BW	= BOTTOM OF WALL (ELEV. AT FINISH GRADE)
B.O.W	= BOTTOM OF WALL (ELEV. BELOW FINISH GRADE)
CAL.	= CALIPER
CONT.	= CONTINUOUS
C.P.	= CENTER POINT
C.T.	= CURRENT TRANSFORMER
DOM	= DOMESTIC WATER LINE
(E)	= EXISTING
EA.	= EACH
E.J.	= EXPANSION JOINT
ELC	= EXTERIOR LIGHTING CONTROL
ELEV	= ELEVATION
EOP	= EDGE OF PAVEMENT
FG	= FINISH GRADE
F.L.	= FLOW LINE
FS	= FINISH SURFACE
GAL	= GALLON
GFI	= GROUND FAULT INTERRUPTER
GND	= GROUND
IE	= INVERT ELEVATION
LF	= LINEAR FEET
MIN	= MINIMUM
MAX	= MAXIMUM
O.H.	= OVER HEAD
O.C.	= ON CENTER
O.D.	= OUTSIDE DIAMETER
P.A.	= PLANTING AREA
PERF	= PERFORATED
PC	= POINT OF CURVATURE
PRC	= POINT OF REVERSE CURVATURE
P.P.	= POWER POLE
PVC	= POLYVINYL CHLORIDE PIPE
REQ.	= REQUIRED
R.	= RADIUS
RE	= RIM ELEVATION
R.O.W.	= RIGHT OF WAY
SAN	= SANITARY
SEC.	= SECONDARY
SST	= STAINLESS STEEL
STA.	= STATION
TC	= TOP OF CURB
TD	= TOP OF DECK
TEL	= TELEPHONE
TG	= TOP OF GRATE
TR	= TOP OF RAMP
TS	= TOP OF STAIR
TYP	= TYPICAL
TW	= TOP OF WALL
U.G.	= UNDERGROUND
U.O.N	= UNLESS OTHERWISE NOTED
VR	= VANDAL RESISTANT
WM	= WATER METER
WP	= WATER PROOF
WQ	= WATER QUALITY

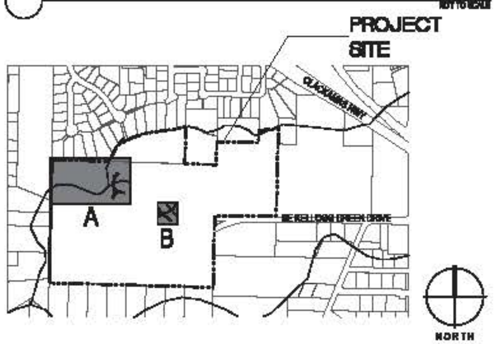
SYMBOL LIST





AREA MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE

DRAWING INDEX

SHEET DESCRIPTION	SHEET NUMBER
GENERAL	
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CIVIL	
BANK STABILIZATION: LOG AND BOULDER PLACEMENT	C1.00
BANK STABILIZATION: LOG AND BOULDER PLACEMENT	C1.01
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PLANTING PLAN	L2.00
PLANTING LEGEND	L2.01
EROSION CONTROL AND TREE PROTECTION DETAILS	L3.00
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OVERLOOK DECK FRAMING DETAIL	L3.02
OVERLOOK DECK DETAILS	L3.03
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PLANTING DETAILS	L3.06

PROJECT PARTNERS

CLACKAMAS COUNTY WATER ENVIRONMENT SERVICES

NORTH CLACKAMAS PARKS AND RECREATION DISTRICT

CITY OF MILWAUKIE

METRO

OREGON DEPARTMENT OF FISH AND WILDLIFE

FRIENDS OF TREES

NORTH CLACKAMAS URBAN WATERSHEDS COUNCIL

FRIENDS OF KELLOGG AND MT. SCOTT CREEKS

FRIENDS OF NORTH CLACKAMAS PARKS

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GREENWORKS

CLACKAMAS COUNTY

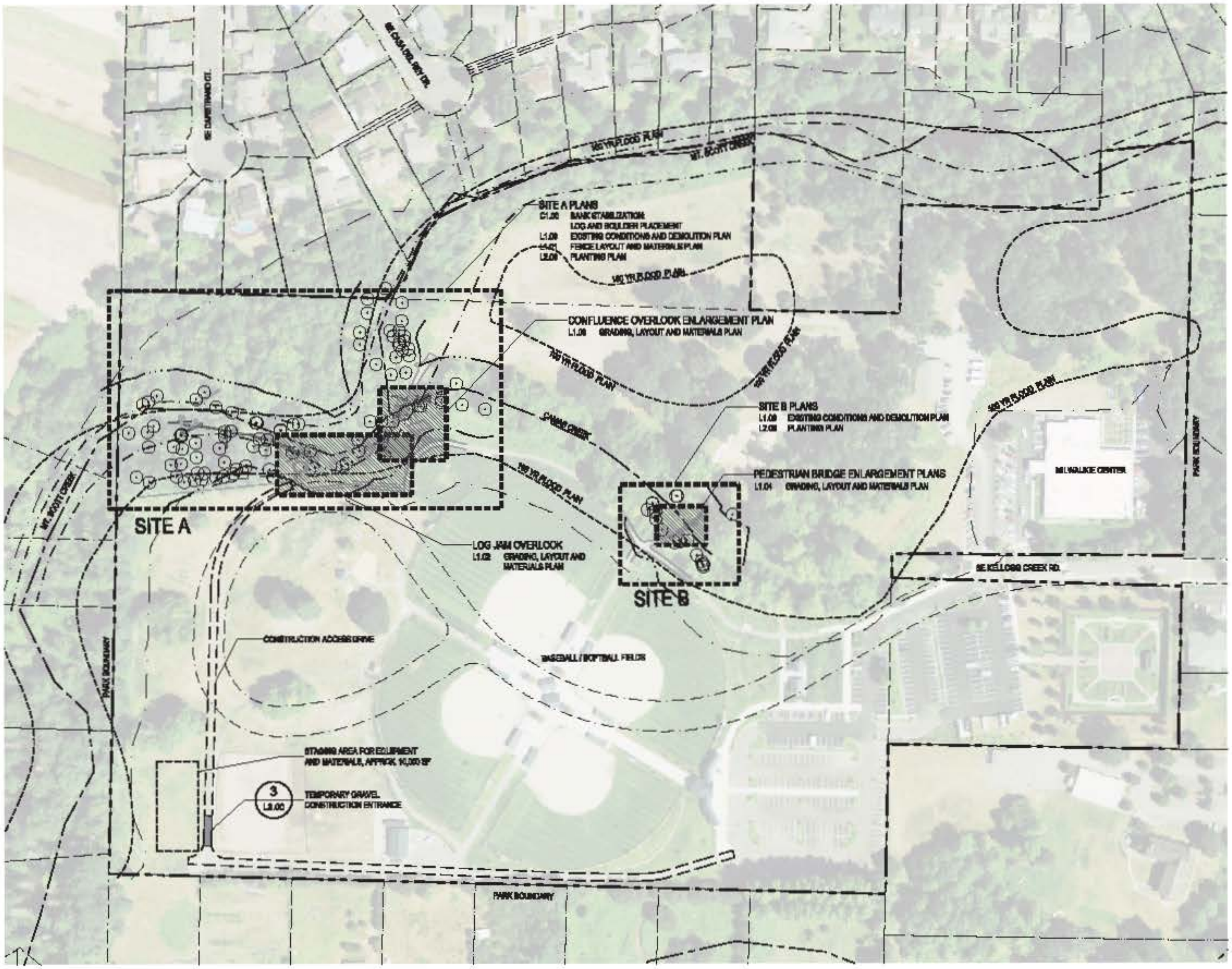
project: Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
sheet title: GENERAL INFORMATION

Date: 4.25.2012
Revisions:

Drawn By: WSKM
Checked By:
Job No. 110231.3
Approved:

G1.00
sheet no. 1 of 22



GENERAL LEGEND

- PARK BOUNDARY
- LOT LINES
- CREEK CENTER LINE
- FEMA 100-YEAR FLOOD PLAIN
- WATER QUALITY RESOURCE (WQR)
- HABITAT CONSERVATION AREA (HCA)
- FLOODWAY
- EXISTING TREES

NORTH 0 40 80 160

GREENWORKS

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
sheet title:
KEY PLAN

Date: 4.25.2012
Revisions:

Drawn By: WS/CM
Checked By:
Job No.: 110231.3
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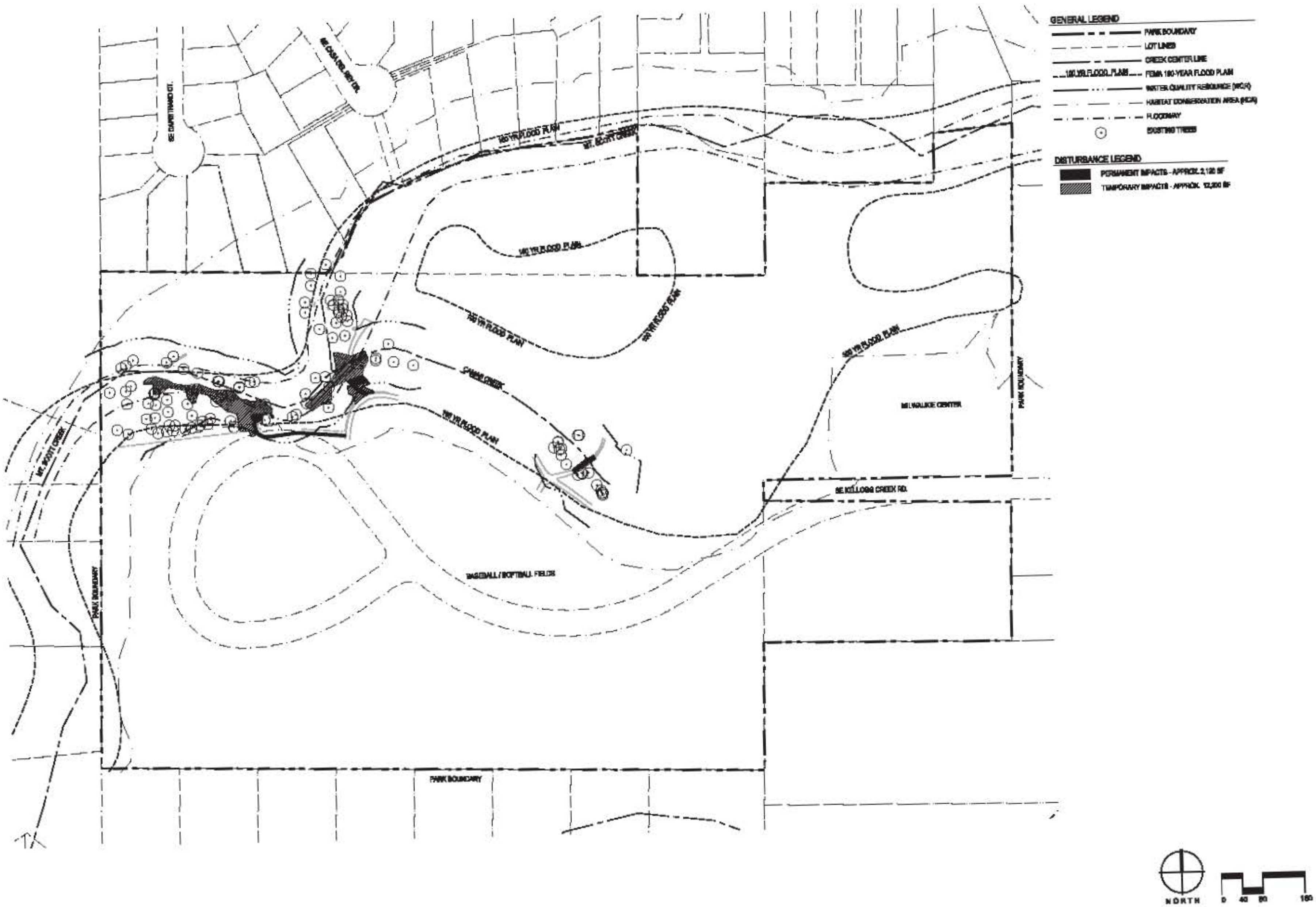
G1.01
sheet no. 2 of 22



GREENWORKS

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
sheet title:
NATURAL RESOURCE - TEMPORARY AND PERMANENT IMPACTS

Date: 4.25.2012
Revisions:

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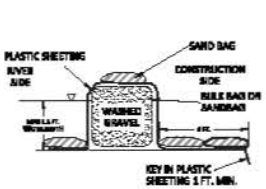
Checked By:
Job No. 11031.3
Approved:

G1.02
sheet no. 9 of 22

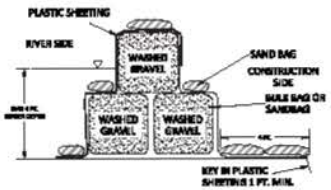
GENERAL LEGEND

- PARK BOUNDARY
- (x) CONTOURS
- CREEK CHAN LINE
- SURVEYED WETLAND AREA
- SANITARY LINE
- 100 YR FLOOD PLAIN — FEMA 100-YEAR FLOOD PLAIN (1996)
- FLOODWAY
- (S) FENCE
- (S) TREES
- SURFACE LOG
- PARTIALLY BURIED SURFACE LOG
- COMPLETELY BURIED BOULDER
- SURFACE BOULDERS AT MOWER CROSSING



SINGLE LAYER COFFERDAM

(WATER DEPTH LESS THAN 2.5')
NOT SCALE



STACKED BULK BAG COFFERDAM

(WATER DEPTH GREATER THAN 2.5')
NOT SCALE

TEMPORARY COFFERDAM DETAILS

NOT SCALE

BULK BAG GENERAL NOTES:

BULK BAG COFFERDAM SHALL BE CONSTRUCTED OF SEVERAL LINES OF BULK BAGS FILLED WITH WASHED GRAVEL, AND ABUTTED SIDE BY SIDE TO CREATE A ROW THAT ISOLATES THE CONSTRUCTION SITE FROM THE RIVER. IF WATER DEPTH EXCEEDS 85% OF THE BULK BAG HEIGHT, AN ADDITIONAL TOP ROW OF BULK BAGS SHALL BE INSTALLED, SUPPORTED BY TWO BOTTOM ROWS OF BULK BAGS. BULK BAG COFFERDAM SHALL BE SEALED BY COVERING THE COFFERDAM WITH PLASTIC SHEETING HELD IN PLACE BY STANDARD SANDBAGS PLACED IN ROWS ON TOP OF COFFERDAM, AND AT TOE OF COFFERDAM. THE PLASTIC SHEETING SHALL BE DRAPED ALONG THE CHANNEL BOTTOM ON THE WORK AREA SIDE OF THE COFFERDAM WITH OUTWARD EDGE OF SHEETING MINIMUM 4-FEET FROM TOE OF COFFERDAM. THE DRAPED PORTION OF PLASTIC SHEETING SHALL BE PINNED TO THE CHANNEL BED BY MINIMUM TWO ROWS OF STANDARD SANDBAGS. THE OUTWARD EDGE OF PLASTIC SHEETING SHALL BE TUCKED UNDER THE CHANNEL BED A MINIMUM 1-FT. TUCKING IN THE OUTWARD EDGE OF PLASTIC SHEETING SHALL OCCUR AFTER THE COFFERDAM IS CLOSED TO PREVENT TURBIDITY RELEASE TO THE WATERWAY.

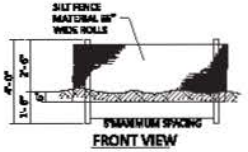
IF POSSIBLE, THE COFFERDAM SHALL BE EXTENDED ONTO A GRAVEL BAR AND OUT OF THE WATER. IF THE END MUST BE TERMINATED AT THE RIVERBANK, THE COFFERDAM SHALL BE TIGHTLY SEALED TO THE BANK BY PLASTIC SHEETING AND STANDARD SANDBAGS. MULTIPLE LAYERS OF SHEETING AND SANDBAGS MAY BE REQUIRED TO FORM A WATERTIGHT SEAL.

BULK BAGS SHALL BE SMALL BZ WATERPROOF CUBE-SHAPED POLYPROPYLENE WOVEN FABRIC BAGS WITH FULLY OPEN TOP, FLAT BOTTOM, FOUR LOOPS, MINIMUM 2-TON WEIGHT CAPACITY, MINIMUM 5:1 SAFETY FACTOR.

PLASTIC SHEETING SHALL BE MINIMUM 6-MIL THICKNESS. ROLL LENGTH SHALL COVER THE COFFERDAM FROM BOTTOM TO TOP WITHOUT SEAMS. FRONT AND BACK PLASTIC SHEETS SHALL OVERLAP ON THE TOP OF THE COFFERDAM.

BULK BAG COFFERDAM SHALL BE COMPLETELY REMOVED AFTER CONSTRUCTION IS COMPLETED AND TURBIDITY HAS BEEN REMOVED.

ALTERNATE COFFERDAM MATERIALS AND CONFIGURATIONS MAY BE ALLOWED BUT SHALL NOT BE IMPLEMENTED WITHOUT REVIEW AND APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND/OR VENDOR CUT SHEETS FOR SUBSTITUTIONS.

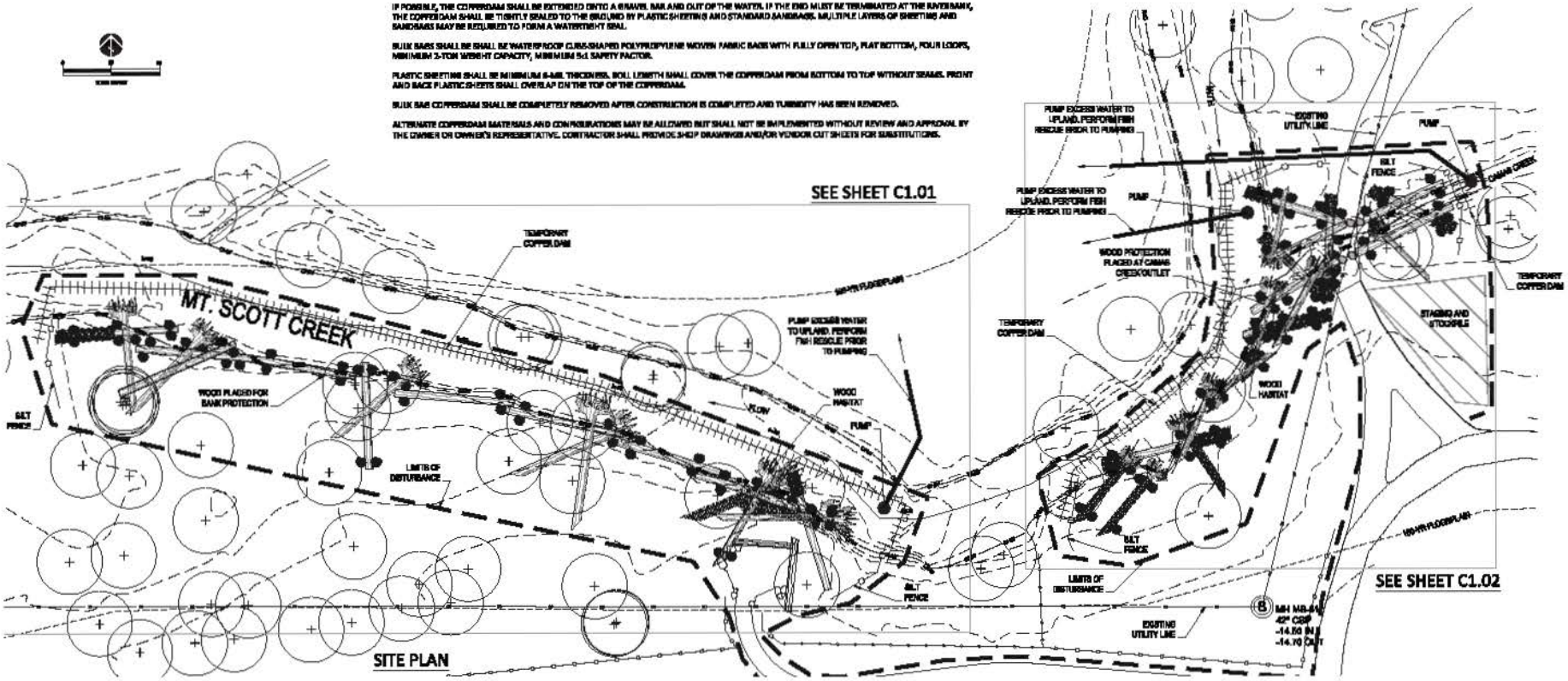


TYPICAL SILT FENCE DETAILS

NTS

SILT FENCES

1. THE SILT FENCE SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST. ALTERNATIVELY, OVERLAP AND INTERLOCK TWO POSTS WITH ATTACHED FABRIC AS APPROVED BY THE GOVERNMENT.
2. THE SILT FENCE IS TO BE INSTALLED AT LOCATIONS SHOWN ON THE PLAN ALONG THE DOWNHILL PERIMETER OF THE CONTAINMENT AREA BELOW EACH SIDE CHANNEL CONSTRUCTION. THE FENCE POST SHALL BE SPACED A MAXIMUM OF 5 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES APART.
3. THE SILT FENCE SHALL HAVE A MINIMUM VERTICAL BURIAL OF 8 INCHES. ALL EXCAVATED MATERIAL FROM SILT FENCE INSTALLATION SHALL BE BACK-FILLED AND COMPACTED.
4. STANDARD OR HEAVY DUTY SILT FENCE SHALL HAVE MANUFACTURED STITCHED LOOPS FOR 2 INCHES X 2 INCHES POST INSTALLATION.
5. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UP SLOPE AREA HAS BEEN PERMANENTLY PROTECTED AND STABILIZED, OR AS DIRECTED BY OWNER'S REPRESENTATIVE.



SITE PLAN

GREENWORKS

project: Mt. Scott Creek Restoration
North Clackamas Park

Clackamas Water Environment Services

submittal: 90% Construction Documents

sheet title: BANK STABILIZATION: LOG AND BOULDER PLACEMENT

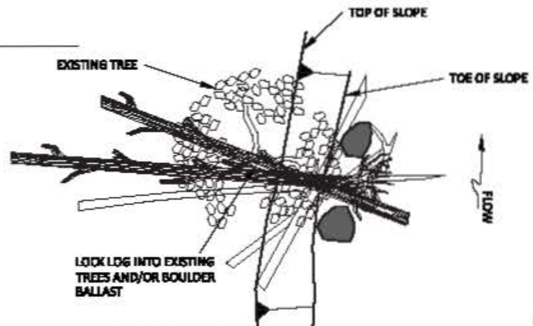
Date: 4.09.2012
Revisions:

Drawn By: REP
Checked By:
Job No. 110851.0
Assistant:

C1.00

sheet no. X of XX

GENERAL LEGEND



PLAN VIEW

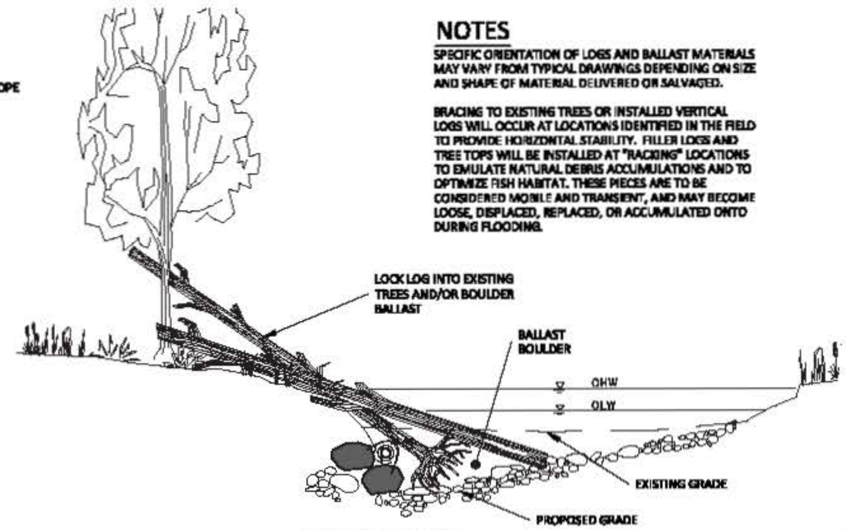
TYPICAL WOOD HABITAT COVER

NOT TO SCALE

NOTES

SPECIFIC ORIENTATION OF LOGS AND BALLAST MATERIALS MAY VARY FROM TYPICAL DRAWINGS DEPENDING ON SIZE AND SHAPE OF MATERIAL DELIVERED OR SALVAGED.

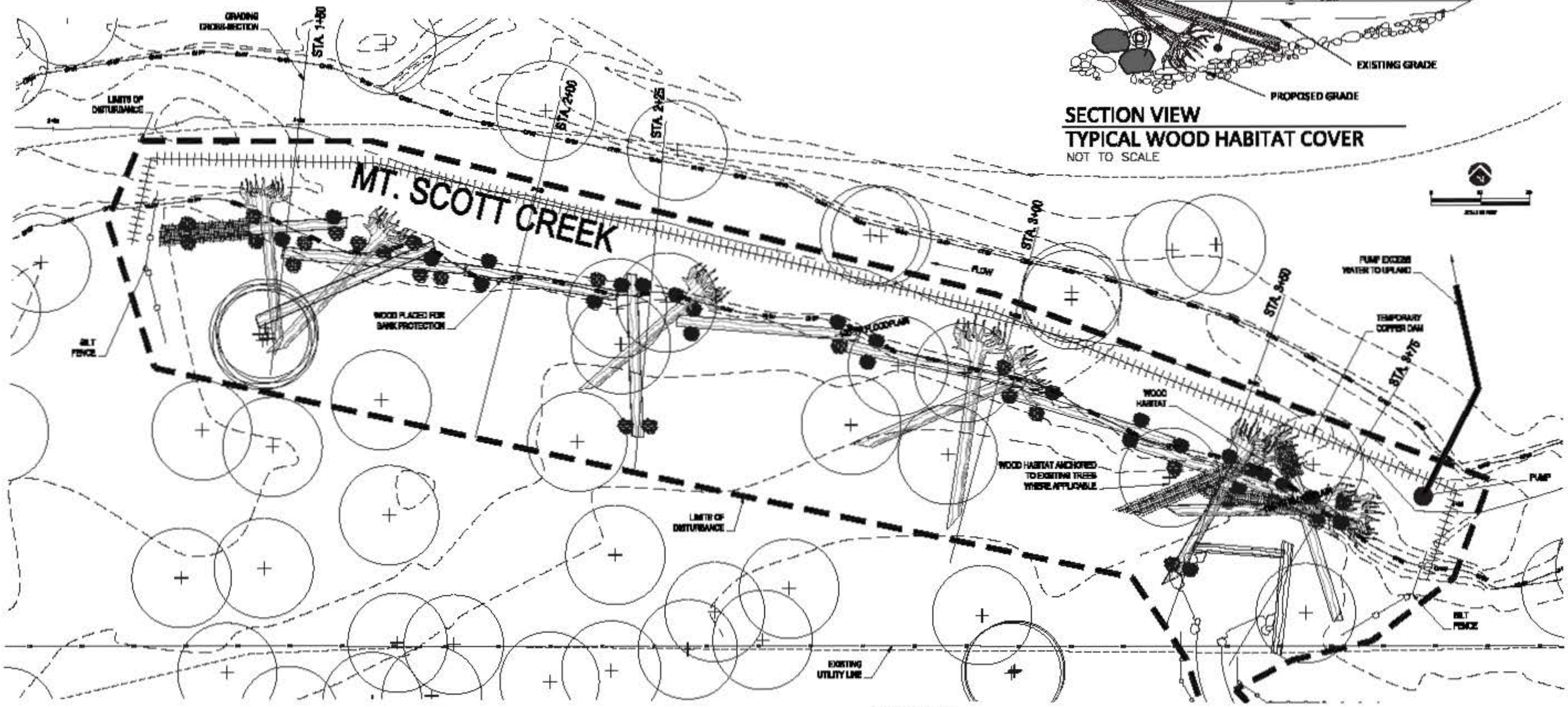
BRACING TO EXISTING TREES OR INSTALLED VERTICAL LOGS WILL OCCUR AT LOCATIONS IDENTIFIED IN THE FIELD TO PROVIDE HORIZONTAL STABILITY. FILLER LOGS AND TREE TOPS WILL BE INSTALLED AT "RACKING" LOCATIONS TO EMULATE NATURAL DEBRIS ACCUMULATIONS AND TO OPTIMIZE FISH HABITAT. THESE PIECES ARE TO BE CONSIDERED MOBILE AND TRANSIENT, AND MAY BECOME LOOSE, DISPLACED, REPLACED, OR ACCUMULATED ONTO DURING FLOODING.



SECTION VIEW

TYPICAL WOOD HABITAT COVER

NOT TO SCALE



PLAN VIEW

GREENWORKS

CLACKAMAS COUNTY

project: **Mt. Scott Creek Restoration**
North Clackamas Park

submittal: 50% Construction Documents

sheet title: **BANK STABILIZATION: LOG AND BOULDER PLACEMENT**

Date: 4.20.2012

Revisions:

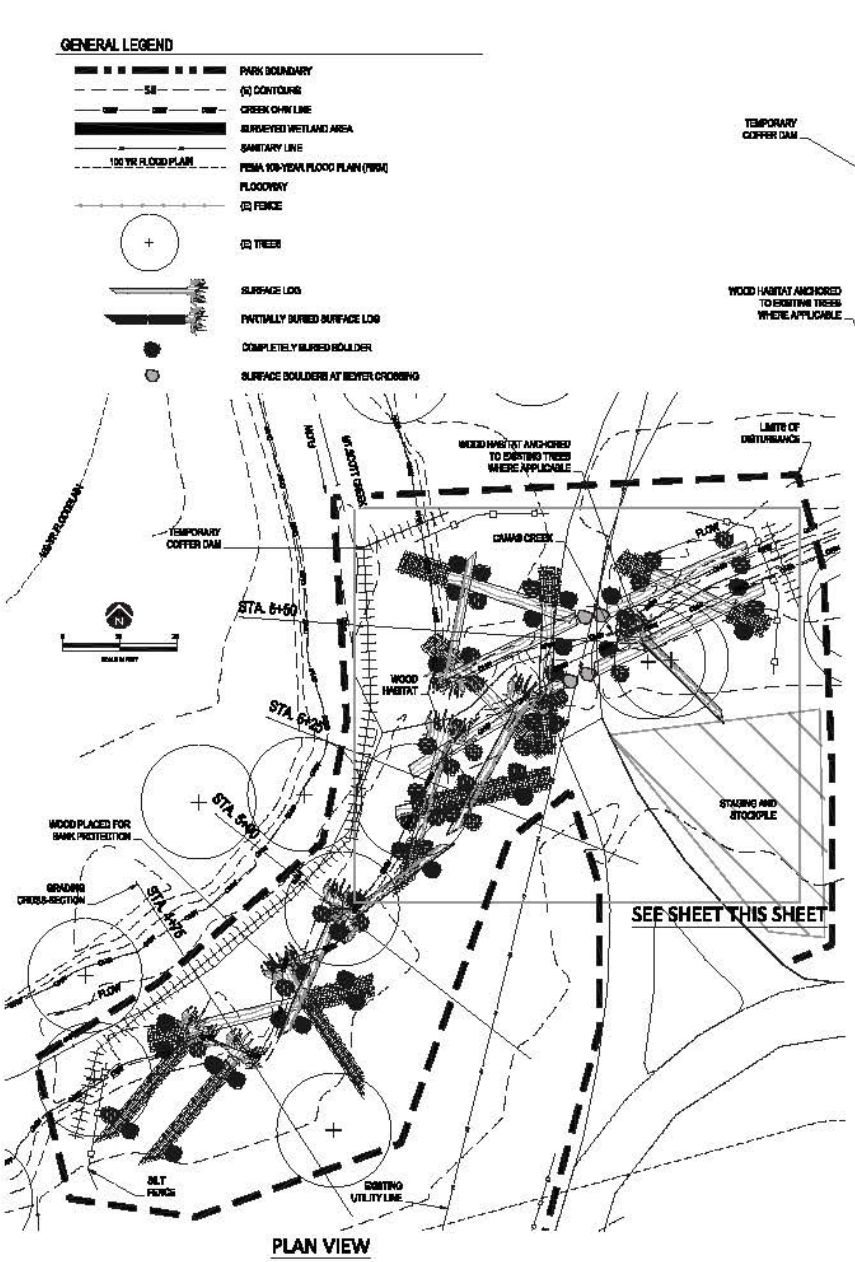
Drawn By: REP

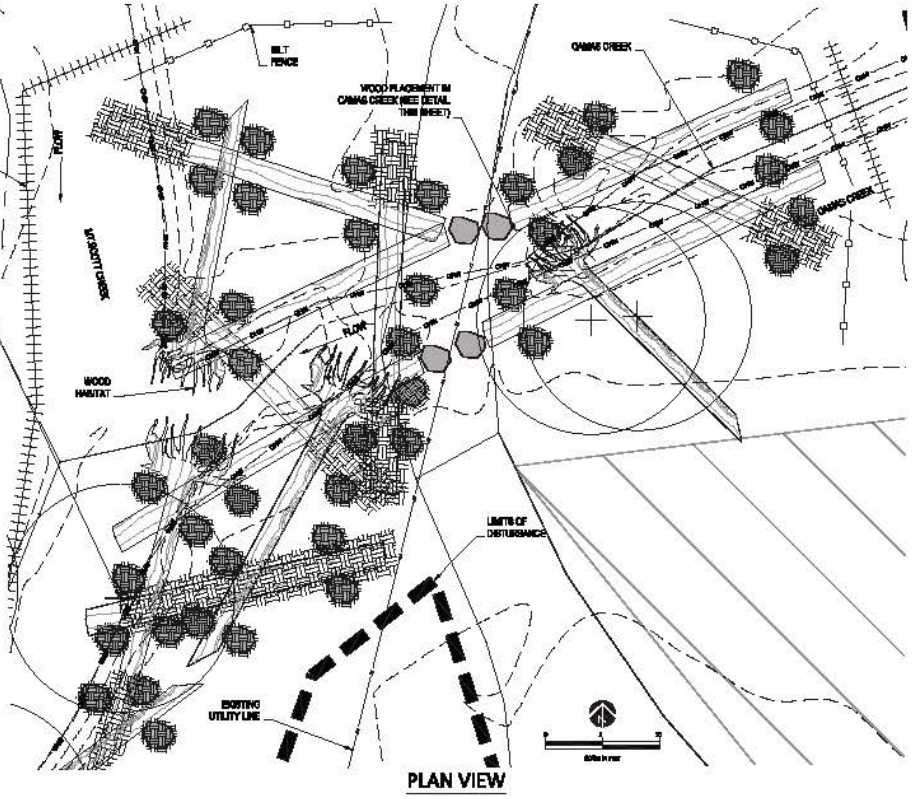
Checked By:

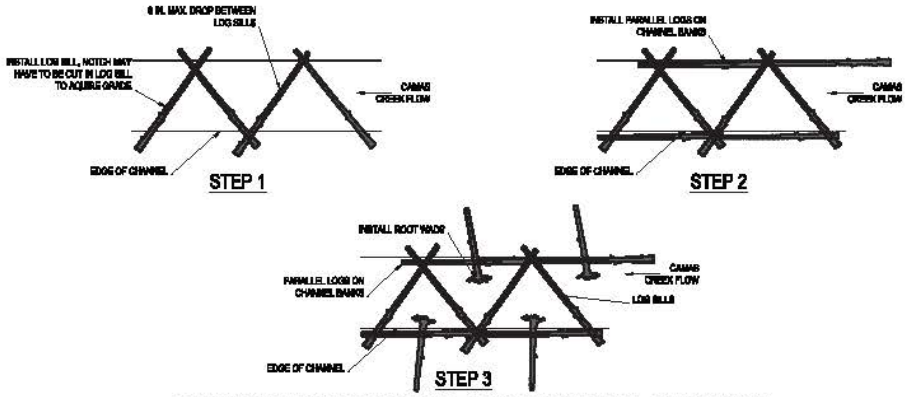
Job No. 110831.3

C1.01

sheet no. X of XX







GREENWORKS

CLACKAMAS COUNTY

project: Mt. Scott Creek Restoration
North Clackamas Park

Clackamas Water Environment Services

submittal: 90% Construction Documents

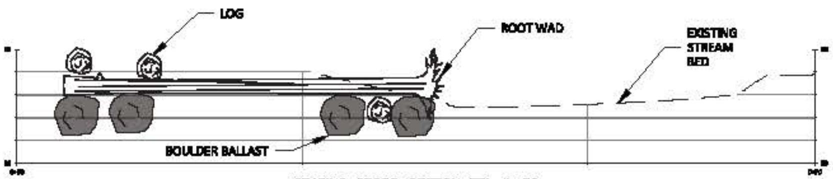
sheet title: BANK STABILIZATION: LOG AND BOULDER PLACEMENT

Date: 4.09.2012

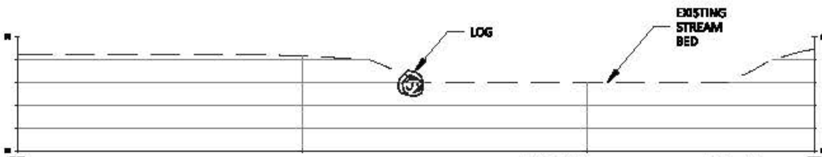
Drawn By: REP

Job No. 110851.0

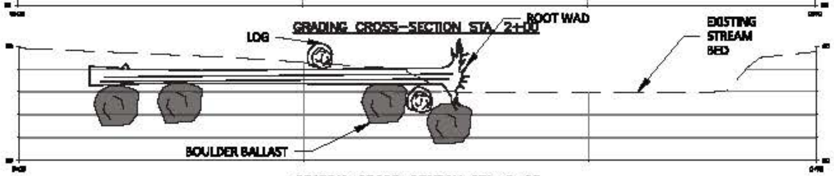
C1.02



GRADING CROSS-SECTION STA. 1+50



GRADING CROSS-SECTION STA. 2+00



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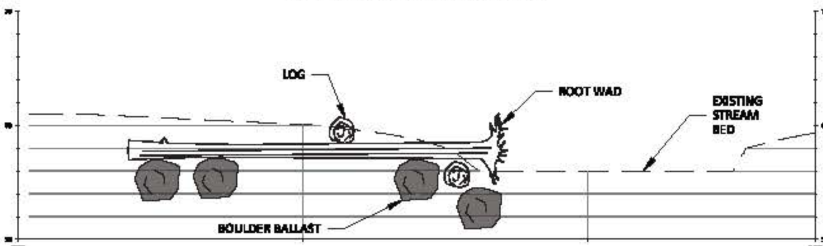

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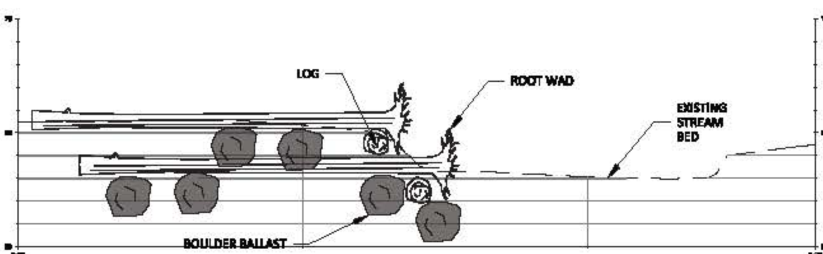

GRADING CROSS-SECTION STA. 3+50

NOTE:
SEE PLAN VIEW (SHEETS C1.01 AND C1.02) FOR LOG PLACEMENT AND (SHEET C1.04) FOR WOOD INSTALLATION DETAILS.

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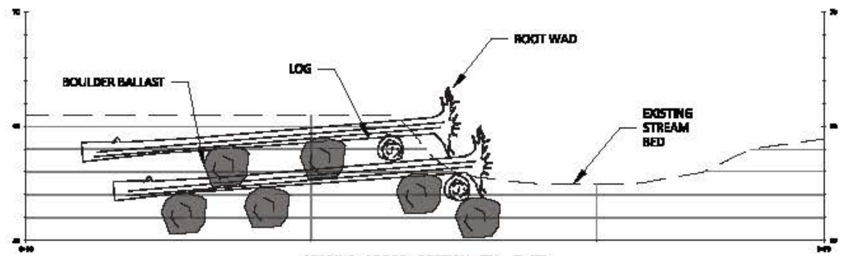

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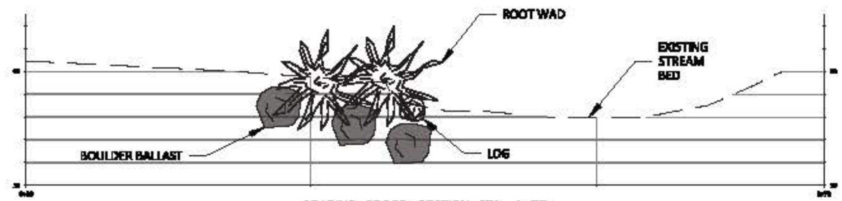

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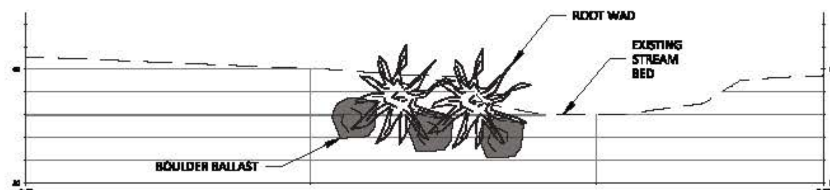

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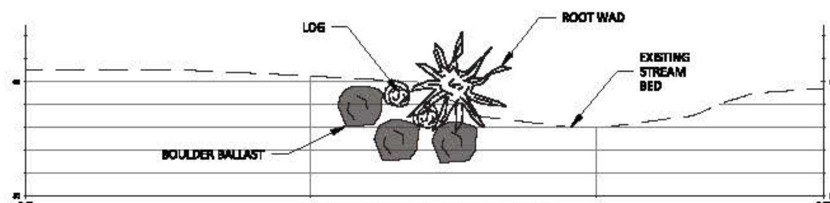
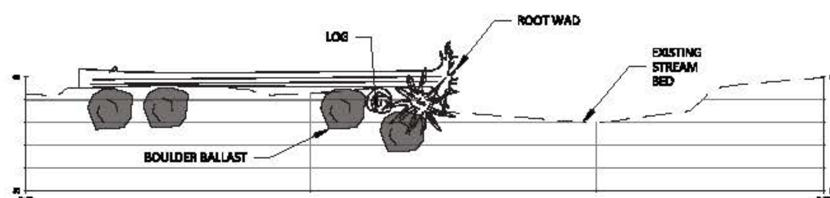


GRADING CROSS-SECTION STA. 5+25



GRADING CROSS-SECTION STA. 5+50

GREENWORKS

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

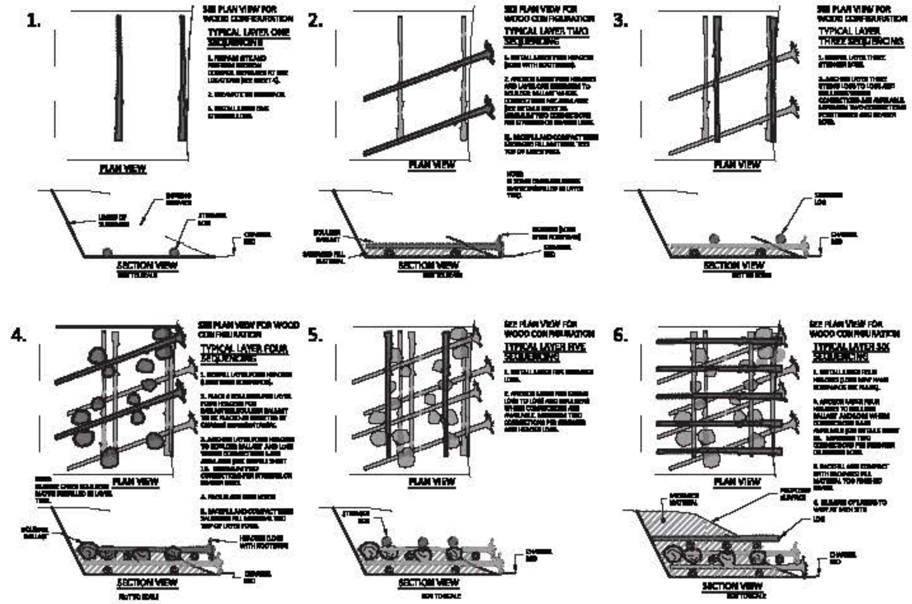
submittal: 90% Construction Documents

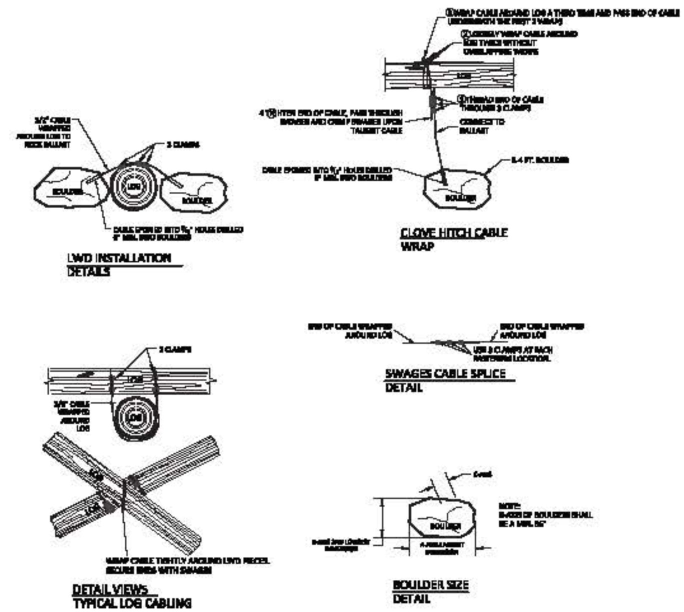
sheet title:
BANK STABILIZATION:
LOG AND BOULDER
PLACEMENT

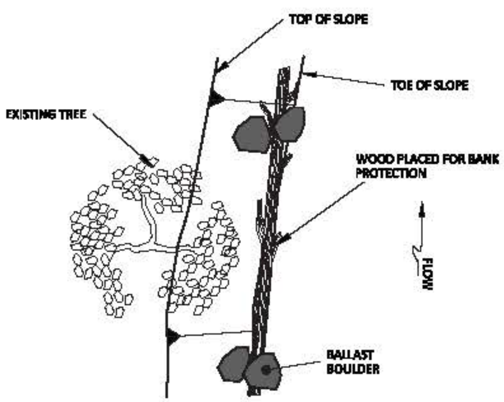
Date: 4.30.2012
Revisions:

Drawn By: WKM
Checked By:
Job No. 110251.3
Approved:

C1.03
sheet no. X of XX







PLAN VIEW

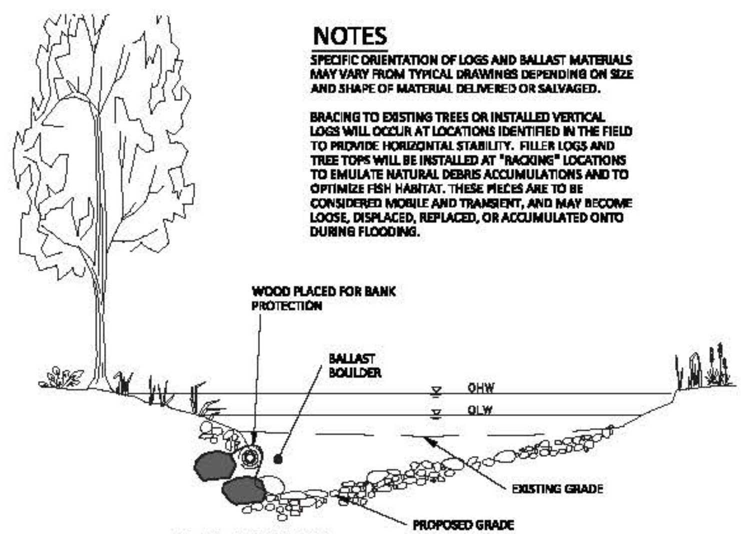
TYPICAL WOOD BANK PROTECTION

NOT TO SCALE

NOTES

SPECIFIC ORIENTATION OF LOGS AND BALLAST MATERIALS MAY VARY FROM TYPICAL DRAWINGS DEPENDING ON SIZE AND SHAPE OF MATERIAL DELIVERED OR SALVAGED.

BRACING TO EXISTING TREES OR INSTALLED VERTICAL LOGS WILL OCCUR AT LOCATIONS IDENTIFIED IN THE FIELD TO PROVIDE HORIZONTAL STABILITY. FILLER LOGS AND TREE TOPS WILL BE INSTALLED AT "RACKING" LOCATIONS TO EMULATE NATURAL DEBRIS ACCUMULATIONS AND TO OPTIMIZE FISH HABITAT. THESE PIECES ARE TO BE CONSIDERED MOBILE AND TRANSIENT, AND MAY BECOME LOOSE, DISPLACED, REPLACED, OR ACCUMULATED ONTO DURING FLOODING.



SECTION VIEW

TYPICAL WOOD HABITAT COVER

NOT TO SCALE

GENERAL NOTES

[illegible]

project: Mt. Scott Creek Restoration
North Clackamas Park

submittal: 50% Construction Documents

sheet title: BANK STABILIZATION: LOG AND BOULDER PLACEMENT

Date: 4.09.2012

Revisions:

Drawn By: WWCM

Checked By:

Job No. 110851.3

Approval:

C1.04

sheet no. X of XX

GENERAL LEGEND

- PARK BOUNDARY
- (E) CONTOURS
- CREEK OHW LINE
- DELINEATED WETLAND AREA
- SANITARY LINE
- FEMA 100-YEAR FLOOD PLAIN (FIRM)
- NATURAL RESOURCE - WATER QUALITY RESOURCE (WQR)
- NATURAL RESOURCE - HABITAT CONSERVATION AREA (HCA)
- FLOODWAY
- (E) FENCE
- (E) TREES

DEMOLITION LEGEND

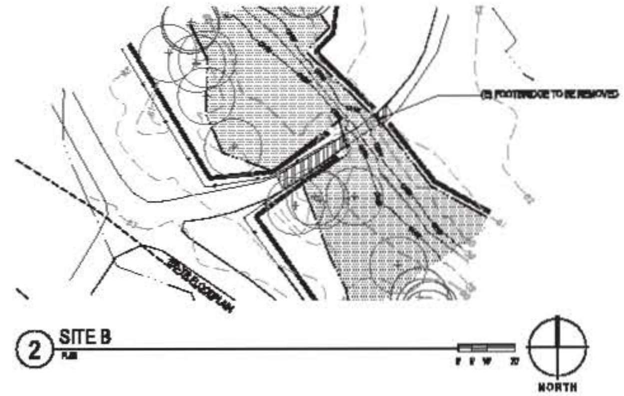
- (E) ASPHALT PATH TO BE REMOVED. UPON COMPLETION OF ASPHALT REMOVAL, DECOMMISSION TRAIL PER DETAIL XX.X.XX AND SPECIFICATIONS.
- (E) DIRT TRAIL TO BE DECOMMISSIONED. SEE DETAIL XX.X.XX AND SPECIFICATIONS.
- (E) ASPHALT PATH TO BE REMOVED.

EROSION CONTROL / TREE PROTECTION LEGEND

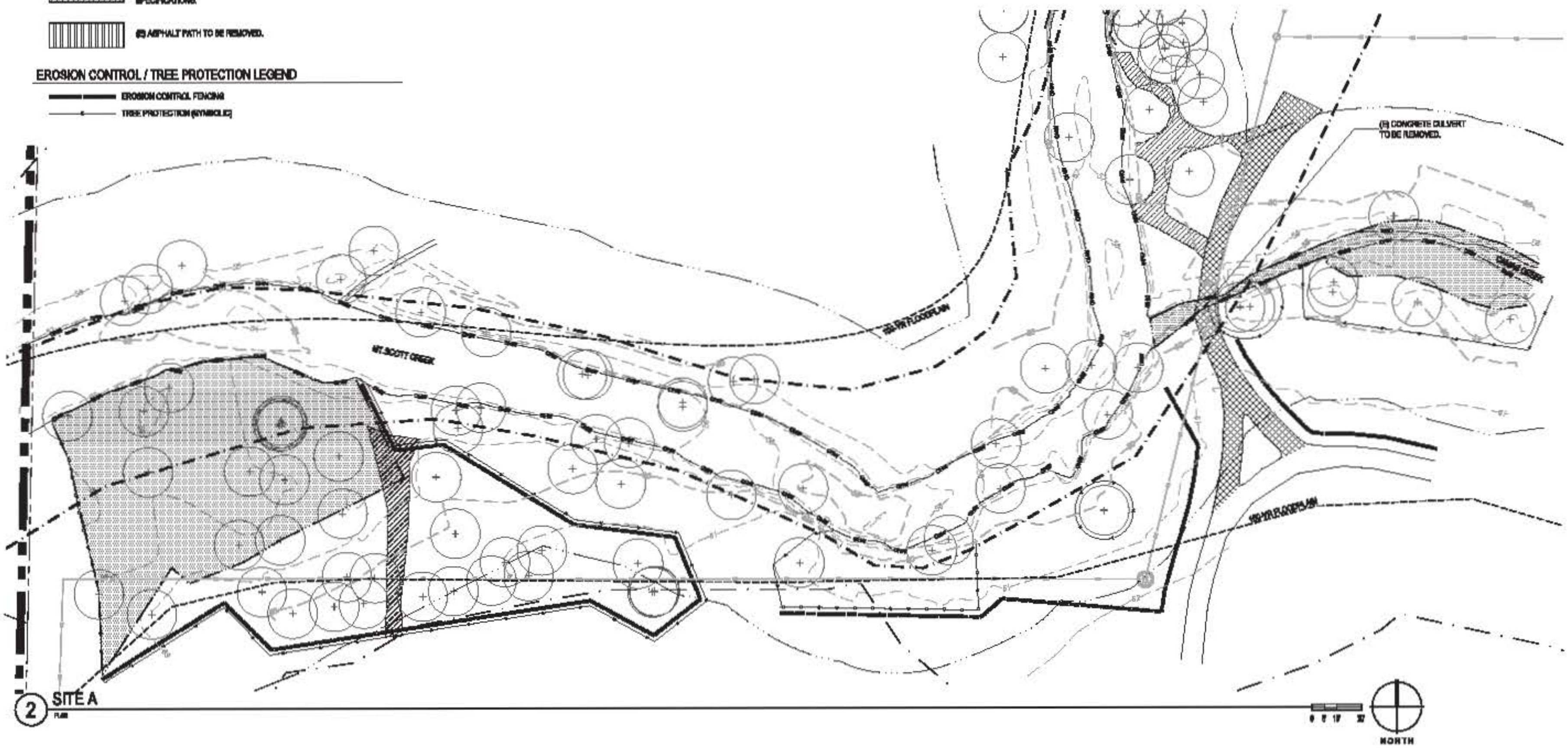
- EROSION CONTROL FENCING
- TREE PROTECTION (SYMBOLIC)

NOTES

1. THIS SURVEY INFORMATION WAS MAPPED BY RON BUSH SURVEY.
2. SURVEY DATUMS:
   HORIZONTAL DATUM IS NAD 83, OREGON STATE PLANE NORTH, ESTABLISHED BY 24 HOUR GPS STATIC SESSIONS. VERTICAL DATUM IS NAVD 88, ESTABLISHED BY 4 HOUR GPS SESSION.
3. 100-YR FLOODPLAIN ZONE AE INFORMATION WAS PROVIDED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY(FEMA) PER THE FLOOD INSURANCE RATE MAP(FIRM), MAP NUMBER 41005C0026D.
4. EXISTING SITE AMENITIES TO BE REMOVED SHALL BE RECYCLED OR DISPOSED OF IN ACCORDANCE WITH SPECIFICATIONS INCLUDED IN THIS CONSTRUCTION DRAWING PACKAGE.
5. SEE DETAIL 18.5.05 AND PREPARATION SPECIFICATION FOR DETAILED INSTRUCTION OF TRAIL DECOMMISSIONING METHODS.



2 SITE B
PLAN



2 SITE A
PLAN

GREENWORKS

CLACKAMAS COUNTY

project: Mt. Scott Creek Restoration
North Clackamas Park
Clackamas Water Environment Services

submittal: Land Use Permit
sheet title: EXISTING CONDITIONS AND DEMOLITION PLAN

Date: 4.25.2012
Revisions:

Drawn By: WS/DM
Checked By:
Job No.: 110231.3
Approved:

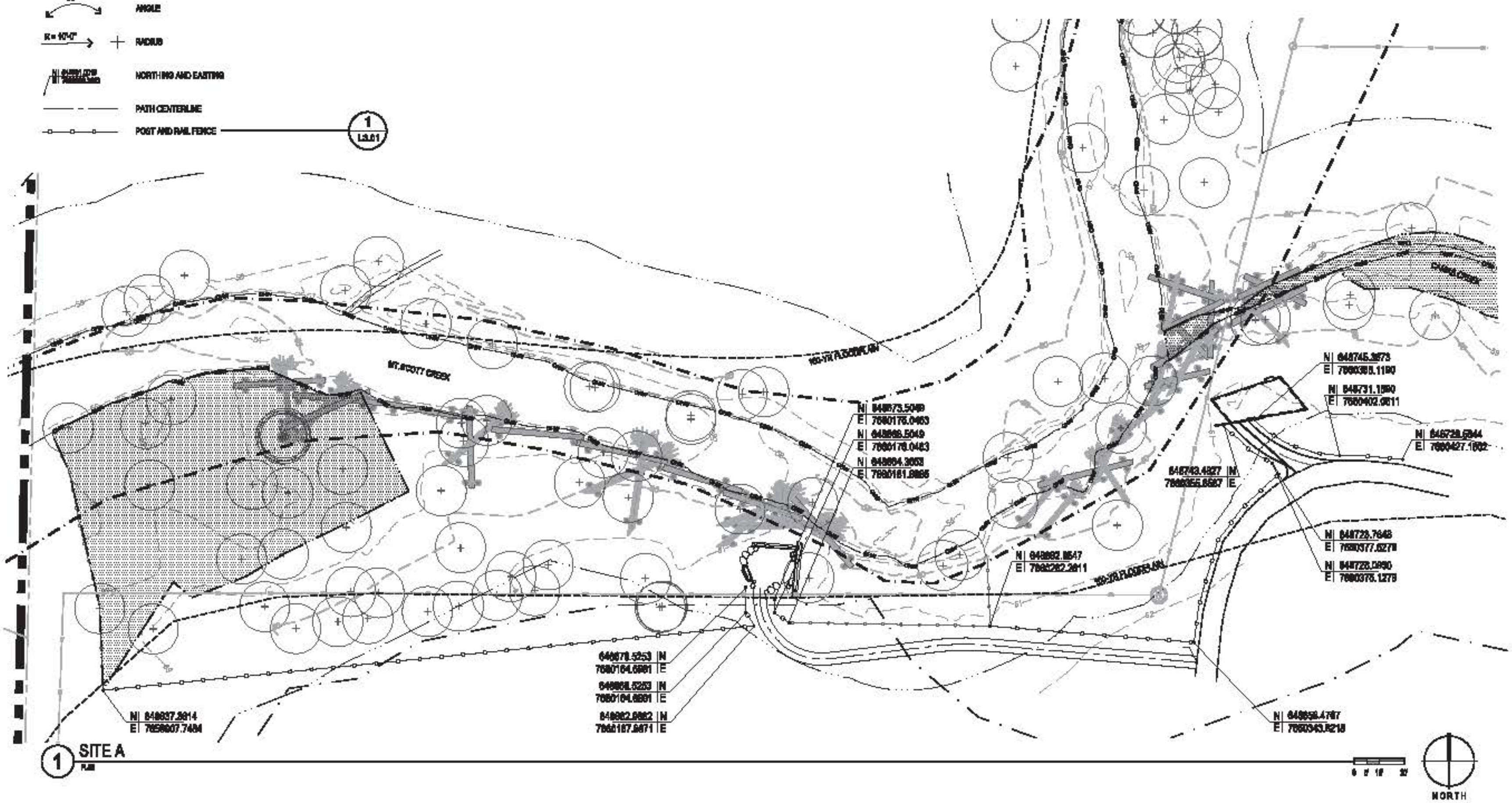
L1.00
sheet no. 3 of 22

GENERAL LEGEND

- PARK BOUNDARY
- (E) CONTOURS
- CREEK OHW LINE
- DELINEATED WETLAND AREA
- SANITARY LINE
- FEMA 100-YEAR FLOOD PLAIN (FIRM)
- NATURAL RESOURCE - WATER QUALITY RESOURCE (WQR)
- NATURAL RESOURCE - HABITAT CONSERVATION AREA (HCA)
- FLOODWAY
- (E) FENCE
- (E) TREES

LAYOUT AND MATERIAL LEGEND

- 17'-9 1/4" DIMENSIONS
- 90° ANGLE
- R = 10'-0" RADIUS
- NORTHING AND EASTING
- PATH CENTERLINE
- POST AND RAIL FENCE — 1 / L3.01



1 SITE A
PLAN

GREENWORKS

CLACKAMAS COUNTY

project: Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
sheet title: FENCE LAYOUT AND MATERIALS PLAN

Date: 4.25.2012
Revisions:

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Checked By:
Job No. 110231.3
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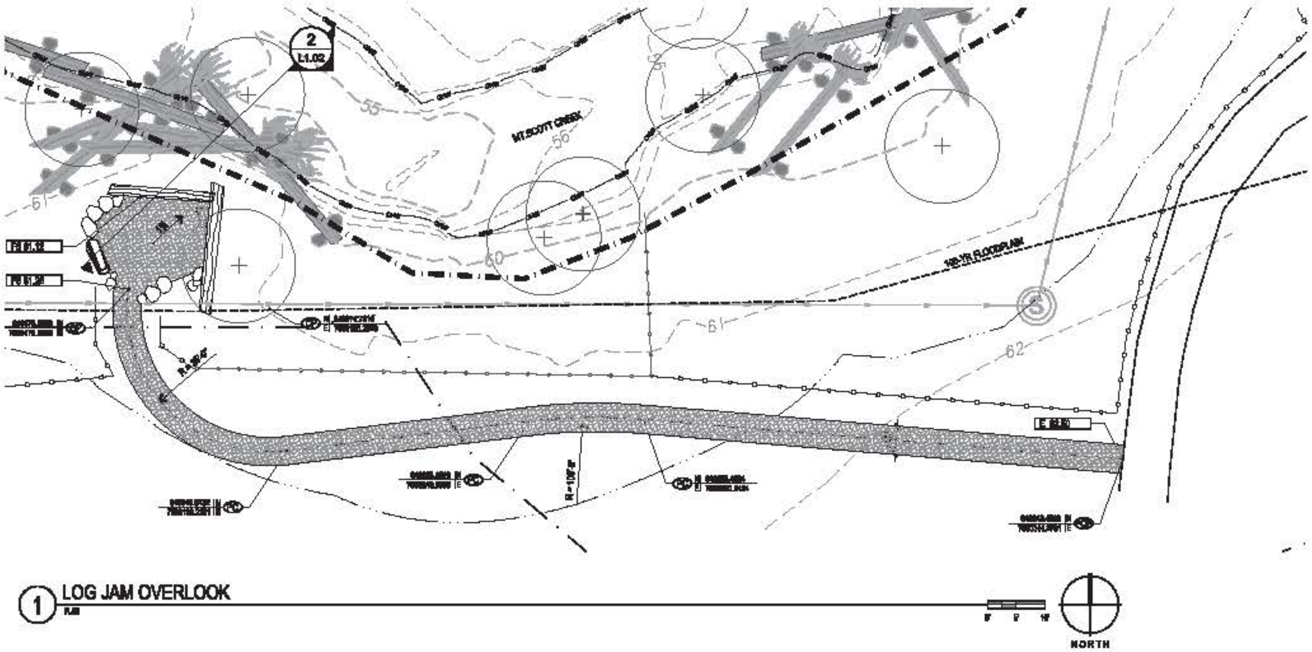
L1.01
sheet no. 10 of 22



1 LOG JAM OVERLOOK

PLAN

GENERAL LEGEND

- (E) CONTOURS
- CREEK OHW LINE
- DELINEATED WETLAND AREA
- SANITARY LINE
- FEMA 100-YEAR FLOOD PLAIN (FIRM)
- NATURAL RESOURCE - WATER QUALITY RESOURCE (WQR)
- NATURAL RESOURCE - HABITAT CONSERVATION AREA (HCA)
- FLOODWAY
- (E) FENCE
- (E) TREES

LAYOUT AND MATERIALS LEGEND

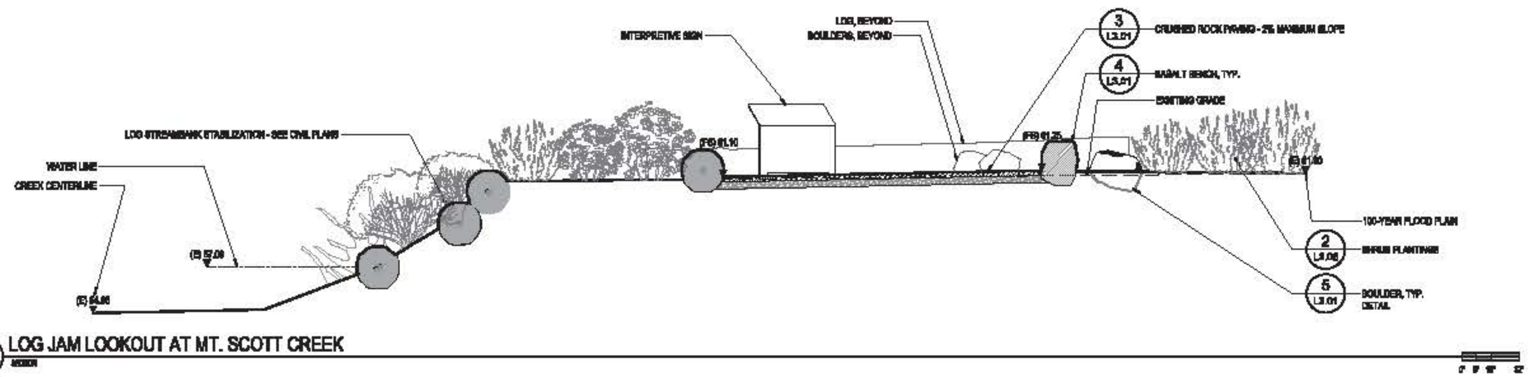
- DIMENSIONS
- ANGLE
- RADIUS
- NORTHING AND EASTING
- PATH CENTERLINE
- CRUSHED ROCK PAVING — 3/L5.01
- POST AND RAIL FENCE — 1/L3.01

GRADING LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- GRADING LABEL
- DIRECTION OF FLOW
- GRADE BREAK

GRADING NOTES

1. CONTRACTOR SHALL INSTALL NEW CRUSHED ROCK PATH TO MATCH THE ELEVATION OF EXISTING ASPHALT PATHWAY.



2 LOG JAM LOOKOUT AT MT. SCOTT CREEK

SECTION

GREENWORKS

CLACKAMAS COUNTY

project: Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit

sheet title: LOG JAM OVERLOOK: GRADING LAYOUT AND MATERIALS PLAN

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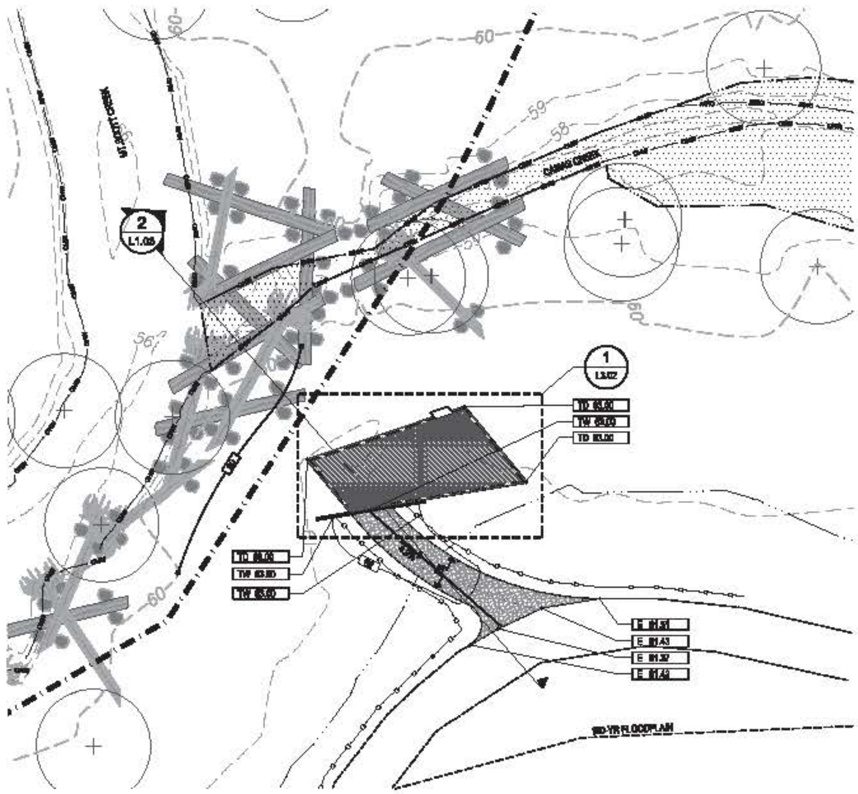
L1.02

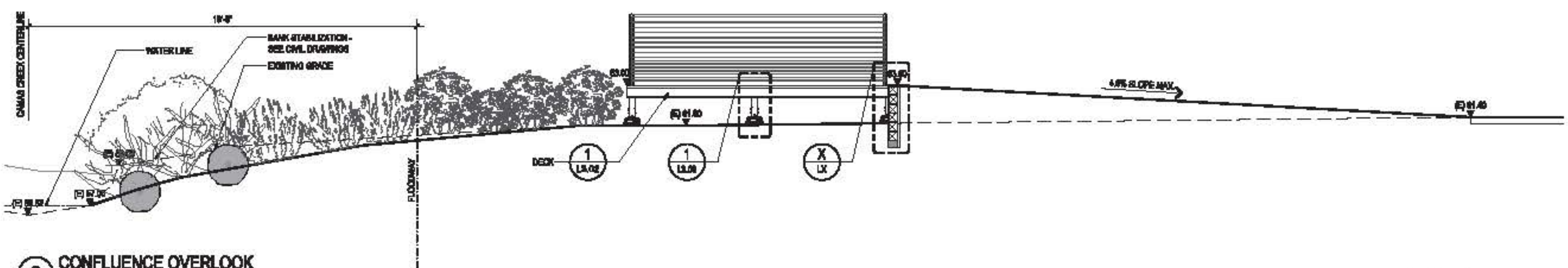
sheet no. 11 of 22



1 CONFLUENCE OVERLOOK

PLAN

NORTH



2 CONFLUENCE OVERLOOK

SECTION

GENERAL LEGEND

- (E) CONTOURS
- CREEK OHW LINE
- DELINEATED WETLAND AREA
- SANITARY LINE
- FEMA 100-YEAR FLOOD PLAIN (FIRM)
- NATURAL RESOURCE - WATER QUALITY RESOURCE (WQR)
- NATURAL RESOURCE - HABITAT CONSERVATION AREA (HCA)
- FLOODWAY
- (E) FENCE
- (E) TREES

LAYOUT AND MATERIALS LEGEND

- DIMENSIONS
- ANGLE
- RADIUS
- NORTHING AND EASTING
- PATH CENTERLINE
- OVERLOOK DECK — 1 / L3.02
- CRUSHED ROCK PAVING — 3 / L3.01
- POST AND RAIL FENCE — 1 / L3.01
- PLASTIC LUMBER CREEK WALL
- HANDRAIL

GRADING LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- GRADING LABEL
- DIRECTION OF FLOW
- GRADE BREAK

GRADING NOTES

1. CONTRACTOR SHALL INSTALL NEW CRUSHED ROCK PATH TO MATCH THE ELEVATION OF EXISTING ASPHALT PATHWAY.

GREENWORKS

Greenworks, P.C.

CLACKAMAS COUNTY

project: Mt. Scott Creek Restoration
North Clackamas Park

Clackamas Water Environment Services

submittal: Land Use Permit

sheet title: CONFLUENCE OVERLOOK: GRADING, LAYOUT AND MATERIALS PLAN

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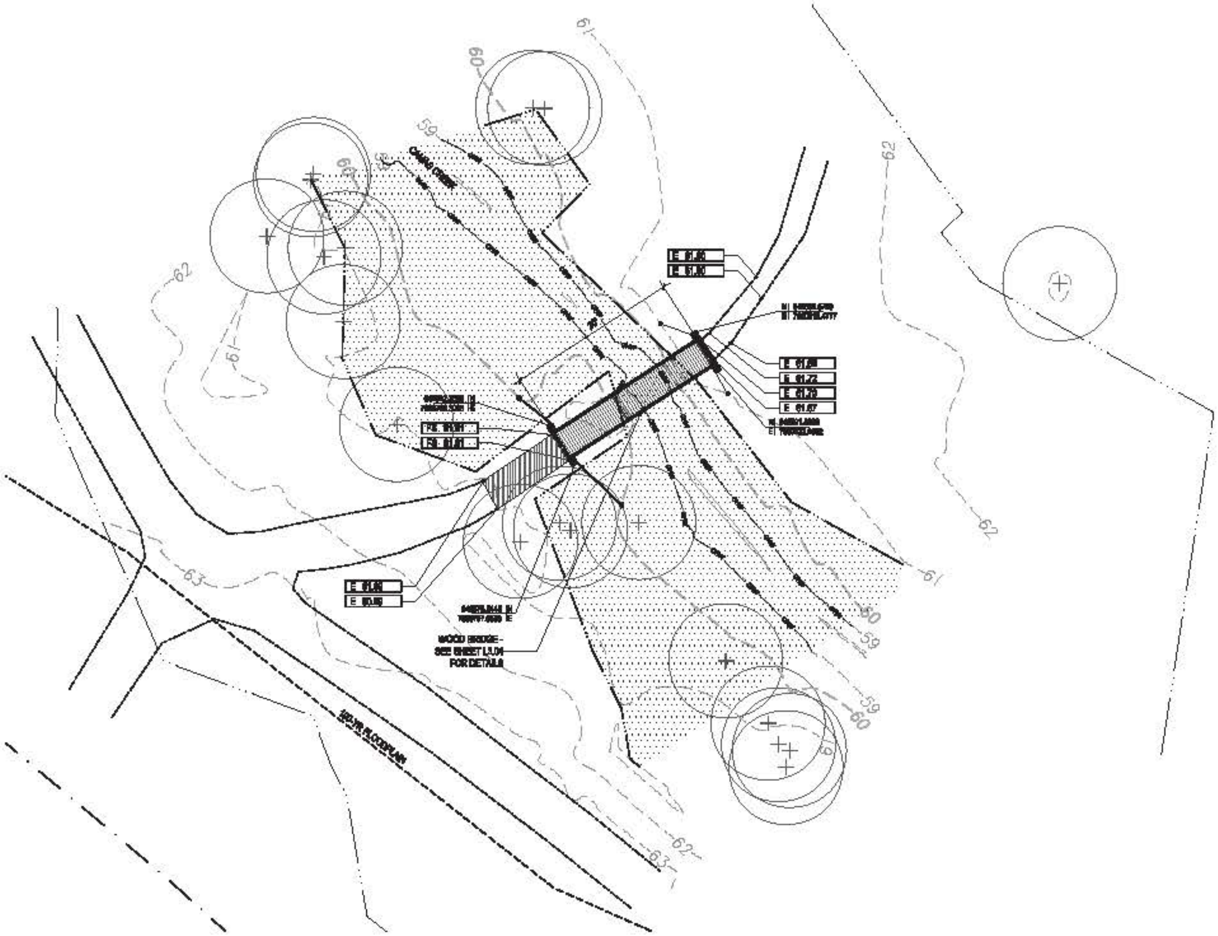

1 PEDESTRIAN BRIDGE
PLAN

NORTH

GENERAL LEGEND

- (E) CONTOURS
- CREEK OHW LINE
- DELINEATED WETLAND AREA
- SANITARY LINE
- FEMA 100-YEAR FLOOD PLAIN (FIRM)
- NATURAL RESOURCE - WATER QUALITY RESOURCE (WQR)
- NATURAL RESOURCE - HABITAT CONSERVATION AREA (HCA)
- FLOODWAY
- (E) FENCE
- (E) TREES

LAYOUT AND MATERIALS LEGEND

- DIMENSIONS
- ANGLE
- RADIUS
- NORTHING AND EASTING
- PATH CENTERLINE
- CONCRETE PAVING (2 / L3.01)

GRADING LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- GRADING LABEL
- DIRECTION OF FLOW
- GRADE BREAK

GRADING NOTES

1. CONTRACTOR SHALL INSTALL NEW BRIDGE TO MATCH THE ELEVATION OF EXISTING ASPHALT PATHWAY ON EAST SIDE OF CAMAS CREEK.
2. CONTRACTOR SHALL INSTALL NEW CONCRETE PATH TO MATCH THE ELEVATION OF EXISTING ASPHALT PATHWAY ON THE WEST SIDE OF CAMAS CREEK.
3. CONTRACTOR SHALL INSTALL BRIDGE PER MANUFACTURER'S DRAWINGS AND SPECIFICATIONS.

GREENWORKS

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
sheet title:
PEDESTRIAN BRIDGE: GRADING, LAYOUT AND MATERIALS PLAN

Date: 4.25.2012
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Drawn By:
Checked By:
Job No. 110231.3
Approved:

L1.04
sheet no. 13 of 22

MASTER PLANT LIST

	BOTANICAL NAME	COMMON NAME	FORM	QTY.
DECIDUOUS TREES				
	ACER MACROPHYLLUM	BIG-LEAF MAPLE	1 GAL.	XX
	ALNUS RUBRA	RED ALDER	1 GAL.	XX
	FRAXINUS LATIFOLIA	OREGON ASH	1 GAL.	XX
	POPULUS TRICHOCARPA	BLACK COTTONWOOD	LIVE STAKES	XX
	QUERCUS GARRYANA	OREGON WHITE OAK	LIVE STAKES	XX
	SALIX LASIANDRA	PACIFIC WILLOW	LIVE STAKES	XX
	SALIX SITCHENSIS	SITKA WILLOW	LIVE STAKES	XX
CONIFER TREES				
	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	1 GAL.	XX
	THUJA PLICATA	WESTERN RED CEDAR	1 GAL.	XX
SHRUBS				
	ACER CIRCINATUM	VINE MAPLE	1 GAL.	XX
	AMELANCHIER ALNIFOLIA	SERVICEBERRY	1 GAL.	XX
	CORNUS SERICEA	RED OSIER DOGWOOD	LIVE STAKES	XX
	MAHONIA AQUIFOLIUM	OREGON GRAPE	1 GAL.	XX
	OEMLERIA CERASIFORMIS	INDIAN PLUM	1 GAL.	XX
	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	1 GAL.	XX
	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GAL.	XX
	ROSA GYMNOCARPA	WOOD ROSE	1 GAL.	XX
	ROSA PISOCARPA	PEA-FRUIT ROSE	1 GAL.	XX
	RUBUS SPECTABILIS	SALMONBERRY	1 GAL.	XX
	SALIX SCOULERIANA	SCOULER WILLOW	LIVE STAKES	XX
	SAMBUCUS CAERULEA	BLUE ELDERBERRY	1 GAL.	XX
	SPIREA DOUGLASII	DOUGLAS SPIREA	1 GAL.	XX
	SYMPHORICARPUS ALBUS	SNOWBERRY	1 GAL.	XX
GRASSES / SEDGES / RUSHES				
	CAREX OBNUPTA	SLOUGH SEDGE	1 GAL.	XX
	ELEOCHARIS PALUSTRIS	COMMON SPIKE RUSH	1 GAL.	XX
	FESTUCA OCCIDENTALIS	TALL OATGRASS	1 GAL.	XX
	SCIRPUS MICROCARPUS	FRUITED BULLRUSH	1 GAL.	XX
	POA HOWELLII	HOWELL BLUEGRASS	1 GAL.	XX

NOTES:

1. FRIENDS OF TREES SHALL PROVIDE SOIL AMENDMENTS AND MULCH AS NECESSARY.
2. ALL PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS PROVIDED AS PART OF THE CONSTRUCTION DOCUMENT PACKAGE.
3. AREAS TO BE PLANTED WITHIN 5 FEET OF ORDINARY HIGH WATER SHALL HAVE LIVE STAKE PLANTINGS.
4. LARGE WOODY DEBRIS RESTORATION ALONG RIVERBANK WILL BE FIELD FIT WITH FINAL LOCATION AND ORIENTATION DETERMINED DURING CONSTRUCTION. WOOD RESTORATION SHALL CONSIST OF ROOT WADS, DOWNED TREES AND TREE LIMBS GREATER THAN 8" IN DIAMETER SALVAGED DURING SITE CLEARING.
5. FRIENDS OF TREES SHALL TAKE MEASURES AS NECESSARY IN ORDER TO PROTECT PLANTING FROM DAMAGE BY WILDLIFE AND ACHIEVE 80% PLANT ESTABLISHMENT AND 80% GROUND COVER ACROSS ENTIRE SITE FOR ONE YEAR AS REQUIRED. FRIENDS OF TREES SHALL PROVIDE ANIMAL PROTECTION SUPPLIES.
6. THIS PLANTING PLAN AND LEGEND IS PROVIDED AS A REFERENCE FOR PLANTING. FRIENDS OF TREES SHALL PROVIDE FINAL PLANTING SPECIES LIST, LAYOUT AND QUANTITIES DURING CONSTRUCTION. FRIENDS OF TREES IS RESPONSIBLE FOR ALL RESTORATION PLANTINGS WHICH INCLUDES LAYOUT AND QUANTITIES.

PLANT LEGEND

- POLYSTICHUM MUNITUM, WESTERN SWORDFERN - SPACE AS SHOWN
- ROSA GYMNOCARPA, WOOD ROSE - SPACE AS SHOWN
- ROSA PISOCARPA, PEA-FRUIT ROSE - SPACE AS SHOWN

PLANT COMMUNITY ZONES (20,000 SF TOTAL)

1 L3.06 | 2 L3.06 | 3 L3.06 | 4 L3.06 | 5 L3.06 | 6 L3.06

UPLAND RIPARIAN (TOTAL OF 10,000 SF)

LAYER	QTY. PER.
OVERSTORY	
ALNUS RUBRA	
FRAXINUS LATIFOLIA	
QUERCUS GARRYANA	
PSEUDOTSUGA MENZIESII	
THUJA PLICATA	
UNDERSTORY	
AMELANCHIER ALNIFOLIA	
CORNUS SERICEA	
MAHONIA AQUIFOLIUM	
PHYSOCARPUS CAPITATUS	
POLYSTICHUM MUNITUM	
ROSA GYMNOCARPA	
ROSA PISOCARPA	
SPIRAEA DOUGLASII	
RUBUS SPECTABILIS	
SAMBUCUS CAERULEA	
SYMPHORICARPUS ALBUS	
GROUNDLAYER	
SEED: APPLY "NATIVE RESTORATION SEED MIX" AT A RATE SPECIFIED IN SECTION 02930 - SEEDED AREAS	

BANK STABILIZATION RESTORATION (TOTAL OF 5,350 SF)

LAYER	QTY. PER.
OVERSTORY	
ACER CIRCINATUM	
ALNUS RUBRA	
POPULUS TRICHOCARPA	
SALIX LASIANDRA	
SALIX SITCHENSIS	
UNDERSTORY	
CORNUS SERICEA	
OEMLERIA CERASIFORMIS	
POLYSTICHUM MUNITUM	
ROSA GYMNOCARPA	
ROSA PISOCARPA	
SALIX SCOULERIANA	
GROUNDLAYER	
SEED: APPLY "NATIVE RESTORATION SEED MIX" AT A RATE SPECIFIED IN SECTION 02930 - SEEDED AREAS	

WETLAND (TOTAL OF 1,650 SF)

LAYER	QTY. PER.
UNDERSTORY	
CORNUS SERICEA	
ROSA PISOCARPA	
SALIX SCOULERIANA	
GROUND LAYER	
CAREX OBNUPTA	
ELEOCHARIS PALUSTRIS	
FESTUCA OCCIDENTALIS	
SCIRPUS MICROCARPUS	
POA HOWELLII	

SEED: APPLY "WATER QUALITY SEED MIX" AT A RATE SPECIFIED IN SECTION 02930 - SEEDED AREAS

GREENWORKS

GreenWorks, P.C.

Landscape Architecture
Environmental Design

CLACKAMAS COUNTY

project: **Mt. Scott Creek Restoration**
North Clackamas Park
Clackamas Water Environment Services

submittal: Land Use Permit

sheet title: **PLANTING LEGEND**

Date:	4.25.2012
Revisions:	
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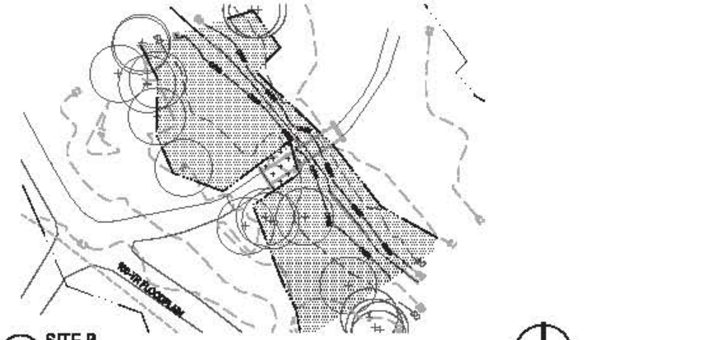
L2.00

GENERAL LEGEND

- PARK BOUNDARY
- (E) CONTOURS
- CREEK OHW LINE
- DELINEATED WETLAND AREA
- SANITARY LINE
- FEMA 100-YEAR FLOOD PLAIN (FIRM)
- NATURAL RESOURCE - WATER QUALITY RESOURCE (WQR)
- NATURAL RESOURCE - HABITAT CONSERVATION AREA (HCA)
- FLOODWAY
- (E) FENCE
- (E) TREES

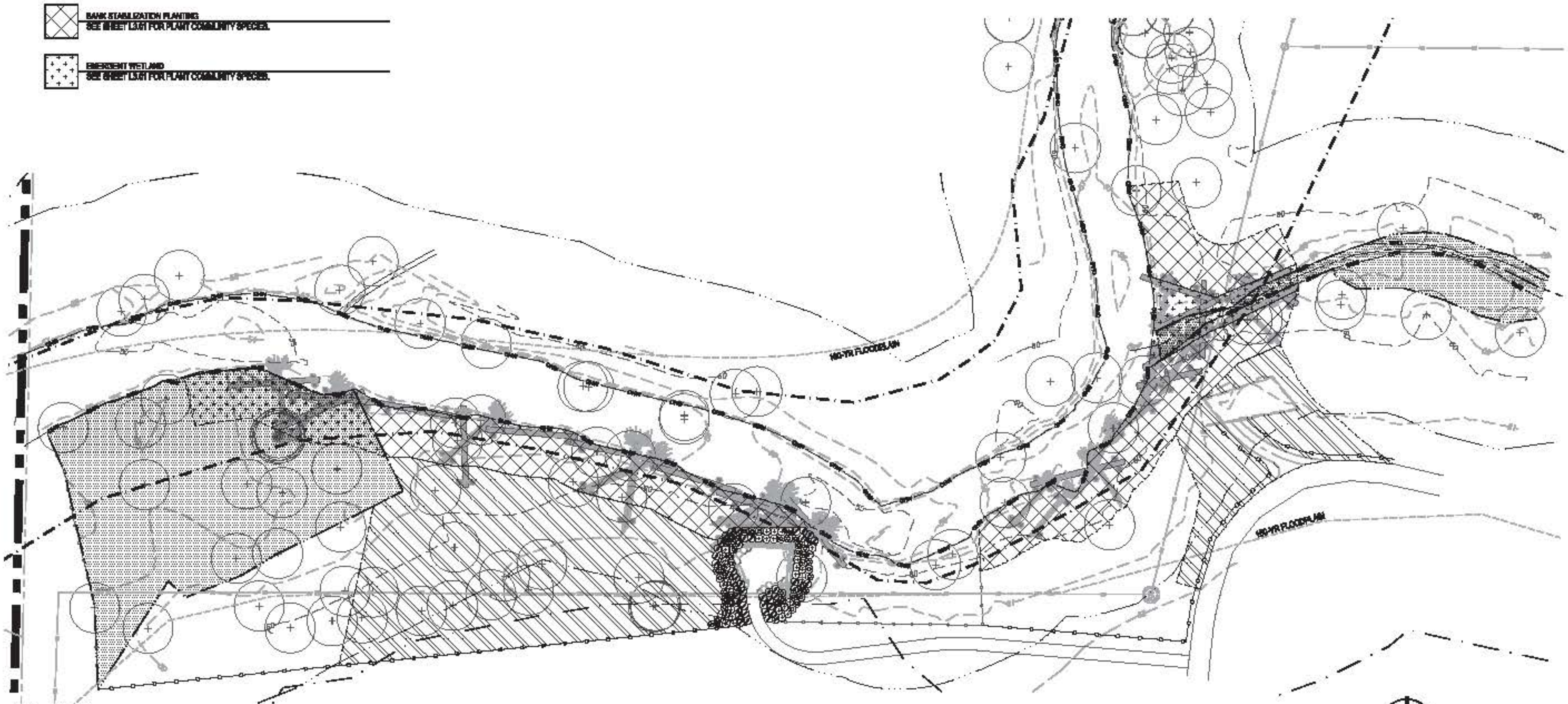
PLANT COMMUNITY ZONES

- UPLAND RIPARIAN
  SEE SHEET L3.01 FOR PLANT COMMUNITY SPECIES.
- BANK STABILIZATION PLANTING
  SEE SHEET L3.01 FOR PLANT COMMUNITY SPECIES.
- EMERGENT WETLAND
  SEE SHEET L3.01 FOR PLANT COMMUNITY SPECIES.



2 SITE B
PLAN

NORTH



1 SITE A
PLAN

NORTH

GREENWORKS

CLACKAMAS COUNTY

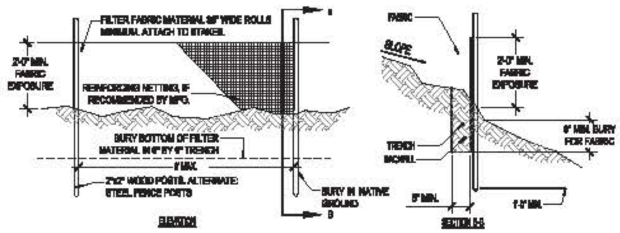
project:
Mt. Scott Creek Restoration
North Clackamas Park
Clackamas Water Environment Services

submittal: Land Use Permit
sheet title:
PLANTING PLAN

Date: 4.25.2012
Revisions:

Job No. 110231.3

L2.01
sheet no. 15 of 22



NOTES:

1. INSTALLATION SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.

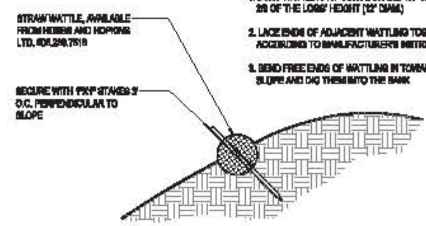
2. POSTS SHALL BE INSTALLED SO THAT A MIN. OF 3'-0" EXTENDS ABOVE THE GROUND WITH A MIN. OF 2'-0" EMBEDMENT.

3. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL TO AVOID JOINTS.

4. SPLICE JOINTS AT SUPPORT POSTS ONLY, WITH A MIN. 6" OVERLAP.

1 SEDIMENT FENCE

NOT TO SCALE



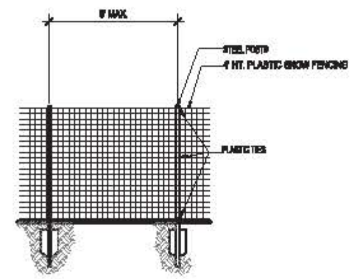
NOTES:

1. BURY WATTLING AT CONSTANT DEPTH OF 1/2 TO 2/3 OF THE LOGS' HEIGHT (12" DIAM.)

2. LACE ENDS OF ADJACENT WATTLING TOGETHER ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

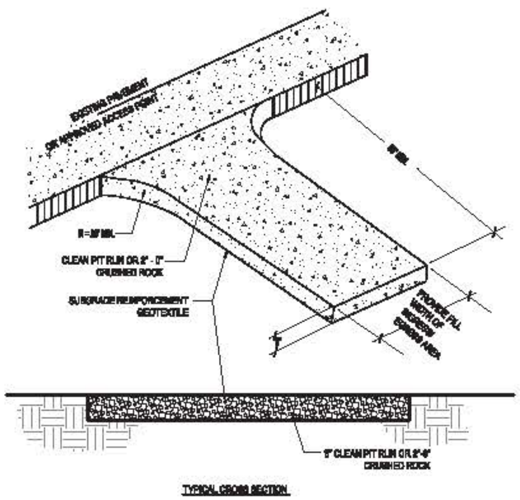
3. BEND FREE ENDS OF WATTLING IN TOWARDS SLOPE AND DIG THEM INTO THE BANK

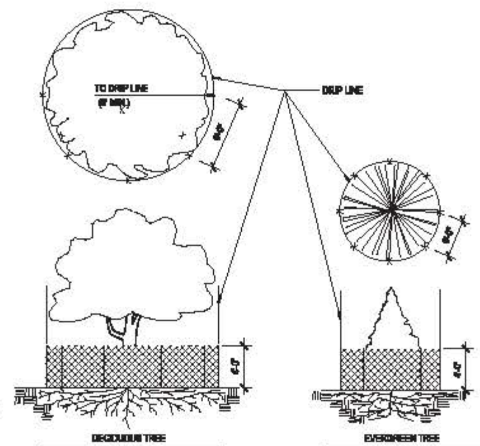
2 TYP. WATTLING INSTALLATION



5 TEMPORARY TREE PROTECTION FENCE

SECTION





NO GRADING OR TRESPASSING INSIDE FENCE. FINAL GRADING SHALL NOT ALTER GRADE BY MORE THAN 6".

DUPONT CONSTRUCTION FENCING ... SECURE TO STEEL POSTS PLACED 6' O.C. INSTALL FENCING PRIOR TO START OF CONSTRUCTION. REMOVE ONLY WITH OWNER'S APPROVAL.

3 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

NOT TO SCALE

4 EXISTING TREE PROTECTION

NOT TO SCALE

GREENWORKS

CLACKAMAS COUNTY

project: Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit

sheet title: EROSION CONTROL AND TREE PROTECTION DETAILS

Date: 4.25.2012

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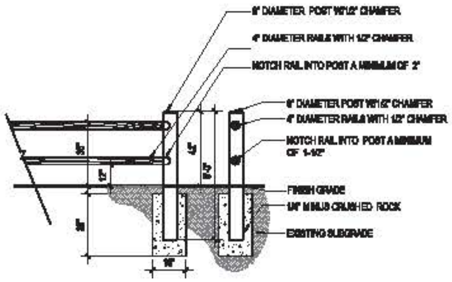
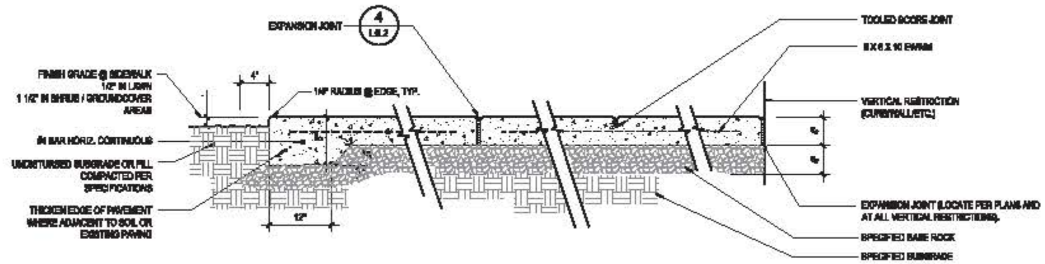
L3.00

sheet no. 15 of 22



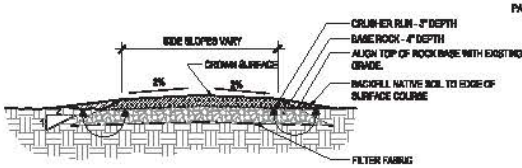
1 POST & RAIL FENCE

SECTION — NOT TO SCALE



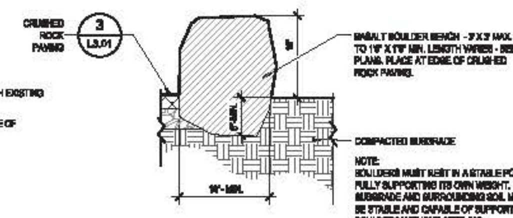
2 CONCRETE PAVING

SECTION



3 CRUSHED ROCK PAVING

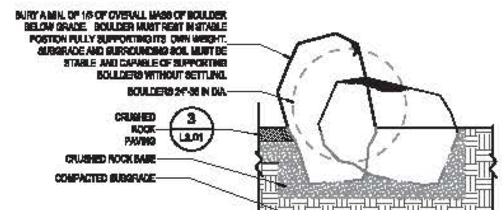
SECTION — NOT TO SCALE



NOTE:
BOULDERS MUST REST IN A STABLE POSITION FULLY SUPPORTING ITS OWN WEIGHT. SUBGRADE AND SURROUNDING SOIL MUST BE STABLE AND CAPABLE OF SUPPORTING BOULDERS WITHOUT SETTLING.

4 BASALT BENCH

Section



NOTES:
1. SEE L1.02 FOR BOULDER PLACEMENT
2. BOULDERS MUST REST IN A STABLE POSITION FULLY SUPPORTING ITS OWN WEIGHT. SUBGRADE AND SURROUNDING SOIL MUST BE STABLE AND CAPABLE OF UPPORTING BOULDERS WITHOUT SETTLING.

5 BOULDER DETAIL

Section

GREENWORKS

CLACKAMAS COUNTY

project: Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
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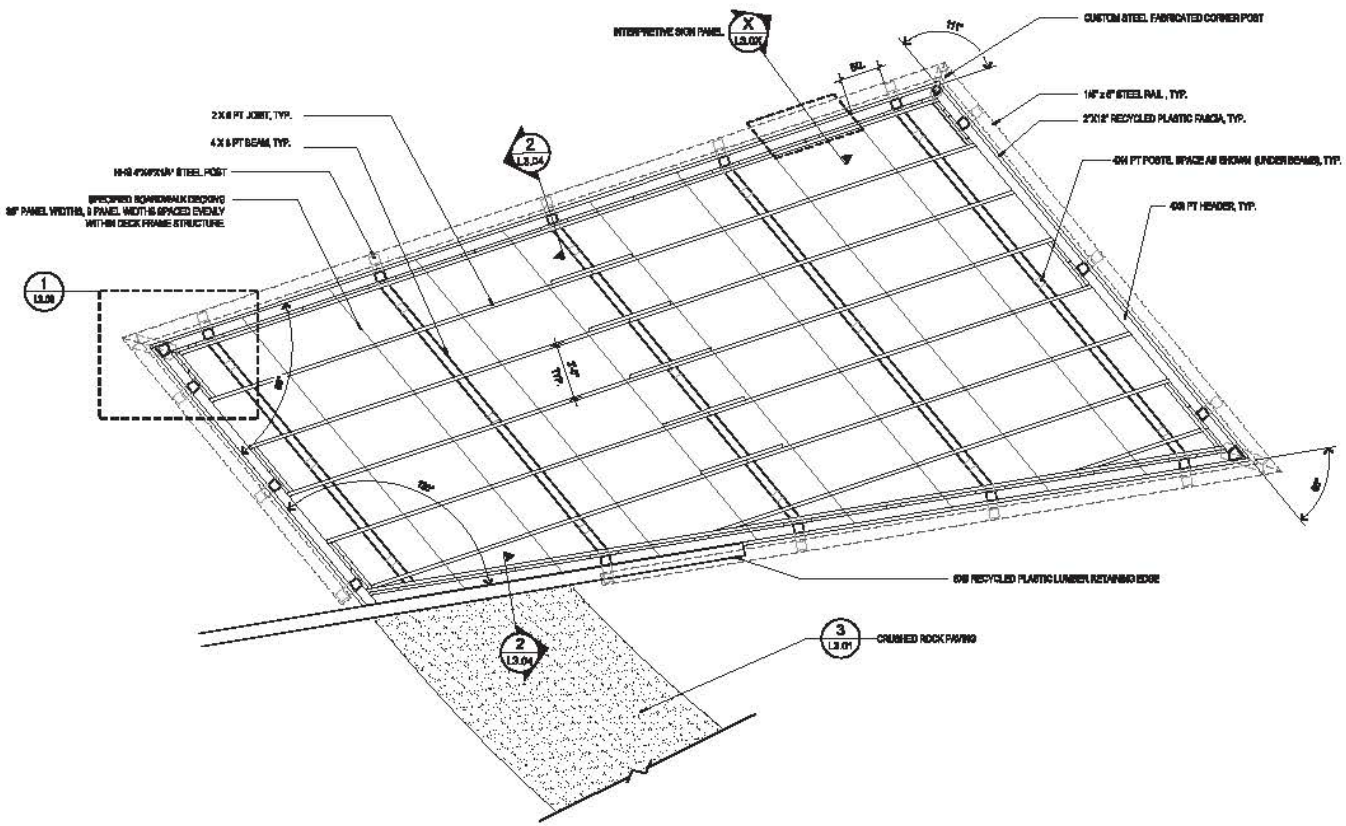

1 OVERLOOK DECK FRAMING / POST AND RAIL PLAN

GREENWORKS

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
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OVERLOOK DETAILS

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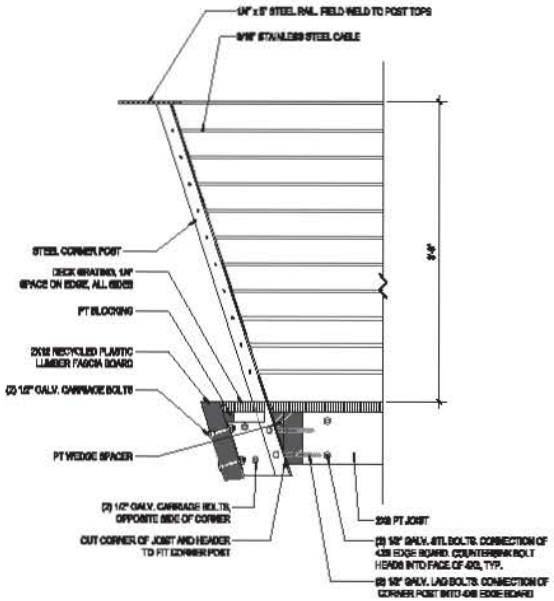
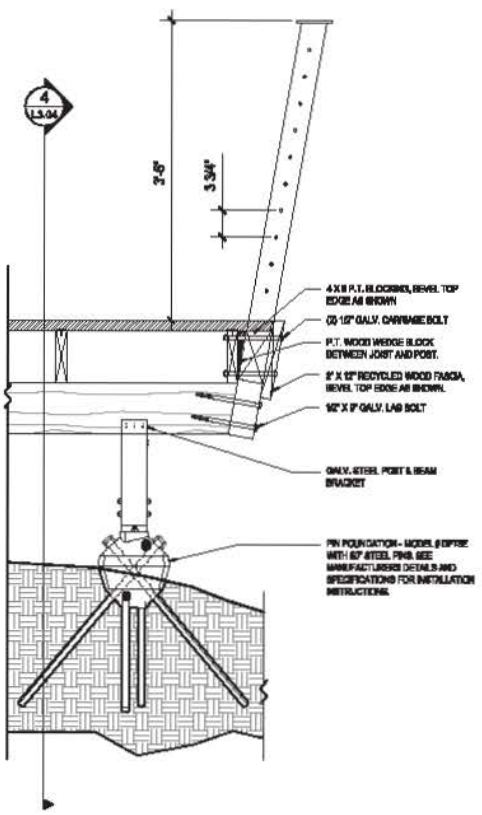
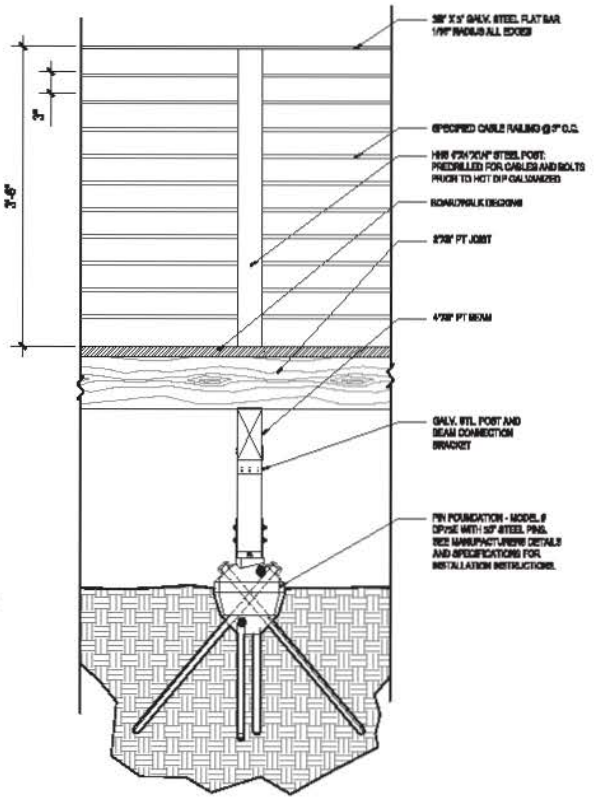
sheet no. 15 of 22



1 DECK CORNER CONSTRUCTION



2 OVERLOOK DECK



3 OVERLOOK DECK

GREENWORKS

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit

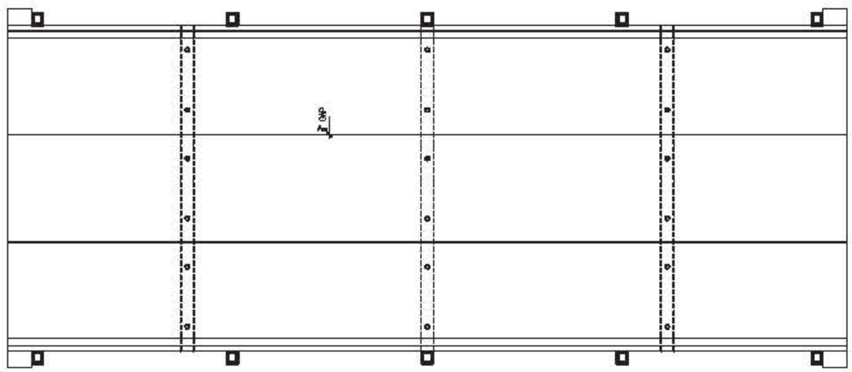
sheet title: BRIDGE DETAILS

Date: 4.25.2018

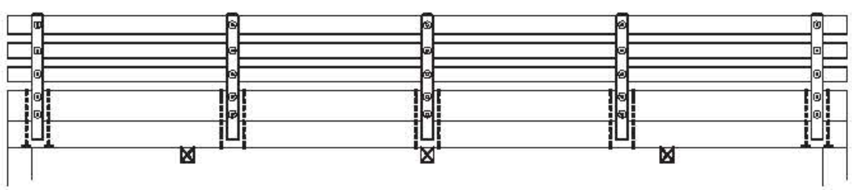
Drawn By: WM/EM
Checked By:
Job No. 190251.3
Approved:

L3.03

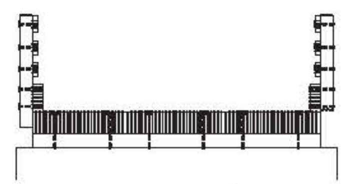
sheet no. 18 of 22



CUT-AWAY BRIDGE PLAN VIEW



BRIDGE ELEVATION



BRIDGE SECTION @ MIDSPAN/ABUTMENT

WESTERN WOOD STRUCTURES, INC.
P.O. BOX 130 TUALATIN, OREGON 97062
503/692-6900 FAX 503/692-6434
800/547-5411

2-B-017

GREENWORKS

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit

sheet title:
BRIDGE DETAILS

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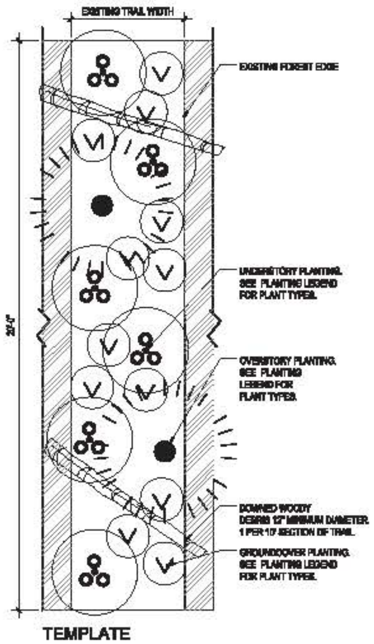
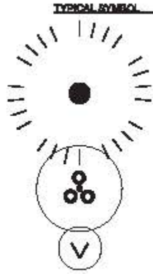


TRAIL REPLANTING LEGEND

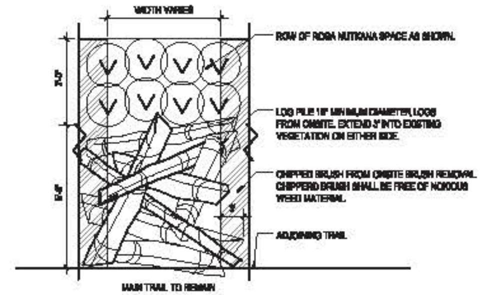
TYPICAL PLOT: 100 SF



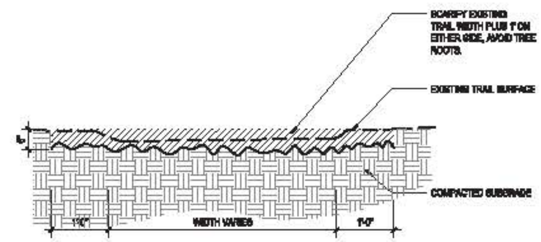
TYPICAL SYMBOL	BOTANICAL NAME		SIZE	TYP. PLOT RATIO
	OVERSTORY			
	QUERCUS GARRYANA	OREGON WHITE OAK	BAREROOT	1
	THUJA PLICATA	WESTERN RED CEDAR	BAREROOT	1
	UNDERSTORY			
	ACER CIRCINATUM	VINE MAPLE	BAREROOT	3
	OEMLERIA CERASIFORMIS	INDIAN PLUM	BAREROOT	3
	GROUNDLAYER			
	MAHONIA AQUIFOLIUM	OREGON GRAPE	BAREROOT	4
	POLYSTICHUM MUNITUM	SWORD FERN	BAREROOT	2
	ROSA NUTKANA	NOOTKA ROSE	BAREROOT	4
	SYMPHORICARPOS ALBUS	SNOWBERRY	BAREROOT	2

NOTE: THIS TRAIL REVEGETATION DETAIL IS PROVIDED AS A REFERENCE FOR PLANTING. FRIENDS OF TREES SHALL PROVIDE FINAL PLANTING SPECIES LIST, LAYOUT AND QUANTITIES DURING CONSTRUCTION. FRIENDS OF TREES IS RESPONSIBLE FOR ALL RESTORATION PLANTINGS WHICH INCLUDES LAYOUT AND QUANTITIES.

1 TRAIL REVEGETATION
PLAN
0' 6' 12' 24'



2 TRAIL BARRIER
PLAN



3 TRAIL DECOMMISSIONING
SECTION

GREENWORKS

Green Works, P.C.

CLACKAMAS COUNTY

project:
Mt. Scott Creek Restoration
North Clackamas Park

submittal: Land Use Permit
sheet title:
TRAIL DECOMMISSION DETAILS

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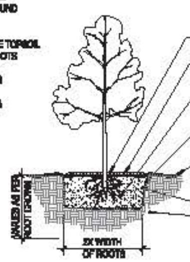
L3.05
sheet no. 21 of 22

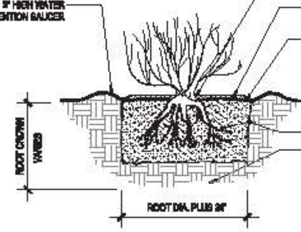
NOTE:
1. BACKFILL MIXTURE TO BE CAREFULLY WORKED AROUND ROOTS.

2. COMPLETELY SATURATE TOPSOIL AND SUBSOIL AROUND ROOTS

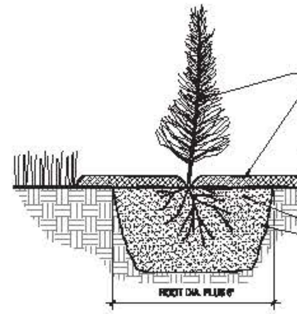
3. IN RIVERBANK PLANTING AREA - PLACE BROWSE PROTECTION AROUND 33% OF DECIDUOUS TREES.



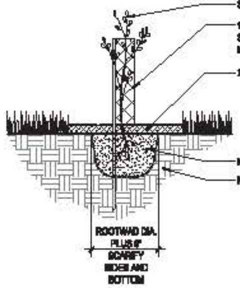
1 BAREROOT DECIDUOUS TREE PLANTING
SECTION — NOT TO SCALE



2 BAREROOT SHRUB PLANTING
SECTION

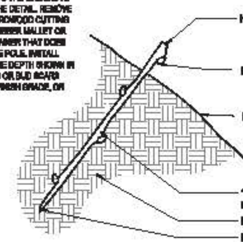


3 BAREROOT EVERGREEN PLUG TREE PLANTING
SECTION — NOT TO SCALE



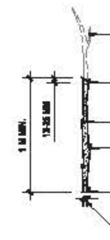
4 BAREROOT BROWSE PROTECTION
SECTION

NOTE:
INSTALLATION PROCESS: CREATE A PILOT HOLE FOR THE HARDWOOD CUTTINGS BY DRIVING A DIBBLE OR REBAR STAKE INTO THE GROUND AT THE DEPTH SPECIFIED ON THE DETAIL. REMOVE REBAR STAKE AND SLIDE HARDWOOD CUTTING INTO THE GROUND USING RUBBER MALLET OR OTHER HAND TOOLS IN A MANNER THAT DOES NOT DAMAGE THE TIP OF THE POLE. INSTALL HARDWOOD CUTTINGS AT THE DEPTH SHOWN IN DETAIL. AT LEAST TWO BUDS OR BUD SCARS SHALL BE PRESENT ABOVE FINISH GRADE, OR APPROX. 3 TO 8 INCHES.

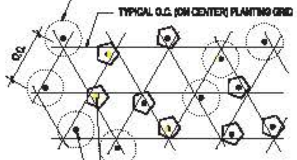


5 HARDWOOD CUTTING PLANTING
NOT TO SCALE

NOTES:
1. CUT FROM VIGOROUS 1-3 YEAR-OLD WOOD ON PLANTS GROWING IN FULL SUNLIGHT WHILE DORMANT.
2. PLANT IMMEDIATELY, OR STORE PROTECTED AT 0 - 5 DEGREES CELSIUS
3. PLANT BEFORE DORMANT BUD DEVELOPMENT.



6 TYPICAL CUTTING DETAIL
NOT TO SCALE



7 RANDOM PLANTING PATTERN
PLAN — NOT TO SCALE

GREENWORKS

CLACKAMAS COUNTY

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North Clackamas Park

submittal: Land Use Permit
sheet title: PLANTING DETAILS

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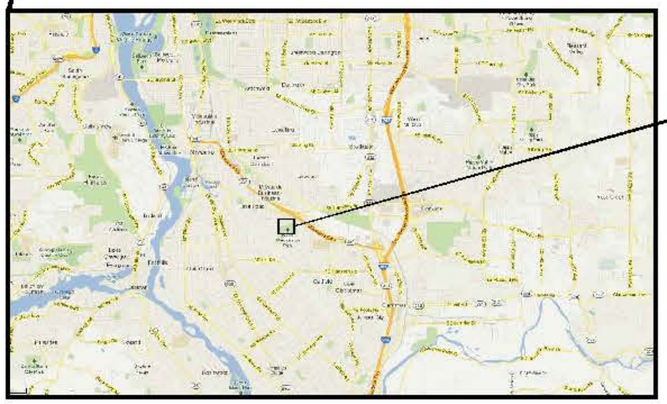
MT. SCOTT CREEK AT NORTH CLACKAMAS PARK
HABITAT ENHANCEMENTS
NORTH CLACKAMAS PARKS AND RECREATION DISTRICT
CLACKAMAS COUNTY, OR

LOCATION MAP
STATE OF OREGON



VICINITY MAP

SITE MAP

SHEET INDEX

PROJECT INFO

WATERBODY: MT. SCOTT CREEK
TRIBUTARY OF: KELLOGG CREEK

COORDINATES

LATITUDE 45°25'36.18"N
LONGITUDE 122°36'42.06"W

NO.	BY	DATE	REVISION

MWJ DRAWN	BN DESIGNED	BN CHECKED
BN APPROVED	06/01/12 DATE	120217 PROJECT

North Clackamas Parks and Recreation
Mt. Scott Creek – Habitat Alcove
Clackamas County, Oregon

interfluve
1020 Wasco Street, Suite 1
Hood River, OR 97031
541.386.9003
www.interfluve.com

COVER, SHEET INDEX, AND SITE MAP

SHEET 1 OF 8

THE CONTRACTOR SHALL ATTEND MANDATORY PRE-BID MEETING. THE CONTRACTOR SHALL ATTEND PRE-CONSTRUCTION CONFERENCES WITH THE CLACKAMAS COUNTY PARKS PRIOR TO BEGINNING CONSTRUCTION.

USACE IN-WATER WORK PERIODS
WORK SHALL OCCUR DURING THE PERMITTED IN-WATER WORK PERIOD.

ALL EARTHWORK QUANTITIES PROVIDED ARE IN-PLACE QUANTITIES. NO TRUCK MEASURE.

UTILITIES

UNDERGROUND UTILITIES ARE KNOWN TO EXIST IN THE AREA OF CONSTRUCTION. THE LOCATION OF EXISTING UTILITIES SHOWN IS APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY OWNERS FOR LOCATIONS AND TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS 1-800-332-2344.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES THROUGHOUT CONSTRUCTION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROMPTLY NOTIFY THE ENGINEER OF ANY CONFLICT WITH EXISTING UTILITIES.

ALL EXISTING FACILITIES, LANDSCAPE IMPROVEMENTS, AND UTILITIES NOT SPECIFICALLY IDENTIFIED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT CONSTRUCTION OR RESTORED AT COMPLETION OF THE WORK.

CONSTRUCTION ACCESS/TRAFFIC CONTROL

THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN INCLUDING PARK FOOT AND BIKE TRAFFIC TO ENGINEER FOR REVIEW. CONSTRUCTION SHALL NOT COMMENCE UNTIL APPROVAL. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR IMPLEMENTING REQUIRED TRAFFIC CONTROL AS REVIEWED AND APPROVED BY ENGINEER.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ANY REQUIRED TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO, SIGNAGE AND FLAGGERS.

ALL EQUIPMENT, MATERIALS AND PERSONNEL SHALL REMAIN WITHIN THE LIMITS OF DISTURBANCE.

THE CONTRACTOR SHALL KEEP THE WORK AREAS IN A CLEAN AND NEAT CONDITION FREE OF DEBRIS AND LITTER FOR THE DURATION OF THE PROJECT.

ALL AFFECTED AREAS INCLUDING ROADS AND ACCESS ROUTES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER.

ALL DISTURBED AREAS OUTSIDE THE LIMITS OF DISTURBANCE SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.

PUBLIC RIGHTS-OF-WAY SHALL BE KEPT IN A CLEAN AND SERVICEABLE CONDITION AT ALL TIMES. IN THE EVENT MATERIALS ARE INADVERTENTLY DEPOSITED ON ROADWAYS THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEPT AND REMOVED PRIOR TO ANY STREET FLUSHING.

EXISTING TREES GREATER THAN 6 INCHES DIAMETER BREAST HEIGHT LOCATED IN WORK AREA SHALL BE PROTECTED AND LEFT UNDISTURBED. SURROUND EXISTING TREES WITH ORANGE CONSTRUCTION FENCING.

CONSTRUCTION STAKING

CLACKAMAS COUNTY PARKS WILL PROVIDE STAKING OF PROJECT LIMITS, CENTERLINE AND TOP EDGE OF CONSTRUCTED CHANNELS, AND ELEVATION CONTROL POINTS. SOME ADJUSTMENTS TO THE LINES AND GRADES ARE TO BE EXPECTED.

CONTRACTOR SHALL MEET WITH THE CLACKAMAS COUNTY PARKS TO DEFINE AND MARK LIMITS OF DISTURBANCE PRIOR TO MOBILIZATION OF EQUIPMENT OR MATERIALS ONTO THE SITE.

THE CONTRACTOR SHALL REPLACE DAMAGED OR DESTROYED CONSTRUCTION STAKES AT NO COST TO THE OWNER.

CONSTRUCTION MATERIALS

LOCATION, ALIGNMENT, SIZE, AND ELEVATION OF LOGS AND LOGS WITH ROOT WADS ARE SUBJECT TO CHANGE PER THE ENGINEER BASED ON FIELD CONDITIONS, AND MATERIAL SIZE.

ANY EXCESS MATERIALS SHALL BE STOCKPILED NEATLY IN AN APPROVED LOCATION OF THE STOCKPILE AND STAGING AREAS. THE MATERIAL SHALL BE REMOVED FROM THE SITE PRIOR TO THE COMPLETION OF WORK.

CONTROL DEWATERING

HIGHLY TURBID OR CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION SHALL BE PREVENTED FROM DELIVERING SEDIMENT TO THE RIVER. DISPOSAL OPTIONS FOR DEWATERING DISCHARGE INCLUDE:

1. SEDIMENT-LADEN WATER MAY BE PUMPED TO AN UPLAND AREA AND ALLOWED TO SHEET FLOW OVER UNDISTURBED GROUND THROUGH EXISTING VEGETATION TO INFILTRATE INTO THE GROUND.

2. USE OF AN APPROPRIATELY SIZED AND MAINTAINED SEDIMENTATION BAG (DIRTBAG) OR OTHER SEDIMENTATION FACILITY WITH OUTFALL TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DEWATERING.

VEHICLE OPERATIONS AND STAGING

THE CONTRACTOR SHALL COMPLETE VEHICLE STAGING, CLEANING, MAINTENANCE, REFUELING, AND FUEL STORAGE IN VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY STREAM, WATER BODY OR WETLAND.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A SPILL CONTAINMENT AND CONTROL PLAN WITH NOTIFICATION PROCEDURES. SPECIFIC CLEANUP AND DISPOSAL INSTRUCTIONS FOR DIFFERENT PRODUCTS. THE CONTRACTOR SHALL STAGE QUICK RESPONSE CONTAINMENT AND CLEANUP MEASURES ON THE SITE, ALONG WITH PERSONNEL TRAINED IN PROPOSED METHODS FOR DISPOSAL OF SPILLED MATERIALS AND SPILL CONTAINMENT.

CONTRACTOR SHALL INSPECT ALL VEHICLES OPERATED WITHIN 150 FEET OF ANY STREAM, WATER BODY OR WETLAND DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA. REPAIR ANY LEAKS DETECTED IN THE VEHICLE STAGING AREA BEFORE THE VEHICLE RESUMES OPERATION. DOCUMENT INSPECTIONS IN A RECORD THAT IS AVAILABLE FOR REVIEW UPON REQUEST.

WHEN TRUCKING SATURATED SOILS FROM THE SITE, WATERTIGHT TRUCKS MUST BE USED, OR LOADS SHALL BE DRAINED ON-SITE SO THAT WATER SEEPING FROM THE SOIL CANNOT DRAIN FROM THE VEHICLE. ALL VEHICLES LEAVING THE SITE SHALL HAVE TIRES CLEANED AT A TRUCK WASHING STATION.

BEFORE OPERATIONS BEGIN AND AS OFTEN AS NECESSARY DURING OPERATION, PRESSURE WASH ALL EQUIPMENT THAT WILL BE USED BELOW BANKFULL ELEVATION UNTIL ALL VISIBLE EXTERNAL OIL, GREASE, MUD, AND OTHER VISIBLE CONTAMINANTS ARE REMOVED.

CONTRACTOR SHALL DIAPER ALL STATIONARY POWER EQUIPMENT (I.E. GENERATORS, PUMPS, CRANES) OPERATED WITHIN 150 FEET OF ANY STREAM, WATER BODY OR WETLAND TO PREVENT LEAKS, UNLESS SUITABLE CONTAINMENT IS PROVIDED TO PREVENT POTENTIAL SPILLS FROM ENTERING ANY STREAM OR WATER BODY.

ABBREVIATIONS

LWD	LARGE WOODY DEBRIS
ECP	EROSION CONTROL PLAN
FES	FABRIC ENCAPSULATED SOIL
FT	FEET
STA	STATION
ELEV	ELEVATION
IN	INCH
APPROX	APPROXIMATE
YR	YEAR
'	FEET
"	INCH
°	DEGREES
%	PERCENT
INV	INVERT
DIA	DIAMETER
OHW	ORDINARY HIGH WATER
CY	CUBIC YARDS

NO.	BY	DATE	REVISION

MWJ DRAWN | BN DESIGNED | BN CHECKED
BN APPROVED | 06/01/12 DATE | 120217 PROJECT

North Clackamas Parks and Recreation
Mt. Scott Creek – Habitat Alcove
Clackamas County, Oregon

inter:fluve
1020 Wasco Street, Suite 1
Hood River, OR 97031
541.386.9003
www.interfluve.com

GENERAL NOTES

SHEET 2 OF 8

EROSION CONTROL

PUBLIC RIGHTS OF WAY ARE TO BE KEPT IN A CLEAN AND SERVICEABLE CONDITION AT ALL TIMES. IN THE EVENT MATERIALS ARE INADVERTENTLY DEPOSITED ON ROADWAYS IT SHALL BE REMOVED PROMPTLY. MATERIALS SHALL BE SWEPT AND REMOVED PRIOR TO ANY STREET FLUSHING. PUBLIC AND PRIVATE DRAINAGE AND WATER WAYS ARE TO BE PROTECTED FROM POLLUTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL NECESSARY EROSION CONTROL FACILITIES TO COMPLY WITH APPLICABLE EROSION CONTROL REGULATIONS.

THE CONTRACTOR SHALL ENSURE THAT MATERIALS FOR EMERGENCY EROSION CONTROL ARE ONSITE, INCLUDING BUT NOT LIMITED TO: SEDIMENT CONTROL MATERIALS (I.E. SILT FENCE, STRAW BALES, STRAW WATTLES, DIRT BAGS); AN OIL-ABSORBING, FLOATING BOOM WHENEVER FLOWING SURFACE WATER IS PRESENT.

THE CONTRACTOR SHALL IMPLEMENT MEASURES TO CONTROL AND MINIMIZE WIND-BLOWN DUST FROM THE SITE.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES TO COMPLY WITH ALL APPLICABLE REGULATIONS. NOTICE TO PROCEED WILL NOT BE ISSUED UNTIL THE CONTRACTOR OBTAINS AN APPROVED EROSION CONTROL PLAN.

THE CONTRACTOR SHALL SUBMIT NAME, ADDRESS AND 24-HOUR PHONE NUMBER OF PERSON RESPONSIBLE FOR EROSION PREVENTION AND SEDIMENT CONTROL MEASURES, AND SPILL CONTAINMENT.

THE IMPLEMENTATION OF EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED, AND VEGETATION IS ESTABLISHED.

THE CONTRACTOR IS ADVISED THAT THE PROJECT AREA DRAINS TO A SALMON BEARING STREAM AND/OR STATE WATERS AND THAT THE CONTRACTOR IS RESPONSIBLE TO PROTECT THE RECEIVING WATERS FROM DELETERIOUS EFFECTS OF CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE EROSION CONTROL MEASURES SHOWN OR DESCRIBED IN THE CONTRACT DOCUMENTS AND ANY ADDITIONAL MEASURES THAT MAY BE REQUIRED BY THE CONTRACTORS MEANS AND METHODS OF CONSTRUCTION AS NEEDED TO CONTROL EROSION AND SEDIMENT AT THE CONSTRUCTION SITE AND TO PREVENT VIOLATION OF SURFACE WATER QUALITY, GROUND WATER QUALITY, OR SEDIMENT MANAGEMENT STANDARDS. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED EARTH IS STABILIZED IN FINISH GRADES.

EROSION CONTROL - CONT'D

EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES MUST BE IMPLEMENTED PRIOR TO ANY GROUND DISTURBING ACTIVITY ON THE PROJECT SITE, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE PROJECT SITE, ENTER THE DRAINAGE SYSTEM OR ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.DURING THE CONSTRUCTION PERIOD, EROSION, SEDIMENT, AND POLLUTION CONTROL MEASURES SHALL BE UPGRADED AS NEEDED FOR STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.

DURING CONSTRUCTION, THE CONTRACTOR SHALL MONITOR INSTREAM TURBIDITY AND INSPECT ALL EROSION CONTROLS DAILY DURING THE RAINY SEASON AND WEEKLY DURING THE DRY SEASON, OR MORE OFTEN AS NECESSARY, TO ENSURE THE EROSION CONTROLS ARE WORKING ADEQUATELY. IF MONITORING OR INSPECTION SHOWS THAT THE EROSION CONTROLS ARE INEFFECTIVE, MOBILIZE WORK CREWS IMMEDIATELY TO MAKE REPAIRS, INSTALL REPLACEMENTS, OR INSTALL ADDITIONAL CONTROLS AS NECESSARY. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM EROSION CONTROLS ONCE IT HAS REACHED 1/3 OF THE EXPOSED HEIGHT OF THE CONTROL.

RIP SOILS ALONG ACCESS ROAD TO 6-INCH DEPTH AND SEED TO RECLAIM ACCESS ROUTES BEFORE PROJECT COMPLETION.

INSPECTION AND MAINTENANCE

AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD.

SEDIMENT MUST BE REMOVED FROM SILT FENCES BEFORE IT REACHES APPROXIMATELY ONE THIRD THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.

STABILIZE SOILS AND PROTECT SLOPES

FROM MAY 1 THROUGH SEPTEMBER 30, ALL EXPOSED SOILS SHALL BE PROTECTED FROM EROSION BY MULCHING, PLASTIC SHEETING, HYDROSEED COVERING, OR OTHER APPROVED MEASURES WITHIN ONE WEEK OF GRADING. FROM OCTOBER 1 THROUGH APRIL 30, ALL EXPOSED SOILS MUST BE PROTECTED WITHIN 2 DAYS OF GRADING. SOILS SHALL BE STABILIZED BEFORE A WORK SHUTDOWN, HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES. HYDROSEED AS SOON AS PRACTICAL ALL DISTURBED AREAS NOT INDICATED IN THE CONTRACT DOCUMENTS FOR OTHER PERMANENT STABILIZATION MEASURES.
DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. REDUCE SLOPE VELOCITIES ON DISTURBED SLOPES BY PROVIDING TEMPORARY BARRIERS. STORMWATER FROM OFF SITE SHOULD BE HANDLED SEPARATELY FROM STORMWATER GENERATED ON SITE.

AFTER FINAL SITE STABILIZATION

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED FROM THE SITE OR INCORPORATED INTO FINISHED GRADING. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

CONTROL POLLUTANTS

CONTRACTOR MUST PREPARE A SPILL PREVENTION CONTROL AND COUNTER MEASURE (SPCC) PLAN AND IMPLEMENT REQUIRED MEASURES TO CONTROL POLLUTANTS. SEE THE SPECIAL PROVISIONS.

ALL POLLUTANT DISCHARGES OTHER THAN SEDIMENT THAT OCCUR ON SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER, GROUNDWATER, OR SOILS TO REMAIN ON SITE.

THE USE OF LIME, FLY ASH, OR OTHER SOIL AMENDMENTS THAT COULD ALTER THE PH OF DISCHARGE WATERS IS PROHIBITED.

SEDIMENT CONTROLS

THE DUFF LAYER, NATIVE TOP SOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE. THE CONTRACTOR SHALL MARK ALL AREAS WHICH ARE NOT TO BE DISTURBED, INCLUDING SETBACKS, SENSITIVE/CRITICAL AREAS AND THEIR BUFFERS. TREES AND DRAINAGE COURSES NOT TO BE DISTURBED SHALL BE MARKED AND FLAGGED BEFORE CONSTRUCTION ACTIVITIES ARE INITIATED. THESE AREAS SHALL BE PROTECTED BY THE CONTRACTOR WITH BARRIER FENCING AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER WHEN CONSTRUCTION ACTIVITIES ARE INITIATED.

THE CONTRACTOR MAY ELECT TO CONSTRUCT TEMPORARY SEDIMENTATION PONDS, TANKS, OR OTHER FACILITIES AS NECESSARY TO CONTROL RUNOFF AND/OR TO FILTER DEWATERING DISCHARGE.

GENERAL ISOLATION GUIDELINES

SOIL PLUG WILL BE UTILIZED TO ISOLATE THE WORK AREA.

ALL SEDIMENT WILL BE ALLOWED TO SETTLE PRIOR TO REMOVAL OF SOIL PLUG.

NO.	BY	DATE	REVISION

MWJ DRAWN | BN DESIGNED | BN CHECKED
BN APPROVED | 06/01/12 DATE | 120217 PROJECT

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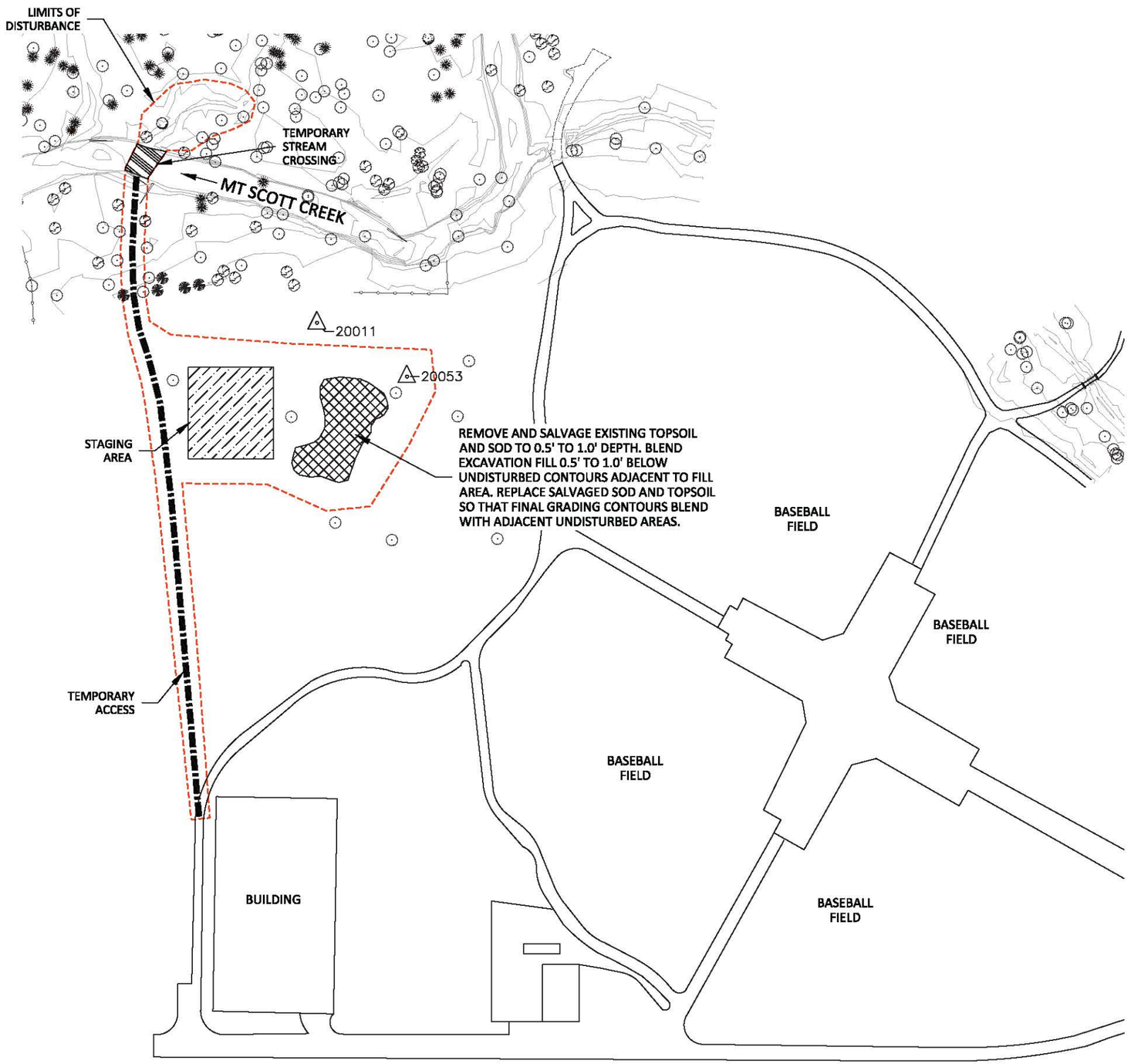
GENERAL NOTES

SHEET 3 OF 8



LEGEND

- TEMPORARY ACCESS
- LIMITS OF DISTURBANCE
- EXISTING CONTOURS
- TEMPORARY STREAM CROSSING
- EXCAVATED SOILS FILL AREA
- STAGING AREA
- EXISTING TREES TO REMAIN
- SURVEY CONTROL POINT

SURVEY CONTROL

Point #	Easting	Northing	Point Elev.	Name
20011	7660150.44'	648638.21'	61.79'	pk
20053	7660227.49'	648592.30'	64.05'	PKspike

0 100 200

SCALE IN FEET

SITE PLAN

NO.	BY	DATE	REVISION

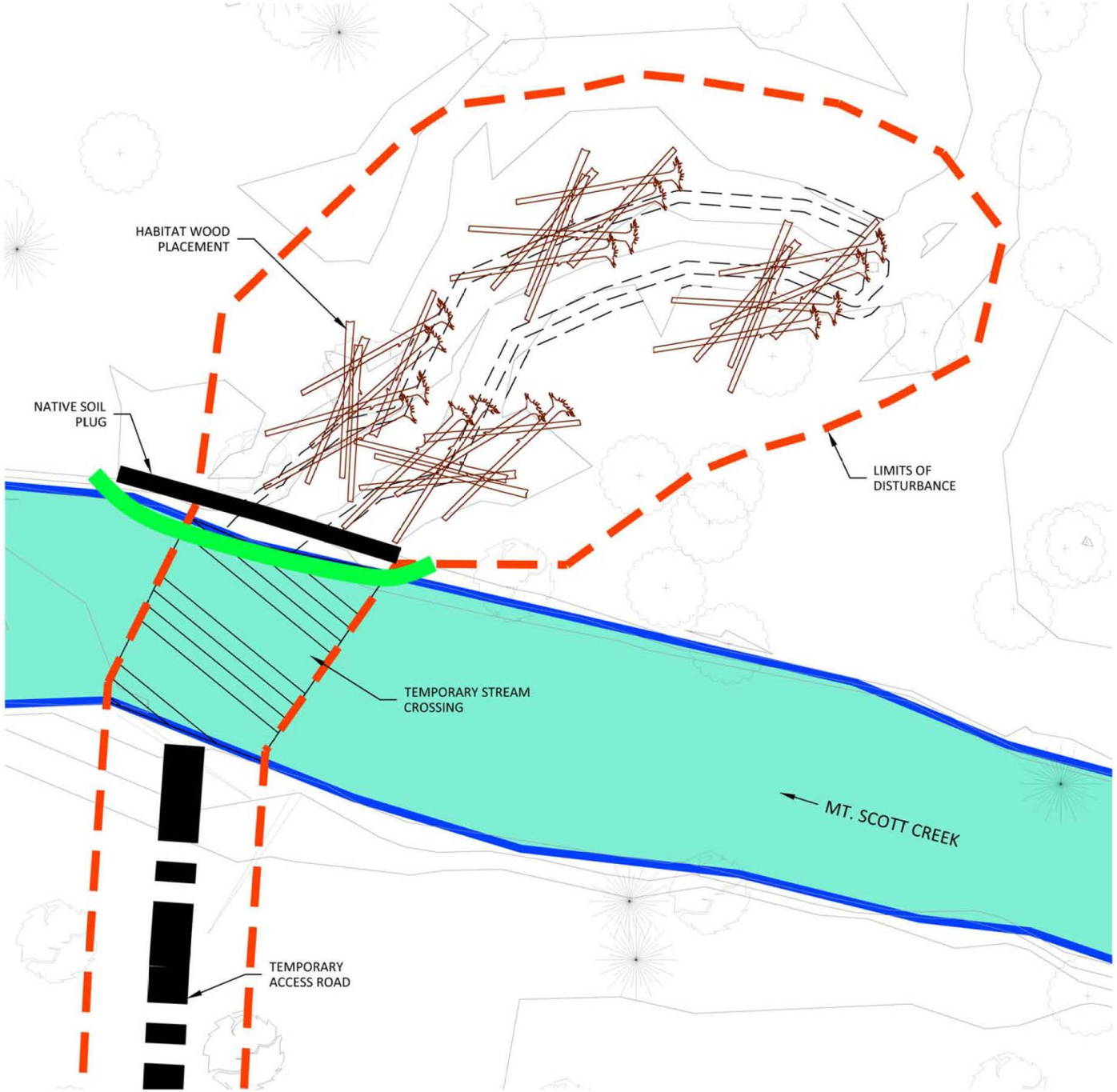
MWJ DRAWN	BN DESIGNED	BN CHECKED
BN APPROVED	06/01/12 DATE	120217 PROJECT

North Clackamas Parks and Recreation
Mt. Scott Creek – Habitat Alcove
Clackamas County, Oregon

inter·fluve
1020 Wasco Street, Suite 1
Hood River, OR 97031
541.386.9003
www.interfluve.com

SITE PLAN SHOWING CONTROL, EROSION MEASURES AND ACCESS

SHEET 4 OF 8

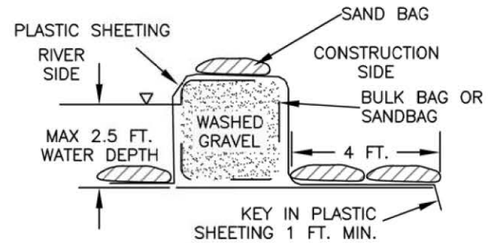


PLAN VIEW

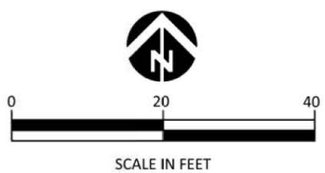
LEGEND

- TEMPORARY STREAM CROSSING
- TEMPORARY ACCESS
- LIMITS OF DISTURBANCE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- NATIVE SOIL PLUG
- COFFER DAM
- MT. SCOTT CREEK
- HABITAT WOOD PLACEMENT
- EXISTING TREES TO REMAIN PROTECT WITH ORANGE CONSTRUCTION FENCING

NOTE:
NATIVE SOIL PLUG TO REMAIN IN PLACE UNTIL ALCOVE EXCAVATION IS SUBSTANTIALLY COMPLETE.



SINGLE LAYER COFFER DAM
(WATER DEPTH LESS THAN 2.5')
NOT SCALE



SCALE IN FEET

NO.	BY	DATE	REVISION

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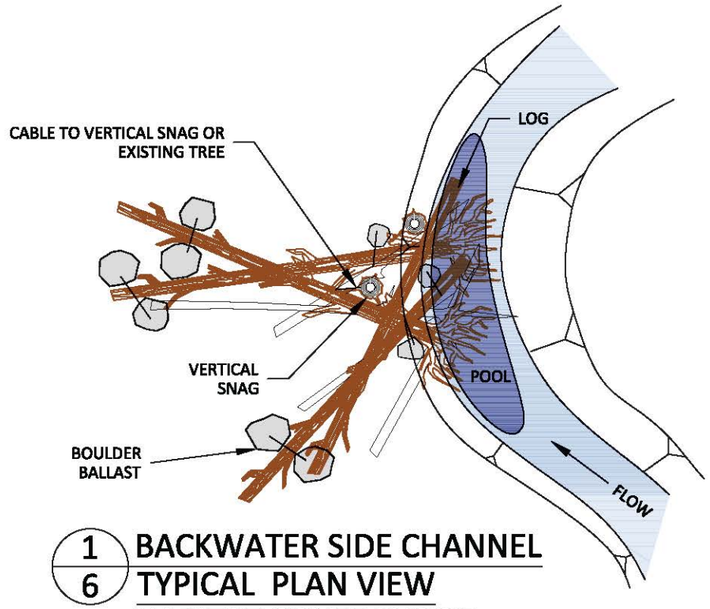
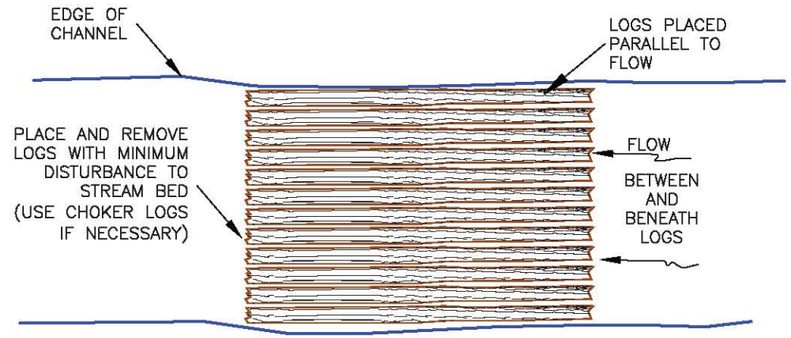
PLAN VIEW OF PROPOSED CONDITIONS

SHEET 5 OF 8



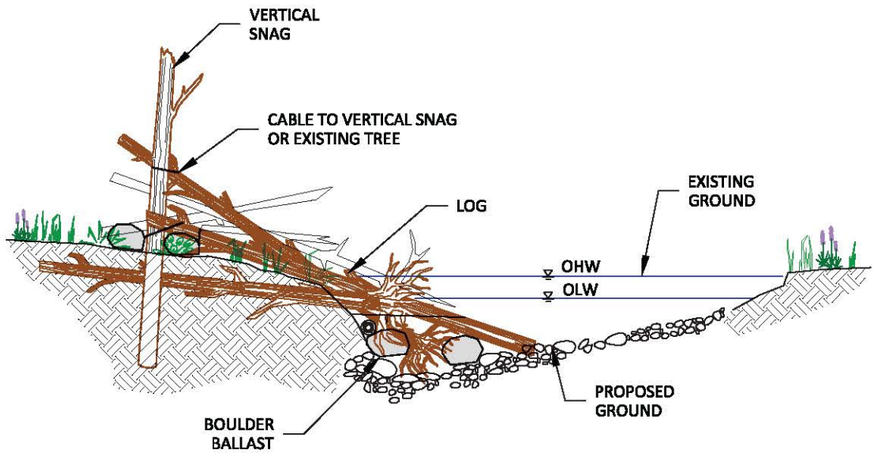
1/6 BACKWATER SIDE CHANNEL
TYPICAL PLAN VIEW
HABITAT COVER WOOD

NOT TO SCALE



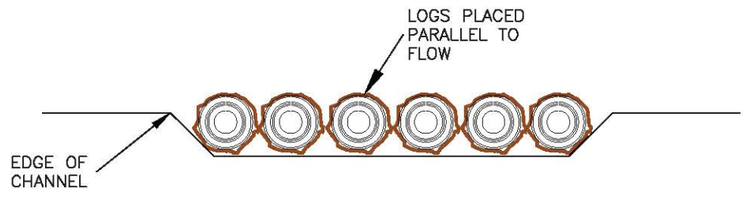
3/6 PLAN VIEW
TYPICAL TEMPORARY CROSSING

NOT TO SCALE



2/6 BACKWATER SIDE CHANNEL
TYPICAL CROSS-SECTION
HABITAT COVER WOOD

NOT TO SCALE



4/6 SECTION VIEW
TYPICAL TEMPORARY CROSSING

NOT TO SCALE

NO.	BY	DATE	REVISION

MWJ DRAWN	BN DESIGNED	BN CHECKED
BN APPROVED	06/01/12 DATE	120217 PROJECT

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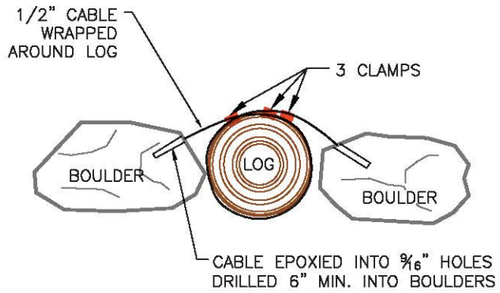
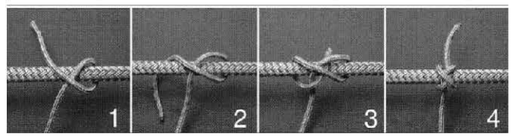
TYPICAL DETAILS

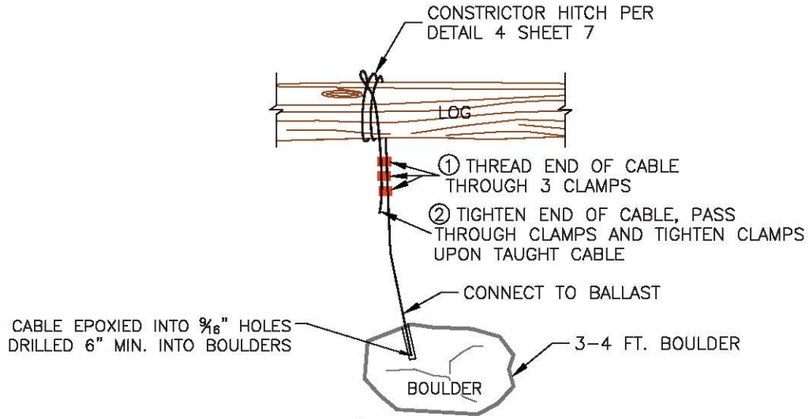
SHEET 6 OF 8



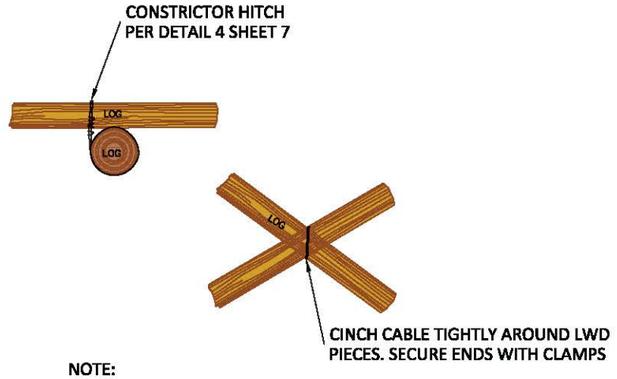
1/8 **BOULDER (DOUBLE) BALLAST**



4/8 **IFI CONSTRICTOR HITCH**



2/8 **BOULDER (SINGLE) BALLAST**



NOTE:
USE 1/2 INCH GALVANIZED CABLE. CABLE SHALL BE CONSTRICTOR HITCHED AROUND BOTH LOGS BEFORE ENDS ARE FASTENED TOGETHER. THERE SHALL BE NO SLACK IN THE CABLE AFTER IT IS FASTENED.

3/8 **TYPICAL LOG CABLING**

GENERAL NOTES

DESCRIPTION
THIS WORK CONSISTS OF INSTALLING LOGS WITH ROOT WADS INTO ANCHORED LOG STRUCTURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.

MATERIALS
ANCHORS FOR THIS WORK WILL CONSIST OF CABLED BOULDERS. BOULDERS SHALL BE NON-FRACTURED BASALT WITH A MINIMUM SPECIFIC GRAVITY OF 2.65.

CABLE SHALL BE GALVANIZED, STEEL CORE, AND SHALL HAVE A MINIMUM DIAMETER OF 1/2 INCH.

CLAMPS SHALL BE ZINC PLATED COPPER AND SHALL MEET THE PERFORMANCE REQUIREMENTS OF MILITARY STANDARD MS-51844, REV. C, SLEEVES, SWAGING-WIRE ROPE. MINIMUM OF 3 CLAMPS PER CONNECTION.

EPOXY FOR ANCHORING SHALL BE HILTI HIT RE 500 ADHESIVE OR APPROVED EQUAL.

CONSTRUCTION

FINAL POSITIONING OF THE ANCHORED LOG STRUCTURES SHALL BE IN THE APPROXIMATE LOCATION AS SHOWN ON THE PLANS AND AS APPROVED IN THE FIELD BY THE ENGINEER.

GENERAL NOTES , CONT'D

FINAL POSITIONING OF THE ANCHORED LOG STRUCTURES SHALL BE IN THE APPROXIMATE LOCATION AS SHOWN ON THE PLANS AND AS APPROVED IN THE FIELD BY THE OWNERS REPRESENATIVE.

ANCHORED LOG STRUCTURES SHALL BE SECURED AS SHOWN ON THE PLANS.

DRILL HOLES IN SOLID ROCK AND AVOID ANY CRACKS OR FRACTURES. HOLES SHALL BE 9/16 INCH IN DIAMETER. HOLES MUST BE DRILLED 6 INCHES, MINIMUM, INTO ROCK. HOLES MUST BE CLEANED OF LOOSE ROCK FRAGMENTS AND POWDER WITH A BRUSH AND WATER. HOLES MUST BE CLEAN OF ALL DUST, DEBRIS, OIL, AND SOAP RESIDUES. THE HOLES MUST FLUSH CLEAR TO INSURE NO MATERIAL EXISTS BETWEEN THE CABLE, EPOXY, AND ROCK SURFACE. INSTALL EPOXY PER MANUFACTURER'S RECOMMENDATIONS.

CABLE SHALL BE WRAPPED ONCE AROUND LOG BEFORE ENDS ARE INSERTED INTO THE DRILLED HOLES FILLED WITH EPOXY. WIPE CABLE WITH CLEAN RAG SOAKED IN ACETONE SOAKED RAG TO REMOVE OILS AND GREASES PRIOR TO INSERTION INTO EPOXY FILLED HOLE. FILL DRILL HOLES ENOUGH TO ENSURE COMPLETE COVERAGE WITH EPOXY. INSERT CABLE INTO HOLE SO THAT END OF CABLE HITS THE BOTTOM OF THE HOLE. EXCESS EPOXY SHOULD COME OUT OF THE TOP OF THE HOLE AS CABLE IS SEATED IN DRILL HOLE. TEST STRENGTH OF BOND BY PICKING UP LOG AFTER MINIMUM CURE TIME RECOMMENDED BY THE EPOXY MANUFACTURER. IF BOND FAILS, REPLACE WITH A NEW HOLE AND CUT THE CONTAMINATED END OFF OF THE CABLE.

MINIMUM 3 CLAMPS PER CONNECTION. CLAMPS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION, SPACING AND SWAGE TOOL DIAMETER FOR THE SIZE AND LOAD RATING OF THE CABLE BEING USED. SWAGING TOOL SHALL BE CHECKED FOR PROPER COMPRESSION, ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, USING A GAUGE PROVIDED BY THE MANUFACTURER OF THE SWAGE FITTINGS BEING INSTALLED.

NO.	BY	DATE	REVISION

MWJ	BN	BN
DRAWN	DESIGNED	CHECKED
BN	06/01/12	120217
APPROVED	DATE	PROJECT

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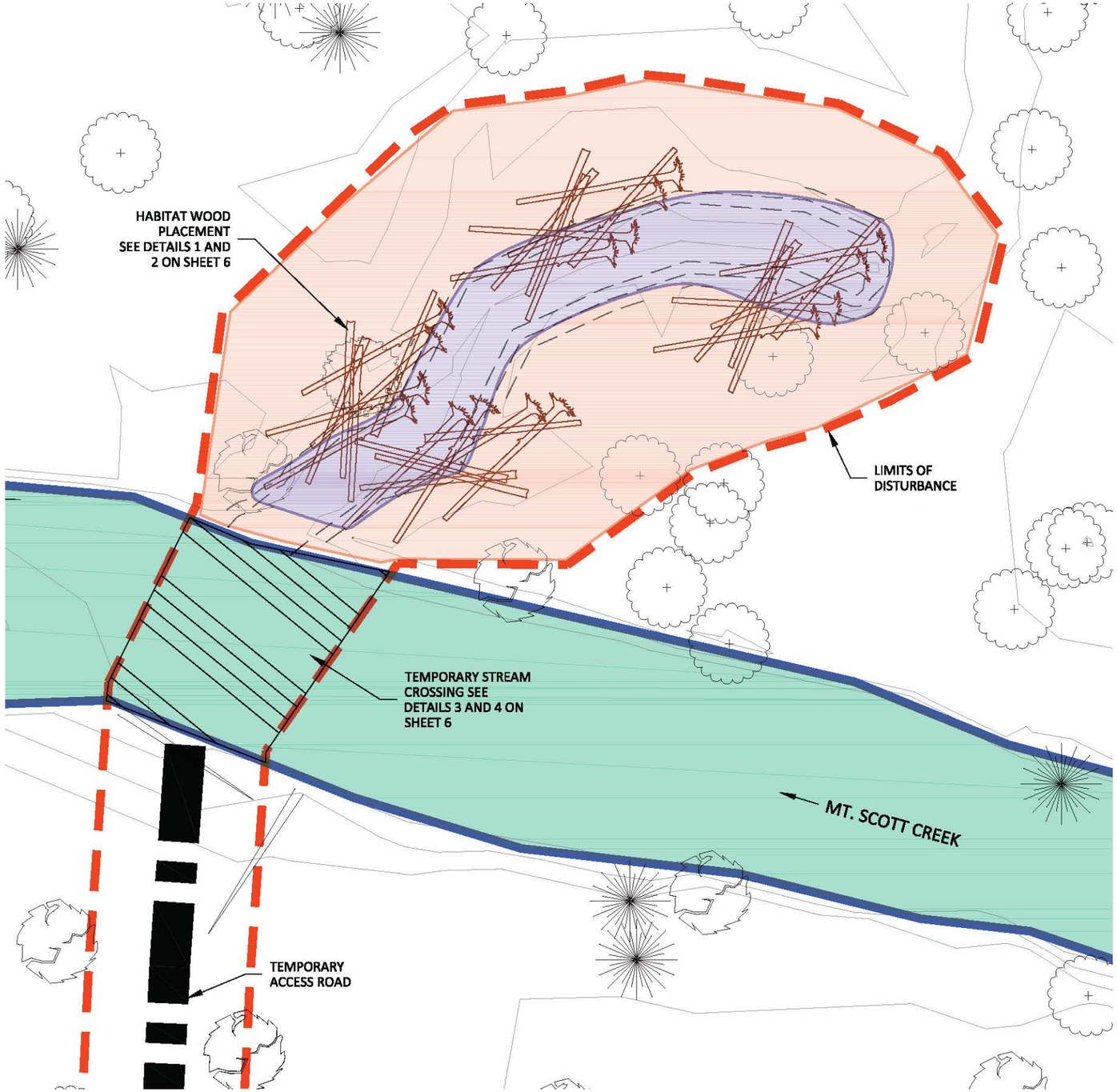
Mt. Scott Creek – Habitat Alcove
Clackamas County, Oregon

inter:fluve
1020 Wasco Street, Suite I
Hood River, OR 97031
541.386.9003
www.interfluve.com

TYPICAL DETAILS



PLAN VIEW

LEGEND

- TEMPORARY STREAM CROSSING
- TEMPORARY ACCESS
- LIMITS OF DISTURBANCE
- EXISTING CONTOURS
- PROPOSED CONTOURS
- MT. SCOTT CREEK
- EMERGENT/OBLIGATE
- WETLAND EMERGENT/RIPARIAN
- HABITAT WOOD PLACEMENT
- EXISTING TREES TO REMAIN

Emergent/Obligate (0.02 acres)

Species	Number
wapato *(sagittaria latifolia var latifolia)*	48

Emergent/Obligate (0.07 acres)

Species	Number
Herbacious	
Slough sedge (*Carex obnuta*)	168
Common spikerush *(Eleocharis Palustris)*	168
skunk cabbage *(Lysichiton americanus)*	168
Lady fern *(Athyrium felix-femina)*	168
Shrubs	
Rose spirea *(Spiraea douglasii)*	168
Salmon berry *(Rubus spectabilis)*	168

N

0 20 40

SCALE IN FEET

NO.	BY	DATE	REVISION

MWJ DRAWN	BN DESIGNED	BN CHECKED
BN APPROVED	06/01/12 DATE	120217 PROJECT

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PLAN VIEW OF REVEGETATION

SHEET 8 OF 8

ESA
522 SW Fifth Avenue
Suite 820
Portland, OR 97204
503.226.8018 phone
503.226.8017 fax
www.esassoc.com

memorandum

date July 7, 2012

to Ryan Marquardt, AICP

from Sarah Hartung

subject Completeness Review for the Mt. Scott Creek Restoration Project

This memo has been prepared to satisfy part of the Task Order for the Natural Resource Review for the Mt. Scott Restoration project. Our completeness review includes the following:

1. Review the application materials to help guide the City's assessment of the proposed project's compliance with applicable standards. Relevant materials include a Water Quality Resource Assessment (WQRA) Report prepared by Greenworks PC, a proposed mitigation plan within the narrative, 90% Design Plans that include existing and proposed conditions, a wetland delineation report and concurrence letter from Department of State Lands, the Pre-Application Conference Report, and additional supporting documentation found in the appendices of this application.
2. Complete a site visit and assess existing conditions on site, comparing figures and narrative with observations on site.
3. Evaluate the restoration work in the project against Milwaukie Municipal Code (MMC) 19.402.10. The restoration elements of the project are the stream bank stabilization (placement of woody debris and boulders, log-stabilized banks), riparian area enhancement/trail decommissioning, alcove creation, and culvert removal. Assess whether the work conforms to best plans and practices promulgated by the agencies listed in MMC 19.402.10.A or B, and whether the work would result in any effects listed in MMC 19.402.10.C.
4. Review the overlook areas and new pedestrian bridge with regard to the discretionary review standards of MMC 19.402.12. Evaluate the alternatives analysis with regard to MMC 19.402.12.A.4 and 5. Assess the design and placement of these items with regard to the criteria in MMC 19.402.12.B. with regard to avoiding disturbance of the natural resources on site, minimizing the impacts of these elements, and appropriately mitigating impacts that would occur.
5. Present any deficiencies in the application and indicate whether you believe the deficiency needs resolving with revised application materials prior to issuance of a decision, if the deficiency can be resolved through adding a condition of approval, or if the deficiency does not impact the overall review of the proposal.

Findings

Existing Conditions

ESA conducted a site visit on July 7, 2012 and it appears that the existing conditions of Mt. Scott and Camas Creek are accurately described in the narrative. The WQR's meet the definition of Class B and a few areas meet Class C as reported.

During the site visit, wetlands were noted adjacent to the spring on the north bank of Mt. Scott Creek where alcove creation is proposed. The approved delineation report for the project documented the lowest 10 feet of the spring, but did not extend far enough north to capture adjacent wetlands. Potential wetlands are on both sides of the spring in a depressional area vegetated with reed canarygrass, jewelweed, skunk cabbage, and lady fern. The soils were saturated to the surface. Because the alcove creation does not involve permanent structures or new impervious surface, the current application materials may be sufficient for local approval.

Proposed Restoration Work

In this section, the proposed restoration work is analyzed for completeness in addressing the MMC 19.402.10.

MMC 19.402.10 - Natural Resource Management Plans

A) Plan is Eligible for Type I Review

Response: The proposed restoration work including stream bank stabilization, riparian enhancement/trail decommissioning, alcove creation, and culvert removal is supported by Oregon Department of Fish and Wildlife and has been approved funding from the Metro Nature in Neighborhoods Capital Grants Program. ODFW was involved in developing and reviewing project details – appears to meet the criteria for "plans that are already approved by ODFW and Metro."

B) Plan is Eligible for Type II Review

Response: N/A

C) Approval Criteria

Every plan prepared for approval under Section 19.402 shall demonstrate that it encourages restoration activities that have any of the following effects:

1) Changes the trend of habitat function

2) Corrects or improves conditions

3) Maximizes beneficial habitat

4) Creates beneficial habitat

Response: This criterion is met – improvements to habitat are described in several places throughout the application.

D) Construction Management Plans

Response: This criterion is met - silt fencing and tree protection are shown on the plans. For the alcove creation, updating the construction management plans is recommended to address temporary access through Wetland 2.

E) Ongoing Maintenance

Response: This criterion is met – Friends of Trees and North Clackamas Parks and Recreation Department (NCPRD) will monitor and maintain proposed plantings for at least 3 years and will meet a minimum 80% survival rate.

Analysis of Alternatives for the Proposed Project

The alternatives analysis for the two new overlooks and the pedestrian bridge are compared to assess whether the information provided is sufficient under MMC 19.402.12.

MMC 19.402.12 - General Discretionary Review

A) Impact Evaluation and Alternatives Analysis

Response: Riparian habitat ecological functions, inventory of vegetation, water quality impacts, and the mitigation plan for this proposed project are adequately described in the narrative. The proposed mitigation will improve overall stream and riparian health with only minor construction-related impacts that can be restored once the work is completed. The applicant appears to have chosen the best alternatives that will have the least minimal impact to the WQR or HCA areas while also providing public education opportunities.

Currently the Supplemental plans show the temporary access road bisecting Wetland 2, this would be considered an impact and should be further discussed.

B) Approval Criteria

Response: This proposal lacks discussion of the avoidance, minimization, and mitigation measures for impacts and disturbances of the Mt. Scott alcove creation to the creek or to the wetland, on the south side of Mt. Scott Creek. On the Supplemental Plan materials for the alcove creation, the temporary access road bisects Wetland 2 in order to cross the stream. This is not discussed in the narrative or shown on any plan figures.

Completeness of Figures

General comment: There is not a single figure that shows Wetland 2 with the temporary access road to the alcove creation. It would be helpful to see the existing resources combined with proposed access because it appears that temporary impacts to Wetland 2 could be avoided.

Specific comments regarding the figures include:

- Plan Sheet L2.01:
    - ❖ Recommend including the quantity of plants or at minimum, anticipated plant spacing for each species.

ATTACHMENT 5

MEMORANDUM

TO: Community Development Department

THROUGH: Gary Parkin, Director of Engineering

FROM: Zachary Weigel, Civil Engineer

RE: 5440 SE Kellogg Creek Drive
NR-12-02, CSU-12-06

DATE: June 28, 2012

Restoration of Mt. Scott Creek and Camas Creek.

Recommended Conditions of Approval

None

Advisory Notes

The following are advisory notes for the applicant. The advisory notes are a list of requirements that may apply to the proposed development at the time of building permit. The advisory notes are for informational purposes only.

Flood Hazard Mitigation

Comply with Milwaukie Municipal Code Title 18 “Flood Hazard Regulations” prior to approval of building permits.

- Provide additional information with the building permit application as follows:
  - Scaled plans showing nature, location, dimensions, and elevations of the development property, including existing and proposed structures, fill, storage of materials, and drainage facilities. Include both the floodplain and floodway boundaries.
  - Elevation in relation to mean sea level of all structures
  - Description of the extent to which any watercourse will be altered or relocated as a result of the proposed development.
- Provide an anchor design by a registered professional engineer, such that all new construction within the 100-year floodplain is anchored to prevent flotation, collapse, or lateral movement of the structure(s). Include a written summary with the building permit materials of how the design of the structure(s) meets this requirement.
- Construct all structures within the 100-year floodplain utilizing materials resistant to flood damage. Include a written summary with the building permit materials of how the design of the structure(s) meets this requirement.

- Placement of fill or structures that displaces more than ten cubic yards of flood storage area shall comply with the following standards.
    - No net fill in any floodplain is allowed, including the volume of structures within the floodplain.
    - All fill placed in a floodplain shall be balanced with at least an equal amount of soil material removed.
    - Any excavation below bankful stage shall not count toward compensating for fill.
    - Excavation to balance a fill shall be located on the same parcel as the fill unless it is not reasonable or practicable to do so. In such cases, the excavation may be located in the same drainage basin and as close as possible to the fill site.
- Placement of fill or structures within the floodway shall comply with flood storage area requirements and the following additional requirements.
    - The proposed excavation and fill shall not increase flood impacts for surrounding property as determined through hydrologic and hydraulic analysis or “no rise certification”.
    - If an increase in the base flood elevation is unavoidable, a conditional approval of such increase is required from the FEMA regional office prior to permitting the development.

Storm Water Management

Submit a storm water management plan prepared by a qualified professional engineer with required development/building permits as part of the proposed development. The plan shall conform to Section 2 – Stormwater Design Standards of the City of Milwaukie Public Works Standards.

- The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development site.
- The storm water management plan shall demonstrate compliance with water quality standards in accordance with the City of Portland Stormwater Management Manual.
- Development/building permits will not be issued for construction until the storm water management plan has been approved by the City of Milwaukie.

From: paul.hawkins@daimler.com
Sent: Friday, June 22, 2012 6:16 AM
To: Marquardt, Ryan
Subject: NR-12-02,CSU-12-06

Re: The restoration of Mt. Scott and Camas Creeks.

No comment on the application; looking forward to the completion.

Paul Hawkins
Kellogg Creek resident since 1965
Lake Road Neighborhood Land Use

=

From: Larsen, Tom
Sent: Thursday, June 21, 2012 4:20 PM
To: Marquardt, Ryan
Subject: Mt. Scott Creek Restoration

Ryan, I have no specific comment in this application. The applicant should refer to my notes from the Pre-App conference.

Tom Larsen, CBO
Building Official, City of Milwaukie
Phone: (503) 786-7611
Fax: (503) 786-7612

ATTACHMENT 6

Exhibits List for Land Use File NR-12-02

The following documents are part of the official record for this application:

1. Application – submitted April 25, 2012
   - A. Application submittal forms – land use application form, property owner authorization, submittal requirements form
   - B. Application narrative and responses to code standards and criteria
   - C. Site Plans
   - D. Appendices
     - i) Preapplication Report
     - ii) Metro Nature in Neighborhoods Grant Application - Mt. Scott Creek Restoration Project
     - iii) Oregon Department of Fish and Wildlife (ODFW) Fish Species Distribution and Abundance and Habitat Assessment of Streams in Clackamas County Service District #1
     - iv) Kellogg-Mt. Scott Creek excerpt
     - v) North Clackamas Community Park – Conceptual Park Plan map (part of File #CPA-10-02)
     - vi) Division of State Lands wetland delineation concurrence
     - vii) North Clackamas Park Mount Scott Creek Restoration Project Wetland And Waters Delineation Report
     - viii) Portland Native Plant List excerpt
     - ix) “No Rise” certification
     - x) City of Milwaukie property deed
     - xi) North Clackamas Park deed
     - xii) ODFW Letter of Project Support
   - E. Application Addendum for Backchannel Alcove – submitted June 18, 2012
     - i) Application narrative
     - ii) Site Plans for Backchannel Alcove
2. Notification information
   - A. Application Referral sent June 20, 2012– referred to Milwaukie Engineering Department, Milwaukie Building Official, Clackamas County Fire District #1, and Chairs and Land Use Committee for Lake Road Neighborhood District Associations.
   - B. Mailing sent July 3, 2012 to property owners and occupants of properties within 300 ft of 5440 SE Kellogg Creek Drive
   - C. Hearing notice posted on site
     - i) Affidavit of posting, July 10, 2012

ii) Photos of posted notice signs

D. Notice of Decision –pending-

3. Materials from City Planning Staff

A. Staff Report – July 18, 2012 for July 24, 2012 Public Hearing

B. Review Memorandum for ESA, on-call natural resource consultant for City of Milwaukie, July 7, 2012

4. Comments Received

A. Milwaukie Engineering Department

B. Milwaukie Building Department

C. Paul Hawkins, Lake Road Neighborhood District Association Land Use Committee

5. Materials Received at the Hearing:

A. Staff Presentation at July 31, 2012 Planning Commission hearing (not in file) –pending-

B. Applicant's testimony at July 31, 2012 Planning Commission hearing (not in file) –pending-

6. Public Testimony – none received at July 31, 2012 hearing –pending-

MILWAUKIE
Dogwood City of the West

To: **Planning Commission**

Through: **Scot Siegel, Interim Planning Director**

From: **Brett Kelver, Associate Planner**

Date: **July 17, 2012, for July 24, 2012, Public Hearing**

Subject: **File:** NR-12-01
Applicant: Leah Robbins for TriMet
Owner: TriMet
Address: 2519, 2525, and 2535 SE Harrison St
Legal Description (Map & Taxlot): 1S1E25CC – taxlots 4300, 4400, and 4500
NDA: Historic Milwaukie

ACTION REQUESTED

Continue with the public hearing for application NR-12-01. Hear staff and applicant responses to issues raised at July 10 hearing, take public testimony if presented, hold deliberations, and make a decision on the application.

BACKGROUND INFORMATION

On July 10, 2012, the Planning Commission opened the public hearing on the application, a proposal to disturb the Crystal Creek Water Quality Resource (WQR) to construct the trackway for the Portland-Milwaukie Light Rail (PMLR), including extension of an existing culvert. The Commission heard initial presentations and follow-up responses from both staff and the applicant. No one presented public testimony. The Commission closed the public testimony portion of the hearing and began deliberations, but voted to continue the hearing to July 24, 2012, and asked the applicant to provide additional information related to the approval criteria.

KEY ISSUES

At the July 10 hearing, the Commission asked the applicant to provide more information regarding several specific topics:

- Proposed chemical treatment of weeds along the new PMLR trackway
- Impacts to the Crystal Creek WQR by pollutants from the PMLR trackway
- Possible use of a barrier in the PMLR trackway to protect water quality in the Crystal Creek WQR

The applicant had not presented staff with any new information as of the time this report was made final. Staff expects that the applicant will provide new information to the Commission directly at the July 24 hearing. In the meantime, staff offers the following assessment of the outstanding issues as they relate to the approval criteria established in Milwaukie Municipal Code (MMC) Subsection 19.402.12.B:

A. Avoid – *The proposed activity has less detrimental impact to the WQR than other practicable alternatives.*

The alignment of the new PMLR trackway, which has been approved by the Milwaukie City Council and all other relevant jurisdictions, will have unavoidable impacts on the WQR. With the approved alignment, the trackway must cross Crystal Creek. Earlier in the project planning phase, the applicant, City of Milwaukie, and applicable natural resource regulatory agencies discussed alternatives to the proposed retaining wall and mechanically stabilized earth (MSE) approach to minimize natural resource impacts. After consideration of a variety of factors, including potential impacts to the WQR, existing fish passage barriers, and financial cost, the proposed approach was determined to be the preferred alternative.

Although the applicant did not document in detail the critical evaluation of project alternatives, staff notes that such an analysis of options was indeed conducted. The Land Use Final Order (LUFO) issued by Metro in 2008 has the effect of making the proposed trackway format (i.e., retaining wall and MSE approach) the most practicable alternative. However, the LUFO does not exempt the applicant from demonstrating that impacts to the WQR are reasonably avoided and minimized as practicable.

B. Minimize – *The proposed activity within the WQR minimizes detrimental impacts to the WQR to the extent possible.*

The Commission's questions about use of chemical weed controls, pollutants emanating from the new PMLR trackway, and best management practices such as installing a plastic liner in the trackway all relate to the question of whether the project adequately minimizes impacts to the WQR. Staff expects that the applicant will address these issues at the July 24 hearing.

Regarding weed control on the PMLR trackway, it has already been noted that the City has a list of chemicals whose use in any WQR or Habitat Conservation Area (HCA) is prohibited. This list does not include glyphosate-based herbicides such as Round-Up or Rodeo. Chemically based methods are sometimes employed by natural resource managers and can be effective in a multi-pronged approach to controlling nuisance species plants. At the Commission's request, staff has revised the recommended conditions of approval to specify that no chemicals found on the City's Prohibited Chemicals List are to be applied within the WQR area. A copy of the Prohibited Chemicals List is attached for reference (see Attachment 3).

The Commission will have to consider the applicant's response to questions about trackway pollutants, determine whether the project has significant water quality impacts, and decide whether a trackway liner or other mitigation is appropriate to minimize identified impacts when it meets on July 24.

C. Mitigate – *The proposed activity mitigates for adverse impacts to the WQR.*

As originally proposed, the applicant's mitigation plan meets the City's minimum standards for WQR replanting, monitoring, and maintenance. However, at the July 10 hearing, the applicant volunteered to expand the proposed mitigation area by approximately 2,900 sq ft. The additional mitigation increases the ratio of mitigation area to permanent disturbance area by approximately 25% beyond the original proposal of 1:1. While the mitigation requirements of MMC 19.402.11 do not prescribe a specific ratio for WQR disturbance, the 1:1 figure was deemed sufficient for the recent decision on the PMLR Kellogg Bridge application (master land use file # WG-11-01).

The revised mitigation plan increases the area where nuisance plant species will be removed and replaced with native species, improving the likelihood that restored WQR areas will thrive. ESA, the City's on-call natural resource consultant, has agreed that the proposed mitigation is sufficient for the PMLR project's disturbance to the Crystal Creek WQR. Staff has revised the recommended findings and conditions of approval to formalize the expansion of the mitigation area.

Staff also made adjustments to the draft language presented at the July 10 hearing regarding the retention of fell logs within the mitigation area. The revisions set a more clear and objective minimum requirement for large wood retention, avoiding the discretion inherent in the original recommended condition.

CONCLUSIONS

The staff recommendation to the Planning Commission is as follows:

Approve application NR-12-01 and adopt the recommended Findings and Conditions of Approval as revised and presented in Attachments 1 and 2. This includes several key additions or revisions to the recommended Conditions of Approval:

- Specify that no chemicals found on the City's Prohibited Chemicals List shall be applied within the WQR.
- Clarify that the required mitigation area has been expanded by approximately 2,900 sq ft.
- Establish a more clear and objective requirement for the minimum amount of large wood to be retained within the mitigation area. *(Staff amended the language it presented to the Commission at the July 10 hearing, reducing the amount of discretion necessary to implement the condition and avoiding the need for an additional hearing to determine compliance.)*

DECISION-MAKING PROCESS

This application is subject to Type III review, which requires the Planning Commission to consider whether the applicant has demonstrated compliance with the code sections shown

above. In Type III reviews, the Commission assesses the application against review criteria and development standards and evaluates testimony and evidence received at the public hearing.

The Commission has 3 decision-making options as follows:

A. Approve the application subject to the revised recommended Findings and Conditions of Approval.

B. Approve the application with additional modifications to the recommended Findings and Conditions of Approval. Such modifications need to be read into the record.

C. Continue the hearing to July 31, 2012, at the Planning Commission meeting that was specifically scheduled for a hearing of the land use application for restoration of Mt Scott Creek at North Clackamas Park (file #NR-12-02). Unless the applicant agrees to extend the 120-day land use clock, the July 31 meeting represents the last scheduled opportunity the Planning Commission will have to make a decision on this application (file #NR-12-01).

The final decision on this application, which includes any appeals to the City Council, must be made by September 20, 2012, in accordance with the Oregon Revised Statutes and the Milwaukie Zoning Ordinance.

ADDITIONAL COMMENTS

No additional comments were received prior to the time this report was made final.

ATTACHMENTS

Attachments are provided only to the Planning Commission unless noted as being attached. All material is available for viewing upon request.

1. Revised Recommended Findings in Support of Approval – strikeout / underline version (attached)
2. Revised Recommended Conditions of Approval – strikeout / underline version (attached)
3. Prohibited Chemicals List (attached)

Recommended Findings in Support of Approval

(revised – ~~strikeout~~/underline version)

1. The applicant, TriMet ("the applicant"), is seeking land use approval to disturb a designated Water Quality Resource (WQR) as part of the Portland-Milwaukie Light Rail (PMLR) project. The process of constructing the PMLR trackway, extending and repairing an existing culvert under the new trackway, and replacing an existing culvert under SE 26th Avenue will result in temporary and permanent disturbance of the WQR that includes Crystal Creek, a small delineated wetland, and associated vegetated buffers.

2. The project area includes the rear portions of 3 residential lots at 2519, 2525, and 2535 SE Harrison Street. The properties are zoned Residential R-2. The site is located between SE 26th Avenue to the east and the Union Pacific Railroad (UPRR) right-of-way and existing trackway to the west. An overpass for Highway 224 runs east-west approximately 400 ft north of the site.

   The project area is undeveloped, though each of the 3 lots is developed with a single-family house structure and has a substantial rear yard where the WQR is located. The existing structure at 2535 SE Harrison St is used as an office for professional medical services. Adjacent properties to the south and west are primarily developed with single-family residential structures and to the east with multi-family residential structures.

   Crystal Creek flows east to west through the project area and under the UPRR trackway. An existing concrete foundation wall, a remnant of infrastructure from the historic Crystal Lake Park (early 1900s), diverts the creek and feeds a small wetland on the east side of the UPRR trackway. The project area is vegetated with approximately two dozen trees (Douglas fir, willow, big-leaf maple) but is dominated by invasive vegetation (primarily blackberry, ivy, and clematis).

3. The proposal is subject to the following provisions of Milwaukie Municipal Code (MMC) Title 19 Zoning:

   MMC 19.306 Residential Zone R-2

   MMC 19.402 Natural Resources

   MMC 19.700 Public Facility Improvements

   MMC 19.1006 Type III review

4. The Planning Commission reviewed the application in compliance with the Type III review process described in MMC 19.1006. As required, the applicant posted public notice at the site and the City mailed notices to surrounding property owners and residents within 300 ft of the site. The Planning Commission held a duly advertised public hearing considering the application on July 10, 2012; the hearing was continued to July 24, 2012.

5. The Planning Commission reviewed the application for compliance with the code sections listed in Finding 3.

   The Planning Commission finds that code sections not addressed in these findings are not applicable to the decision.

6. MMC 19.306 Residential R-2 zone

   MMC 19.306 establishes regulations for the R-2 zone. The PMLR trackway itself is part of a larger public transportation system and is allowable in all zones as a transportation facility. No other uses or structures are proposed.

The Planning Commission finds that no R-2 zone standards are applicable to the work proposed within the project area.

7. MMC 19.402 Natural Resources

   MMC 19.402 establishes regulations for designated natural resource areas. The standards and requirements of MMC 19.402 are an acknowledgment that many of the riparian, wildlife, and wetland resources in the community have been adversely impacted by development over time; and they are intended to minimize additional negative impacts and to restore and improve natural resources where possible.

   A. MMC 19.402.3 establishes applicability of the Natural Resource (NR) regulations, including all properties containing Water Quality Resources (WQRs) and Habitat Conservation Areas (HCAs) as shown on the City's NR Administrative Map. Specifically, MMC 19.402.3.G requires the submittal of a construction management plan for projects that will disturb more than 150 sq ft.

      The project area includes Crystal Creek and a small delineated wetland. These features, along with the associated vegetated buffer areas as defined in Table 19.402.9.A, constitute a WQR on the site. As proposed, the proposed development will disturb over 11,000 sq ft of WQR area.

      The Planning Commission finds that the requirements of MMC 19.402 are applicable to the subject property, including the requirement to provide a construction management plan according to the standards of MMC 19.402.9.

   B. MMC 19.402.8 establishes that certain activities within a designated WQR, including development activities allowed in the base zone, are subject to Type III review (MMC 19.1006) and the general discretionary review criteria provided in MMC 19.402.12.

      The proposed construction of the light rail trackway within a WQR is not exempt from the provisions of MMC 19.402, nor is it permitted as a Type I or Type II activity.

      The Planning Commission finds that the proposed development is subject to Type III review (MMC 19.1006) and that the general discretionary review criteria of MMC 19.402.12 apply to the proposed disturbance of the WQR area.

   C. MMC 19.402.9 establishes standards for construction management plans, which are required for projects that disturb more than 150 sq ft of natural resource area. Construction management plans must provide information related to site access, staging of materials and equipment, and measures for tree protection and erosion control.

      As noted in Finding 7-A, above, a construction management plan is required prior to commencement of the proposed development activity. A construction management plan was not included with the application submittal, so a condition is established to ensure that a construction management plan, with the information required by MMC 19.402.9, is provided as part of the development permit review process.

      The Planning Commission finds that, as conditioned, this standard is met.

   D. MMC 19.402.11 establishes development standards for projects that impact a natural resource.

      i. MMC 19.402.11.A provides standards for protecting natural resource areas during development, including requirements to mark work areas, flag WQR and HCA areas that are to remain undeveloped, and conduct all work in accordance with an approved construction management plan.

The proposed project is subject to all relevant standards in MMC 19.402.11.A. A condition is established to ensure that all project work is performed in accordance with an approved construction management plan.

As conditioned, the Planning Commission finds that this standard is met.

ii. MMC 19.402.11.B establishes general standards for required mitigation, including requirements related to items such as plant species, size, spacing, and diversity, as well as location of mitigation area, removal of invasive vegetation, and plant survival.

The applicant has provided a general mitigation plan for the proposed disturbance to the WQR. The plan includes information about species, size, spacing, and survival within a designated mitigation area. As proposed, existing nuisance species vegetation will be removed and the mitigation area will be planted or seeded with native species to 100% surface coverage as required. The applicant has proposed to maintain the mitigation effort for 5 years after planting. A condition is established to require a more detailed plan for implementation of the approved mitigation, including timelines for planting, maintenance, and monitoring, as well as a contingency plan.

As conditioned, the Planning Commission finds that this standard is met.

iii. MMC 19.402.11.C establishes mitigation requirements for disturbance within WQRs. The requirements vary depending on the existing condition of the WQR, according to the categories established in MMC Table 19.402.11.C. For Class B "Marginal" WQR conditions, MMC Table 19.402.11.C requires that disturbed areas be restored and mitigated with native species from the Milwaukie Native Plant List, using a City-approved plan developed to represent the vegetative composition that would naturally occur on the site.

According to the applicant's inventory of vegetation in the WQR, the combination of trees, shrubs, and ground cover and the percentage of tree canopy are sufficient to categorize the existing condition as Class A "Good." However, the applicant has noted that most of the shrub and ground cover vegetation consists of nuisance species and that, if the nuisance species were removed, the actual condition of the WQR would be Class B "Marginal."

ESA, the City's on-call natural resource consultant, has reviewed the applicant's materials and visited the site to assess existing conditions. Within the wetland area, ESA observed a variety of native plants in addition to the nuisance species noted by the applicant. However, ESA concurs overall with the applicant's assessment of the existing condition of the WQR as Class B "Marginal" instead of Class A "Good," due to the large percentage of nuisance species.

Within the WQR, the proposed development will permanently disturb 0.2 acres and temporarily disturb 0.06 acres. As proposed, all temporary disturbance areas will be revegetated with native plants. As mitigation for permanent disturbance, the applicant has proposed to restore approximately 0.25 acres within the WQR, within an area available for mitigation through a temporary construction easement. The applicant proposes to remove existing nuisance species vegetation, remove an existing concrete foundation wall that impedes stream flow, minimally re-grade the area to improve drainage to the new culvert extension, and revegetate the area with native plants. According to the applicant, the proposed mitigation is intended to create a multi-canopy arrangement of plantings that, once established, will prevent the return of nuisance species and will reset the ecological conditions of the site.

ESA has assessed the proposed mitigation plan and determined that it is generally sufficient as mitigation for the proposed permanent disturbance to the WQR. ESA offered one suggestion for improving the mitigation plan: within the mitigation area,

retain ~~the~~some fell logs from trees downed as part the project, to provide immediate nutrients and large woody and organic material. A condition is established to incorporate this suggestion and ensure that the mitigation plan adequately compensates for detrimental impacts to the ecological functions of the WQR.

As conditioned, the Planning Commission finds that this standard is met.

The Planning Commission finds that, as conditioned, the proposed development meets the applicable standards of MMC 19.402.11.

E. MMC 19.402.12 establishes a discretionary process for analyzing the impacts of development on WQRs and HCAs.

i. MMC 19.402.12.A requires a report presenting an evaluation of impacts and analysis of alternatives for the proposed development. The report must be prepared and signed by a qualified natural resource professional and must include several specific elements, which are addressed below.

The submittal materials include a WQR report prepared by Vigil-Agrimis, a professional firm specializing in engineering, landscape design, and environmental science. The report includes an evaluation of impacts and analysis of alternatives sufficient to address the required elements listed below.

a) MMC 19.402.12.A.1 requires identification of the ecological functions of riparian habitat found on the subject property.

The applicant's WQR report provides an assessment of the existing ecological functions of the Crystal Creek riparian habitat. Overall, the WQR within the project area is in a state of ecological decline. Although there is substantial canopy provided by native species trees, the shrub layer and ground cover are dominated by non-native nuisance species (primarily blackberry, ivy, and clematis) that are out-competing native plants and preventing the regeneration of trees and other native species. A concrete foundation wall, a remnant from past development at the historic Crystal Lake Park in the early 1900s, is in the stream channel, where it alters the natural stream flow and causes active erosion. (Note: The site is not on the City's list of historic properties.)

ESA reviewed the applicant's WQR report and generally concurs with the applicant's assessment of ecological functions and values of the WQR. The applicant's identification of ecological functions is sufficient to meet this requirement.

b) MMC 19.402.12.A.2 requires an inventory of vegetation, sufficient to categorize the existing condition of the WQR per MMC Table 19.402.11.C.

The applicant's WQR report includes an inventory of existing vegetation within the project area. Tree canopy covers approximately 68% of the project area, shrubs cover approximately 91%, and ground cover and vines cover approximately 92%. The trees are mostly native species (willow, Douglas fir, big leaf maple); the shrub and groundcover layers are dominated by nuisance species (Armenian blackberry, English ivy, and clematis).

According to MMC Table 19.402.11.C, the existing condition of the WQR is Class A "Good." However, the applicant has noted that the area would be categorized as Class B "Marginal" if the most prolific nuisance plants (blackberry, ivy, and clematis) were removed and not included in the assessment. The nuisance plants are further degrading the tree canopy and preventing the growth of new trees.

ESA has reviewed the applicant's WQR report and visited the site to assess existing conditions. Overall, ESA concurs with the applicant's assessment of the existing condition of the WQR as Class B "Marginal."

c) MMC 19.402.12.A.3 requires an assessment of the water quality impacts related to the proposed development.

The applicant's WQR report notes that direct impacts to water quality resulting from the proposed development will be minimal. Erosion control measures will be established, staging areas will be located at least 150 ft from any water body, and all temporarily disturbed areas will be restored following construction. Thirteen (13) trees within the WQR will be removed as part of the temporary and permanent disturbance, including 8 trees within 20 ft of Crystal Creek. However, the WQR report notes that temperature and water quality in Crystal Creek are more directly affected by Crystal Lake than by tree canopy. And approximately 45 native trees will be planted as mitigation, which will eventually re-establish a comprehensive canopy.

ESA has reviewed the applicant's WQR report and generally concurs with the applicant's assessment of the proposed development's impacts on water quality. ESA has noted that the report did not sufficiently discuss the project's impacts on sediments, sediment control, or nutrients. A condition is established to ensure that a construction management plan (including provisions for sediment control) is provided as part of the development permit process. Another condition is established to ensure that ~~the~~some fell logs from trees removed as part of the project are retained within the mitigation area to provide immediate nutrients and large woody and organic material. As conditioned, the applicant's assessment of water quality impacts is adequate.

d) MMC 19.402.12.A.4 requires an analysis of alternatives to the proposed development, including an explanation of the rationale behind choosing the alternative selected.

Within its approved alignment, the PMLR trackway will cross Crystal Creek and pass through the adjacent WQR area. Therefore, some intrusion into and disturbance of the WQR is inevitable for the PMLR project.

The applicant's WQR report asserts that the proposed development, which involves using mechanically stabilized earth (MSE) behind a new retaining wall to construct the PMLR trackway, is the most practicable alternative. Although the applicant's WQR report does not directly discuss other specific alternatives in detail, it does note several relevant considerations:

- *Crystal Creek already passes through a culvert under the existing Union Pacific Railroad (UPRR) trackway. The proposed development would simply extend the existing culvert under the new PMLR trackway.*
- *There is no documented history of Crystal Creek being a fish-bearing stream for protected species.*
- *Additional barriers to fish passage in Crystal Creek exist both upstream and downstream from the project area.*
- *The Oregon Department of Fish & Wildlife (ODFW) has granted the applicant an exemption to the requirements to maintain standard fish-passage conditions in Crystal Creek. The applicant is not required by ODFW to establish or maintain particular conditions for fish passage in Crystal Creek.*

Given these considerations, in addition to the fact that the overall project has been approved by all of the relevant federal and state agencies, it is reasonable to conclude that the proposed culvert extension, using MSE and a retaining wall to establish the new trackway, is in fact the most practicable, least impactful option.

e) For alterations to existing structures within the WQR, MMC 19.402.12.A.5 requires the presentation of evidence that 1) no practicable alternative design or method of development exists that would have a lesser impact on the WQR than the one proposed and 2) mitigation is provided for impacts to the WQR.

As noted in Finding 7-E-i(d), above, the proposed development (using mechanically stabilized earth and a retaining wall for the new trackway) represents the least impactful, most practicable alternative regarding disturbance to the WQR. As noted in Finding 7-E-i(f), below, the proposed mitigation of impacts is designed to reset a healthy ecological function for the WQR.

f) MMC 19.402.12.A.6 requires a mitigation plan, including a description of the proposed development's impacts to the WQR, a map showing where mitigation activities will occur and a schedule and timeline for implementation.

The applicant's WQR report includes a description of the proposed disturbances to the WQR. The new PMLR trackway will result in a permanent disturbance of 0.2 acres, with 0.06 acres of temporary disturbance for construction access. A map (Figure 2: Mitigation Area) shows the location of temporary and permanent disturbance areas within the WQR.

Existing trees to remain on the site will be protected, and an area equal to the permanent disturbance area will be restored with native species trees, shrubs, and ground cover. The concrete foundation wall within the stream channel will be removed to restore a more natural stream hydrology within the WQR. The nuisance species plants that currently dominate the area will be removed, reversing the trend of ecological decline and resetting a natural course for a healthy, native vegetation community within the WQR.

The mitigation plan includes some general information about how the work will be conducted within the WQR. Erosion and sediment control measures will be established prior to the commencement of work, and cleared areas will not be left unprotected for more than 24 hours. According to the planting list included in the applicant's WQR report, cleared areas will be re-seeded within 48 hours of disturbance and will be replanted with trees and shrubs as soon as practicable. Unless the Oregon Department of Fish & Wildlife (ODFW) grants an extension, in-stream work will be conducted during the ODFW-sanctioned window of July 15 through August 31.

ESA has reviewed the mitigation plan provided in the WQR report and concluded that it is generally sufficient, given the amount and type of disturbance proposed. A condition is established to require a more detailed plan for implementation of the approved mitigation, including timelines for planting, maintenance, and monitoring, as well as a contingency plan. An additional condition is established to require that <u>some</u> fell logs from the trees downed within the project area be retained in the mitigation area.

As conditioned, the Planning Commission finds that the WQR report provided by the applicant meets the applicable standards of MMC 19.402.12.A.

ii. MMC 19.402.12.B establishes criteria for approving disturbances to the WQR.

a) MMC 19.402.12.B.1.a requires that the proposed development shall avoid intrusion into the WQR to the extent practicable and that it be the least impactful alternative.

The alignment of the PMLR trackway, which the Milwaukie City Council and Metro approved, crosses Crystal Creek and passes through the adjacent WQR. The approved alignment location makes intrusion into and some disturbance of the WQR inevitable.

As discussed in Finding 7-E-i(d), above, Crystal Creek already passes through a culvert under the existing Union Pacific Railroad (UPRR) trackway; the proposed development will extend the existing culvert. There is no documented history of Crystal Creek being a fish-bearing stream for protected species. Additional barriers to fish passage in Crystal Creek exist both upstream and downstream from the project area. The Oregon Department of Fish and Wildlife (ODFW) granted the applicant a waiver from the requirement to establish or maintain particular conditions for fish passage in Crystal Creek. Given these circumstances, repairing and extending the existing culvert and using mechanically stabilized earth (MSE) and a retaining wall represents the least impactful alternative for the new trackway that is practicable.

As proposed, this criterion is met.

b) MMC 19.402.12.B.1.b requires that the proposed development shall minimize detrimental impacts to the WQR to the extent practicable.

The project proposal limits the area of WQR disturbance and the number of existing trees that will be removed to the minimum necessary, and provides protection for the WQR area and the trees that will remain. Temporary disturbance for trackway construction and for access to the project area will be limited to the minimum necessary for construction access, both along the new trackway and into the project area from SE 26th Avenue.

The proposed development is subject to all applicable development standards, including measures to protect areas within the WQR that will not be disturbed by the proposed development. A condition is established to ensure that all project work is performed in accordance with an approved construction management plan. An additional condition is established to confirm that no chemicals found on the City's Prohibited Chemicals List shall be applied within the WQR area.

As conditioned, this criterion is met.

c) MMC 19.402.12.B.1.c requires that the proposed development shall mitigate for detrimental impacts to the WQR. Mitigation shall be on site, use native plants, be done in accordance with allowable windows for in-water work, and follow a mitigation maintenance plan.

The applicant has proposed to mitigate for permanent impacts to the WQR by restoring an area equal to the permanent disturbance area (0.2 acres). Existing nuisance plant species will be removed from the mitigation area. The applicant will also remove a concrete foundation wall from the stream channel, improving stream flow and water quality. Removal of the concrete wall will require removal of 1 small willow tree that is growing out of the foundation. The mitigation area will be replanted with native species, including approximately 45 trees and 130 shrubs, and the area will be minimally re-graded to establish a more natural channel and direct water into the newly extended culvert. The proposed mitigation is designed to reset the ecological balance of the area in favor of native species and more natural stream and wetland hydrology.

ESA has assessed the proposed mitigation plan and determined that it is generally sufficient as mitigation for the proposed permanent disturbance to the WQR. ESA offered one suggestion for improving the mitigation plan: within the mitigation area, retain ~~the~~some fell logs from trees downed as part the project, to provide immediate nutrients and large woody and organic material. A condition is established to address this suggestion and ensure that the mitigation plan adequately compensates for detrimental impacts to the ecological functions of the WQR.

As conditioned, this criterion is met.

The Planning Commission finds that, as conditioned, the proposed development meets the approval criteria established in MMC 19.402.12.B.

The Planning Commission finds that, as conditioned, the proposed development meets the applicable standards of MMC 19.402.12.

F. MMC 19.402.15 establishes standards for verifying the boundaries of WQRs and HCAs and for administering the City's Natural Resource (NR) Administrative Map. The locations of WQRs are determined based on the provisions of MMC Table 19.402.15. In general, for primary protected water features, the WQR includes the feature itself and a vegetated corridor that extends 50 ft from the top of bank (for streams) or delineated edge of the feature (for wetlands).

The application submittal includes a map showing the location of Crystal Creek, a primary protected water feature. The map also shows the location of the wetland associated with the creek, the delineation of which has been approved by the Oregon Department of State Lands (DSL). The vegetated corridors adjacent to both protected water features have been determined in accordance with the provisions of MMC Table 19.402.15, including an accounting for steep slopes in the project area.

ESA visited the site and reviewed the applicant's map of the WQR. ESA concurs with the applicant's presentation of the location of the primary protected water features (Crystal Creek and the associated wetland) and the adjacent vegetated corridors that comprise the WQR.

The Planning Commission finds that the WQR is accurately mapped according to the relevant provisions of MMC 19.402.15.

The Planning Commission finds that, as conditioned, the proposed development meets all the applicable standards of MMC 19.402.

8. MMC 19.700 Public Facility Improvements

The purpose of MMC 19.700 is to ensure that development provides public facilities that are safe, convenient, and adequate in rough proportion to their public facility impacts. As per MMC 19.702.3.G, public capital improvement projects are exempt from the standards of MMC 19.700.

The Portland-Milwaukie Light Rail (PMLR) project is part of a larger, regional public transportation system and represents a type of capital improvement project. The standards of MMC 19.700 are not applicable to the proposed work.

9. The City distributed the subject application to the following City departments and agencies for review and comment on May 23, 2012: City of Milwaukie Building, Engineering, and Operations Departments; Clackamas County Fire District #1; Historic Milwaukie Neighborhood District Association; TriMet; U.S. Army Corps of Engineers; Oregon Department of State Lands; and ESA, the City's on-call natural resource consultant. The

City mailed notice of the initial public hearing to property owners and current residents at all properties within 300 ft of the subject property on June 20, 2012.

The following is a summary of the comments received by the City:

- **Rob Livingston, City of Milwaukie Erosion Control Specialist:** No specific comments on this application. Will review the Erosion, Sediment, and Pollution Control Plan submitted as part of actual construction, as referenced on Page 8 (third paragraph) of the applicant's WQR report.
- **Zach Weigel, City of Milwaukie Engineering Department:** The provisions of MMC 19.700 Public Facility Improvements are not applicable to the proposed development.

  Response: This comment has been incorporated into the Findings.
- **Jean Baker, co-chair of Historic Milwaukie NDA:** There are no further questions at this time. *(Note: NDA members met with TriMet staff met on June 18, 2012, to address questions site access, phasing of construction and mitigation, the ODFW fish-passage exemption, and repurposing of trees removed.)*
- **Sarah Hartung and Alison Sigler, Biologists with ESA:** As the City's on-call natural resource consultant, ESA reviewed the application; assessed the existing conditions, alternatives analysis, and proposed mitigation plan; and prepared a report summarizing the analysis.

  Response: The ESA analysis has been incorporated into the Findings.

Recommended Conditions of Approval

(revised – ~~strikeout~~/underline version)

1. Prior to issuance of any building or other permits for development on the subject property, the following shall be resolved:

   A. Unless otherwise required by these conditions of approval, all plans submitted for development permits for the subject property shall be substantially similar to those submitted as part of the final land use application (stamped received on May 18, 2012, for most of the applicant's materials; or June 7, 2012, for the revised Figure 1 (Existing Conditions)).

   B. Provide a construction management plan that shows the following:

      i. Demarcation of the Water Quality Resource (WQR) and the location of disturbance areas (temporary and permanent)

      ii. Erosion and sediment control measures

      iii. Measures to protect trees and other vegetation located within the WQR but outside of the approved disturbance area

      iv. Location of any site access (ingress and egress) that construction or mitigation equipment will use

      v. Any equipment and material staging or stockpile areas

   C. Provide a final mitigation plan that includes the following details:

      i. Clear indication of the person responsible for the mitigation work, including primary contact, phone number, and address.

      ii. Demarcation of planting areas for mitigation of temporary and permanent disturbances to the WQR. The mitigation area shall be expanded by approximately 2,900 sq ft beyond the areas shown in the plans presented with the applicant's original submittal, to encompass the entirety of the area within the applicant's temporary construction easement.

      iii. Locations of particular plant species within the mitigation planting area—plantings shall be appropriate for particular conditions (e.g., sun/shade, wet/dry, etc.) and shall be native, non-nuisance species from the Milwaukie Native Plant List.

      iv. A note that ~~fell logs~~ a minimum of 4 pieces of large wood from trees removed from within the WQR shall be retained within the mitigation area ~~as practicable~~, to provide immediate nutrients and large woody and organic material for habitat or other ecological benefit. For purposes of these conditions, "pieces of large wood" shall mean logs at least 20 ft long and at least 15 in diameter at breast height.

      v. A note specifying that no chemicals listed on the City's Prohibited Chemicals List shall be applied within the WQR area.

      vi. Timeline for planting, with schedule for watering, maintenance, monitoring, and replacement of plants—the timeline shall note that monitoring and maintenance will continue for at least 5 years after planting, to ensure 80% survival of the mitigation plantings. Throughout this 5-year establishment period, nuisance

species plants shall be removed and/or otherwise controlled within the mitigation area.

vii. Contingency plan for ensuring that work will be completed as proposed

2. Prior to final inspection for any development permit for the subject property, implement the final mitigation plan for disturbance to the WQR, including the following tasks:

   A. Remove all invasive nonnative vegetation and any debris or noxious material from within designated mitigation planting areas.

   B. Install trees, shrubs, and ground cover according to the details provided in the final mitigation plan and in accordance with the standards provided in MMC 19.402.11.B. This includes standards for plant size, spacing, and survival.

   C. Provide a signed statement from the responsible party identified in Condition 1-C-i above, stating that all mitigation plantings have been installed according to the final mitigation plan.

   D. <u>As outlined in Condition 1-C-iv, demonstrate that a minimum of 4 pieces of large wood, from trees removed from within the WQR, remain within the mitigation area.</u>

3. The land use approval shall expire and become void unless both of the following steps are completed:

   A. Obtain all necessary development permits and start construction within 2 years of land use approval.

   B. Pass final inspection within 4 years of land use approval.

PLANNING DEPARTMENT
6101 SE Johnson Creek Blvd
Milwaukie OR 97206

PHONE: *503-786-7630*
FAX: *503-774-8236*
E-MAIL: *planning@ci.milwaukie.or.us*

Prohibited Chemicals List

Everyone in Milwaukie has a hand in protecting the City's water resources and drinking water supply.

The chemicals listed below—commonly found in herbicides, pesticides, and insecticides—pose health risks and damage the environment and are therefore prohibited within the City's designated Water Quality Resources (WQRs) and Habitat Conservation Areas (HCAs).

To learn if a property is located in one of these sensitive areas, please call the **Planner on Duty (503-786-7630)** or enter **"Natural Resources Administrative Map"** into the search bar of the City of Milwaukie's homepage: www.cityofmilwaukie.org.

Natural alternatives to the chemicals found in these products are available in most garden centers.

.....

As per Milwaukie Municipal Code Subsection 19.402.5.E, application of pesticides containing any of the chemicals listed below is prohibited within designated Water Quality Resources (WQRs) and Habitat Conservation Areas (HCAs):

(Sample trade names are listed in parentheses for reference.)

- 2,4-D *(in various Weed 'n Feed products, but prohibited only for direct aquatic application)*
- Azinphos-methyl *(Guthion)*
- Bensulide *(Prefar)*
- Bromoxynil *(Buctril)*
- Carbaryl *(Sevin)*
- Chlorpyrifors *(Dursban, Lorsban)*
- Diazinon *(many brand names)*
- Dimethoate *(Cygon)*
- Diuron *(Direx, Karmex)*
- Fenbutatin-oxide *(Vendex)*
- Malathion *(many brand names)*
- Methomyl *(Lannate)*
- Methyl-parathion *(Penncap-M)*
- Metolachlor *(Dual)*
- Naled *(Dibrom)*
- Phorate *(Thimet)*
- Triclopyr BEE *(Garlon-4)*

MILWAUKIE
Dogwood City of the West

To: **Planning Commission**

Through: **Scot Siegel, Interim Planning Director**

From: **Li Alligood, Associate Planner**

Date: **July 17, 2012, for July 24, 2012, Public Hearing**

Subject: **File:** CSU-12-07, DR-12-05, VR-12-04
Applicant: Jeff Joslin, KLK Consulting, Inc.
Owner(s): TriMet[1]
Address: 2103 & 2105 SE Adams St
Legal Description (Map & Taxlot): 1S1E36BC01901, 1902, & 1903
NDA: Historic Milwaukie

ACTION REQUESTED

Review and approve applications CSU-12-07, DR-12-05, and VR-12-04 with the recommended Findings and Conditions of Approval found in Attachments 1 and 2. This action would approve a design for a signal and communications building as part of the Portland Milwaukie Light Rail (PMLR) project in downtown Milwaukie.

BACKGROUND INFORMATION

A. Site and Vicinity

The site is triangular in shape and is comprised of an existing tax lot at 2103 SE Adams St (Tax Lot 1S1E36BC01901). The site borders Union Pacific Railroad (UPRR) right-of-way to the north and west. The surrounding area consists of a mix of industrial and office uses to the east and south and freight rail tracks to the west. The site will be accessed via an easement across 2015 SE Adams (Tax Lots 11E36BC01902 & 1903).

The images below show an aerial view of the site (left) and the site from the south at Adams St (right). The building on the site has been removed.

[1] TriMet owns the property at 2103 SE Adams St. The property at 2105 SE Adams St is owned by O'Donnell Holdings LLC.

B. Zoning Designation

Downtown Office Zone (DO).

C. Comprehensive Plan Designation

Town Center (TC).

D. Land Use History

- **1985:** Administrative approval of a minor land partition, lot line adjustment, and variance to the minimum lot width of the property (File #VR-85-10). This approval established the subject site and approved a variance of 2.2 ft to the minimum 50 ft lot width. The approval also required the establishment of a 10-ft wide sewer easement between the buildings for service to the property at 2206 SE Washington St.

E. Other Approvals

- **2008:** Land use final order issued by Metro[2] for the entire PMLR alignment and related systems buildings pursuant to House Bill 3478 (1996), which provides for the review and siting of regional transportation facilities through local jurisdictions. This land use final order (LUFO) allows the City to review the signal and communications building against the City's design and development standards to ensure that it respects Milwaukie's existing small town character, fine-grained development pattern, and future development aspirations. The City may subject the proposed building to reasonable and necessary conditions of approval to ensure conformance with local standards and appropriate mitigation of local impacts. It cannot, however, condition the approval of the building in such a way as to prevent the implementation of the 2008 LUFO.

F. Proposal

The applicant is seeking land use approvals for construction of a PMLR signal and communications building. See Attachment 4 for details. The project requires approval of the following applications by the Planning Commission:

[2] Metro Resolution No. 08-3964 entitled 2008 South/North Land Use Final Order (LUFO) Amendment.

1. Design Review (DR-12-05): The site is located in the Downtown Office Zone, and all new construction in the downtown zones is subject to Downtown Design Review. The applicant requested a modification to the design standards for roofs, and authorization to use prohibited wall materials. Design Review application DR-12-05 was reviewed by the Design and Landmarks Committee (DLC) on July 2, 2012. The DLC recommended approval of the application at that time. The DLC's recommended findings and conditions of approval have been incorporated into Attachments 1 and 2 respectively.
2. Community Service Use (CSU-12-07): The proposed signal and communications building is permitted in the DO zone as a Utility, subject to community service use review.
3. Variance Review (VR-12-04): The applicant has requested a variance to the development standards of the DO zone related to the minimum floor area ratio (FAR). The DLC recommended approval of variance application VR-12-04 on July 2, 2012. The DLC's recommended findings and conditions of approval have been incorporated into Attachments 1 and 2 respectively.

G. Specific Design Elements

Below is an overview of the key design elements under review.

- Building materials – The building walls will be constructed of painted CMU block and standing seam galvanized metal panels, with woven metal cladding mounted to the wall and door surfaces. The proposed roof is standing seam galvanized metal, with a membrane base green roof alternative if funding becomes available. See Exhibits P14 and P24 of the application.
- Retaining wall finishes – The surface of the retaining walls on site will be textured with a formliner that resembles a rusticated masonry surface. See Exhibit P31 of the application.
- Fencing and railings – Ornamental "Milwaukie black" metal railings are proposed along the western and southern site frontage. Fencing and the security gate between the site and property to the east is a delicate, welded wire design. See Exhibits D1, D2, D9, and P28-P30 of the application.
- Landscaping – A combination of flowers, shrubs, and ground cover landscaping is proposed for the site, and Boston Ivy is proposed at the base of the 21st Ave retaining wall. See Exhibits D3 and P3 of the application.
- Lighting – The applicant has proposed the use of linear LED fixtures above each entrance. See Exhibits P14 and P26 of the application.

H. Compliance with the Downtown Design Guidelines

Though the signal and communications building is utilitarian in purpose, it has been designed to fit into the existing fabric of downtown Milwaukie. The scale of the building is appropriate for the site and location.

The use of traditional materials on site, such as concrete retaining walls texturized with rusticated stone formliners and "Milwaukie black" gates and railings provide a sense of permanence and quality and respect the City's urban design aspirations. The use of

contemporary materials for the building provides contrast, allows the building to visually recede, and relates to the adjacent buildings.

Overall, as conditioned, the building appears to meet the intent and spirit of the Milwaukie Downtown Design Guidelines.

KEY ISSUES

Summary

Staff has identified the following key issue for the Planning Commission's deliberation. Aspects of the proposal that are not described in the analysis below are addressed in the Findings (see Attachment 1) because they either require less analysis and discretion by the Commission or have already been vetted by the DLC.

A. Do the public benefits of the proposal outweigh any negative impacts?

A key approval criterion for the establishment of a Community Service Use (CSU) is that the public benefits of the proposal outweigh any actual or potential negative impacts.

The public benefits resulting from development of the PMLR project are expected to be substantial, both locally and regionally. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development. Additionally, locating the signal and communications building on a below-grade site adjacent to existing freight rail tracks minimizes the visual impact to adjacent properties and provides a buffer between the rail activity and other uses on this section of Adams St.

Potential negative impacts include visual impacts and physical impacts to adjacent properties. Visual impacts have been mitigated by the downtown design review process and the below-grade nature of the site. However, the physical impacts to the adjacent properties have not been fully explored.

There are two potentially impacted properties: 2105 SE Adams St to the east and 2206 SE Washington St to the northeast. See Attachment 3 for additional information.

- <u>2105 SE Adams St</u>

  The development site will be accessed via a 25-ft easement across the south side of the property. The business located on site, Myles O'Donnell & Co, will be able to retain the off-street parking and loading dock parking adjacent to the building on the south side. A retaining wall and fencing will be installed at the southern lot line in order to accommodate the re-graded Adams St; the wall and fence and will extend approximately 20 feet across the 2105 SE Adams St property frontage.

  The primary potential negative impact to this property is related to future development. If the easement is permanent and tied to a single location, the redevelopment potential of the site at 2105 SE Adams would be severely compromised, would require variances to the maximum setback standard of the DO zone, and would impact the

development's ability to comply with the downtown design guidelines related to pedestrian emphasis and architecture.

In order to mitigate this potential impact, staff recommends a condition of approval requiring flexibility regarding the location of the access easement on the site at 2105 SE Adams St.

- 2206 SE Washington St

  A recorded permanent sewer easement[3] across the properties at 2103 and 2105 SE Adams St (Tax Lots 1S1E36BC01901 & 1902) provides access for the repair and maintenance of an existing sewer line serving the residence on site. The easement was located between the buildings on the sites. Staff has confirmed that the property's sewer line is currently connected to the Adams St trunk line and the easement is still effective.

  The easement was established as a condition of approval of land use file #M-85-03. The applicant proposes to construct a fence and gate alone the eastern border of the site. This could result in blocking access to the easement.

  In order to mitigate this potential impact, staff recommends a condition of approval requiring retention of access to the recorded sewer easement area.

CONCLUSIONS

A. Staff recommendation to the Planning Commission is as follows:

Approve the application for the PMLR signal and communications building with the recommended findings and conditions of approval in Attachments 1 and 2.

CODE AUTHORITY AND DECISION-MAKING PROCESS

The portion of the proposal being considered by the Design and Landmarks Committee (DLC) is subject to the Milwaukie Design Guidelines and the following provisions of the Milwaukie Zoning Ordinance, which is Title 19 of the Milwaukie Municipal Code (MMC).

- Chapter 19.1000 Review Procedures
- Section 19.904 Community Service Uses
- Section 19.907 Downtown Design Review
- Section 19.911 Variances
- Chapter 19.700 Public Facility Improvements
- Subsection 19.310.4 Downtown Zones Development Standards
- Subsection 19.310.6 Downtown Zones Design Standards

All three applications are subject to Type III review, which requires the Planning Commission to consider whether the applicant has demonstrated compliance with the code sections shown

[3] Clackamas County Recording Certificate #85-18365.

above. In Type III reviews, the Planning Commission considers the DLC recommendation on the Design Review application, assesses all three applications against all applicable provisions of the Milwaukie Zoning Ordinance, and evaluates testimony and evidence received at the public hearing.

The Commission has 3 decision-making options as follows:

A. Approve the application subject to the recommended Findings and Conditions of Approval.

B. Approve the application with modified Findings and Conditions of Approval. Any modifications must be read into the record.

C. Continue the hearing to Tuesday, August 14. The final decision on the application, which includes any appeals to the City Council, must be made by October 6, 2012, in accordance with the Oregon Revised Statutes and the Milwaukie Zoning Ordinance. Unless the applicant extends the time period within which the City must make a decision, a hearing continuation beyond August 14, 2012, is not feasible.

COMMENTS

The application was referred for comment to the following agencies and persons: City of Milwaukie Building, Engineering, and Community Development Departments; Clackamas County Fire District #1; Historic Milwaukie Neighborhood District Association; Clackamas County; Metro; ODOT Rail Division; and TriMet.

The following is a summary of the comments received by the City. See Attachment 5 for further details. Any comments received after this date but before the July 24, 2012, public hearing will be brought to the hearing.

- **Tom Larsen, Building Official:** No specific comment.
- **Zach Weigel, Civil Engineer:** Comments regarding public facility improvements, recommended conditions of approval regarding clear vision, and advisory notes regarding stormwater management.

  Staff Response: These comments have been incorporated into the recommended findings and conditions of approval.
- **Shawn Olson, Clackamas County Fire District #1:** No comments at this time.
- **Wendy Hemmen, Light Rail Design Coordinator:** Pole light on site must be relocated to the public right-of-way.

  Staff Response: The applicant has agreed to relocate the pole light fixture off-site.
- **Patrick O'Donnell, Myles O'Donnell & Co, 2105 SE Adams St:** Concerns about off-street parking, maneuvering on site, retaining walls and fencing along Adams St in front of his business, and visibility of business signage.

  Staff Response: Mr. O'Donnell has been working with TriMet and City staff to address his stated concerns.

ATTACHMENTS

Attachments are provided only to the Planning Commission unless noted as being attached. All material is available for viewing upon request.

1. Recommended Findings in Support of Approval (attached)
2. Recommended Conditions of Approval (attached)
3. Site Maps (attached)
    A. Vicinity Map
    B. Zoning Map
    C. Aerial Photo
    D. Easements Map
4. Applicant's Narrative and Supporting Documentation dated June 8, 2012 (4.A-C e-packet only)**
    A. Narrative
    B. Exhibits D1 – D9 (Illustrations)
    C. Exhibits P1 – P31 (Architectural Plans)
    D. Revised Exhibit P2, dated July 2, 2012 (attached)
5. Comments Received
6. List of Materials and Exhibits

(**Attachments 4.A-C were provided to the Planning Commission on June 13, 2012.)

Recommended Findings in Support of Approval

1. The applicant, Jeff Joslin, KLK Consulting, Inc, for TriMet, submitted three land use applications (the "application") for approval of a signal and communications building as part of the Portland Milwaukie Light Rail (PMLR) project. The applicant requests approval for the building design. The application has been assigned the following file numbers and consists of the following application types:

   - CSU-12-07: Community Service Use
   - DR-12-05: Design Review
   - VR-12-04: Variance Review

2. The site is 2103 SE Adams St, Tax Lot 11E36BC01901. The site is currently vacant. The site will take access from Adams St through an access easement across 2105 SE Adams (Tax Lots 11E36BC01902 & 1903), to the east. The site borders Union Pacific Railroad (UPRR) right-of-way to the north and west. The surrounding development is a combination of light industrial and office buildings.

3. The PMLR alignment, which includes the location of specific project elements such as the light rail station, has an existing land use approval that was issued by Metro in 2008.[1] This land use final order (LUFO) was made pursuant to House Bill 3478 (1996), which provides for the review and siting of regional transportation facilities through local jurisdictions. The City may subject the building to reasonable and necessary conditions of approval to ensure conformance with local standards and appropriate mitigation of local impacts. It cannot, however, condition the approval of the building in such a way as to prevent the implementation of the 2008 LUFO.

4. The application was submitted on May 2, 2012. It was initially deemed incomplete by City staff on May 14, 2012. The applicant revised and resubmitted the application on June 8, 2012, and requested that the application be deemed complete. The City deemed the application complete on June 8, 2012. The City has until October 6, 2012, to issue a final decision on the application.

5. The signal and communications building site has a base zone designation of Downtown Office (DO). As proposed, the building is subject to Community Service Use review, Downtown Design Review, and Variance Review.

6. The application is further subject to MMC 19.906 Development Review at or before the time of development permit submittal. The purpose of Development Review is to ensure compliance with applicable standards and conditions of approval through an efficient review process that effectively coordinates the City's land use and development permit review functions.

7. The Design and Landmarks Committee (DLC) evaluated the Design Review application (DR-12-05) on July 2, 2012, pursuant to MMC 19.1011 Design Review Meetings. The DLC recommended that the Planning Commission adopt Finding 14 and Condition 4 as the findings and conditions of approval for the signal and communications building Design Review application.

8. The applicant has proposed a standing seam metal roof with an alternative green roof. The DLC strongly prefers the green roof alternative to the proposed standing seam metal roof. However, the City Attorney advised against establishing a condition of

[1] Metro Resolution No. 08-3964 entitled 2008 South/North Land Use Final Order (LUFO) Amendment.

approval to require a green roof due to LUFO and the associated cost. If funding for the green roof becomes available, it is the DLC's expectation that it will be installed.

9. The Planning Commission (PC) evaluated the entire application at a public hearing on July 24, 2012, pursuant to MMC Section 19.1006 Type III Review.

10. The design review meeting and public hearing on the application were properly noticed through direct mailings and sign postings, pursuant to Milwaukie Municipal Code (MMC) Subsection 19.1006.3 Type III Public Notice and MMC Subsection 19.1011.2 Design Review Meeting Notice Requirements.

11. The application was referred for comment to the following City departments and agencies: City of Milwaukie Building, Engineering, and Community Development Departments; Clackamas County Fire District #1; Historic Milwaukie Neighborhood District Association; Clackamas County; Metro; ODOT Rail Division; and TriMet.

12. The application is subject to the Milwaukie Design Guidelines and the following provisions of the Milwaukie Zoning Ordinance, which is Title 19 of the Milwaukie Municipal Code (MMC):

- Section 19.310 Downtown Zones
- Section 19.700 Public Facility Improvements
- Section 19.904 Community Service Use
- Section 19.907 Downtown Design Review
- Section 19.911 Variance Review
- Chapter 19.1000 Review Procedures

Provisions not addressed in these findings are found to be not applicable to the decision on the application.

13. MMC 19.904 contains the criteria and standards for Community Service Uses.

A. MMC 19.904.2 Applicability

The proposed development consists of a building that will house communications equipment related to light rail. This use is identified as a Utility and is subject to the provisions of this chapter.

The Planning Commission finds that the proposed development is subject to the criteria and standards of MMC 19.904.

B. MMC 19.904.4 Approval Criteria

i) The building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone are met. Where a specific standard is not proposed in the CSU, the standards of the underlying zone are met.

The proposed use is for a signal and communications building, a Utility – Public Transit Facility, which is subject to the Community Service Use standards as. The proposed structure requires a variance to FAR standards of the DO zone; other development and design standards are

met. Per land use file #P-12-02,[2] no off-street vehicle or bicycle parking is required on the site.

ii) Specific standards for the proposed uses as found in MMC 19.904.7-11 are met.

There are two applicable standards related to site improvements and lighting. Subsection 19.904.9.A requires that utilities, streets, or other improvements necessary for the use shall be provided by the agency constructing the use. Subsection 19.904.9.F requires that lighting shall be designed to avoid glare on adjacent residential uses and public streets.

The applicant is constructing necessary improvements as part of the project. A condition has been established to require lighting on the site to be located and shielded to ensure that it does not impact adjacent properties and public streets.

iii) The hours and levels of operation of the proposed use are reasonably compatible with surrounding uses.

The signal and communications building houses utility and communications equipment and is not utilized by the public. Access to the building is infrequent and is for maintenance purposes only. Currently, the surrounding uses are primarily daytime light industrial and office uses, and an adjacent heavy rail track. The hours and levels of operation of the site are reasonably compatible with both current and anticipated surrounding uses.

iv) The public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood.

The public benefits resulting from development of the PMLR project are expected to be substantial, both locally and regionally. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development.

Additionally, locating the building and site improvements on a below grade site adjacent to existing freight rail tracks minimizes the impact to adjacent properties and provides a visual buffer for properties to the east.

Potential negative impacts include visual impacts; impacts to adjacent properties; and loss of an existing off-street parking space. Visual impacts have been mitigated by the downtown design review process. The loss of off-street parking will be mitigated by improved pedestrian and bicycle facilities on Adams St and 21st Ave, as well as by the expansion of transit options between downtown Milwaukie and downtown Portland. The potential impacts to adjacent properties will be mitigated by drafting the access easement to allow for flexible location on the site at 2105 SE Adams St and protecting access to the existing sewer easement on site. A condition has been established to ensure these mitigating actions.

[2] Parking Quantity Determination request; Notice of Decision (NOD) issued June 6, 2012.

v) The location is appropriate for the type of use proposed.

The location of the light rail alignment and associated structures are consistent with the Locally Preferred Alternative (LPA) alignment adopted by City Council in 2000.[3] Additionally, the alignment was vetted through the Final Environmental Impact Statement (FEIS) process, which reviewed the impacts of the alignment on the downtown Milwaukie area. The location of the building is necessary for its function, and its siting on a below grade site adjacent to the existing freight rail and future light rail alignment minimizes the disruption of existing uses.

As conditioned and with the approval of a variance to the FAR standards, the Planning Commission finds that the proposed development meets the criteria of MMC 19.904.4.

The Planning Commission finds that the proposed development meets the criteria of MMC 19.904.

14. MMC 19.907 contains the criteria and standards for Downtown Design Review

A. MMC 19.907.2 Applicability

The proposed development is located in the downtown zones and is new construction.

The Planning Commission finds that the proposed development is subject to Type III Design Review.

B. MMC 19.907.7 Approval Criteria for Design Review

i) Compliance with Title 19 Zoning Ordinance.

The development standards for the DO zone are located in MMC 19.310.4. The applicable standards pertain to minimum floor area ratio (FAR). MMC 19.310.4.2 requires that new buildings have a minimum FAR of 0.5:1. The applicant is proposing a structure with an FAR of 0.1:1, and has requested a variance to this standard (see Finding 15).

The design standards for the DO zone are located in MMC 19.310.6. The applicable standards pertain to wall materials and roofs.

MMC 19.310.6.C.2 contains the design standards for walls. The applicant is proposing prohibited wall materials, and has requested authorization for the use of prohibited materials.

MMC 19.320.6.C.4 contains design standards for roofs. The applicant is proposing a flat roof without the required cornice, and has requested a modification to this standard.

ii) Substantial consistency with the Downtown Design Guidelines

Refer to Table 1 below for detailed findings pertaining to this approval criterion.

iii) Submittal of a complete application and applicable fee as adopted by the City Council.

[3] Light rail station location adopted by Res. 51, 2008. LPA adopted by Res. 69-2008.

The applicant submitted a revised application on June 8, 2012, and requested that the City deem the application complete. The applicable application fee was paid May 2, 2012.

With the approval of a variance to the FAR standards, a modification to the design standards, and authorization of the use of prohibited materials, the Planning Commission finds that the proposed development meets the criteria of MMC 19.907.7.

C. MMC 19.907.10 Modification of Design Standards

The DO zone design standards for roofs require that buildings with flat roofs (roofs with a slope of equal to or less than 2:12) include a cornice of at least 6 inches depth and 12 inches in height. The proposed building includes a roof with a slope of 2:12, which does not meet the minimum slope for a pitched roof. The design does not include a cornice and a modification to the design standard for roofs is required. A modification of a design standard may be granted when all of the following criteria are satisfied.

i) The modification is integral to the overall design concept for the building.

The applicant has indicated that a higher roof pitch would add more material and more visual mass to a design that is intended to be modest and unassuming, and that the roof design is therefore integral to the overall design concept.

ii) The modification substantially meets the design standard or, in combination with other design elements of the project, meets the intent of the design standard.

In combination with the design guidelines related to roofs ("Silhouette and Roofline" and "Rooftops"), the intent of the cornice requirement for flat roofs is to ensure that rooftop mounted mechanical equipment is screened from street-level view, as well as to provide a visual interest to a sheer wall. In the case of a projecting cornice, the cornice also protects the face of a building from rain. The proposed building does not include any roof-mounted mechanical or other equipment, and it is not necessary to hide these components from view. The proposed roof design includes 12-inch eaves to protect the building from the weather, and a cornice is not necessary for this function.

iii) The project is substantially consistent with the Downtown Design Guidelines applicable to the design standard.

The proposed development is substantially consistent with the Downtown Design Guidelines related to Architecture.

The Planning Commission finds that the proposed development meets the criteria of MMC 19.907.10.

D. MMC 19.907.11 Consideration of Prohibited Material or Design Feature

The proposal for the building includes the use of prohibited wall materials, specifically masonry block (CMU), woven metal cladding, and standing seam metal panels. Authorization of the use of prohibited materials is necessary. Authorization for the use of prohibited materials may be granted when all of the following criteria are satisfied.

iv) The applicant demonstrates that the prohibited material is substantially comparable to an allowed material.

The proposed materials are substantially comparable to the allowed materials with regards to quality, architectural effect, and durability, and are consistent with the relevant design guidelines. The proposed design provides articulation and visual interest at the pedestrian level, and the proposed materials are solid and durable.

v) Use of the materials is consistent with the applicable design element of the Milwaukie Downtown Design Guidelines.

The applicable design elements are related to pedestrian emphasis, specifically defining the pedestrian environment, and architecture, specifically walls. The design guidelines are intended to provide a human scale to the pedestrian environment, and create variety and visual richness.

The appearance of painted CMU block, metal panels, and metal cladding is utilitarian and can appear industrial when not used carefully. However, the purpose of the building lends itself to this straightforward design, and the use of woven metal cladding to wrap the walls minimizes the appearance of the CMU block and metal panels and provides depth and articulation at the pedestrian level. The combination of materials, and the play of light and shadow that they allow, is a contemporary rather than industrial style. The use of a contemporary design and materials in this location and context is appropriate and contributes to architectural variety in the downtown area.

The Planning Commission finds that the proposed development meets the criteria of MMC 19.907.11.

The Planning Commission finds that the proposed development meets the approval criteria of MMC 19.907.

15. MMC 19.911 contains the criteria and standards for requests for variances from specific code provisions.

A. MMC 19.911.2 Applicability

The applicant has requested a variance to the minimum floor area ratio of the Downtown Office Zone. This is an eligible variance request.

B. MMC 19.911.3 Review Process

There is no Type II variance for the minimum FAR. The Planning Commission finds that the proposed development is subject to the Type III variance procedure as per MMC 19.911.3.C.

C. MMC 19.911.4 Approval Criteria

An application for a Type III variance shall be approved when all of the criteria in either subsection MMC 19.911.4.B.1 or 2 have been met.

i) MMC 19.911.4.B.1 Discretionary Relief Criteria

a) MMC 19.911.4.B.1.a requires an alternatives analysis of the impacts and benefits of the variance proposal as compared to the baseline code.

The purpose of the FAR standard is to direct more intense forms of development to appropriate areas of downtown, to make efficient use of land and available services, and to support street-level pedestrian activity. The DO zone requires a minimum FAR of 0.5:1, or 0.5 sq ft of floor area for every 1 sq ft of site area. The proposed structure provides an FAR of 0.1:1.

The light rail alignment is expected to greatly exceed the number of pedestrians that would be drawn to the site by development of a building on the site that met the FAR requirements. The light rail alignment and related structures will support pedestrian activity and development in the station area, and will contribute to the vitality of the area.

b) MMC 19.911.4.B.1.b requires that the requested variance be both reasonable and appropriate and meet at least one of three criteria related to (1) minimizing impacts to surrounding properties, (2) providing desirable public benefits, and (3) responding to the existing built or natural environment in a creative and sensitive manner.

The requested variance to the FAR standard will allow the development of a modest, low-profile building, which will minimize visual and other impacts to surrounding properties.

The Planning Commission finds that the proposed development is reasonable and appropriate and the criteria of both MMC 19.911.4.B.1.b.ii.(1) and b.ii.(2) are met.

c) MMC 19.911.4.B.1.c requires mitigation of impacts from the requested variance to the extent possible.

An impact of the variance is the lack of habitable development on the site. This impact will be mitigated by site development that supports future redevelopment of adjacent sites; site landscaping;, and the retaining walls topped with fence and railing between the adjacent public streets and the building site. A condition has been established to allow for future redevelopment of the property to the east of the site.

ii) MMC 19.911.4.B.2 Economic Hardship Criteria

The applicant has not requested an economic hardship variance.

The Planning Commission finds that, as conditioned, the proposed development meets the criteria of MMC 19.911.

16. MMC 19.700 Public Facility Improvements contains the criteria and standards for public facility improvements.

A. MMC 19.702 Applicability

The proposed development consists of new construction.

The Planning Commission finds that the proposed development is subject the standards and requirements of MMC 19.700.

B. MMC 19.703 .1 Preapplication Conference

A pre-application conference for the proposed development was held on November 17, 2011.

The Planning Commission finds that the proposed development complies with MMC 19.703.1.

C. MMC 19.703.2 Application Submittal

The Engineering Director has determined that a transportation impact study is not required as part of the proposed development in accordance with MMC Section 19.704. A Transportation Facilities Review (TFR) land use application is not required. The proposed development requires submission of other land use applications. Compliance with MMC 19.700 will be reviewed concurrently with as part of the other land use applications.

The Planning Commission finds that the proposed development complies with MMC 19.703.2.

D. MMC 19.703.3 Approval Criteria

Development subject to MMC 19.700 shall meet the approval criteria of MMC 19.703.3.

i) MMC 19.703.3.A Procedures, Requirements, and Standards

Public facility improvements associated with the proposed development comply with the standards and requirements of MMC 19.700, as provided herein. Public facility improvements shall comply with the Public Works Standards at the time of development. A condition has been established to require compliance.

ii) MMC 19.703.3.B Transportation Facility Improvements

The applicant proposes transportation facility improvements and mitigation at the time of development in rough proportion to the potential impacts of the development in accordance with MMC 19.705.

iii) MMC 19.703.3.C Safety and Functionality Standards

The applicant proposes transportation facility improvements that meet or exceed the safety and functionality standards of MMC 19.703.3.C

The Planning Commission finds that the proposed development, as conditioned, meets the approval criteria of MMC 19.703.3.

E. MMC 19.704 Transportation Impact Evaluation

The projected increase in trip generation resulting from the proposed development, being a building to house mechanical equipment in support of light rail operations, is minimal. The Engineering Director has determined that the projected impacts to the transportation system are not significant enough to require a transportation impact study.

The Planning Commission finds that the proposed development complies with MMC 19.704.

F. MMC 19.705 Rough Proportionality

The proposed development consists of new construction on an existing lot. The applicant proposes design and construction of transportation facility improvements

along the full length of Adams Street fronting the development parcel. The proposed transportation facility improvements are consistent with the Public Works Standards. The transportation facility improvements are roughly proportional to the impacts of the proposed development.

The Planning Commission finds that the proposed development complies with MMC 19.705.

G. MMC 19.706 Fee In Lieu of Construction

The applicant proposes to construct the required transportation facility improvements.

The Planning Commission finds that the proposed development complies with MMC Section 19.706.

H. MMC 19.707 Agency Notification and Coordinated Review

The proposed development is within 300 feet of a public railroad crossing. Notice of the proposed land use application has been provided to ODOT Rail Division for their review and comment.

The proposed development is within 200 feet of a designated arterial roadway, SE 21st Avenue. Notice of the proposed land use application has been provided to Metro and Clackamas County for their review and comment.

The proposed development is within 200 feet of a transit route, Line 32 on SE 21st Avenue. Notice of the proposed land use application has been provided to TriMet for their review and comment.

The Planning Commission finds that the proposed development complies with MMC Section 19.707.

I. MMC 19.708 Transportation Facility Requirements

The applicant proposes a single, 16-foot wide shared driveway approach with the property east of development property as the access. The applicant shall provide access in accordance with the access management standards of MMC Chapter 12.16.

The applicant shall demonstrate compliance with the clear vision standards of MMC Chapter 12.24 prior to start of construction.

The proposed development is located within the Downtown Office Zone. Transportation facility improvements are subject to the requirements of the Milwaukie Downtown and Riverfront Plan: Public Area Requirements. The surveyed right-of-way of Adams St fronting the proposed development property is less than indicated in the Public Area Requirements. The City Engineer has modified the Adams Street cross-section, in accordance with the Public Work Standards, to fit within the actual right-of-way width. The applicant proposes transportation facility improvements fronting the proposed development property on Adams Street consistent with public area requirements, as modified by the City Engineer.

The Planning Commission finds that the proposed development, as conditioned, complies with MMC 19.708.

J. MMC 19.709 Public Utility Requirements

The Engineering Director has determined that the existing public utilities are adequate to serve the proposed development.

The Planning Commission finds that the proposed development complies with MMC 19.709.

The Planning Commission finds that, as conditioned, the development proposal meets the criteria of MMC 19.700.

17. Pursuant to MMC 19.1001.7.E.2, the time period within which the applicant must obtain development permits for the signal and communications building is 2 years, and the time period within which the applicant must pass all final inspections is 4 years, from the date of the land use decision on this application.

Table 1. Design Review Compliance

MILWAUKIE CHARACTER GUIDELINES	
Applicant Information	**Recommended Findings**
a. Reinforce Milwaukie's Sense of Place = Strengthen the qualities and characteristics that make Milwaukie a unique place.	
Milwaukie's history is largely formed and defined by its natural surroundings and unique transportation systems. The project's parallel relationship to the existing rail reinforces this transportation / technological history. Light rail is the steamship of the 21st century, and will provide Milwaukie with a new link to the region. It will provide unique views to the natural and urban areas that are Milwaukie today and will reinforce Milwaukie's qualities and characteristics in the future. As a result of public participation efforts, including public workshops, meetings with officials, and input from the Design and Landmarks Committee, numerous elements have been integrated into the design of the sig/com that are specifically responsive to Milwaukie's unique qualities and characteristics. The texture and layering of the building materials is unusual for such a modest utilitarian building. The maximizing of the remainder of the site for landscaping further connects the site to the nearby station area landscaping and parks. Landscaping, ashlar patterned retaining walls, and Milwaukie-themed fencing have all been incorporated in to the project to add to the project's thematic continuity and further support Milwaukie's unique qualities and characteristics. This guideline is met.	As proposed, the building design respects Milwaukie's sense of place by emphasizing special relationships at the pedestrian level through detailing of abutment walls, visual interest at the pedestrian level through layering of wall materials, the use of ornamental railings to delineate the boundary between the private and public realm, and the use of landscaping to soften the visual impact of retaining walls on the site. Additionally, the use of uncluttered design, simple detailing, a subdued palette of materials and fixtures in "Milwaukie black" is specific to the station area. *The proposal meets this guideline.*
b. Integrate the Environment = Building design should build upon environmental assets.	

The design of the sig/com, respects the character of the nearby natural area through simple detailing, material selection, and landscaped area. This guideline is met.	As proposed, the design of the building respects the character of nearby natural areas by providing substantial landscaping and utilizing a subdued palette of colors. Installation of a green roof would further support conformance with this guideline. *The proposal meets this guideline.*
c. Promote Linkages to Horticultural Heritage = Celebrate Milwaukie's heritage of beautiful green spaces.	
The sig/com, through its maximizing of landscape on the site, makes a thematic connection to Kellogg Lake and Kronberg Park, and celebrates those spaces. The design of the building also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, and sympathetic and layered materials and color. This guideline is met.	As proposed, the design of the building and site respects Milwaukie's heritage of green spaces through the liberal installation of landscaping to the west and north of the building, and inclusion of larger trees between the building and 21st Ave. *The proposal meets this guideline.*
d. Establish or Strengthen Gateways = Projects should use arches, pylons, arbors, or other transitions to mark special or primary entries and/or borders between public and private spaces.	
The carefully designed building site features a variety of planting enhancements. Metal railings with historic Milwaukie motif demarcate the site, further contributing to transitional quality along the street frontage. Also visible within the site is variegated protective screening, ashlar treatment of the retaining walls, and the decorated and articulated quality of the building. These elements further contribute to the graceful transitioning between the site and the surrounding public and private areas and properties. The guideline is met.	As proposed, the site is secured by welded black wire gates and fencing on the east and north sides, and ashlar patterned retaining walls topped with ornamental railings on the west and south sides. The site is not designed for pedestrian access, but the boundary between the public sidewalk space and the private site is defined by a change in fence design and grade. *The proposal meets this guideline.*
e. Consider View Opportunities = Building designs should maximize views of natural features or public spaces.	
No response.	The building site does not have views of natural features or public spaces. *This guideline is not applicable.*
f. Consider Context = A building should strengthen and enhance the characteristics of its setting, or at least maintain key unifying patterns.	
Elements have been integrated into the design of the overall project that are specifically responsive to, and enhance, Milwaukie's surrounding characteristics. These elements include: stone-patterning of the various wall treatments, bollard and furniture treatments appropriate to Milwaukie's palette, pedestrian scale street light	The immediate context includes both historic and current railroad uses, including a station, trestle, and tracks. The proposed building incorporates design features that acknowledge the characteristics of existing and future uses and buildings, including a minimal, contemporary design, and textured wall treatments to provide

standards consistent with Milwaukie's, and custom railing treatments incorporating detail and motifs specific to Milwaukie. The design of the standard light rail elements, such as the shelters, TVM shelters, and bike shelter and other system furniture are also high quality and complimentary. The sig/com building treatments are consistent with these nearby themes. The screens, roof, and wall materials are layered and highly articulated. The building is also near the historic railroad trestle, thus providing both a modern contrast and a formal and utilitarian consistency. The landscaping on the site will also relate to the natural qualities and diversity of the nearby Lake area and Kronberg Park. This guideline is met.	articulation and depth to the façade. *The proposal meets this guideline.*
g. Promote Architectural Compatibility = Buildings should be "good neighbors." They should be compatible with surrounding buildings by avoiding disruptive excesses. New buildings should not attempt to be the center of attention.	
The modest scale and "background building" character of the sig/com fits quietly into its surroundings. The siting of the structure maximizes setbacks, to minimize disruption of adjacent uses The details are refined and of an appropriately human scale. Landscape further tempers the transition from building to neighborhood. This guideline is met.	As proposed, the building design is modest and unassuming. The contemporary design does not compete with nearby structures and is compatible with surrounding buildings. *The proposal meets this guideline.*
h. Preserve Historic Buildings = Historic building renovation, restoration, or additions should respect the original structure.	
No response.	No historic buildings are proposed to be renovated, restored, or expanded as part of the application. *This guideline is not applicable.*
i. Use Architectural Contrast Wisely = Contrast is essential to creating an interesting urban environment. Used wisely, contrast can provide focus and drama, announce a socially significant use, help define an area, and clarify how the downtown is organized.	
The inventive use of metal frames and woven mesh will contribute to an interesting urban environment. The play of light and shadow that will result will further enhance the area, while still appropriate for this simple utilitarian structure. Its clear thematic connection to elements associated with the larger light rail project help define its relationship to the overall area. This guideline is met.	As proposed, the design of and materials used in construction of the building incorporates contrast in through its use of contemporary materials. The combination of wall materials creates delight and nighttime interest. *The proposal meets this guideline.*
j. Integrate Art = Public art should be used sparingly. It should not overwhelm outdoor spaces or render buildings mere backdrops. When used, public art should be integrated	

into the design of the building or public open space.	
No response.	No public art is proposed as part of the application. *This guideline is not applicable.*

PEDESTRIAN EMPHASIS GUIDELINES	
Applicant Information	**Recommended Findings**
a. Reinforce and Enhance the Pedestrian System = Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminated, so that the pedestrian is the priority in all development projects.	
There are no barriers to pedestrian movement associated with the proposal. Sidewalks, lighting, and street improvements are proposed consistent with City standards that will improve and encourage pedestrian movement. Decorative fencing, ashlar-pattern wall treatments, and landscaping will contribute to an enhanced pedestrian experience. This guideline is met.	As proposed, the building does not introduce any new barriers to pedestrian movement. The pedestrian experience along Adams St is enhanced by the introduction of new City standard sidewalks and streetlights. *The proposal meets this guideline.*
b. Define the Pedestrian Environment = Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.	
The sig/com is modest in scale. The "background building" character of the sig/com fits quietly into its surroundings. The details are refined and of an appropriately human scale. Landscape treatments further contribute to the variety, visual richness, and the enhancement of the public realm. This guideline is met.	As proposed, the building introduces human-scaled design treatments where the building intersects with the pedestrian environment. Although the function of the building precludes the use of windows in its design, the layered wall treatments provide visual interest at the pedestrian level. The building is modest in scale. The overall site design including detailing of the retaining wall materials; the use of ornamental railings to guide pedestrians to the along 21st Ave and Adams St; and landscaping on the edges of the site contribute to the pedestrian experience. Wall-washing light fixtures contribute to nighttime visual interest. *As conditioned, the proposal meets this guideline.*
c. Protect the Pedestrian from the Elements = Protect pedestrians from wind, sun, and rain.	
No response.	The proposed development is not intended to attract or accommodate pedestrians on site. *This guideline is not applicable.*
d. Provide Places for Stopping and Viewing = Provide safe, comfortable places where people can stop to sit and rest, meet and visit with each other, and otherwise enjoy the downtown surroundings.	
No response.	The proposed development does not include active uses, parks, or plazas.

	This guideline is not applicable.
e. Create Successful Outdoor Spaces = Spaces should be designed for a variety of activities during all hours and seasons.	
No response.	The proposed development does not include public outdoor spaces. *This guideline is not applicable.*
f. Integrate Barrier-Free Design = Accommodate handicap access in a manner that is integral to the building and public right-of-way and not designed merely to meet minimum building code standards.	
No response.	The building entrance is at-grade, and no ramps, lifts, or elevators are required or proposed as part of the application. *The proposal meets this guideline.*

ARCHITECTURE GUIDELINES	
Applicant Information	**Recommended Findings**
a. Corner Doors = Locate entry doors on corners of commercial and retail buildings wherever possible.	
No response.	No retail or commercial buildings are proposed as part of the application. *This guideline is not applicable.*
b. Retail and Commercial Doors = Doors should create an open and inviting atmosphere.	
No response.	No retail or commercial doors are proposed as part of the application. *This guideline is not applicable.*
c. Residential Doors = Residential front doors should define a friendly transition between the public and the private realm.	
No response.	No residential doors are proposed as part of the application. *This guideline is not applicable.*
d. Wall Materials = Use materials that create a sense of permanence.	
TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the CMU, steel frame and woven wire, painted metal, and hardy landscape plants have been selected and utilized in a manner that will ensure that the structure is of a consistent and well maintained quality, both physically and visually for the life of the project. This guideline is met.	As proposed, the retaining walls on site are made of concrete and textured with a formliner that resembles a rusticated masonry surface. The textured surface provides depth and substance. The building materials of CMU block, metal panels, and woven metal cladding provide a visual sense of weight and permanence. *The proposal meets this guideline.*
e. Wall Structure = Use scale defining devices to break up the longitudinal dimensions of buildings, creating a comfortable sense of enclosure by establishing an uninterrupted	

street edge.	
The building, particularly given its scale and purpose, is highly detailed and articulated, resulting in quality human-scaled structure that comfortable adds to the sense of enclosure. This guideline is met.	The street-facing façade of the building is 12 ft wide, and the building is 15 ft tall; the area of the façade does not necessitate the use of scale-defining devices. The building is set back less than the maximum, which does not contribute to an uninterrupted street edge. However, the inclusion of ornamental fencing along the 21st Ave and Adams St frontage provides a sense of enclosure. *The proposal substantially complies with this guideline.*
f. Retail Windows =Use windows that create an open and inviting atmosphere.	
No response.	No retail windows are proposed as part of the application. *This guideline is not applicable.*
g. Residential Bay Windows =Provide bays to add variety and visual interest to façade and interesting views and outdoor spaces from the interiors.	
No response.	No residential bay windows are proposed as part of the application. *This guideline is not applicable.*
h. Silhouette and Roofline = Create interest and detail in silhouette and roofline.	
The roofline is simple and modestly scaled, consistent with overall scale and composition of the building. The simple soffit and edge, the standing seam pattern, and the roof pitch provide an appropriate degree of interest and detail. This guideline is met.	As proposed, the building has a slightly sloped roof, in contrast to the flat roofs of adjacent buildings. The slope and the standing seam pattern of the metal roof create visual interest and detail. *The proposal meets this guideline.*
i. Rooftops = Integrate rooftop elements into building design.	
The building form and material transitions from a CMU body, to metal panel, to the membrane (and green, pending funding) roof. The modest overhang and simple detailing results in a coherent and integrated composition for the overall building. This guideline is met.	The proposal does not include roof-mounted mechanical equipment or other rooftop elements. *This guideline is not applicable.*
j. Green Architecture = New construction or building renovation should include sustainable materials and design.	
TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the CMU, steel frame and woven wire, painted metal, and hardy landscape plants have been selected and utilized in an efficient manner that will ensure that the	As proposed, the building will be constructed of quality, durable materials with low lifecycle costs. High-efficiency LED lighting will be utilized on site. Finally, many of the materials are potentially recyclable should the project ever have an end-of-use. The addition of a green roof to the structure

structure is of a consistent and well maintained quality, both physically and visually for the life of the project. This quality, and the recyclability of the materials should the building ever be removed, ensure this to be a highly sustainable component. The guideline is met.	would further enhance the building's conformance with this guideline. *The proposal meets this guideline.*
k. Building Security = Buildings and site planning should consider and employ techniques that create a safe environment.	
Safety is a prime design consideration for Tri Met in all its projects. Crime Prevention Through Environmental Design (CPTED) principles are followed throughout the station area design. TriMet's safety and security committee has reviewed the project and determined that in both construction and use, the design will contribute to a visibly open, safe, and inviting environment. Because of the importance of these utility structures, the site is fenced, and TriMet has included security cameras - integrated into the design - for added security. The building includes lighting, limited to l.e.d. fixture lighting over each of the doors for security purposes. Carefully designed fencing, integrated into the site design, contributes to the site's overall security, while contributing positively to the experiential quality of the surrounding public and private realms. This guideline is met.	As proposed, the building employs numerous techniques to create a safe environment. • Ornamental metal railings, retaining walls, and black wire welded fencing and gate secure the site. • Light fixtures and security cameras are integrated into the design, and light fixtures provide a pleasant pedestrian environment and nighttime visual interest without compromising safety. • The proposed plant materials and landscaping design ensure that the site is easily observable and increases pedestrian safety. *As conditioned, the proposal meets this guideline.*
l. Parking Structures = Parking structures should be designed so that they appear like most other buildings in the downtown.	
No response.	No parking structures are proposed as part of the application. *This guideline is not applicable.*

LIGHTING GUIDELINES	
Applicant Information	**Recommended Findings**
a. Exterior Building Lighting = Architectural lighting should be an integral component of the façade composition.	
The architectural lighting the station is limited to l.e.d. fixture lighting over each of the doors. The lighting will be for security purposes, photocell-actuated focused down. The lighting is a linear fixture, placed over each door, integrated into the overall composition as it is placed within the "reveal" between the screen system and door frame. The guideline is met.	As proposed, linear LED surface-mounted fixtures will be mounted above each door. The lighting is provided for security purposes and is visible from Adams St. A shield will be installed in front of the fixtures to provide a wall washing effect and shield the light fixture from view at the pedestrian level. *As conditioned, the proposal meets this guideline.*

b. Parking Lot Lighting = Ornamental street lights should be used to be compatible with downtown streetlight standards identified in the Public Area Requirements.	
No response.	No parking lots are proposed as part of the application. *This guideline is not applicable.*
c. Landscape Lighting = Lighting should be used to highlight sidewalks, street trees, and other landscape features. Landscape lighting is especially appropriate as a way to provide pedestrian safety during holiday periods.	
No response.	No landscape lighting is proposed as part of this application. *This guideline is not applicable.*
d. Sign Lighting = Sign lighting should be designed as an integral component of the building and sign composition.	
No response.	No sign lighting is proposed as part of the light rail station application. *This guideline is not applicable.*

SIGN GUIDELINES	
Applicant Information	**Recommended Findings**
a. Wall Signs	
No response.	No wall signs are proposed as part of the light rail station application. *This guideline is not applicable.*
b. Hanging or Projecting Signs	
No response.	No hanging or projecting signs are proposed as part of the application. *This guideline is not applicable.*
c. Window Signs	
No response.	No window signs are proposed as part of the station application. *This guideline is not applicable.*
d. Awning Signs	
No response.	No awning signs are proposed as part of the station application. *This guideline is not applicable.*
e. Information and Guide Signs	
No response.	No information and guide signs are proposed as part of the application. *This guideline is not applicable.*
f. Kiosks and Monument Signs	

No response.	No kiosk or monument signs are proposed as part of the application. *This guideline is not applicable.*
g. Temporary Signs	
No response.	No temporary signs are proposed as part of the station application. *This guideline is not applicable.*

Recommended Conditions of Approval

1. The applicant shall submit a Type I Development Review application prior to or concurrent with the development permit submittal for construction of the Portland Milwaukie Light Rail (PMLR) signal and communications building and site improvements.

2. The plans submitted to the City of Milwaukie for construction of the building and site improvements shall be in substantial conformance with the plans reviewed by the Design and Landmarks Committee (DLC) and Planning Commission (PC) and date stamped by the City on June 8, 2012, and July 3, 2012. The plans shall be modified only as described in these conditions of approval or through a subsequent design review or formal modification process.

   (Note: Any plan set changes proposed by the applicant or Planning Commission during or as a result of the land use review process shall be reflected in these conditions of approval prior to adoption by the Planning Commission.)

3. The development permit submission for the building and site improvements shall include a detailed description of any proposed plan changes that are not part of these conditions of approval, or that the final decision-making authority did not specify in its decision; such plan change shall be subject to the City's review and approval.

4. The development permit submission for the building and site improvements shall include the following item to demonstrate conformance with the Milwaukie Downtown Design Guidelines. Development permits shall not be issued until the Planning Director is satisfied that the following conditions of approval are met.

   A. Propose a lighting design that shields the south-facing exterior building light fixtures from view at the pedestrian level at Adams St and 21st Ave and creates a wall-washing effect. Work with the Planning Director to determine the appropriate solution, and submit the lighting design plan for City review and approval.

5. The development permit submission for the building and site improvements shall include the following items to demonstrate conformance with the Community Service Use criteria. Development permits shall not be issued until the Planning Director is satisfied that the following conditions of approval are met.

   A. Submit photometric studies or other appropriate materials to demonstrate that lighting on the site will not cause glare or excessive light trespass onto the street or other properties.

   B. The development of the site, including the location of the building and fencing, shall protect access for repair and maintenance of the sewer lateral on the site, pursuant to the 1985 sewer easement on the property (Clackamas County Recording Certificate #85-18365).

   C. The easement across the property at 2105 SE Adams St for access to 2103 SE Adams St shall provide flexibility regarding the location of the easement on site in order to allow future redevelopment.

6. The development permit submission for the building and site improvements shall include the following items to demonstrate conformance with the Public Facility Improvements criteria. Development permits shall not be issued until the Engineering Director is satisfied that the following conditions of approval are met:

   A. Demonstrate compliance with clear vision standards of MMC 12.24.

B. Submit a storm water management plan prepared by a qualified professional engineer. The plan shall conform to Section 2 – Stormwater Design Standards of the City of Milwaukie Public Works Standards.

i) The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development site.

ii) The storm water management plan shall demonstrate compliance with water quality standards in accordance with the City of Portland Stormwater Management Manual.

7. Prior to commencement of any earth disturbing activities, the applicant shall:

A. Obtain an erosion control permit pursuant to MMC Title 16 Erosion Control.

8. During site development, the applicant shall:

A. Limit development activity from 7 a.m. to 7 p.m. Monday through Friday and 8 a.m. to 5 p.m. Saturday and Sunday pursuant to Milwaukie Public Works Standards Division 105.13, unless otherwise approved by the Engineering Director, and abide by MMC Chapter 8.08 regarding construction noise. Variances to maximum permitted noise levels or prohibited noises as identified in MMC Chapter 8.08 may be granted by the Police Department pursuant to MMC Subsection 8.08.110.

9. Prior to final inspection of the building permit, the applicant shall complete the following items to the satisfaction of the Engineering Director:

A. Provide access to the proposed development property in accordance with MMC 12.16.

B. Construct a private storm management system to accommodate stormwater runoff from the site. The private storm management system shall be constructed according to the approved storm water management plan.

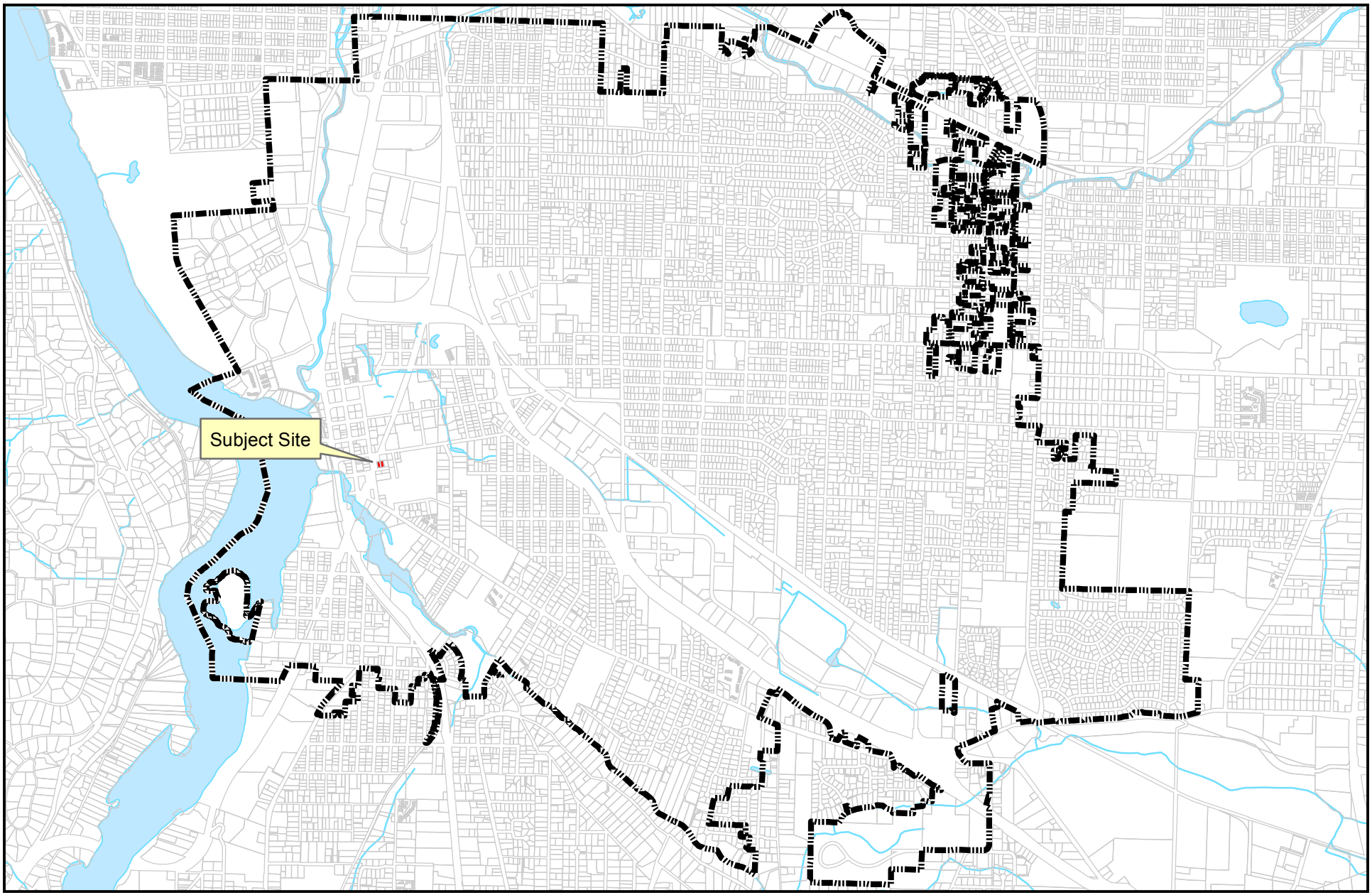
C. Construct transportation facility improvements fronting the proposed development property on Adams Street in accordance with the Milwaukie Downtown and Riverfront Plan: Public Area Requirements, as modified by the City Engineer.

10. Prior to final inspection of the building permit, the applicant shall complete the following items to the satisfaction of the Planning Director:

A. Submit an easement for vehicle access to the site across 2105 SE Adams St. The easement shall be recorded with Clackamas County.

11. Pursuant to MMC 19.1001.7.E.2, the time period within which the applicant must obtain development permits for the signal communications building is 2 years, and the time period within which the applicant must pass all final inspections is 4 years, from the date of the land use decision on this application.

ATTACHMENT 3A



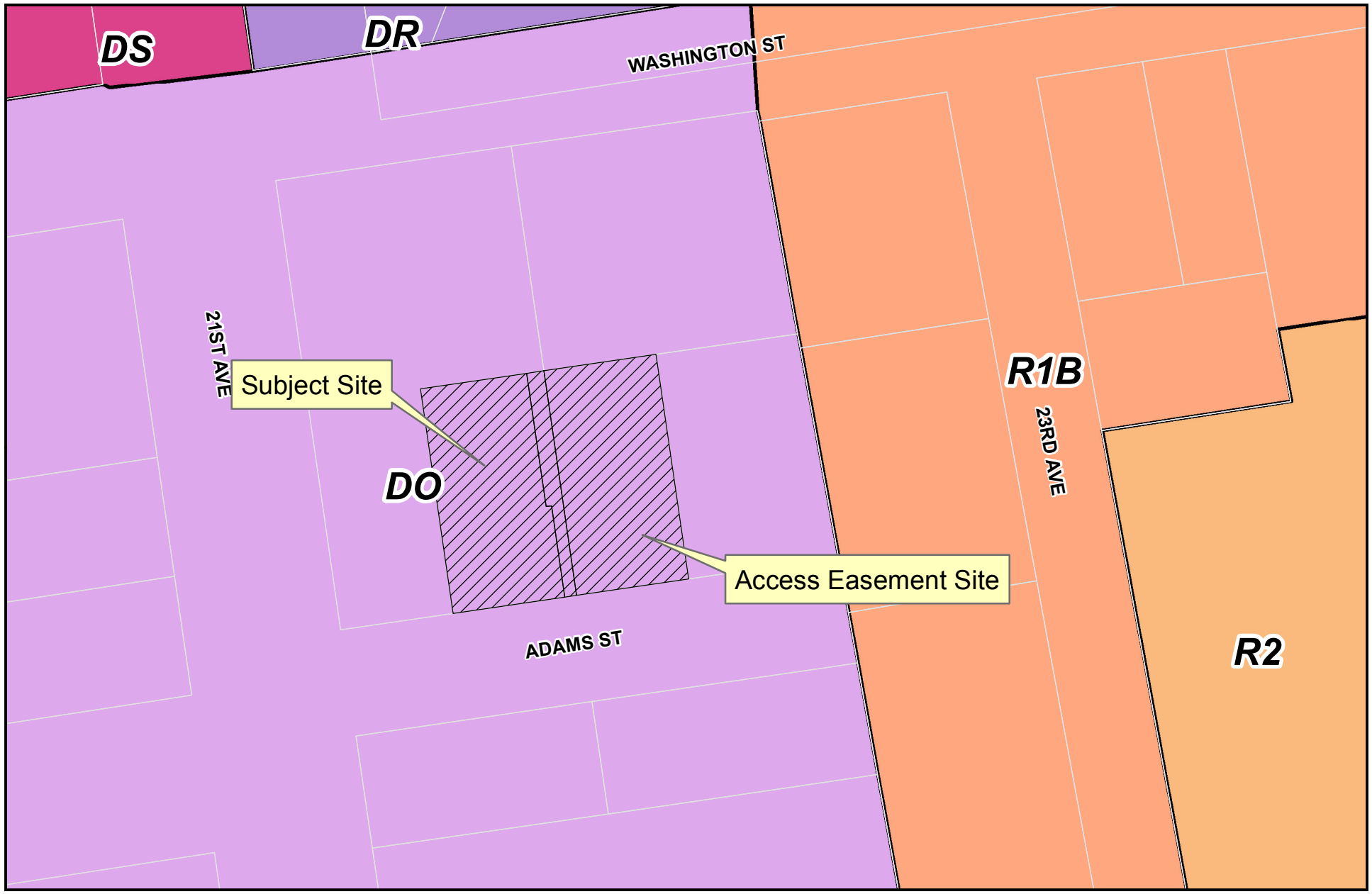
Vicinity Map

Milwaukie Planning Dept.
Data: City of Milwaukie GIS; Metro RLIS
Date: 7/11/2012
Author: MarquardtR

1 inch = 2,142 feet

0 435870 1,740 2,610 3,480 Feet

ATTACHMENT 3B



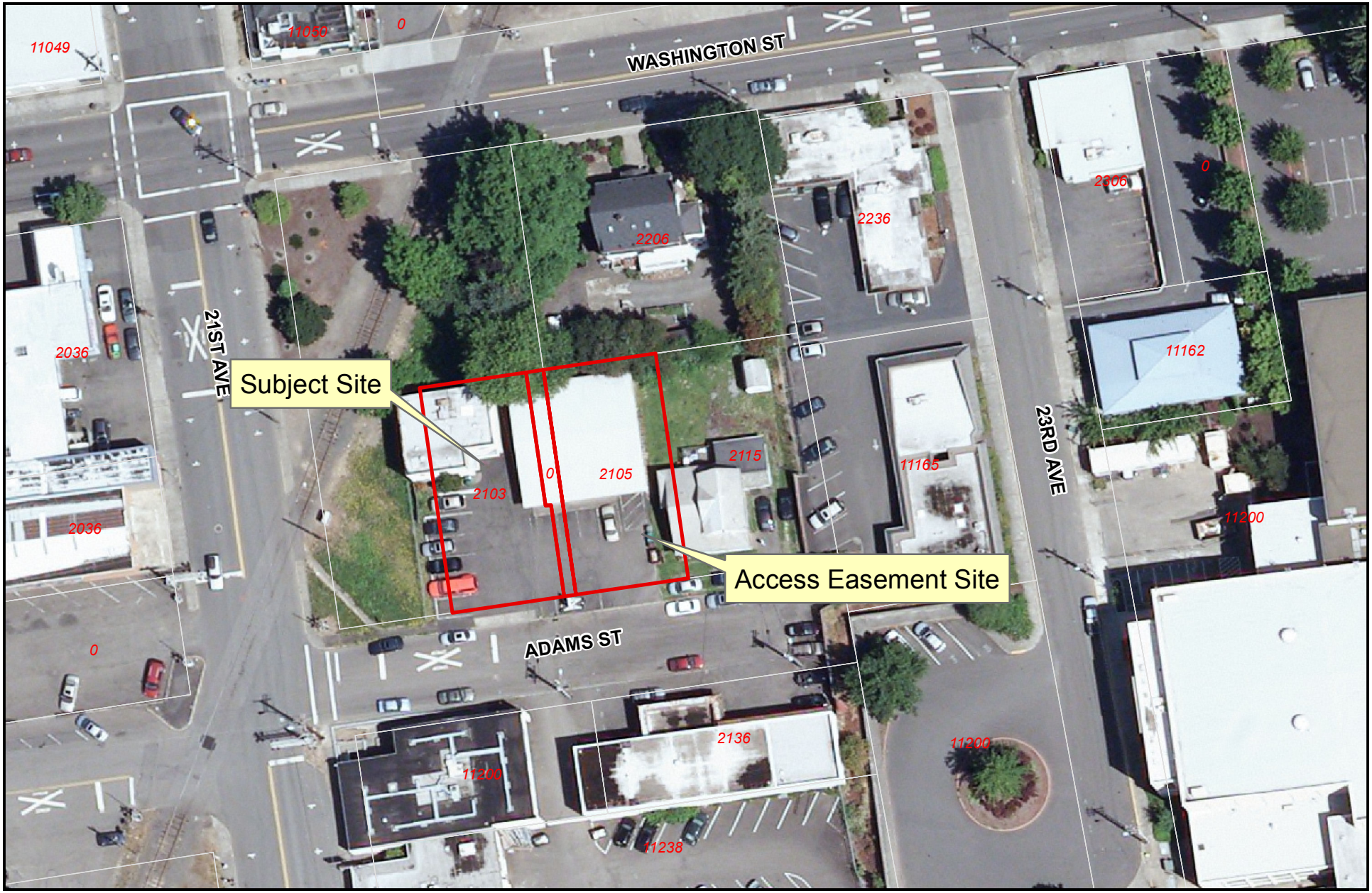
Zoning Map

Milwaukie Planning Dept.
Data: City of Milwaukie GIS; Metro RLIS
Date: 7/11/2012
Author: MarquardtR

1 inch = 60 feet

0 12.5 25 50 75 100 Feet

ATTACHMENT 3C



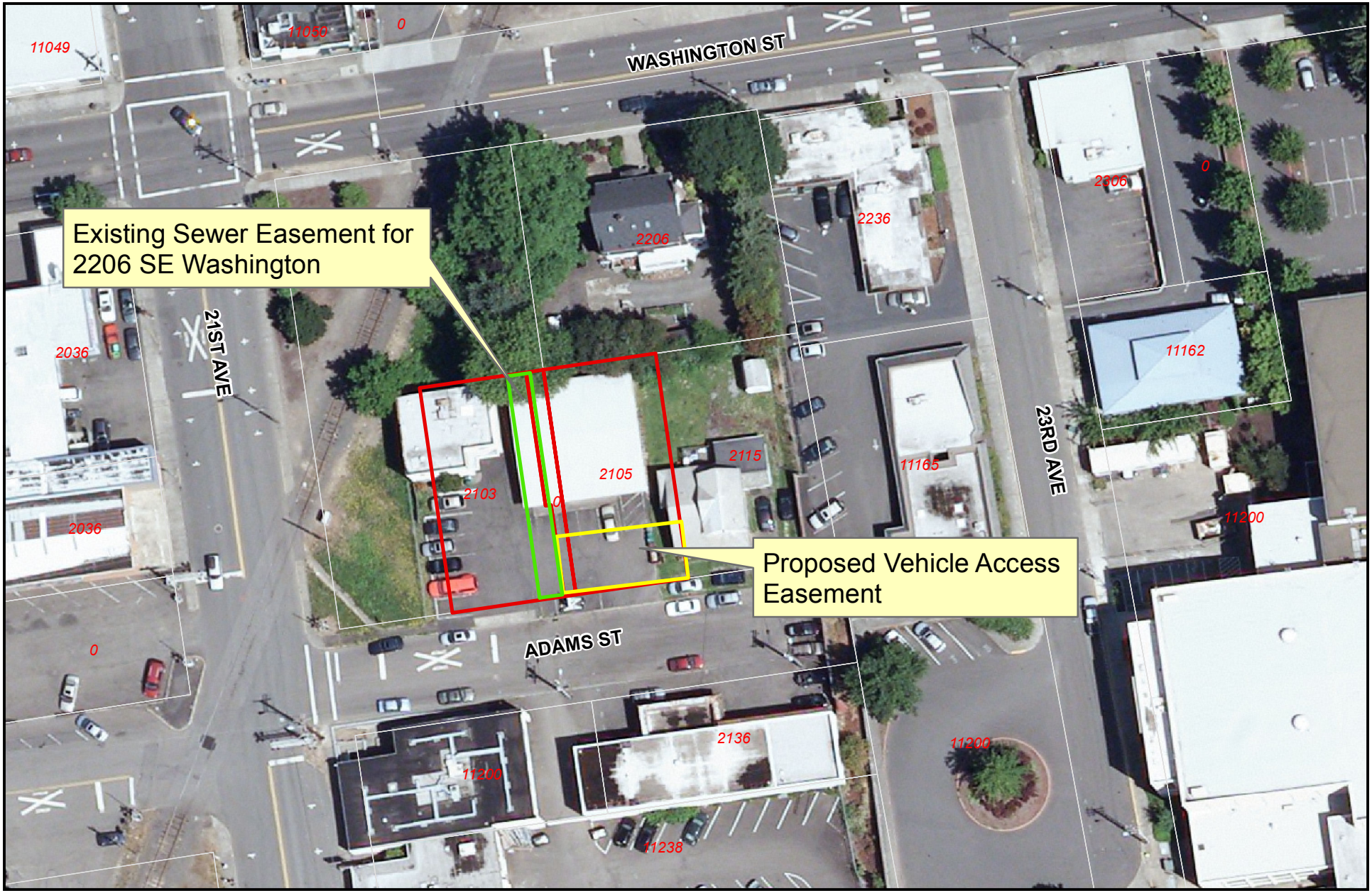
Site Aerial

Milwaukie Planning Dept.
Data: City of Milwaukie GIS; Metro RLIS
Date: 7/11/2012
Author: MarquardtR

1 inch = 60 feet

0 12.5 25 50 75 100 Feet

ATTACHMENT 3D



Easements

Milwaukie Planning Dept.
Data: City of Milwaukie GIS; Metro RLIS
Date: 7/11/2012
Author: MarquardtR

1 inch = 60 feet

0 12.5 25 50 75 100 Feet

PORTLAND-MILWAUKIE
LIGHT RAIL PROJECT

DOWNTOWN MILWAUKIE LIGHT RAIL SIGNAL & COMMUNICATIONS BUILDING
APPLICATION STANDARDS AND CRITERIA RESPONSE

Procedure Type
MNQJ/Planning Commission

Reviews Required

DESIGN REVIEW
COMMUNITY SERVICE USE REVIEW
VARIANCE REVIEW

REVIEW EXTENT

COMMUNITY SERVICE USE

The signal and communication (sig/com) use, characterized as Utility because of the communications function, is subject to a **Community Service Use Review**.

VARIANCE

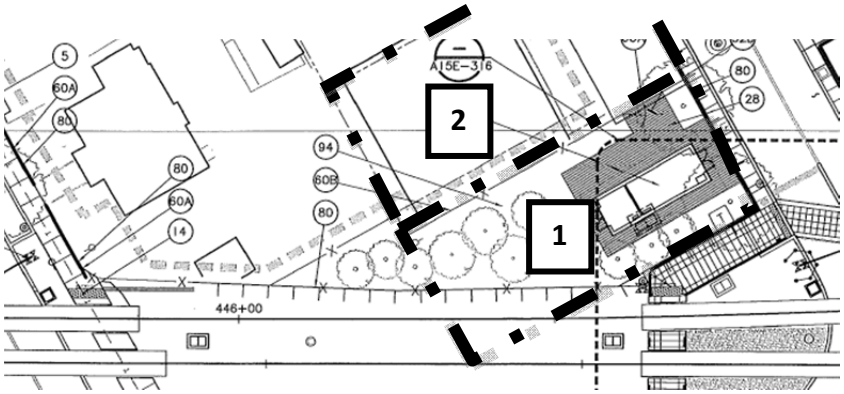
It's been identified that two development standards (off-street parking, and floor area ratio) are not met. The parking requirements are being addressed through a separate land use review. A variance review is required for the floor area ratio exception.

DESIGN REVIEW

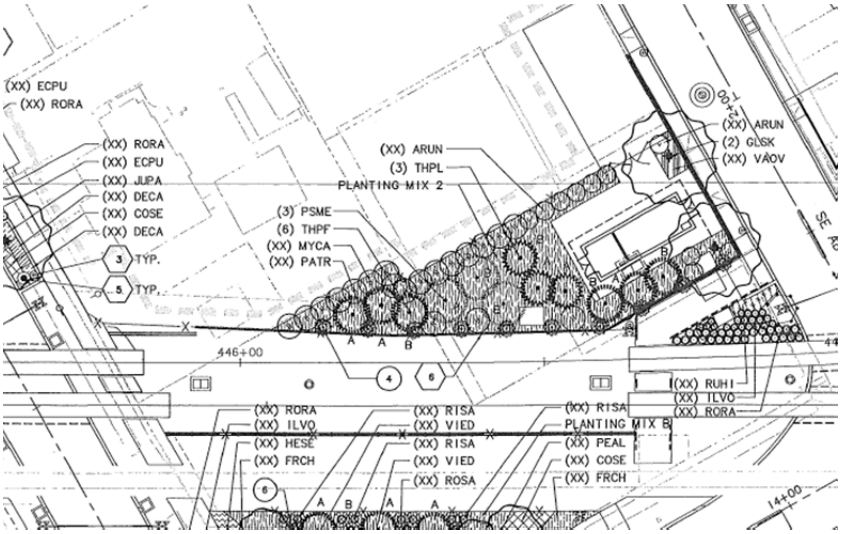
As the sig/com building is within the DO (Downtown Office) Zone, Design Review is required. As there are also variations from the Downtown Design Standards desired, those design elements also need to be reviewed as a modification to those Standards.

PROPERTY SUBJECT TO REVIEW

SIGNAL AND COMMUNICATION PROPERTY				
lot #	**Street**	**Zone**	**Property ID #**	**Assessor Reference #**
1	2103 SE ADAMS ST	DO	C224608	11E36BC01901
2*	2105 SE ADAMS ST	DO		11E36BC01903
* - Lot #2 is exclusively for an access easement to Lot #1. No modifications to the parking or circulation on the lot is proposed.				



LOT/SITE PLAN



LANDSCAPE PLAN

AERIAL VIEW OF SITE

DETAILED PROPOSAL DESCRIPTION

The Portland Milwaukie Light Rail project is a 7.3 mile extension of the TriMet regional rail system. The rail system includes a station in downtown Milwaukie, and another just south of Milwaukie at Park Avenue and McLoughlin.

Various portions and aspects of the project have gone through land use reviews, and others will come through future reviews.

This review pertains specifically to the downtown light rail **signal and communications building** (sig/com) which will be located along the future light rail alignment between SE Adams and SE Washington Street, with frontage along SE Adams, and vehicle access will occur as a result of a permanent easement across one of the lots. The site previously had a building with parking on it, both of which have been removed. The sig/com building site will include: a small utility building that houses signals equipment for the LRT and Freight track crossing and communications equipment that facilitate LRT train functions, a gravel border to the building with landscaping on the remainder of the site, retaining walls, and security fencing with an access gate around the perimeter. No changes to the configuration of the associated lots are anticipated.

The purpose of this application is to seek the following approvals for the downtown sig/com design and use specifically, and is limited to the elements in the area circumscribed by SE Adams Street, a side lot line, and an existing railroad right-of-way.

1. The sig/com use, characterized as Utility because of the communications function, is subject to a **Community Service Use Review**.

   Note:
   A "signal bungalow" is also on the site. Railroad facilities and equipment, including track, signals, and signal bungalows, are a part of the railroad system and are subject to the federal Interstate Commerce Commission Termination Act of 1995, which preempts local and state law related to that subject matter. Therefore, the location, design, and other features of these elements are not subject to review.

   The signal bungalows are exempt given their integral function to service the freight corridor and LRT. However the signal and Communications building Signal and Communications Building also house communications equipment that service light rail functions only. This communications function is defined as Utilities, therefore Community Service Use Review is required.

2. The need for a **Variance Review** for floor area ratio requirements has also been identified.

3. **Design Review** approval is also sought for the following elements.

- A small utility building that houses signals and communications equipment for the track crossing and train functions.
- Security fencing with an access gate around the perimeter.
- A gravel border to the building with landscaping on the remainder of the site,

- A retaining walls that supports the trackway adjacent to the site. A second wall runs parallel to the street ROW to support the roadway, and while not typically subject to design review, is proposed to match the on-site wall.

Throughout the light rail system, there has been an effort to define both “Elements of Continuity” and “Elements of Distinction”.

Elements of Continuity are those that serve to provide a familiarity and continuity from station to station. Use of like elements at respective stations serves a number of purposes. Successfully guiding passengers as they get on and off at each station is one: the similarity of such elements serves to help orient passengers. This orientation aspect also contributes to passenger safety, as they successfully and efficiently navigate their way through the station sequence. Cost-effectiveness of both acquisition and maintenance is also best-served by using these standardized elements.

Elements of Continuity include: internal signs, track, catenary poles, platform lighting and amenities, ticket vending machines, equipment boxes, OCS equipment, signal bungalows and other LRT equipment, light standards, and shelter structures.

Elements of Distinction are those that have been selected or modified to give aspects of the system a unique character, and contribute to the successful integration of the station area into the respective context. These include the use of an ashlar stone treatment on the face of retaining walls, welded wire fence, a unique pedestrian railing design, and landscape treatments,

While systems buildings, such as the Sig/Com. are elements of continuity, the building design has been enhanced to include elements and attributes that have been developed to fit into respective downtown urban contexts, and offer a higher quality of features and finishes than have been applied to such structures in the past. In this case those elements consist of the following:

- A painted concrete block (cmu) structural wall system, faced with a semi-transparent, full wrap metal frame in which woven wire panels are placed.
- For the portions of the building above 12’-0”, metal siding above the cmu.
- A membrane roof surface with a 2/12 sloped roof. The membrane is designed to anticipate and incorporate a green roof option, pending funding.
- Woven wire panels also attached to all doors.

This is a unique, hybrid design that provides architectural interest to an otherwise utilitarian structure.

While the Downtown Design standards include as prohibited materials: cmu, solid metal cladding, and solid metal panels, CMU is an element of continuity for the sig/comm. structures throughout the LRT alignment. The cmu and metal siding appear to be contrary to the standards.

Additionally, a roof with a pitch of 2/12 or less is considered flat, and must meet the flat roof standards. These standards include a 6” minimum cornice with a 12” minimum height. The roof is proposed with a pitch of 2/12. While the proposed roof does have a sufficient cornice projection, the cornice does not meet the height requirement.

Due to these departures from the standards, a modification is required. The approval criteria for modification of design standards are in MMC 19.907.10.

APPLICABLE APPROVAL CRITERIA

Those Code sections determined to be Applicable have been identified as follows.

Community Service Use

19.904.4 APPROVAL CRITERIA COMMUNITY SERVICE USE
19.904.9 Specific Standards for Institutions and other Facilities not Covered by Other Standards

Design Review

19.907.7 APPROVAL CRITERIA FOR DESIGN REVIEW
MILWAUKIE DOWNTOWN DESIGN GUIDELINES

Variance Review

19.911.4.B.1 APPROVAL CRITERIA for Variances

APPLICABLE DEVELOPMENT STANDARDS

The development standards which need to be addressed through the variance review have been identified as follows. All others are met.

	Standard	Response
19.310.4, B.2 Floor Area Ratios and Table 19.310.4		
	19.310.4, B.2 and Table 19.310.4 identifies floor area ratio (FAR) requirements as a minimum of .5:1 and a maximum of 3:1.	The proposed structure is approximately 480 square feet, and the lot on which it will sit is approximately 4800 square feet, resulting in an FAR of approximately .1:1. Therefore, a Variance is required, and has been assessed below.

19.700 PUBLIC FACILITY IMPROVEMENTS

Per direction from the City of Milwaukie, the following applicable sections of Chapter 19.700 are addressed below.

Standards		Findings
A. 19.702 Applicability		The proposed development consists of new construction and is subject to the requirements of Chapter 19.700.
B. 19.703.1 Preapplication Conference		The required Preapplication Conference has occurred.
C. 19.703.2 Application Submittal		The proposed development does not trigger a transportation impact study, but does require submittal of land use applications, including those herein and a previous Parking Determination reviewed under separate cover.
D. 19.703.3 Approval Criteria A. Procedures, Requirements, and Standards Development and related public facility improvements shall comply with procedures, requirements, and standards of Chapter 19.700 and the Public Works Standards. B. Transportation Facility Improvements Development shall provide transportation improvements and mitigation at the time of development in rough proportion to the potential impacts of the development per Section 19.705 Rough Proportionality, except as allowed by Section 19.706 Fee in Lieu of Construction. C. Safety and Functionality Standards The City will not issue any development permits unless the proposed development complies with the City's basic safety and functionality standards, the purpose of which is to ensure that development does not occur in areas where the surrounding public facilities are inadequate. Upon submittal of a development permit application, an applicant shall demonstrate that the development property has or will have all of the following: 1. Adequate street drainage, as determined by the Engineering Director. 2. Safe access and clear vision at intersections, as determined by the Engineering Director. 3. Adequate public utilities, as determined by the Engineering Director. 4. Access onto a public street with the minimum		A. Compliance with the applicable standards and requirements is herein being addressed. B. Transportation Facility Improvements are proposed to occur at the time of development. 19.705 and 19.706 are addressed below. C. Demonstration of compliance with all safety and functional standards will be demonstrated through the development permit application.

paved widths as stated in Subsection 19.703.3.C.5 below. 5. Adequate frontage improvements as follows: a. For local streets, a minimum paved width of 16 ft along the site's frontage. b. For nonlocal streets, a minimum paved width of 20 ft along the site's frontage. c. For all streets, a minimum horizontal right-of-way clearance of 20 ft along the site's frontage. 6. Compliance with Level of Service D for all intersections impacted by the development, except those on Oregon Highway 99E that shall be subject to the following: a. Level of Service F for the first hour of the morning or evening 2-hour peak period. b. Level of Service E for the second hour of the morning or evening 2-hour peak period.		
E. 19.704 Transportation Impact Evaluation		The Engineering Director has determined that a Transportation Impact Study is not required for the proposed development.
F. 19.705 Rough Proportionality		The system impacts of the proposal are minor, given access to the site will be intermittent, primarily for the purpose of maintenance. All possible and appropriate right-of-way improvements in the vicinity of the site will be provided, including new sidewalks, street lighting, curbs, and street paving. Other positive impacts include the project's role in the operation of the Light Rail facility, resulting in multiple benefits to the community and the overall transportation system. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development. Local, benefits will include access to job corridors in the region readily accessible by light rail, and a

		reduction in congestion on 99E and other nearby roads. Transportation facility improvements on SE Adams Street is constructed positively in excess of rough proportionality to the impacts of the proposed development as part of the light rail project.
G. 19.706 Fee In Lieu of Construction		The required transportation facility improvements as part of the proposed development will be constructed as part of the light rail project.
H. 19.707 Agency Notification and Coordinated Review		All appropriate notification coordinated review has occurred through this process, and earlier associated processes for the overall light rail project.
I. 19.708.1.A Access Management		The property will be accessing the public right-of-way through 2105 SE Adams Street. As a result, the existing property's accessways onto SE Adams Street shall be brought into conformance with the access management standards contained in Chapter 12.16.
J. 19.708.1.B Clear Vision		The proposal will comply with clear vision standards contained in Chapter 12.24.
K. 19.708.1.C Development in Downtown Zones		The required transportation facility improvements as part of the proposed development shall be constructed in accordance with the Milwaukie Downtown and Riverfront Plan: Public Area Requirements.
L. 19.708.3 Sidewalk Requirements and Standards		Sidewalk improvements shall be incorporated into the design and construction of the required transportation facility improvements as part of the proposed development. Sidewalk improvements shall be constructed in accordance with the Public Works Standards.
M. 19.708.4 Bicycle Facility Requirements and Standards		SE Adams Street is not classified as a bike route. As a result, bikeway improvements are not required as part of the proposed development.
N. 19.708.6 Transit Requirements and Standards		SE Adams Street is not classified as a transit route. As a result, transit improvements are not required as part of the proposed development.
O. 19.709 Public Utility Requirements		The Engineering Director has determined that the existing public utilities are adequate to serve the proposed development.

I. 19.708.1.A Access Management		The property will be accessing the public right-of-way through 2105 SE Adams Street. As a result, the existing property's accessways onto SE Adams Street shall be brought into conformance with the access management standards contained in Chapter 12.16.
J. 19.708.1.B Clear Vision		
K. 19.708.1.C Development in Downtown Zones		The required transportation facility improvements as part of the proposed development shall be constructed in accordance with the Milwaukie Downtown and Riverfront Plan: Public Area Requirements.
L. 19.708.3 Sidewalk Requirements and Standards		Sidewalk improvements shall be incorporated into the design and construction of the required transportation facility improvements as part of the proposed development. Sidewalk improvements shall be constructed in accordance with the Public Works Standards. M. 19.708.4
Bicycle Facility Requirements and Standards		SE Adams Street is not classified as a bike route. As a result, bikeway improvements are not required as part of the proposed development.
N. 19.708.6 Transit Requirements and Standards		SE Adams Street is not classified as a transit route. As a result, transit improvements are not required as part of the proposed development.
O. 19.709 Public Utility Requirements		The Engineering Director has determined that the existing public utilities are adequate to serve the proposed development.
		Off-street parking requirements have been addressed through an earlier submitted application. The Parking Determination Review concluded that no off-street parking is required, given the site's use as a utility building. Variances are necessary for building setback and floor area ratio requirements. All other underlying zone standards are met.

		The variance requests have been addressed within this application, and have been found to be consistent with variance approval criteria. With approval of the variances, this criterion is met.

COMMUNITY SERVICE USE

19.904.4 Approval Criteria		
Criteria		**Findings**
1. The building setback, height limitation, and off-street parking and similar requirements governing the size and location of development in the underlying zone are met. Where a specific standard is not proposed in the CSU, the standards of the underlying zone are met		Off-street parking requirements are being addressed through an earlier submitted application. That Parking Determination Review application requests approval for no off-street parking, given the site's use as a utility building. The building meets all setback and height limitations required in this zone. A variance is necessary for floor area ratio requirements. Exceptions are also sought for roof pitch and building material standards. The variance and exceptions requests have been addressed within this application, and have been found to be consistent with variance approval criteria. With approval of the variance and exceptions, this criterion is met.
2. Specific standards for the proposed uses as found in Subsections 19.904.7-11 are met		The activities have been assessed against the specific standards for the proposed uses as found in Subsections 19.904.7-11 (specifically, 19.904.9), and have been found to be met (see below), The criterion is met.
3. The hours and levels of operation of the proposed use are reasonably compatible with surrounding uses		The use of the sig/com building is infrequent and irregular, as the purpose of such use is exclusively maintenance. As such, the hours and level of the use are nominal, the operation and use are therefore compatible with surrounding uses. The criterion is therefore met.

4. The public benefits of the proposed use are greater than the negative impacts, if any, on the neighborhood		The public benefits resulting from the construction, completion, and utilization of the rail system are substantial, both locally and regionally. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development. Local, benefits will include access to job corridors in the region readily accessible by light rail, and a reduction in congestion on 99E and other nearby roads. While the CMU block is not an allowed material in the Downtown area, the building design has been enhanced with the woven metal screens, which are transparent and create an interesting architectural contrast through the use of materials. The siting of the building in proximity to the two retaining walls on site, provide an inconspicuous location for the building, In addition, The setback from the west retaining wall on the property line is minimized, allowing increased setbacks from the adjacent business at 2105 Adams. Therefore, the criterion is met.
5. The location is appropriate for the type of use proposed		The location of this building is appropriate given its proximity to the gates at 21rst and Adams intersection. Signal bungalows, must be placed within site of an intersection to allow maintenance personnel to see the gate and light functions at the intersection during routine maintenance. In its proposed orientation, the doors to the signal building face south, toward the 21rst/ Adams intersection. The Communications building is connected to the back of the signal building, which allows the two to blend seamlessly, as one structure within one compact location. In addition, the site is below the grade of 21rst Ave, providing an inconspicuous location for this key light rail function. The location of the Light Rail project and its associated facilities has been vetted through a protracted Final Environmental Impact Statement (FEIS) process, as well as a substantial ongoing public outreach program and multiple public hearings, to ensure its location maximizes potential benefits,. Additionally, the City of Milwaukie approved the South Downtown Concept Plan which anticipates the future light rail station and related amenities in this location. The criterion is met.

19.904.9 Specific Standards for Institutions…and other Facilities not Covered by Other Standards		
Criteria		**Findings**
A. Utilities, streets, or other improvements necessary for the public facility or institutional use shall be provided by the agency constructing the use.		All utilities and street improvements warranted by the project are being constructed as part of the project and are being provided by TriMet. . The criterion is met.
B. When located in or adjacent to a residential zone, access should be located on a collector street if practicable. If access is to a local residential street, consideration of a request shall include an analysis of the projected average daily trips to be generated by the proposed use and their distribution pattern, and the impact of the traffic on the capacity of the street system which would serve the use. Uses which are estimated to generate fewer than 20 trips per day are exempted from this subsection.		There is no regular vehicular access. The criterion is not applicable.
C. When located in a residential zone, lot area shall be sufficient to allow required setbacks that are equal to a minimum of ⅔ the height of the principal structure. As the size of the structure increases, the depth of the setback must also increase to provide adequate buffering.		The location is not within a residential zone. The criterion is not applicable.
D. The height limitation of a zone may be exceeded to a maximum height of 50 ft. provided Subsection 19.904.9.C of this subsection is met.		The maximum sig/com height is approximately fifteen feet. Therefore the structure does not exceed the height limit. The criterion is met.
E. Noise-generating equipment shall be sound-buffered when adjacent to residential areas.		There will be no noise generating equipment present on site. The criterion is met.
F. Lighting shall be designed to avoid glare on adjacent residential uses and public streets.		The architectural lighting for the structure consists of l.e.d. fixture lighting over each of the doors. The lighting provides site security, and is photocell-actuated, the fixture is focused down to ensure there will be no glare. In addition, the street lighting improvements will be

		made, insuring no glare occurs on adjacent surrounding uses and streets. The criterion is met.
G. Where possible, hours and levels of operation shall be adjusted to make the use compatible with adjacent uses.		The hours and levels of use are infrequent and intermittent. As such, the hours and level of the use do not conflict with the surrounding uses and are therefore compatible with them. The criterion is met
H. A spire on a religious institution may exceed the maximum height limitation. For purposes of this subsection, "spire" means a small portion of a structure that extends above the rest of the roofline, or a separate structure that is substantially smaller than the main structure and extends above the roofline of the main structure. "Spire" includes but is not limited to ornamental spires, bell towers, other towers, minarets, and other similar structures or projections. The number of spires on a religious institution property is not limited, so long as the spires remain only a small portion of the area of the structures		No spire is being proposed by this project The criterion is not applicable
I. The minimum landscaping required for religious institutions is the lesser of 15% of the total site area and the percentage required by the underlying zone.		No religious institution is being proposed, and the DO zone has no minimum landscaping requirement. The criterion is not applicable
J. Park-and-ride facilities may be encouraged for institutions along transit routes that do not have days and hours in conflict with weekday uses (e.g., religious institutions or fraternal organizations). Such uses may be encouraged to allow portions of their parking areas to be used for park-and-ride lots.		This development will not include an off-street parking area as determined by the Parking Determination review completed for this site. The criterion is not applicable

VARIANCES

Table 19.310.4 identifies floor area ratio (FAR) requirements as a minimum of .5:1 and a maximum of 3:1. The proposed structure is approximately 480 square feet, and the lot on which it will sit is approximately 4800 square feet, resulting in an FAR of approximately .1:1.

19.911.4.B.1 Approval Criteria

Criteria		Findings
1. Discretionary Relief Criteria a. The applicant's alternatives analysis provides, at a minimum, an analysis of the impacts and benefits of the variance proposal as compared to the baseline code requirements.		The station and associated structures such as the sig/com will result in little building area that is measurable as FAR. The sig-com building, as one critical component of the overall system, is a unique use with desirable public benefits. The site layout makes efficient use of the site as it utilizes a minimum footprint for the structure and its surround, while providing a screening landscape buffer to minimize any aesthetic impacts, thus ensuring that surrounding sites will remain desirable for ongoing uses or potential future redevelopment. The baseline code requirements are intended to ensure that development supports street activity and makes efficient use of land and available services. The activity generated by light rail overall will greatly enhance the vitality of the area, and will contribute to the creating an environment that will support new downtown development activities along nearby streets. The increased use of transit will also allow for more efficient development of adjacent properties by minimizing parking demand. Other broader public benefits resulting from the construction, completion, and utilization of the station, and rail system, are substantial, both locally and regionally. They include a more efficient transit system, reduced automobile usage and associated reduction in vehicle emissions and congestion, improved access and mobility for residents, a significant increase in local construction jobs, an accessible connection to the region's light rail system, enhanced regional economic competiveness, and eventual downtown economic benefits typically associated with transit-oriented development. The local benefits directly associated with requiring a minimum FAR include supporting existing nearby development by providing increased pedestrian activity and an enlarged customer base. The number of people brought to the area because they use

		the light rail facilities will greatly exceed the number that would be produced by a building on the site meeting the FAR requirements, and this will ultimately support new development activities and associated benefits. Therefore the variance allowing the building as an essential component of this larger project is entirely consistent with the purpose of FAR standard, which is to ensure land is developed to an appropriate density that contributes to the activity and vitality of an area, and is suitable for the services available. The criterion is met.
b. The proposed variance is determined by the Planning Commission to be both reasonable and appropriate, and it meets one or more of the following criteria: (1) The proposed variance avoids or minimizes impacts to surrounding properties. (2) The proposed variance has desirable public benefits. (3) The proposed variance responds to the existing built or natural environment in a creative and sensitive manner.		The sig/com is a modest structure, thoughtfully designed, and screened by landscaping to the maximum extent possible. In addition, the building is positioned with a minimum setback from the west property line to maximize setback from the surrounding properties. The site is bounded by a wall in the street ROW to the south, substantial landscaping to the north and the east, and a wall retaining supporting the future light rail tracks and existing RR tracks to the west. Due to the anticipated landscaping, walls, modest scale, the structure will be screened from other properties, to the extent possible, while still retaining site lines to the property for increased security. This results in minimal impact to adjacent parcels. The site configuration responds to the built and natural environment by partially recessing the structure into the site. Further, the adjacent walls supporting the LRT trackway align with the existing freight railroad. Overall, this minimizes impacts to adjacent parcels as the area is already largely defined by the existing tracks. The landscaping on site further contributes to the sites relationship to the natural environment. The proposed variance has desirable public benefit as the building footprint is reduced to supply the appropriate amount of space necessary to provide safe operations for the LRT and freight rail street crossing. The criterion is met.
c. Impacts from the proposed variance will be mitigated to the extent practicable.		The impacts from the proposed variance will be the lack of occupiable development. Given the function of this structure the FAR proposed is appropriate and impacts are minimal These impacts have been mitigated through execution of a Memorandum of understanding that defines City of Milwaukie and TriMet efforts to develop the nearby triangle site. In addition, the activity that will occur at the station, as well as the resulting overall enhancement of the immediate area and lack of impact to adjacent properties further mitigates impacts.

		This enhancement is furthered through the use of quality materials. The criterion is met.

DESIGN REVIEW

The site is located in the Downtown Office zone and is subject to Downtown Design Review. Addressed below are the following:

- **The applicable approval criteria of MMC 10.907.7**
- **Modification Criteria of MMC 19.907.10 to allow an exception to Design Standards**
- **Consideration Criteria of MMC 19.907.1 to allow an exception to Design Standards for prohibited materials.**
- **The applicable Design Guidelines.**

19.907.7 Approval Criteria for Design Review		
Criteria		**Findings**
A. Compliance with Title 19;		The applications requirements and development standards of Title 19 have been met, but for the required variance addressed above, and the prohibited materials addressed below. With approval of the variances and the materials, the criterion is therefore met.
B. Substantial consistency with the Downtown Design Guidelines;		The project has been reviewed below, and has been found to be consistent with the applicable Downtown Design Guidelines This criterion is met.
C. Submittal of a complete application and applicable fee as adopted by the City Council.		The project as submitted is considered complete, and the fee accompanies this submission. This criterion is met.

19.310.6 Design Standards		
Requirement		**Findings**
C. 2. Design Standards for Walls b. The following wall materials are prohibited at the street level of the building: (2) Splitface or other masonry block. c. The following wall materials are prohibited at all levels of the		Painted concrete masonry unit (cmu) block is the proposed primary structural wall material. The wall will be predominantly concealed by woven metal screens held out from the wall on steel frames. In addition to the woven metal wire screens, portions of the wall above 12'-0" are proposed to be standing seam metal. As such, the approval criteria for consideration of prohibited materials in MMC 19.907.11 must be met, and are addressed below.

building in all downtown zones: (4) Vinyl or metal cladding; (6) Metal panels, except at penthouse level.		
4. Design Standards for Roofs The following standards are applicable to building roofs in all of the downtown zones. a. Flat roofs shall include a cornice with no less than 6 in depth (relief) and a height of no less than 12 in.		The roof is proposed with a pitch of 2/12. While the proposed roof does have a sufficient cornice projection, it does not meet the height requirement. As such, the approval criteria for modification of design standards in MMC 19.907.10 must be met, and are addressed below.

19.907.10 Modification of Design Standards		
A modification to a design standard may be granted at a public hearing in accordance with Section 19.1006 when all of the following criteria are satisfied:		
Criteria		**Findings**
A. The modification is integral to the overall design concept for the building;		The roof is proposed with a pitch of 2/12. While the proposed roof does have a sufficient cornice projection, it does not meet the height requirement. The building is an extremely modest, and sustainably-designed structure. Though pitching the roof a fraction higher would obviate it being subject to the modification, the roof pitch is fitting proportionally, and would require more material and a custom design to implement an atypical (i.e. 2.1:12) pitch. A higher pitch would add more material and more visual mass to a design that is appropriately modest and unassuming. As the building is designed to be durable, efficient and modest, the scale of the roof eaves is designed to provide appropriate weather protection, minimize maintenance, and be proportionally appropriate. A continuous cornice height of 1' would add much "visual weight" to this element, add mass to the overall building, and require much more material than is otherwise required. As such, the approach is integral to the overall design concept. This criterion is met.
B. The modification: 1. Substantially meets the intent of		The purpose of the Design Standards is "to encourage building design with durable, high-quality materials." The materials and

the design standard; or 2. In combination with other design elements of the project, the modification meets the intent of the design standard; and		approaches employed are durable, of high-quality, and appropriately sustainable. The roof pitch is appropriate for the structure. It is the highest pitch that does not meet the standard. It has sufficient and appropriate slope for the scale of the structure, while not appearing as the type of yet-lower pitched flat roof the standard aspires to avoid. The intent of the cornice dimensional requirement is to ensure that flat-roofed structures are finished and terminated at the top with an appropriate finished and scaled element. Given the modest scale of the structure, the more modest 6-1/2" dimension is better fitting for this composition, and more sustainable. This criterion is met.
C. The project is substantially consistent with the Downtown Design Guidelines applicable to the design standard.		The design considerations specified for buildings in the Milwaukie Downtown Design Guidelines aspire to ensure that they are contextually appropriate, compositionally additive, and of refined quality. The sig/com building is a refined composition. The roof pitch and thickness are intrinsic and thoughtful components of the overall design. The Design Guidelines applicable to the design standard are specifically addressed below, and the proposal, including the roof element, has been found to be consistent with those guidelines. This criterion is met.

19.907.11 Consideration of Prohibited Material or Design Features		
The Planning Commission may authorize the use of prohibited materials or design features specified in Subsection 19.310.6.C subject to the following criteria:		
Criteria		**Findings**
A. The applicant demonstrates that the prohibited material is substantially comparable to an allowed material with regards to quality, appearance, style, architectural effect, and durability.		Painted concrete masonry unit (cmu) block walls which are the proposed primary structural wall material, is predominantly concealed by woven metal screens held out from the walls on steel frames. In addition to woven metal wire screens that are proposed, portions of the wall above 12'-0" are proposed to be standing seam metal. The purpose of the overall approach is to use modern, utilitarian, durable, high-quality materials in an inventive manner that results in a low-maintenance and aesthetically advanced composition. The masonry base building is essential, given the nature of the equipment within and the vital security needs of the facility. The introduction of the

		metal frame and woven wire provides a textured quality that allows light to filter through, softening and enriching the overall presence of the building. The cmu and metal wall panels are almost entirely placed behind the woven mesh (the exception being reveals about the doors and equipment that allows them to function freely, further adding depth and character to the composition). Historically, these types of buildings have been rather plain, utilitarian structures. In this case there has been extra effort applied to making the structures for this light rail phase significantly more contributory to their context. The overall quality, appearance, style, and architectural effect is one of a modern, thoughtful, intricately detailed and modulated design. This criterion is met.
B. Use of the prohibited materials is consistent with design considerations specified for the particular design element in the Milwaukie Downtown Design Guidelines.		The design considerations specified for buildings in the Milwaukie Downtown Design Guidelines are to ensure that such structures are contextually appropriate, compositionally additive, and of refined quality. The sig/com building is a refined composition. The normally prohibited cmu and metal panels are a backdrop to the highly articulated and character-giving mesh and frame surround. These materials will allow a play of light and shadow that will be enhancing, consistent with the environmental values embedded in the guidelines, and contextually compatible with the existing railroad heritage and the new light rail elements. The addition of substantial landscaping will further connect the project to the environmental values and goals established by the guidelines. This criterion is met.

DESIGN GUIDELINES: MILWAUKIE CHARACTER		
Guideline		**Findings**
Reinforce Milwaukie's Sense of Place **Strengthen the qualities and characteristics that make Milwaukie a unique place.**		Milwaukie's history is largely formed and defined by its natural surroundings and unique transportation systems. The project's parallel relationship to the existing rail reinforces this transportation/technological history. Light rail is the steamship of the 21st century, and will provide Milwaukie with a new link to the region. It will provide unique views to the natural and urban areas that are Milwaukie today and will reinforce Milwaukie's qualities and characteristics in the future. As a result of public participation efforts, including public workshops, meetings with officials, and input from the Design and Landmarks Committee, numerous elements have been integrated into the design of the sig/com that are specifically responsive to Milwaukie's unique qualities and characteristics. The texture and layering of the building materials is unusual for such a modest utilitarian building. The maximizing of the remainder of the site for landscaping further connects the site to the nearby station area landscaping and parks. Landscaping, ashlar patterned retaining walls, and Milwaukie-themed fencing have all been incorporated in to the project to add to the project's thematic continuity and further support Milwaukie's unique qualities and characteristics. This guideline is met.
Integrate the Environment **Building design should build upon environmental assets.**		The design of the sig/com, respects the character of the nearby natural area through simple detailing, material selection, and landscaped area. This guideline is met.
Promote Linkages to Horticultural Heritage **Celebrate Milwaukie's heritage of beautiful green spaces.**		The sig/com, through its maximizing of landscape on the site, makes a thematic connection to Kellogg Lake and Kronberg Park, and celebrates those spaces. The design of the building also acknowledges and celebrates Milwaukie's green space heritage, through its simple detailing, and sympathetic and layered materials and color. This guideline is met.

Establish or Strengthen Gateways **Projects should use arches, pylons, arbors or other transitions to mark special or primary entries and/or borders between public and private spaces.**		The carefully designed building site features a variety of planting enhancements. Metal railings with historic Milwaukie motif demarcate the site, further contributing to transitional quality along the street frontage. Also visible within he site is variegated protective screening, ashlar treatment of the retaining walls, and the decorated and articulated quality of the building. These elements further contribute to the graceful transitioning between the site and the surrounding public and private areas and properties. The guideline is met.
Consider Context **A building should strengthen and enhance the characteristics of its setting, or at least maintain key unifying patterns.**		Elements have been integrated into the design of the overall project that are specifically responsive to, and enhance, Milwaukie's surrounding characteristics. These elements include: stone-patterning of the various wall treatments, bollard and furniture treatments appropriate to Milwaukie's palette, pedestrian scale street light standards consistent with Milwaukie's, and custom railing treatments incorporating detail and motifs specific to Milwaukie. The design of the standard light rail elements, such as the shelters, TVM shelters, and bike shelter and other system furniture are also high quality and complimentary. The sig/com building treatments are consistent with these nearby themes. The screens, roof, and wall materials are layered and highly articulated. The building is also near the historic railroad trestle, thus providing both a modern contrast and a formal and utilitarian consistency. The landscaping on the site will also relate to the natural qualities and diversity of the nearby Lake area and Kronberg Park. This guideline is met.
Promote Architectural Compatibility **Buildings should be "good neighbors." They should be compatible with surrounding buildings by avoiding disruptive excesses. New buildings should not attempt to be the center of attention.**		The modest scale and "background building" character of the sig/com fits quietly into its surroundings. The siting of the structure maximizes setbacks, to minimize disruption of adjacent uses The details are refined and of an appropriately human scale. Landscape further tempers the transition from building to neighborhood. This guideline is met.

Use Architectural Contrast Wisely **Contrast is essential to creating an interesting urban environment. Used wisely, contrast can provide focus and drama, announce a socially significant use, help define an area and clarify how the downtown is organized.**		The inventive use of metal frames and woven mesh will contribute to an interesting urban environment. The play of light and shadow that will result will further enhance the area, while still appropriate for this simple utilitarian structure. Its clear thematic connection to elements associated with the larger light rail project help define its relationship to the overall area. This guideline is met.

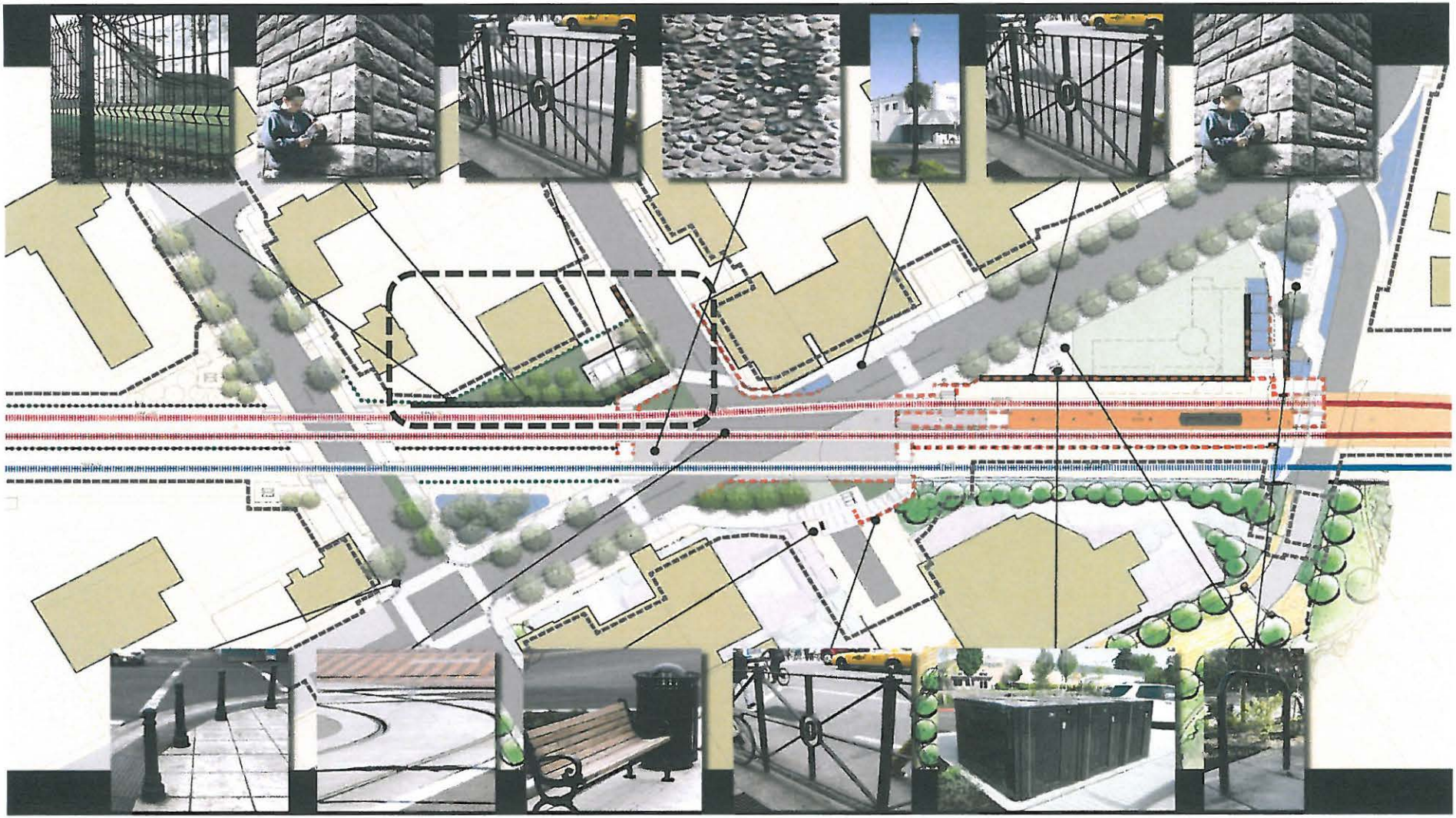
DESIGN GUIDELINES: PEDESTRIAN EMPHASIS		
Guideline		**Findings**
Reinforce and Enhance the Pedestrian System **Barriers to pedestrian movement and visual and other nuisances should be avoided or eliminated, so that the pedestrian is the priority in all development projects.**		There are no barriers to pedestrian movement associated with the proposal. Sidewalks, lighting, and street improvements are proposed consistent with City standards that will improve and encourage pedestrian movement. Decorative fencing, ashlar-pattern wall treatments, and landscaping will contribute to an enhanced pedestrian experience. This guideline is met.
Define the Pedestrian Environment **Provide human scale to the pedestrian environment, with variety and visual richness that enhance the public realm.**		The sig/com is modest in scale. The "background building" character of the sig/com fits quietly into its surroundings. The details are refined and of an appropriately human scale. Landscape treatments further contribute to the variety, visual richness, and the enhancement of the public realm. This guideline is met.

DESIGN GUIDELINES: ARCHITECTURE		
Guideline		**Comments**
Wall Materials **Use materials that create a sense of permanence.**		TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the cmu, steel frame and woven wire, painted metal, and hardy landscape plants have been selected and utilized in a manner that will ensure that the structure is of a consistent and well maintained quality, both physically and visually for the life of the project. This guideline is met.
Wall Structure **Use scale-defining devices to break up the longitudinal dimensions of buildings, creating a comfortable sense of enclosure by establishing an uninterrupted street edge.**		The building, particularly given its scale and purpose, is highly detailed and articulated, resulting in quality human-scaled structure that comfortable adds to the sense of enclosure. This guideline is met.

Silhouette and Roofline **Create interest and detail in silhouette and roofline.**		The roofline is simple and modestly scaled, consistent with overall scale and composition of the building. The simple soffit and edge, the standing seam pattern, and the roof pitch provide an appropriate degree of interest and detail. This guideline is met.
Rooftops **Integrate rooftop elements into building design.**		The building form and material transitions from a cmu body, to metal panel, to the membrane (and green, pending funding) roof. The modest overhang and simple detailing results in a coherent and integrated composition for the overall building. This guideline is met.
Green Architecture **New construction or building renovation should include sustainable materials and design.**		TriMet consistently uses long lasting, high quality materials to ensure low maintenance costs for its facilities and enhance the quality of the communities. In this case, the cmu, steel frame and woven wire, painted metal, and hardy landscape plants have been selected and utilized in an efficient manner that will ensure that the structure is of a consistent and well maintained quality, both physically and visually for the life of the project. This quality, and the recyclability of the materials should the building ever be removed, ensure this to be a highly sustainable component. The guideline is met.
Building Security **Buildings and site planning should consider and employ techniques that create a safe environment.**		Safety is a prime design consideration for Tri Met in all its projects. Crime Prevention Through Environmental Design (CPTED) principles are followed throughout the station area design. TriMet's safety and security committee has reviewed the project and determined that in both construction and use, the design will contribute to a visibly open, safe, and inviting environment. Because of the importance of these utility structures, the site is fenced, and TriMet has included security cameras - integrated into the design - for added security. The building includes lighting, limited to l.e.d. fixture lighting over each of the doors for security purposes. Carefully designed fencing, integrated into the site design, contributes to the site's overall security, while contributing positively to the experiential quality of the surrounding public and private realms. This guideline is met.

DESIGN GUIDELINES: LIGHTING		
Guideline		**Findings**
Architectural lighting should be an integral component of the facade composition.		The architectural lighting the station is limited to l.e.d. fixture lighting over each of the doors. The lighting will be for security purposes, photocell-actuated focused down. The lighting is a linear fixture, placed over each door, integrated into the overall composition as it is placed within the “reveal” between the screen system and door frame. The guideline is met.

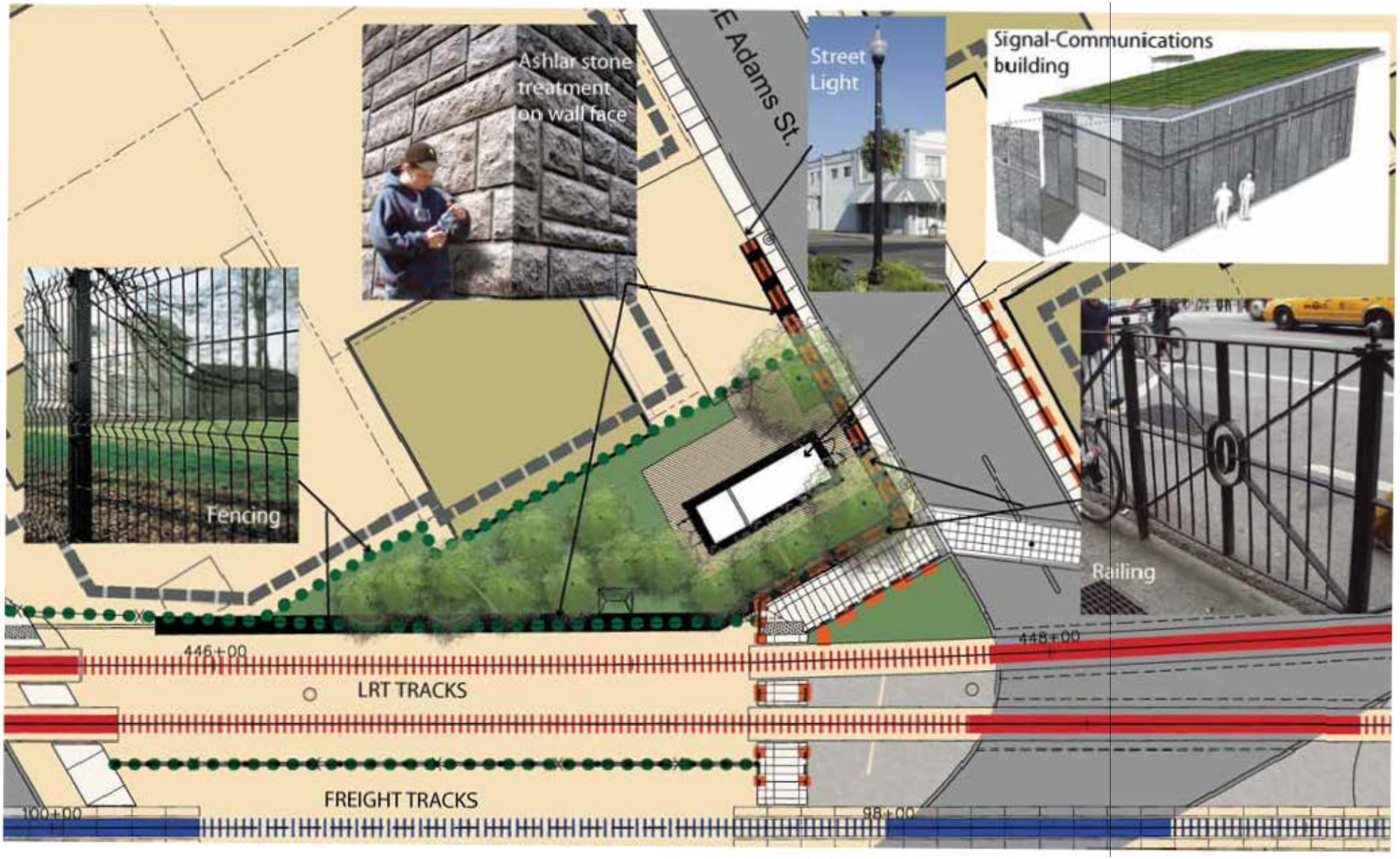
ATTACHMENT 4B



Sig Com Site

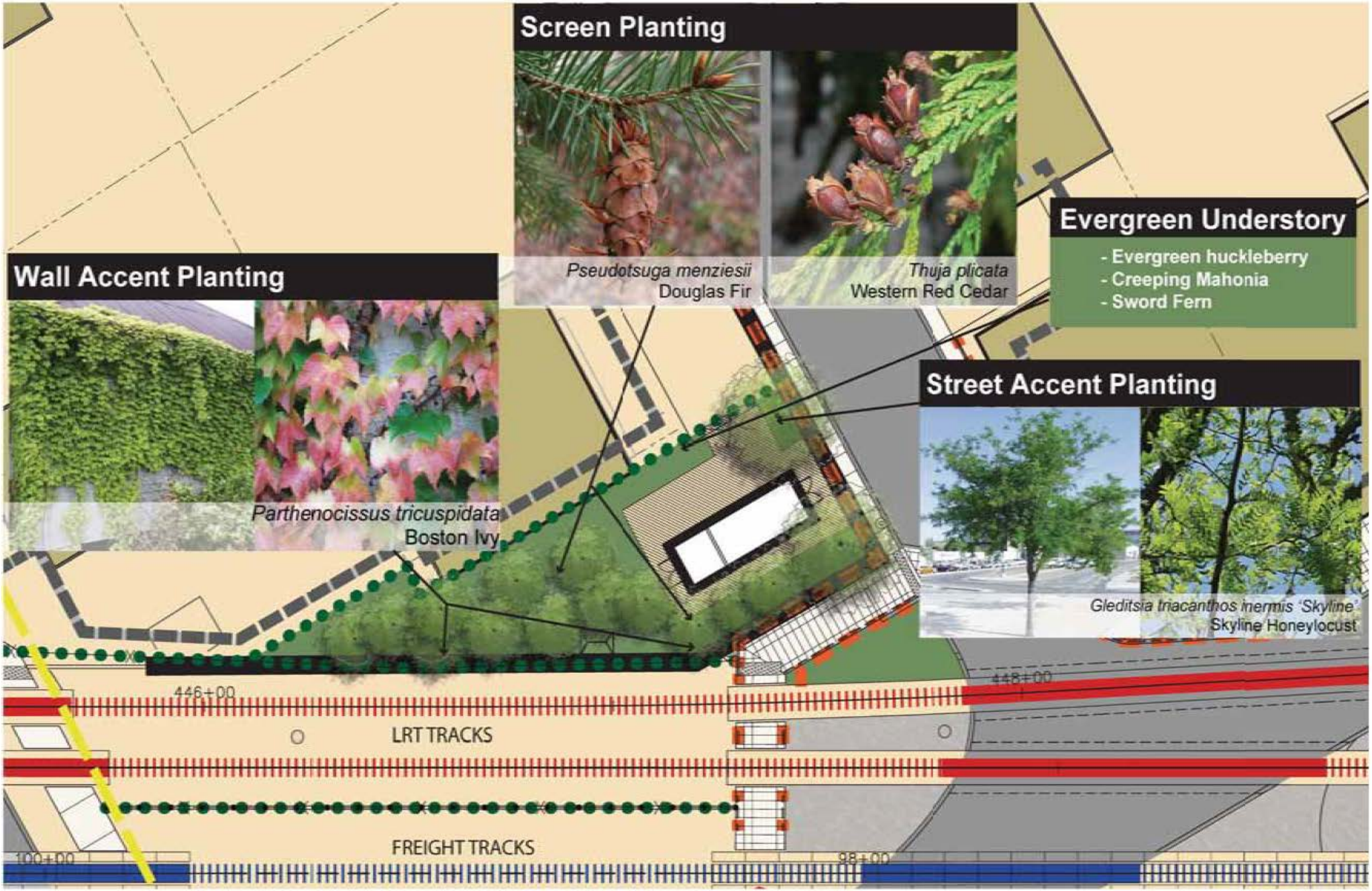
Urban Design Vicinity Plan With Principle Elements

Exhibit D 1



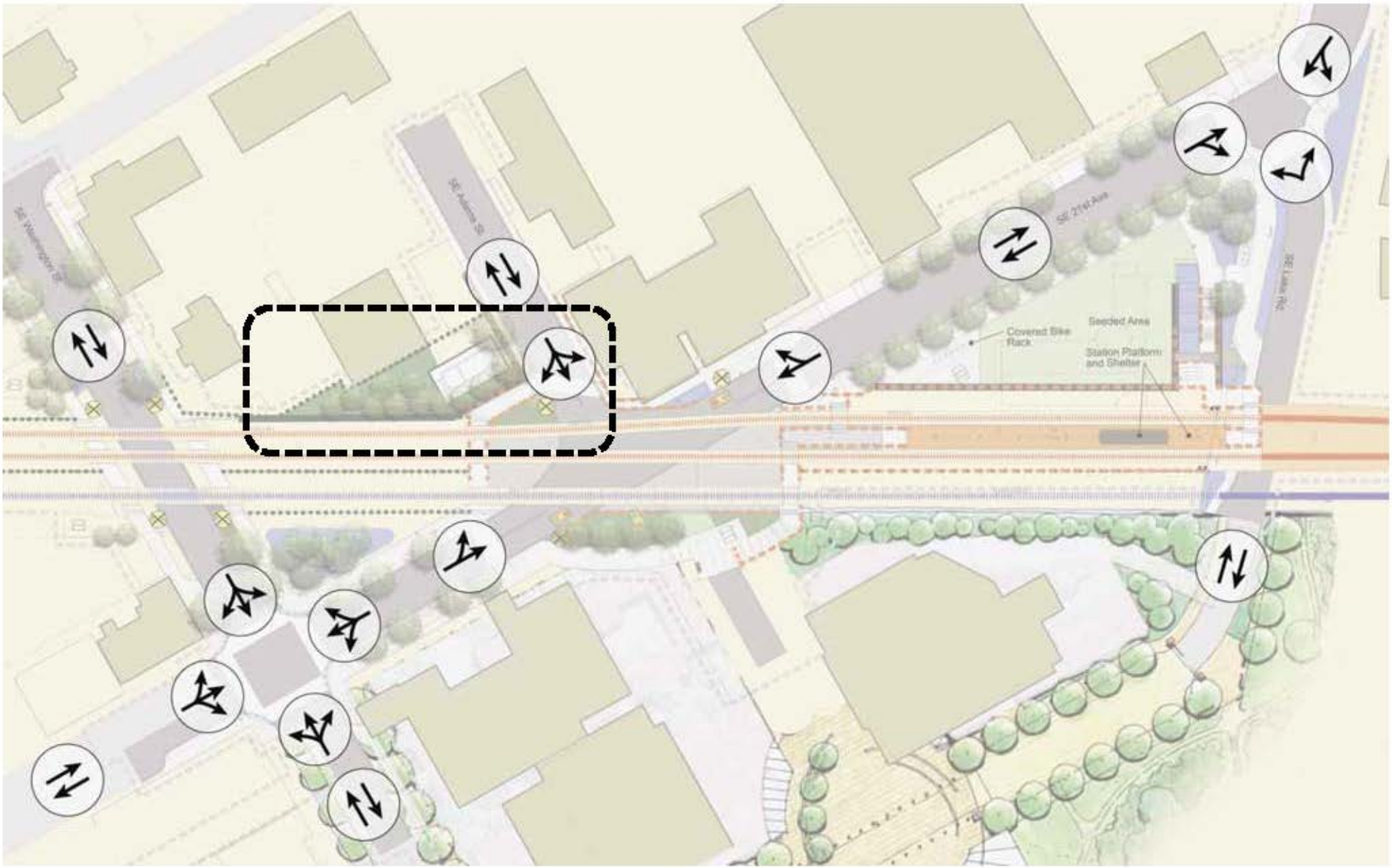
Sig Com Building Site Plan With Principle Elements

Exhibit D 2



Sig Com Landscape Plan

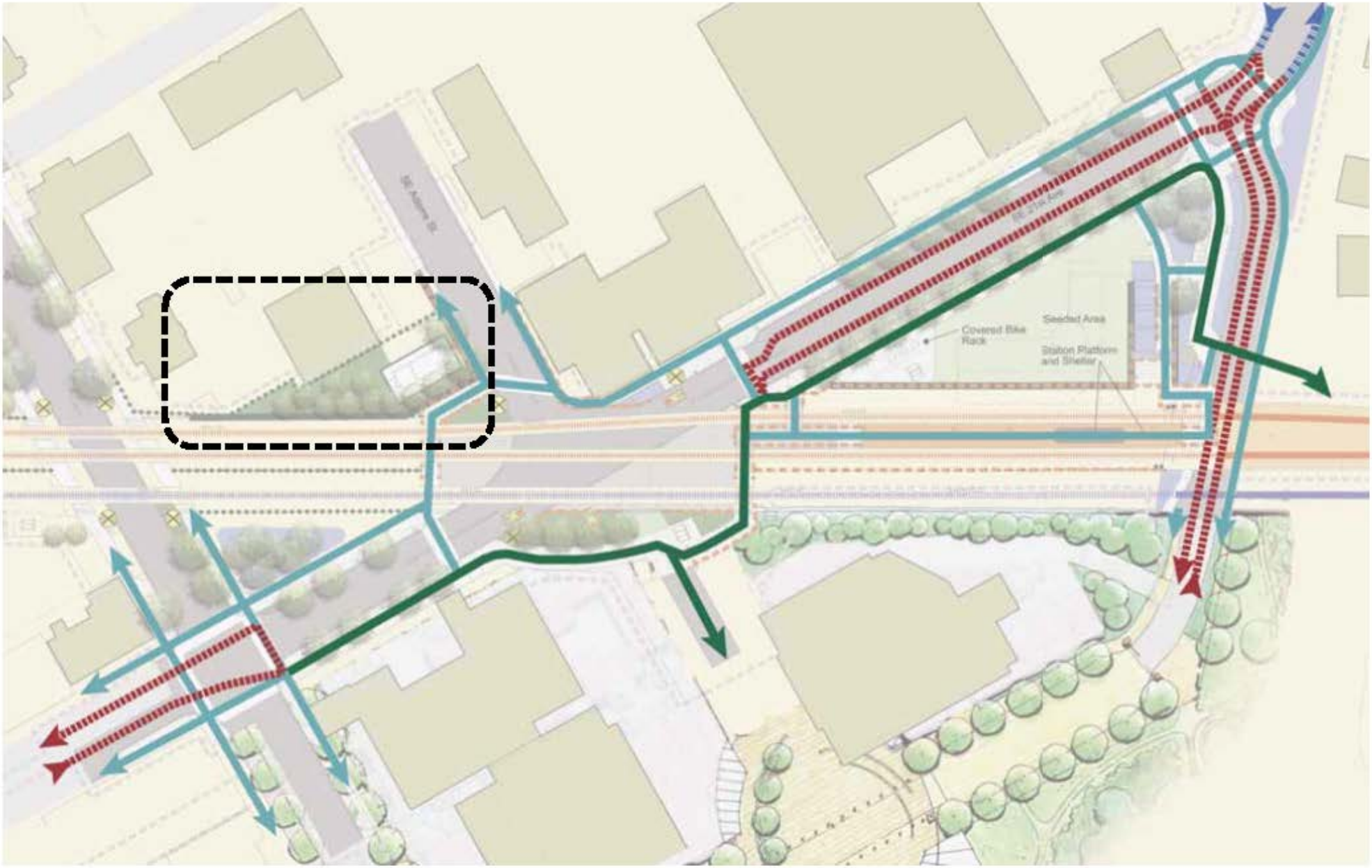
Exhibit D 3



Sig Com Site

Sig Com Vicinity Vehicle Circulation Plan

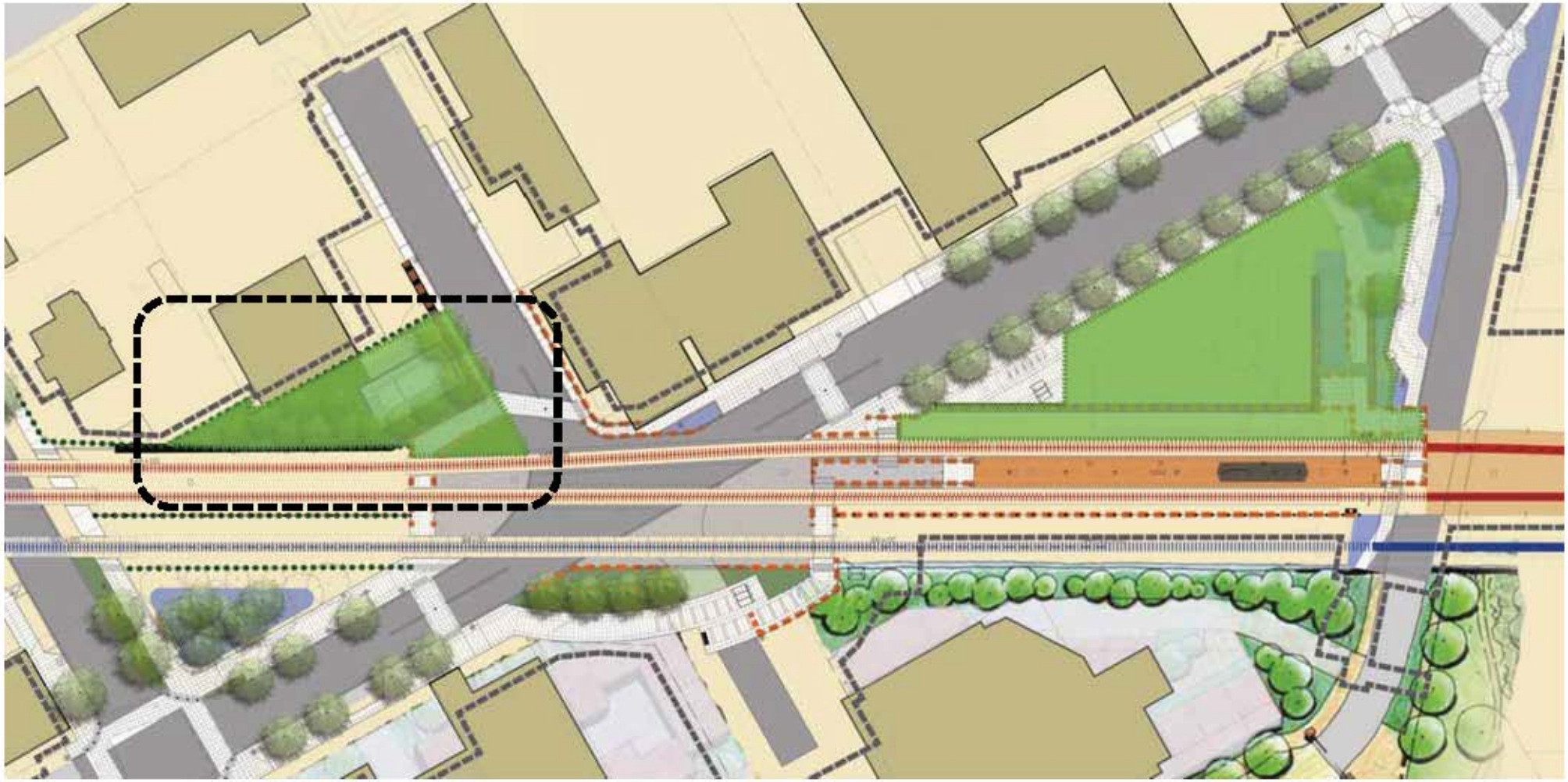
Exhibit D 4



Sig Com Site

Sig Com Vicinity Ped-Bike Circulation Plan

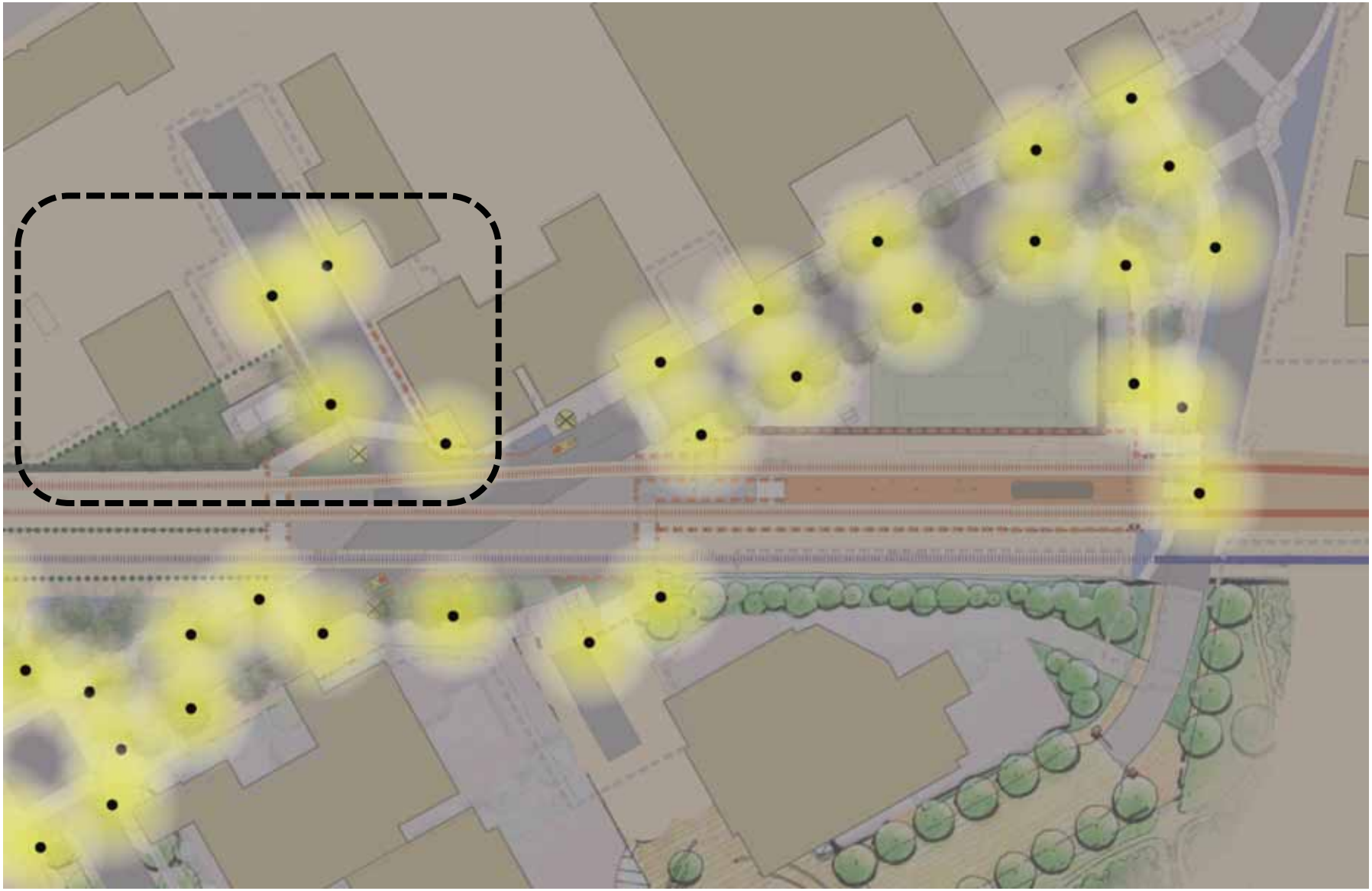
Exhibit D 5



Sig Com Site

Sig Com and Vicinity Site Plan

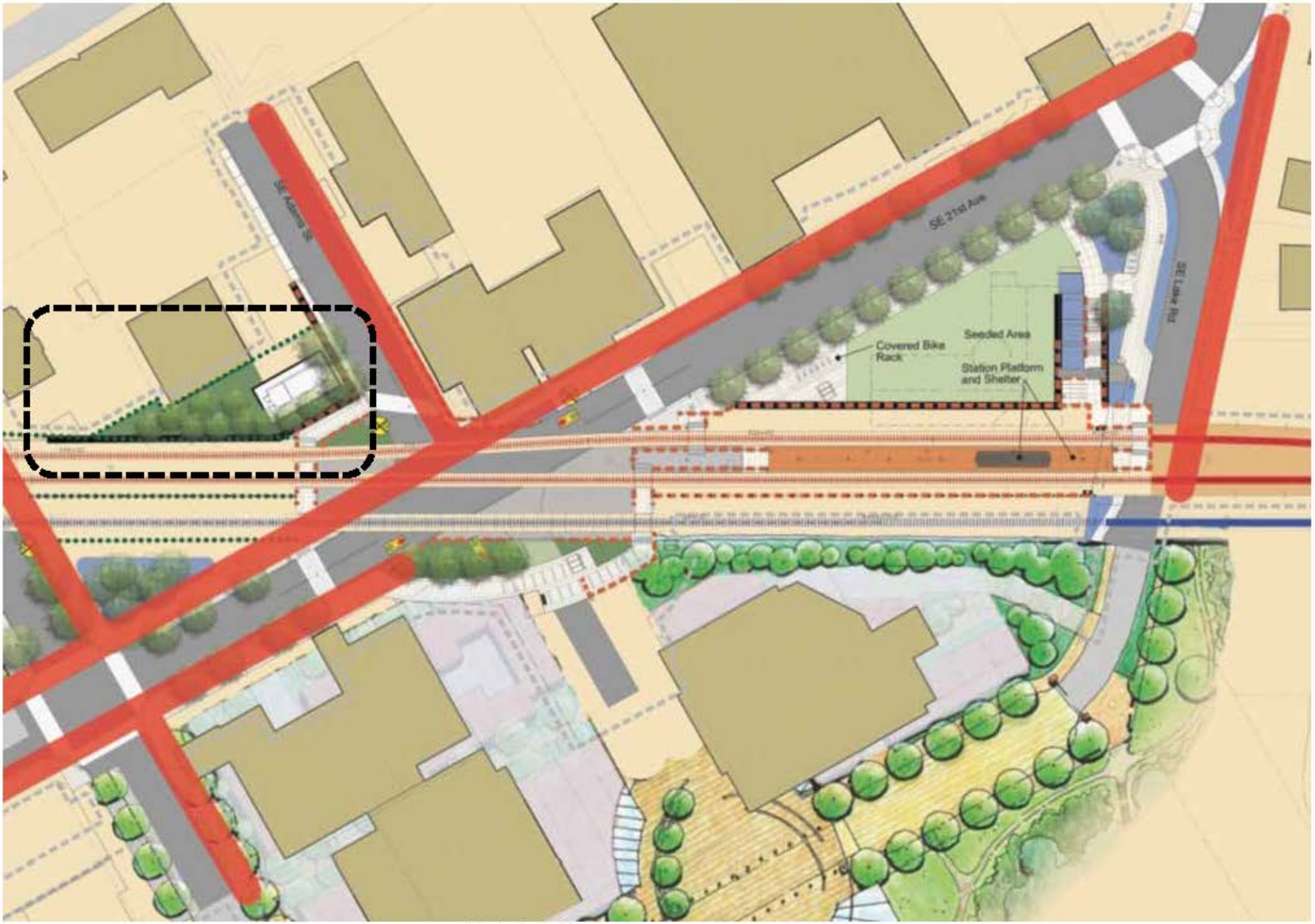
Exhibit D 6



Sig Com Site

Sig Com and Vicinity Site Plan

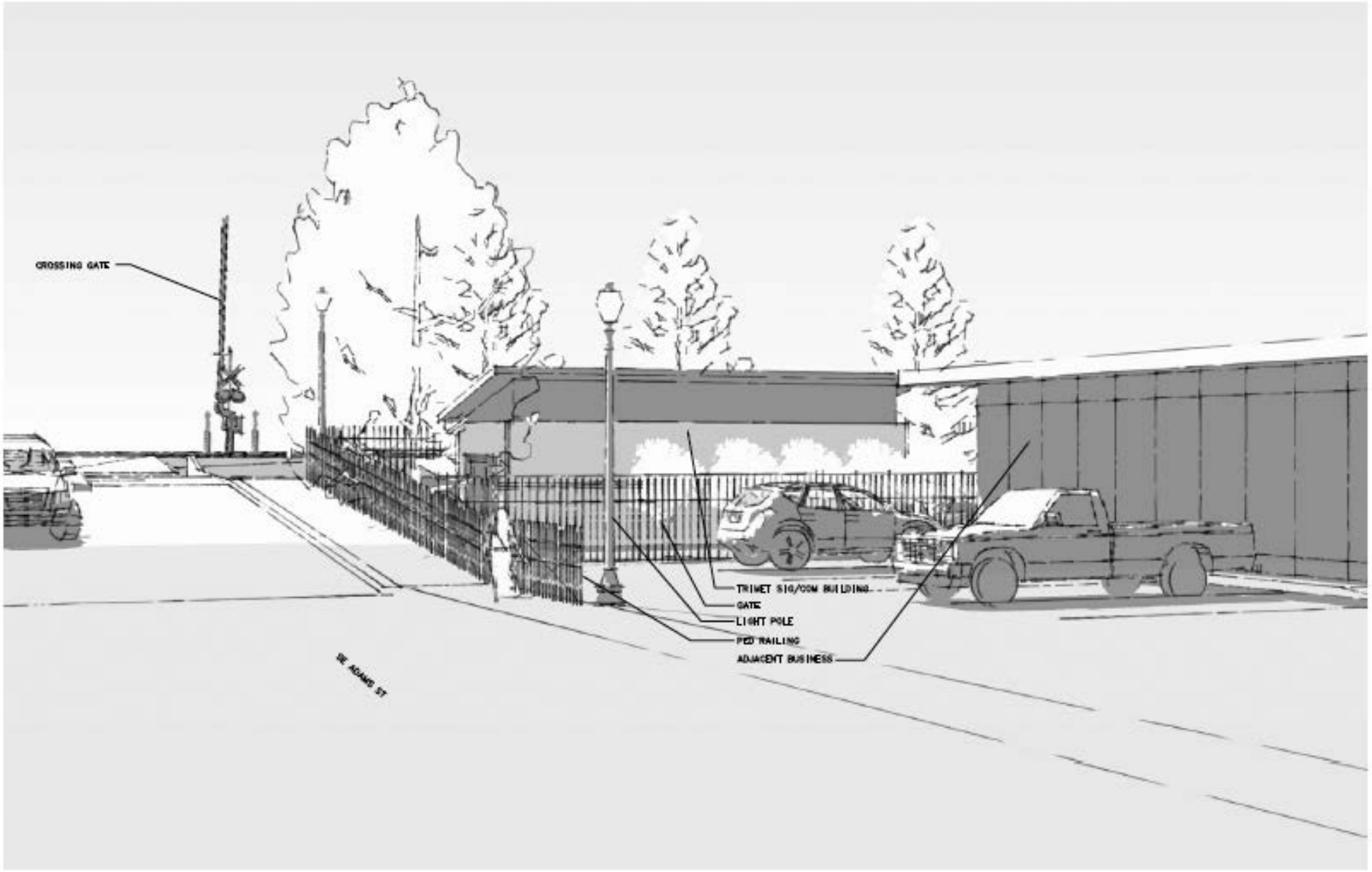
Exhibit D 7



Sig Com and Vicinity Utilities Plan

Sig Com Site

Exhibit D 8

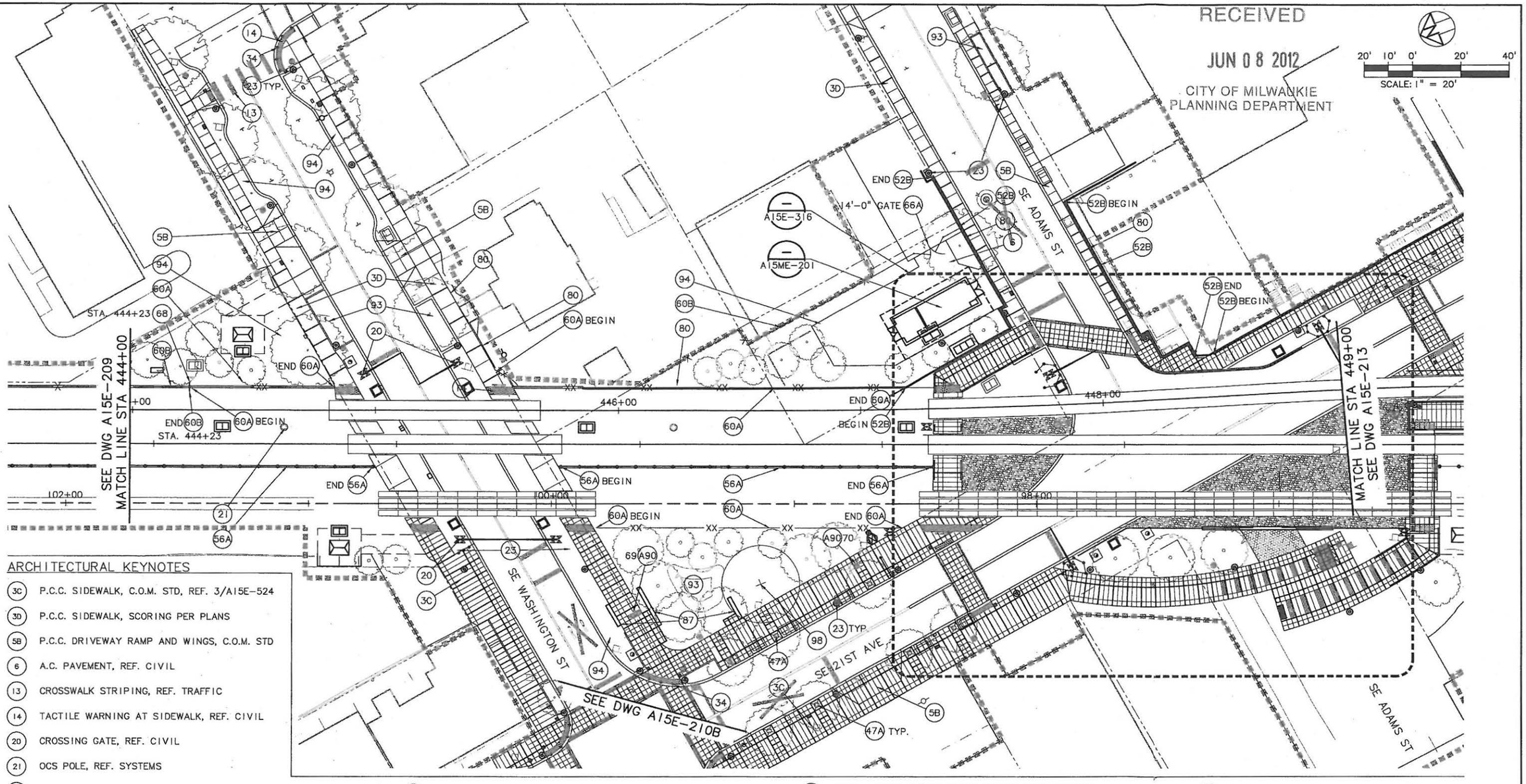


Sig Com Site Perspective View at SE 21st and Adams Street

Exhibit D 9

ATTACHMENT 4C

SCALE: 1" = 20'



ARCHITECTURAL KEYNOTES

- (3C) P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E-524
- (3D) P.C.C. SIDEWALK, SCORING PER PLANS
- (5B) P.C.C. DRIVEWAY RAMP AND WINGS, C.O.M. STD
- (6) A.C. PAVEMENT, REF. CIVIL
- (13) CROSSWALK STRIPING, REF. TRAFFIC
- (14) TACTILE WARNING AT SIDEWALK, REF. CIVIL
- (20) CROSSING GATE, REF. CIVIL
- (21) OCS POLE, REF. SYSTEMS
- (23) LIGHT, REF. ELECTRICAL
- (29) TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS
- (34) BOLLARD – C.O.M., REF. CIVIL
- (47A) TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E-524, 5 & 6/A15E-527
- (52B) RAILING – TYPE 3B, REF. 1/A15E-542
- (56A) RAILING – TYPE 7A, REF. 1/A15E-550
- (60A) FENCE – TYPE 9A – 48" WELDED WIRE FENCE, REF. 3/A15E-560
- (60B) FENCE – TYPE 9B – 72" WELDED WIRE FENCE, REF. 1/A15E-560
- (66A) GATE – WELDED WIRE FENCE, MATCH FENCE HEIGHT, REF. 1/A15E-561
- (68) FENCE TRANSITION, REF. 2/A15E-562
- (80) RETAINING WALL, REF. STRUCTURAL
- (87) BASALT STONE SEATWALL – REF. 4/A15E-570
- (93) STORMWATER PLANTER, REF. LANDSCAPING
- (94) PLANTING AREA, REF. CIVIL / LANDSCAPING
- (98) PRESERVE AND PROTECT EXISTING TREE, REF. LANDSCAPING
- (A90) xx CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5-14-12	JMS	CMR	ISSUED FOR CONSTRUCTION

RAH DESIGNED	06-01-11	DATE
JFC DRAWN	06-01-11	DATE
JMS CHECKED	04-17-12	DATE
APPROVED	5-14-12	DATE

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed | DAVID EVANS AND ASSOCIATES INC.

TRIMET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 5-14-12
APPROVED: DATE: 5-14-12

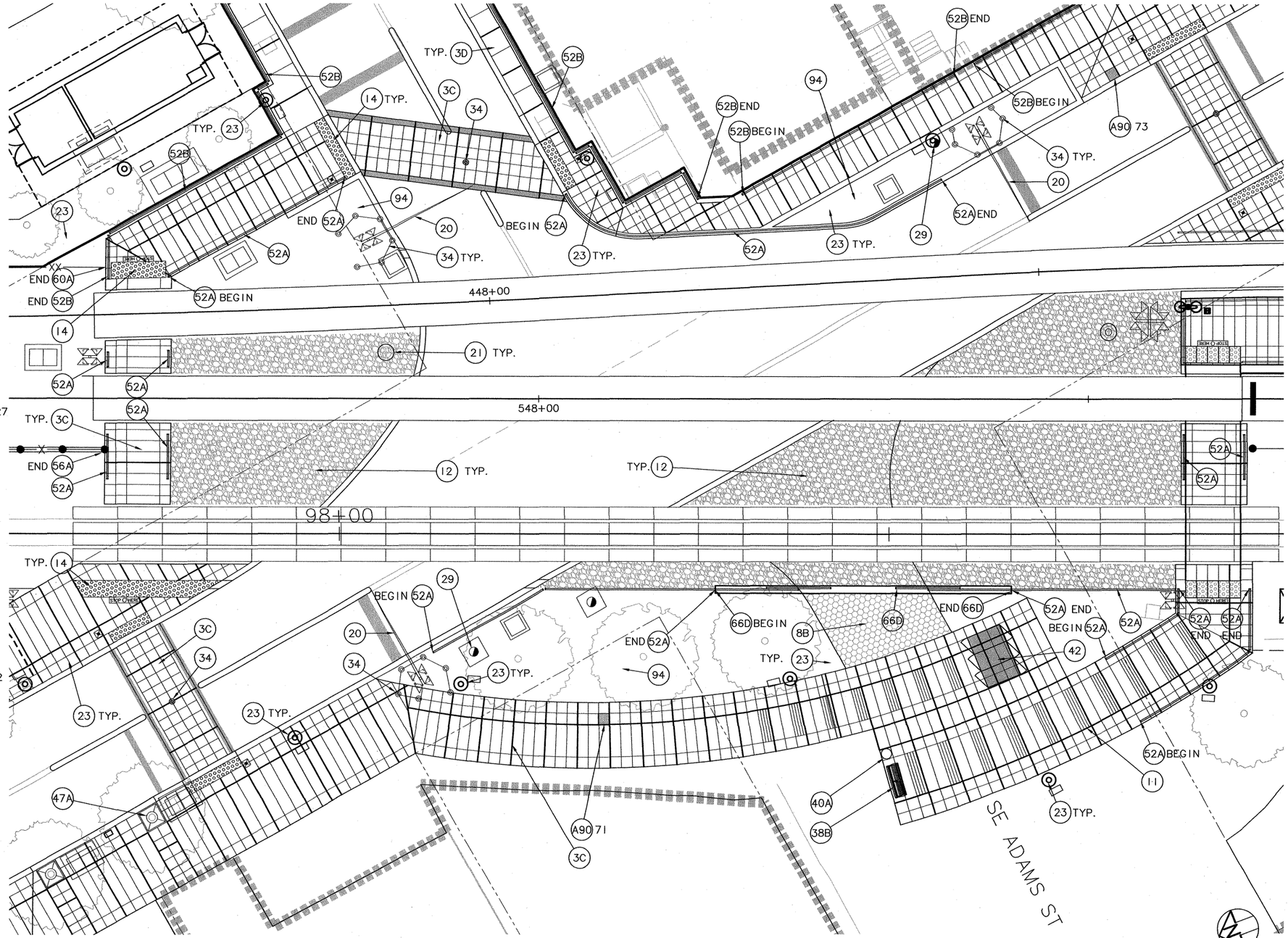
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
SITE PLAN (SE ADAMS ST)
STA 444+00 TO STA 449+00

Exhibit P1

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=20'	A15E-211	RH100544JB	90

ARCHITECTURAL KEYNOTES

- (3C) P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E–524
- (3D) P.C.C. SIDEWALK. SCORING PER PLANS
- (8B) FLEXIBLE POROUS PAVING, REF. 1/A15E–526
- (11) SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E–527
- (12) COBBLE PAVING, REF. 1 & 2/A15E–525
- (14) TACTILE WARNING AT SIDEWALK, REF. CIVIL
- (20) CROSSING GATE, REF. CIVIL
- (21) OCS POLE, REF. SYSTEMS
- (23) LIGHT, REF. ELECTRICAL
- (29) TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS
- (34) BOLLARD – C.O.M., REF. CIVIL
- (38B) BENCH – TYPE A – C.O.M. STD. (O.F.C.I), REF. 1/A15E–572
- (40A) TRASH RECEPTACLE – TYPE A – C.O.M. STD. REF. 2/A15E–572
- (42) BIKE LOCKER (O.F.C.I.)
- (47A) TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E–524, 5 & 6/A15E–527
- (52A) RAILING – TYPE 3A, REF. 1/A15E–542
- (52B) RAILING – TYPE 3B, REF. 1/A15E–542
- (56A) RAILING – TYPE 7A, REF. 1/A15E–550
- (60A) FENCE – TYPE 9B – 48" WELDED WIRE FENCE, REF. 1/A15E–560
- (66D) GATE – FIRE ACCESS, REF. 1/A15E–547
- (94) PLANTING AREA, REF. CIVIL / LANDSCAPING
- (A90) xx CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST



ENLARGED PLANS – SE ADAMS STREET (1)

SCALE: 1" = 10'–0"

10' 5' 0' 10' 20'

SCALE: 1" = 10'

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	JMS / CMR		ISSUED FOR CONSTRUCTION

RAH DESIGNED	06-01-11	DATE
JFC DRAWN	06-01-11	DATE
JMS CHECKED	04-17-12	DATE
APPROVED	5-14-12	DATE

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET

CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

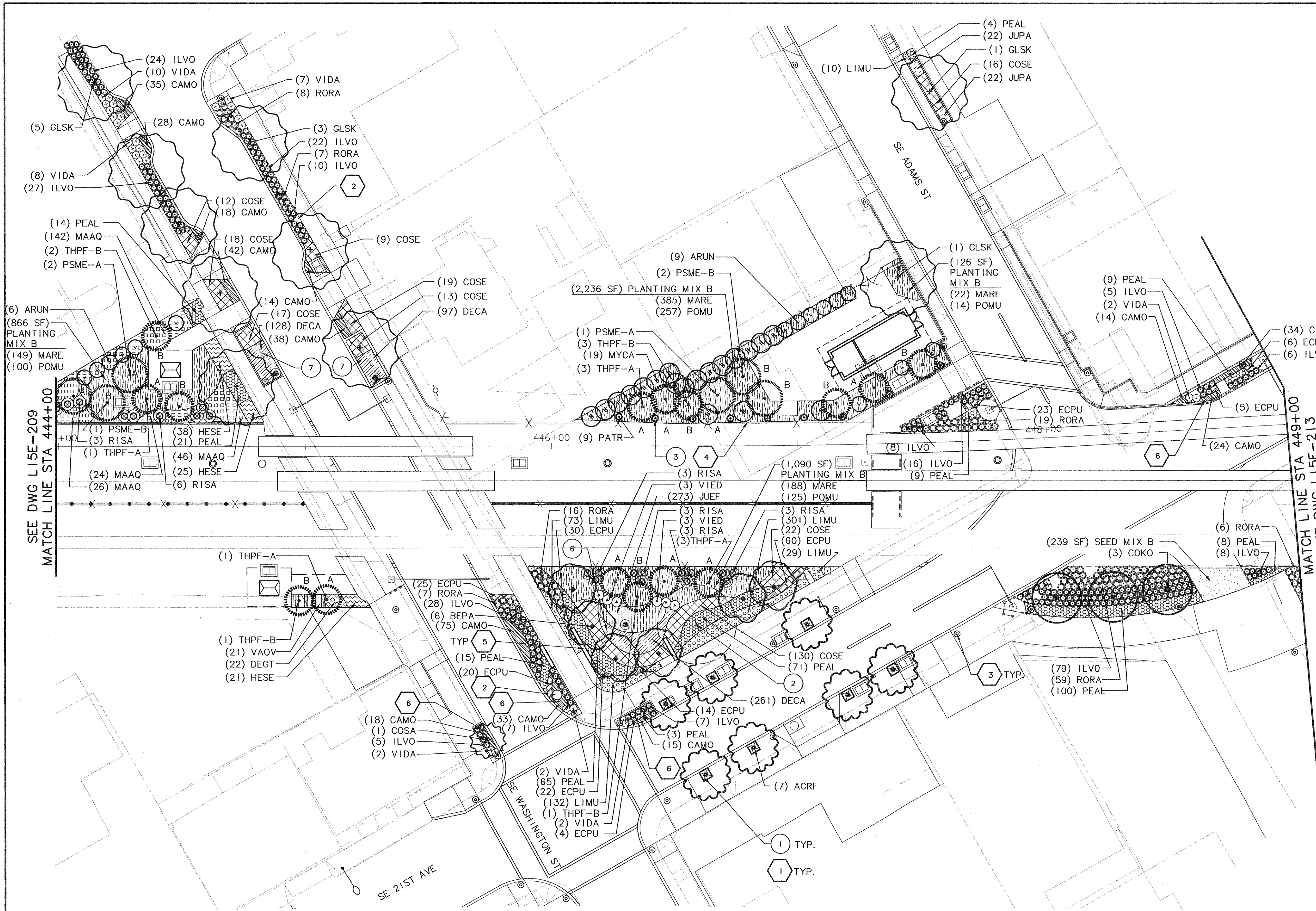
SUBMITTED: DATE: 5-14-12

APPROVED: DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
ENLARGED PLAN
SE ADAMS ST

SCALE: 1"=10' | DRAWING NO.: A15E–316 | CONTRACT NO.: RH100544JB | SHEET NO.: 125

R:\15-CD DUMP\15E-EAST\F.C. FINALS\5-Architecture\A15E-316.dwg, 4/27/2012 4:08:49 PM, mdodel



PLANTING KEY NOTES

REF. TO L15E-001 FOR FULL DESCRIPTION

1. STREET TREE IN TREE WELL
2. PRESERVE EXISTING TREE
3. VINE PLANTING AT WALL
6. WATER QUALITY BASIN
7. STORMWATER PLANTER

SHEET NOTES:

1. TREE GRATE IN TREE WELL. REFER TO DETAIL 5/L15E-300 FOR TREE ANCHORING DETAIL. REFER TO ARCHITECTURAL DRAWINGS FOR TREE GRATE DETAIL.
2. FIRE HYDRANT
3. LIGHT POLE
4. RETAINING WALL
5. STONE SEAT WALL, SEE ARCHITECTURAL DRAWINGS
6. INTERPLANT 3 GROUPS OF NARCISSUS 'FORTISSIMO' WITH 3 BULBS PER GROUP

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-14-12	TS		MF	ISSUED FOR CONSTRUCTION

DESIGNED	SK	05-03-11
DRAWN	CM/AP	10-19-11
CHECKED	TS	04-17-12
APPROVED	FMF	05-14-12

REGISTERED LANDSCAPE ARCHITECT — F. MICHAEL FAHA — 242 — 10/31/1988 — OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS DIVISION, 710 NE HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED: [signature] — DATE: 05-14-12

APPROVED: Leah Robbins — DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT

EAST SEGMENT

LANDSCAPE

PLANTING PLAN

STA 444+00 TO STA 449+00

SCALE: 1"=20' — DRAWING NO.: L15E-211 — CONTRACT NO.: RH100544JB — SHEET NO.: 328

ARCHITECTURAL PLAN NOTES

(1) P.C.C. TRACKWAY, REF. CIVIL

(2A) P.C.C. ROADWAY, HEAVY TINED FINISH

(2B) P.C.C. ROADWAY, BLACK INTEGRAL COLOR

(3A) P.C.C. SIDEWALK, PBOT STD, REF. 4/A15E-523

(3B) P.C.C. SIDEWALK, ODOT STD, REF. 5/A15E-523

(3C) P.C.C. SIDEWALK, C.O.M. STD, REF. 3/A15E-524

(3D) P.C.C. SIDEWALK, SCORING PER PLANS

(3E) P.C.C. SIDEWALK, OMSI STD, REF. 2/A15E-523

(3F) P.C.C. SIDEWALK, PED./BIKE MIXING ZONE, SCORE AS SHOWN

(3G) P.C.C. SIDEWALK, TACOMA STD, REF. 1 & 2/A15E-524

(3H) P.C.C. SIDEWALK, SE PARK AVE STD, REF. 4/A15E-524

(4) P.C.C. SIDEWALK, MATCH EXISTING FOR COLOR, SCORING AND FINISH

(5A) P.C.C. DRIVEWAY RAMP AND WINGS, REF. CIVIL – SCORE PER PLANS

(5B) P.C.C. DRIVEWAY RAMP AND WINGS, C.O.M. STD – SEE NOTE 14 THIS SHEET

(6) A.C. PAVEMENT, REF. CIVIL

(7) WHEEL STOPS, REF. CIVIL

(8A) BASALT COBBLESTONE PAVING, REF 2/A15E-528

(8B) FLEXIBLE POROUS PAVING, REF. 1/A15E-526

(9) PRECAST CONCRETE UNIT PAVERS – TYPE 3 – 8 CM, REF. 3/A15E-525

(10A) PRECAST CONCRETE UNIT PAVERS – TYPE 1 – 6 CM, REF. 3/A15E-525

(10B) PRECAST CONCRETE UNIT PAVERS – TYPE 2 – 6 CM, REF. 3/A15E-525

(11) SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E-527

(12) COBBLE PAVING, REF. 1 & 2/A15E-525

(13) CROSSWALK STRIPING, REF. TRAFFIC

(14) TACTILE WARNING AT SIDEWALK, REF. CIVIL

(15) EXISTING SIDEWALK TO REMAIN, REF. CIVIL

(16) BUS A.D.A. LOADING ZONE

(17) P.C.C. GREENWAY – SCORING PER PLAN, REF. 1/A15E-523

(18) P.C.C. BRIDGE PAVING – SCORING TO MATCH PMLRTB (WRTB) PLANS

(19) P.C.C. GREENWAY PLAZA WITH INTEGRAL COLOR, REF. 3/A15E-301

(20) CROSSING GATE, REF. CIVIL

(21) OCS POLE, REF. SYSTEMS

(22) JOINT USE POLE WITH LIGHTING, REF. SYSTEMS

(23) LIGHT, REF. ELECTRICAL

(24) UTILITY VAULT, REF. CIVIL

(25) FIRE HYDRANT, REF. UTILITIES

(26) S.S. BANDS, REF. 7/A15E-527

(27) P.C.C. TRAFFIC MEDIAN, SCORE PER PLANS

(28) GRAVEL, REF. CIVIL

(29) TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS

(30A) BIKE RACK – TYPE 1 AT P.C.C. SIDEWALK (O.F.C.I), REF. 1/A15E-571

(30B) BIKE RACK – TYPE A – C.O.M. STD. AT P.C.C. SIDEWALK (O.F.C.I), REF. 1/A15E-571

(30C) BIKE RACK – TYPE 1 AT CONCRETE PAVERS (O.F.C.I), REF. 3/A15E-571

(31) BIKE SHELTER, REF. A15E-740

(31A) BIKE SHED, REF. A15E-750

(32A) OMSI POLE LIGHT SHROUD – REF. A15E-500

(32B) OMSI CABLE LIGHT SHROUD – REF. A15E-500

(33A) REMOVABLE TROLLEY TRAIL BOLLARD, REF. C15E-1600

(33B) BASALT TROLLEY TRAIL BOLLARD, REF. C15E-1600

(34) BOLLARD – C.O.M., REF. CIVIL

(35A) REMOVABLE BOLLARD, REF. C15E-492

(35B) REMOVABLE BOLLARD AT OLD WATER AVE., REF. 4/A15E-526

(36) PEDESTRIAN WARNING DEVICE, REF. ELEC.

(37) TVM SHELTER (O.F.C.I), REF. SEGMENT N DRAWINGS

(38A) BENCH – TYPE 4 – (O.F.C.I) – REF. 3/A15E-572

(38B) BENCH – TYPE A – C.O.M. STD., REF. 1/A15E-572

(38C) BENCH – TYPE B – GABION BASKET SEATWALL, REF. 1/A15E-570

(38D) BENCH – TYPE C – PORTLAND GREENWAY, REF. 4/A15E-572

(39A) TRAFFIC BOLLARD, REF. 2/A15E-554

(39B) TRAFFIC BOLLARD WITH CHAIN, REF. 2/A15E-554

(40A) TRASH RECEPTACLE – TYPE A – C.O.M STD., REF. 2/A15E-572

(40B) TRASH RECEPTACLE – TYPE 1 – (O.F.C.I.)

(42) BIKE STORAGE LOCKER (O.F.C.I.)

(43) STREETCAR SHELTER (N.I.C.)

(44) BUS STOP SHELTER (N.I.C.)

(45) CCTV POLE – REF. SEGMENT N DRAWINGS, SHEET A15S-153

(46A) NEW TREE WELL, 4'X4', REF. 3/A15E-524

(46B) NEW TREE WELL, 4'X6', REF. 1 & 2/A15E-521 (SIM)

(46C) NEW TREE WELL, 4'X9', REF. 1 & 2/A15E-521

(46D) NEW TREE WELL, 6'-6"X9', REF. 3 & 4/A15E-521

(47A) TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E-524, 5 & 6/A15E-527

(47B) TREE WELL NO GRATE, 3'X3' – C.O.M. STD, REF. 5/A15E-524

(48) ADA CAST IRON TRENCH GRATE AT STORMWATER INLET, REF. CIVIL

(49) OSPREY NESTING PLATFORM, REF. 1/A15E-504

(50A) RAILING – TYPE 1A – 36" HT. PED. RAIL, REF. 1/A15E-542

(50B) RAILING – TYPE 1B – 36" PAINTED PED. RAIL, REF. 1/A15E-542

(50C) RAILING – TYPE 1C – 42" HT. PED. GUARDRAIL, REF. 1/A15E-542

(51A) RAILING – TYPE 2A, REF. 1/A15E-541

(51B) RAILING – TYPE 2B, REF. A15E-540

(51C) RAILING – TYPE 2C, REF. A15E-540

(52A) RAILING – TYPE 3A, REF. 1/A15E-542

(52B) RAILING – TYPE 3B, REF. 1/A15E-542

(53A) RAILING – TYPE 4A, REF. 1/A15E-542

(53B) RAILING – TYPE 4B, REF. 1/A15E-542

(54A) RAILING – TYPE 12A, REF. 1/A15E-549

(54B) RAILING – HANDRAIL AT EXISTING SIDEWALK TYPE 12A, REF. 1/A15E-549

(54C) RAILING – HANDRAIL AT BYBEE DECK TYPE 12A, REF. 4/A15E-549

(55A) RAILING – PMLRTB PEDESTRIAN RAILING, REF. A15E-551

(55B) RAILING – PMLRTB RAILING, REF. A15E-552

(56A) RAILING – TYPE 7A, REF. 1/A15E-550

(57) PROTECTIVE FENCING, REF. S15E-721

(58A) RAILING – CORTI PROPERTY, REF. 3/A15E-549

ARCHITECTURAL ABBREVIATIONS

AL	ALIGN
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
DIM.	DIMENSION
EJ	EXPANSION JOINT
EX.	EXISTING
F.G.	FINISH GRADE
JT	JOINT
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
NTS	NOT TO SCALE
O.C.	ON CENTER
O.F.C.I.	OWNER FURNISHED / CONTRACTOR INSTALLED
P.C.C.	PORTLAND CEMENT CONCRETE
REF.	REFERENCE
S.S.	STAINLESS STEEL
S.F.R.C.	STEEL FIBER REINFORCED CONCRETE
SIM.	SIMILAR
TYP.	TYPICAL

FOR OTHER ABBREVIATIONS, REFERENCE TRIMET STANDARD ABBREVIATIONS, SHEET STM011, TRIMET STANDARD DRAWINGS.

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. FIELD VERIFY DIMENSIONS BEFORE PROCEEDING WITH THE WORK. WHERE NEW WORK IS TO MATCH EXISTING FEATURES TO REMAIN, RECORD EXISTING CONDITIONS PRIOR TO DEMOLITION SO THAT SPACING AND LAYOUT OF PROPOSED ELEMENTS CAN BE PROPERLY LOCATED TO MATCH THE EXISTING CONSTRUCTION MODULE. NOTIFY ENGINEER IMMEDIATELY OF ANY DIMENSIONAL ERRORS OR CONFLICTS WITH THE WORK OF OTHER TRADES.
2. ALL ARCHITECTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO THE WORK, INCLUDING STRUCTURAL, ELECTRICAL, LANDSCAPE AND CIVIL DRAWINGS.
3. EMBEDDED ITEMS SUCH AS PIPES, INSERTS, SLEEVES, CONDUITS AND STRUCTURAL SUPPORTS AND OPENINGS OR RECESSES REQUIRED FOR ELECTRICAL AND CIVIL WORK ARE NOT SHOWN ON ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL REFER TO TRADES FOR LOCATION AND DETAILS OF THESE ITEMS.
4. ALL WORK SHALL CONFORM TO THE LATEST ADOPTED LOCAL, STATE, AND NATIONAL CODES AND REGULATORY REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION. CONFLICTS, WHERE NOTED BY THE CONTRACTOR, SHALL BE IMMEDIATELY FORWARDED TO THE ENGINEER.
5. EXISTING WORK IS SHOWN BY SCREENED LINE IN THE DRAWING AND/OR IDENTIFIED BY THE TERM "EXISTING."
6. DIMENSIONS ARE TO FACE OF CONCRETE OR MASONRY WALLS OR CENTERLINE OF COLUMN OR MEMBER UNLESS OTHERWISE NOTED.
7. PAVEMENT ELEVATIONS ARE TO TOP OF STRUCTURAL CONCRETE SLABS OR TO TOP OF ARCHITECTURAL FINISHES UNLESS OTHERWISE NOTED.
8. SEE CIVIL DRAWINGS FOR NEW AND EXISTING GRADES OF PAVING AND SIDEWALK ELEVATIONS.
9. ARCHITECTURAL SYMBOLS APPLY TO A15E- SERIES DRAWINGS.
10. ON DRAWINGS DEPICTING LRT PLATFORMS, IF PLAN AND ELEVATION INFORMATION CONFLICT, FOLLOW PLAN INFORMATION.
11. ALL EXPOSED METAL ON SIDEWALK FURNISHINGS, POLES, SHELTERS, HATCHES AND MISCELLANEOUS ELEMENTS MUST BE GROUNDED IF WITHIN 15 FEET OF LRT TRACK CENTERLINE. SEE DETAILS FOR GROUNDING ATTACHMENTS. SEE J15-SERIES DRAWINGS AND E15-SERIES DRAWINGS FOR PLATFORM AND SIDEWALK GROUNDING PLANS.
12. PRESERVE AND PROTECT ALL EXISTING TREES NOT IDENTIFIED FOR REMOVAL. SEE CIVIL AND LANDSCAPE PLANS. SEE CIVIL DEMOLITION DWGS AND NOTES, LANDSCAPE DWGS AND NOTES, AND SPEC SECTION 01535 FOR TREE PROTECTION AND PRESERVATION NOTES.
13. SOME ITEMS ON THESE DRAWINGS ARE NOT IN CONTRACT (INDICATED N.I.C.), BUT ARE FURNISHED AND INSTALLED BY OTHERS. FOOTINGS OR THICKENED SLABS ARE REQUIRED FOR ANCHORAGE OF MANY OF THESE ITEMS.
14. SCORE DRIVEWAYS OUTSIDE DOWNTOWN MILWAUKIE AREAS IN ACCORDANCE WITH C.O.M. DETAILS #502A-E. MATCH CONDITIONS WITH APPROPRIATE DETAIL.

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	5-14-12	RAH	CMR	ISSUED FOR CONSTRUCTION

JMS	DESIGNED	08-09-11 DATE
JFC	DRAWN	08-10-11 DATE
RAH	CHECKED	04-17-12 DATE
	APPROVED	5-14-12 DATE

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed | DAVID EVANS AND ASSOCIATES INC.

SUBMITTED: DATE: 5-14-12

TRIMET CAPITAL PROJECTS DIVISION, 710 NE HOLLADAY STREET, PORTLAND, OREGON 97232

APPROVED: DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
GENERAL NOTES / ABBREVIATIONS AND LEGEND

SCALE: NONE | DRAWING NO.: A15E-004 | CONTRACT NO.: RH100544JB | SHEET NO.: 4

R:\15-CD DUMP\15E-EASTU F.C. - FINAL\05_Architecture\A15E-004.dwg, 4/27/2012 2:00:03 PM, mdrake

ARCHITECTURAL PLAN NOTES

- (59) FENCE – TYPE 9A/9C – 48" WELDED WIRE FENCE, TRANSITION AT PROPERTY LINE, REF. 3/A15E-562
- (60A) FENCE – TYPE 9A – 48" WELDED WIRE FENCE, REF. 3/A15E-560
- (60B) FENCE – TYPE 9B – 72" WELDED WIRE FENCE, REF. 1/A15E-560
- (60C) FENCE – TYPE 9C – 48" GALVANIZED WELDED WIRE FENCE, REF. 3/A15E-560
- (60D) FENCE – TYPE 9D – 72" GALVANIZED WELDED WIRE FENCE, REF. 1/A15E-560
- (61A) FENCE – TYPE 10A – CL4, 48" CHAIN LINK FENCE, REF. ODOT STD DWG RD815
- (61B) FENCE – TYPE 10B – CL6, 72" CHAIN LINK FENCE, REF. ODOT STD DWG RD815
- (61C) FENCE GATE – TYPE 10 – CHAIN LINK FENCE GATE, REF. ODOT STD DWG RD815
- (61D) FENCE – TYPE 10C – CL8R 96" CHAIN LINK FENCE, REF. ODOT STD DWG DTL 1810
- (61E) FENCE – TYPE 10E – CL4, 48" CHAIN LINK FENCE, BLACK VINYL COATED, REF ODOT STD DWG RD815
- (61F) FENCE – TYPE 10F – CL6, 72" CHAIN LINK FENCE, BLACK VINYL COATED, REF ODOT STD DWG RD815
- (62A) FENCE – THROW BARRIER, WWM FENCING, REF. STRUCTURAL
- (62B) FENCE – THROW BARRIER, MLK VIADUCT, REF. 1/A15E-563
- (62C) FENCE – THROW BARRIER, CONCRETE BARRIER MOUNTED, REF. ODOT STD DWG 1830
- (63) FENCE – SCREEN, 72" WELDED WIRE FENCE, REF. 2/A15E-560
- (64) FENCE – TYPE 11 – 72" WOOD FENCE, REF A15E-564
- (65) FENCE – MAINTENANCE RAIL – REF. STRUCTURAL S15E-1004
- (66A) GATE – WELDED WIRE FENCE, MATCH FENCE HEIGHT, REF. 1/A15E-561
- (66B) GATE – LOCKABLE GATE AT CHAIN LINK FENCE / RAILING
- (66C) GATE – ODOT STANDARD REF. 1/A15E-548
- (66D) GATE – FIRE ACCESS REF. 1/A15E-547
- (66E) GATE – LOCKABLE GATE AT WOOD FENCE, REF A15E-564
- (67) BOLLARD IN BALLAST TRACK, REF. 2/A15E-550
- (68) FENCE TRANSITION, REF. 2/A15E-562
- (69A) WELDED WIRE CANTILEVER SLIDING GATE WITH AUTOMATIC GATE OPERATOR
- (69B) CHAIN LINK CANTILEVER SLIDING GATE WITH AUTOMATIC GATE OPERATOR
- (70) GATE – MOTOR AND ACCESS CONTROL
- (71) NOT USED
- (72) NOT USED
- (73) NOT USED
- (74) NOT USED
- (75) NOT USED
- (76) NOT USED
- (77) NOT USED
- (78) NOT USED
- (79) NOT USED
- (80) RETAINING WALL, REF. STRUCTURAL
- (81) NOT USED
- (82) GABION RETAINING WALL, REF. STRUCTURAL
- (83) CONCRETE BARRIER, REF. CIVIL
- (84) P.C.C. STEPS WITH HANDRAIL, REF. 2/A15E-549 FOR HANDRAIL, REF. STRUCTURAL FOR STEPS
- (85) RR SAFETY WALL, REF. STRUCTURAL
- (86) SOUND WALL, REF. CIVIL / STRUCTURAL
- (87) BASALT STONE SEATWALL – REF. 4/A15E-570
- (88) PARK & RIDE SIGN, REF. SEGMENT N DRAWINGS, SHEET A15N-250
- (89) VINE PLANTING PIT, REF. 2/A15E-522
- (90) GRANITE BOULDER, REF. 5/A15E-526
- (91) AGGREGATE SPLASH PAD, REF. 3/A15E-522
- (92) SAWCUT STREET TREE PLANTER FROM EXISTING SIDEWALK
- (93) STORMWATER PLANTER, REF. LANDSCAPING
- (94) PLANTING AREA, REF. CIVIL / LANDSCAPING
- (95) TROLLEY TRAIL, REF. CIVIL
- (96) PROPOSED BUS STOP (N.I.C.)
- (97) EXISTING BUS STOP TO REMAIN (N.I.C.)
- (98) PRESERVE AND PROTECT EXISTING TREE, REF. LANDSCAPING
- (99) UTILITY POLE

ART PLAN NOTES

REF. ART MATRIX SHEETS A15E-010 FOR MORE INFORMATION

- (A10) OMSI STATION – VIDEO DISPLAY AT SHELTER
- (A20) CLINTON STATION – LARGE FREE STANDING STEEL SCULPTURE
- (A21) CLINTON STATION – SMALL STEEL SCULPTURE
- (A30) POWELL UNDERPASS – TBD
- (A40) 17TH AVE CORRIDOR – BOAT SHAPED STEEL SCULPTURES
- (A50) BYBEE STATION – KINETIC ILLUMINATED SCULPTURE
- (A60) TACOMA STATION PARK AND RIDE – LARGE SCALE "EARTH CAST" SCULPTURES
- (A70) LAKE STATION – NORTH PLATFORM GRANITE SCULPTURE
- (A71) LAKE STATION – SOUTH PLATFORM GRANITE SCULPTURE
- (A80) PARK STATION PARK AND RIDE – LARGE SCALE SCULPTURE
- (A90)XX CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST
- (A100) KELLOGG BRIDGE – "BOTTS" ADHERED TO UNDERSIDE OF BRIDGE STRUCTURE
- (A101) SHELTER COLUMN TREATMENT
- (A102) BRIDGE ABUTMENT ART – REF. PMLRTB CONTRACT DWGS.

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	RAH		CMR	ISSUED FOR CONSTRUCTION

DESIGNED	JMS	06-01-11
DRAWN	JFC	06-01-11
CHECKED	RAH	04-17-12
APPROVED	[signature]	5-14-12

REGISTERED LANDSCAPE ARCHITECT 82 CAROL MAYER-REED OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET CAPITAL PROJECTS DIVISION 710 NE HOLLADAY STREET PORTLAND, OREGON 97232

SUBMITTED: [signature] DATE: 5-14-12

APPROVED: Leah Robbins DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
GENERAL NOTES / ABBREVIATIONS AND LEGEND

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
NONE	A15E-005	RH100544JB	5

GENERAL PLANTING NOTES

1. REFER TO DRAWING NOS. L15E-002 THROUGH L15E-013 FOR PLANTING LEGENDS AND QUANTITIES.
2. REFER TO DRAWING L15E-014 FOR PLANTING SHEET LAYOUT INDEX.
3. REFER TO DRAWING NOS. L15E-300 THROUGH L15E-302, AND TRIMET DIRECTIVE DRAWINGS LTM301 AND LTM302 FOR LANDSCAPE DETAILS.
4. GENERAL PLANTING NOTES APPLY TO ALL PLANTING DRAWINGS. NUMBERS IN CIRCLES (#) REFER TO PLANTING KEY NOTES AS LISTED BELOW AND APPLY TO DRAWINGS AS SHOWN ON THE PLANS. NUMBERS IN HEXAGONS (#) REFER TO PLANTING SHEET NOTES AS SHOWN ON THE PLANS.
5. INDIVIDUAL TEXT SYMBOL CALLOUTS ON PLAN SHEETS REFER TO PLANT SPECIES SHOWN IN LEGENDS ON SHEETS L15E-002 THROUGH L15E-007. TEXT SYMBOL CALLOUTS ARE PROVIDED FOR EACH CONTIGUOUS CLUSTER OF SIMILAR PLANTINGS PER SHEET. SOME PLANTING AREAS RECEIVE ONLY ONE TEXT SYMBOL CALLOUT PER SPECIES, PER CONTIGUOUS PLANTING AREA FOR OVERALL LEGIBILITY PER SHEET.
6. CONTRACTOR MUST FIELD VERIFY ALL EXISTING TREES IN FIELD PRIOR TO CONSTRUCTION ACTIVITIES. ALL EXISTING TREES NOT SHOWN IN CIVIL DEMO PLANS AS REMOVED ARE TO BE PROTECTED AND PRESERVED IN PLACE. REFER TO SPECIFICATION SECTION 01535 FOR TREE PRESERVATION AND PROTECTION AND EXISTING TREE PROTECTION DETAIL ON L15E-303.
7. REFER TO SPECIFICATION SECTION 32 93 00 FOR LANDSCAPE PLANTINGS.
8. CONTRACTOR SHALL PROVIDE TOPSOIL, SOIL AMENDMENTS, AND COMPOST IN REQUIRED QUANTITIES TO CREATE THE PLANTING SOIL FOR PLANTED AND SEEDED AREAS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS AS PART OF THE CONSTRUCTION DOCUMENTATION PACKAGE. 12" DEPTH PLANTING SOIL AS SPECIFIED IN SPECIFICATION SECTION 32 93 00 IS REQUIRED FOR ALL TREE AND SHRUB PLANTING AREAS (EXCEPT FOR STORMWATER FACILITIES), AND 6" DEPTH OF PLANTING SOIL FOR ALL SEEDED AREAS SHOWN ON LANDSCAPE PLANS.
9. 18" DEPTH STORMWATER FACILITY TOPSOIL, AS SPECIFIED IN SPECIFICATION SECTION 32 93 00, IS REQUIRED FOR ALL STORMWATER FACILITIES, INCLUDING SWALES, PLANTERS, AND BASINS. REFER TO CIVIL DRAWINGS FOR STORMWATER FACILITY DETAILS.
10. ALL PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS PROVIDED AS PART OF THE CONSTRUCTION DOCUMENT PACKAGE.
11. QUANTITIES ARE LISTED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL COUNTS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLATION. IN THE CASE OF A DISCREPANCY BETWEEN THE LEGEND, QUANTITY SHEETS, AND THE PLAN, PLANTS INDICATED ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN THE LEGEND AND QUANTITY SHEETS.
12. INSTALL AND MAINTAIN TREES FURNISHED BY TRIMET ("OWNER-FURNISHED TREES"). SEE PLANTING LEGENDS FOR SPECIES AND QUANTITIES THAT WILL BE PROVIDED. COORDINATE DELIVERY AND RECEIPT THROUGH RESIDENT ENGINEER.
13. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND ROUTING OF EXISTING UNDERGROUND UTILITIES PRIOR TO STARTING EXCAVATION. ANY DAMAGE TO EXISTING PIPES, UTILITIES, OR RELATED FACILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY THE ENGINEER.
14. ADJUST PLANT LOCATIONS SO THAT VEGETATION DOES NOT CONFLICT WITH ABOVE-GROUND UTILITIES, OR WITH TRAFFIC SIGHT LINES, SIGNS, OR OTHER APPURTENANCES.
15. PRESERVE, PROTECT, AND MAINTAIN ALL IMPROVEMENTS WITHIN WORK AREAS, INCLUDING EXISTING TREES AND VEGETATION. THOROUGHLY CLEAN ALL IMPROVEMENTS AFTER COMPLETION OF WORK.
16. PROVIDE 12" ROOT BARRIER WHERE TREES ARE WITHIN 6' OF PAVED SURFACES, CURBS, OR WALLS, AND IN ALL TREE WELLS, UNLESS OTHERWISE REQUIRED BY APPLICABLE JURISDICTIONS, OR AS INDICATED ON PLANS. REFER TO DETAIL 3, SHEET L15E-300. REFER TO STANDARD PBOT DETAIL P-581 FOR ALL STREET TREES IN CITY OF PORTLAND.
17. ALL TREES TO BE BALLED AND BURLAPPED (B&B), UNLESS OTHERWISE INDICATED IN LEGEND OR IN DRAWINGS.
18. REFER TO DEMOLITION DRAWINGS FOR TREES TO BE REMOVED.
19. CONTRACTOR SHALL PROVIDE MULCH FOR PLANTED AREAS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS.
20. ALL PLANTINGS LOCATED IN CITY OF PORTLAND RIGHT-OF-WAY WILL BE HAND-WATERED DURING THE ESTABLISHMENT PERIOD. REFER TO IRRIGATION DRAWINGS AND SPECIFICATIONS FOR WATERING REQUIREMENTS OF ALL PLANTING AREAS OF THE PROJECT.
21. THE SCALE OF THE LANDSCAPE DRAWINGS ARE HALF THE SCALE INDICATED ON THE PLANS WHEN THE DRAWINGS ARE SIZE 11"X17".

PLANTING KEY NOTES

(1) STREET TREE IN TREE WELL – REFER TO TRIMET DIRECTIVE DRAWING 5, SHEET LTM301 FOR TREE STAKING AND PLANTING. REFER TO STANDARD PBOT DETAIL P-581 FOR ALL STREET TREES IN CITY OF PORTLAND. FOR ALL OTHER STREET TREES IN TREE WELLS REFER TO DETAIL 3, SHEET L15E-300 FOR ROOT BARRIER DETAIL. INSTALL TREE GRATE AND ROOTBALL ANCHOR SYSTEM AT LOCATIONS INDICATED ON PLANS. REFER TO ARCH DRAWINGS FOR TREE GRATE DETAILS. REFER TO DETAIL 4, SHEET L15E-300 FOR ROOTBALL ANCHOR SYSTEM DETAIL.

(2) PRESERVE EXISTING TREE – PRIOR TO CONSTRUCTION, INSTALL 4' HEIGHT ORANGE PLASTIC CONSTRUCTION FENCING AROUND EXISTING TREES AS INDICATED ON PLANS. TREE PROTECTION FENCING SHALL BE LOCATED AROUND EACH TREE AT THE DRIPLINE, OR AT 8' DIAMETER MINIMUM. SECURE FENCING TO STEEL POSTS PLACED 6' O.C. WITH PLASTIC TIES. REFER TO SPECIFICATION SECTION 01535 – TREE AND PLANT PROTECTION AND DETAIL 1, SHEET L15E-303.

(3) VINE PLANTING AT WALL – REFER TO DETAIL 1, SHEET L15E-300 FOR VINE PLANTING IN PLANTING AREAS, AND DETAIL 5, SHEET L15E-300 FOR VINE PLANTINGS IN PLANTING WELLS.

(4) MITIGATION PLANTING – REFER TO L15E-700 SERIES SHEETS FOR MITIGATION PLANTING PLANS AND DETAILS.

(5) WATER QUALITY SWALE – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 93 00 TO ZONE 'A' PLANTING AREAS, PLACE 2" DEPTH BARK MULCH TO ZONE 'B' PLANTING AREAS UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY SWALES LOCATED WITHIN RIGHT-OF-WAY.

(6) WATER QUALITY BASIN – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 93 00 TO ZONE 'A' PLANTING AREAS, PLACE 2" DEPTH BARK MULCH TO ZONE 'B' PLANTING AREAS UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY BASINS LOCATED WITHIN RIGHT-OF-WAY.

(7) STORMWATER PLANTER – REFER TO CIVIL DRAWINGS. PLACE 2" DEPTH OF ROCK MULCH AS SPECIFIED IN SECTION 32 93 00 THROUGHOUT FACILITY UNLESS OTHERWISE INDICATED ON PLANS. NO MULCH SHALL BE INSTALLED IN ANY PLANTERS LOCATED WITHIN RIGHT-OF-WAY.

(8) EXISTING LANDSCAPE TO REMAIN – PRESERVE AND PROTECT LANDSCAPE ON PRIVATE PROPERTY. REFER TO SPECIFICATION SECTION 01535 FOR TREE AND PLANT PROTECTION.

(9) OWNER-PROVIDED ARTWORK – REFER TO ARCH. DRAWINGS FOR LOCATIONS.

DETAIL REFERENCES

PLANTING DETAILS APPLY TO ALL PLANTS SHOWN ON LEGENDS AND LAYOUT SHEETS AS FOLLOWS:

Detail	Ref.	Applies
TREE PLANTING AND STAKING	5 / LTM301	APPLIES TO ALL DECIDUOUS AND CONIFER TREES PLANTED ON SLOPES LESS THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
TREE PLANTING ON SLOPE	6 / LTM301	APPLIES TO ALL DECIDUOUS AND CONIFER TREES PLANTED ON SLOPES STEEPER THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
PLANTING BED GRADING	1 / LTM302	TO ALL PROJECT PLANTING AREAS, EXCEPT FOR STORMWATER QUALITY FACILITIES
PLANTING	2 / LTM302	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED ON THE PROJECT ON SLOPES LESS THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
PLANTING AT SLOPE	3 / LTM302	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED ON THE PROJECT ON SLOPES STEEPER THAN 4 UNITS HORIZONTAL TO ONE UNIT VERTICAL
VINE PLANTING	1 / L15E-300	APPLIES TO ALL VINE PLANTINGS LOCATED WITHIN PLANTING BEDS AND SEEDED AREAS INSTALLED ON THE PROJECT AS SHOWN ON PLANS
VINE PLANTING IN PLANTING WELL	5 / L15E-300	APPLIES TO ALL VINE PLANTINGS INSTALLED IN PLANTING WELLS ON THE PROJECT AS SHOWN ON PLANS
PLANT SPACING	2 / L15E-300	APPLIES TO ALL SHRUBS AND GROUNDCOVER INSTALLED IN ALL PROJECT PLANTING AREAS
ROOT BARRIER – TREES IN PLANTING STRIP	3 / L15E-300	APPLIES TO ALL TREE PLANTING AREAS ADJACENT TO PAVED AREAS, AS INDICATED ON PLANS AND IN GENERAL PLANTING NOTES
TREE PLANTING – ROOTBALL ANCHOR	4 / L15E-300	APPLIES TO TREE PLANTINGS LOCATED IN TREE WELLS WITH TREE GRATES AT LOCATIONS INDICATED ON PLANS, AND AS NOTED ON PLANS.
TYPICAL PLANT LAYOUT PER SPACING TYPE	1 / L15E-301	APPLIES TO ALL SHRUB AND GROUNDCOVER PLANTING AS REPRESENTED WITH HATCHES IN THE DRAWINGS.
PLANTING – 17TH AVE CORRIDOR ARTWORK	1 / L15E-302	APPLIES TO ALL SHRUBS AND GRASSES INSTALLED WITHIN AND AROUND OWNER-PROVIDED ARTWORK ALONG 17TH AVENUE
EXISTING TREE PROTECTION	1 / L15E-303	APPLIES TO ALL EXISTING TREES TO BE PRESERVED AS INDICATED ON THE PLANS.

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-14-12	SK/TS		MF	ISSUED FOR CONSTRUCTION

DESIGNED	TS	05-03-11
DRAWN	CM/AP	08-10-11
CHECKED	SK/TS	04-23-12
APPROVED	FMF	05-14-12

REGISTERED LANDSCAPE ARCHITECT
F. MICHAEL FAHA
10/31/1988
OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

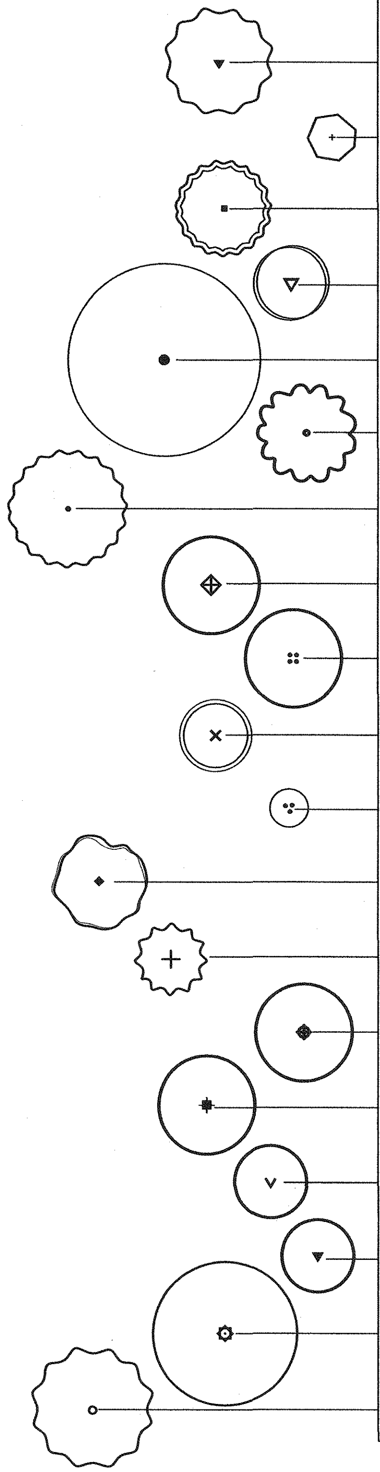
TRIMET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: [signature] DATE: 05-14-12
APPROVED: Leah Robbins DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING NOTES

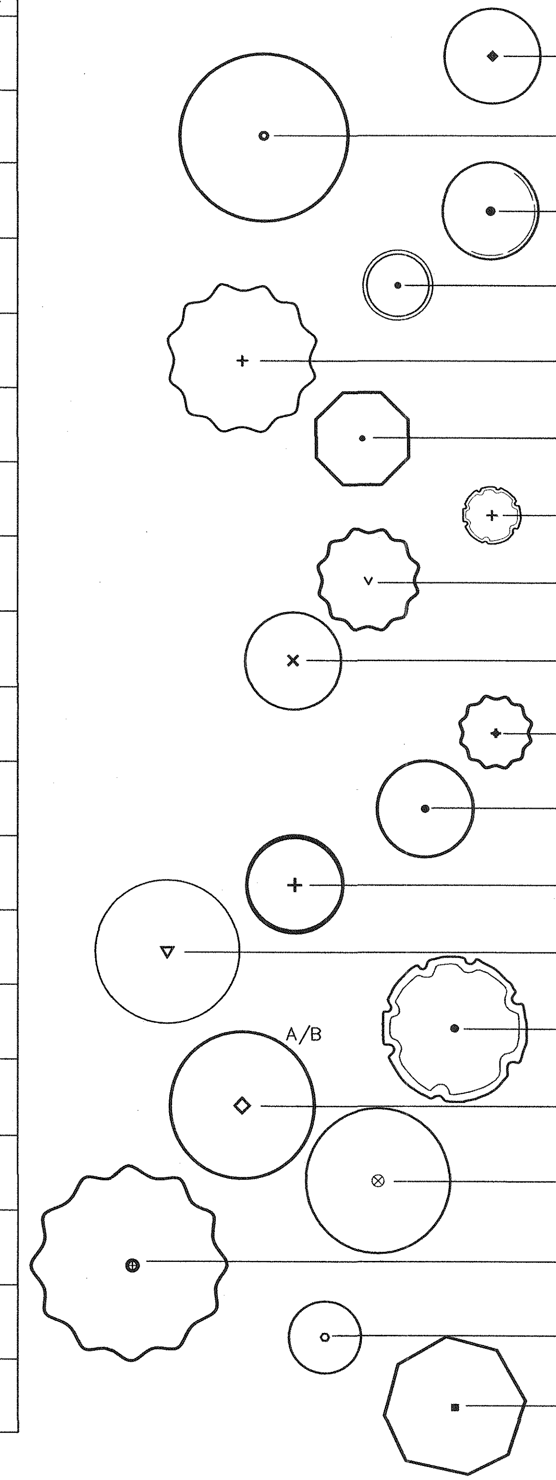
SCALE: 1"=20'
DRAWING NO.: L15E-001
CONTRACT NO.: RH100544JB
SHEET NO.: 265

MASTER TREE LEGEND



DECIDUOUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
ACCA	Acer campestre 'Evelyn'	QUEEN ELIZABETH HEDGE MAPLE	2 1/2" CAL.		7
ACCI	Acer circinatum	VINE MAPLE	7'-8',MULTI-STEM, 3 STEM MIN.	47	
ACGI	Acer ginnala 'Flame'	FLAME MAPLE	2 1/2" CAL., MULTI-STEM, 3 STEM MIN.		18
ACGR	Acer grandidentatum 'Schmidt'	ROCKY MOUNTAIN GLOW MAPLE	2 1/2" CAL.		9
ACMA	Acer macrophyllum	BIG LEAF MAPLE	2 1/2" CAL.		10
ACRF	Acer rubrum 'Franks Red'	RED SUNSET MAPLE	2 1/2" CAL.	1	25
ALRU	Alnus rubra	RED ALDER	2 1/2" CAL.		30
AMAL	Amelanchier alnifolia	SERVICEBERRY	1 1/2" CAL.	24	
AMJF	Amelanchier laevis 'JFS-Arb' PP 15304	SPRING FLURRY SERVICEBERRY	2 1/2" CAL.		30
AMSN	Amelanchier laevis 'Snowcloud' PP 7203	SNOWCLOUD SERVICEBERRY	2 1/2" CAL.		16
ARME	Arbutus menziesii	PACIFIC MADRONE	5 GAL.	3	
BEPA	Betula papyrifera 'Renci' PP12768	RENAISSANCE REFLECTION PAPER BIRCH	2 1/2" CAL.		6
COSA	Cornus kousa 'Satomi'	SATOMI DOGWOOD	2" CAL.	1	
COEW	Cornus x 'Eddie's White Wonder'	EDDIE'S WHITE WONDER DOGWOOD	2 1/2" CAL.		19
COKO	Cornus kousa 'Chinensis'	KOUSA DOGWOOD	2" CAL.	9	3
CONU	Cornus nuttalli	PACIFIC DOGWOOD	5 GAL.	5	
FASY	Fagus sylvatica 'Fastigiata'	FASTIGIATE EUROPEAN BEECH	2 1/2" CAL.		19
FRLA	Fraxinus latifolia	OREGON ASH	2 1/2" CAL.		11
FRCI	Fraxinus pennsylvanica 'Cimmzam' PP8077	CIMMARON GREEN ASH	2 1/2" CAL.		29



DECIDUOUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
FRRU	Fraxinus pennsylvanica 'Rugby'	PRAIRIE SPIRE GREEN ASH	2 1/2" CAL.		66
GIAU	Ginkgo biloba 'Autumn Gold'	AUTUMN GOLD GINKGO	2 1/2" CAL.		10
GIMG	Ginkgo biloba 'Magyar'	Magyar GINKGO	2 1/2" CAL.		18
GIPR	Ginkgo biloba 'Princeton Sentry'	PRINCETON SENTRY GINKGO	2 1/2" CAL.		38
GLSK	Gleditsia triacanthos inermis 'Skyline'	SKYLINE HONEYLOCUST	2 1/2" CAL.	12	41
MAGA	Magnolia x 'Galaxy'	GALAXY MAGNOLIA	2 1/2" CAL.		75
MATR	Malus transitoria 'Schmidtcutleaf' Golden Raindrops	CUTLEAF CRABAPPLE	1 1/2" CAL.	13	
NYSY	Nyssa sylvatica	BLACK TUPELO	2 1/2" CAL.		129
PAPE	Parrotia persica	PERSIAN IRONWOOD	2 1/2 " CAL.	9	35
PRSA	Prunus sargentii 'Columnaris'	COLUMNAR SARGENT CHERRY	2 1/2" CAL.		10
PRVI	Prunus virginiana	CHOKECHERRY	2 1/2" CAL.	10	4
PRCA	Prunus virginiana 'Canada Red"	CANADA RED CHOKECHERRY	2 1/2" CAL.	2	24
QUFR	Quercus frainetto 'Schmidt'	FOREST GREEN OAK	2 1/2" CAL.	25	17
QUGM	Quercus gambelii	GAMBEL OAK	3" CAL.		1
QUGA	Quercus garryana	OREGON WHITE OAK	A= 2 1/2" CAL. B= 3" CAL.	1	5 25
QULO	Quercus lobata	VALLEY OAK	2 1/2" CAL.	1	
ULJA	Ulmus japonica x wilsoniana 'Morton'	ACCOLADE ELM	2 1/2" CAL.		18
ZEMU	Zelkova serratta 'Mussashino'	MUSSASHINO COLUMNAR ZELKOVA	2 1/2" CAL.	26	
ZESE	Zelkova serrata 'Village Green'	VILLAGE GREEN ZELKOVA	2 1/2" CAL.		41

* CF = CONTRACTOR FURNISHED OF = OWNER FURNISHED

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-14-12	SK/TS		MF	ISSUED FOR CONSTRUCTION

DESIGNED	TS	05-03-11
DRAWN	CM/AP	08-10-11
CHECKED	SK/TS	04-23-12
APPROVED	(signature)	05-14-12

REGISTERED LANDSCAPE ARCHITECT
F. MICHAEL FAHA
10/31/1988
OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET

CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING LEGEND

SUBMITTED: (signature) DATE: 05-14-12

APPROVED: (signature) DATE: 05-14-12

SCALE: 1"=20' | DRAWING NO.: L15E-002 | CONTRACT NO.: RH100544JB | SHEET NO.: 2166

MASTER TREE LEGEND CONT'D

CONIFEROUS TREES

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	QUANTITY *CF	QUANTITY *OF
CADE	Calocedrus decurrens	INCENSE CEDAR	A=10–12' HT. B=14–16' HT.	7 149	
CHNO	Chamaecyparis nootkatensis 'Glauca Pendula'	WEEPING ALASKA CEDAR	15–18' HT.	24	
CUSE	Cupressus sempervirens	ITALIAN CYPRESS	12–14' HT.	26	
PSME	Pseudotsuga menziesii	DOUGLAS FIR	A=10–12' HT. B=14–16' HT.	34 27	
TADI	Taxodium distichum 'Mickelson'	SHAWNEE BRAVE BALD CYPRESS	14' –16' HT.	25	
THPL	Thuja plicata	WESTERN RED CEDAR	A=10–12' HT. B=14–16' HT.	50 39	
THPF	Thuja plicata 'Fastigiata'	HOGAN CEDAR	A=10–12' HT. B=14–16' HT.	81 62	
TSHE	Tsuga heterophylla	WESTERN HEMLOCK	A=10–12' HT. B=14–16' HT.	6 4	

* CF = CONTRACTOR FURNISHED, OF = OWNER FURNISHED

EXISTING TREES

EXISTING TREE TO BE PROTECTED AND PRESERVED – SEE SPECIFICATIONS SECTION 01535.
SYMBOL SIZE DOES NOT NECESSARILY REFLECT ACCURATE EXISTING CANOPY SIZE IN FIELD. CONTRACTOR MUST FIELD VERIFY CANOPY EXTENTS AND ADHERE TO TREE PRESERVATION DETAIL PER APPLICABLE JURISDICTION AND AS SHOWN IN DETAIL 1 ON SHEET L15E–303.

NO.	DATE	BY	APPD.	REVISIONS
	05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

DESIGNED TS	05–03–11 DATE
DRAWN CM/AP	08–10–11 DATE
CHECKED SK/TS	04–23–12 DATE
APPROVED	05–14–12 DATE

REGISTERED LANDSCAPE ARCHITECT
F. MICHAEL FAHA
10/31/1988
OREGON

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05–14–12
APPROVED: DATE: 05–14–12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING LEGEND

SCALE: 1"=20' | DRAWING NO.: L15E–003 | CONTRACT NO.: RH100544JB | SHEET NO.: 267

MASTER SHRUBS/GROUNDCOVER LEGEND

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
ABGR	Abelia x grandiflora 'Francis Mason'	FRANCIS MASON ABELIA	2 GAL.	AS SHOWN
ARUN	Arbutus unedo 'Compacta'	COMPACT STRAWBERRY TREE	5 GAL.	AS SHOWN
ARMA	Arctostaphylos uva-ursi 'Massachusetts'	MASSACHUSETTS KINNICKINNICK	1 GAL.	18" O.C.
ARUV	Arctostaphylos uva-ursi	KINNICKINNICK	1 GAL.	18" O.C.
ARWO	Arctostaphylos uva-ursi 'Woods Compacta'	WOOD'S COMPACT KINNICKINNICK	1 GAL.	18" O.C.
BEBU	Berberis buxifolia 'Nana'	BOXLEAF BARBERRY	1 GAL.	18" O.C.
BUMI	Buxus microphylla 'Green Gem'	GREEN GEM BOXWOOD	1 GAL.	24" O.C.
CAAC	Calamagrostis x acutiflora 'Avalanche'	AVALANCHE FEATHER REED GRASS	1 GAL.	18" O.C.
CAAO	Calamagrostis x acutiflora 'Overdam'	VARIEGATED REED GRASS	1 GAL.	18" O.C.
CAAL	Carex albula 'Frosty Curls'	FROSTY CURLS SEDGE	1 GAL.	18" O.C.
CABU	Carex buchananii	LEATHERLEAF SEDGE	1 GAL.	12" O.C.
CADN	Carex densa	DENSE SEDGE	1 GAL.	12" O.C.
CAIC	Caryopteris incana 'Sunshine Blue'	SUNSHINE BLUE CARYOPTERIS	1 GAL.	18" O.C.
CAGO	Carex morrowii 'Gold Band'	GOLD BAND JAPANESE SEDGE	1 GAL.	12" O.C.
CAMO	Carex morrowii 'Ice Dance'	ICE DANCE JAPANESE SEDGE	1 GAL.	12" O.C.
CAVA	Carex morrowii 'Variegata'	VARIEGATED JAPANESE SEDGE	1 GAL.	12" O.C.
CETH	Ceanothus thyrsifolia 'Victoria'	VICTORIA CALIFORNIA LILAC	5 GAL.	AS SHOWN
COSG	Cornus sanguinea	BLOODTWIG DOGWOOD	3 GAL.	36" O.C.
COSE	Cornus sericea 'Kelseyi'	DWARF RED-TWIG DOGWOOD	1 GAL.	24" O.C.
COST	Cornus stolonifera	RED-TWIG DOGWOOD	3 GAL.	AS SHOWN
COAF	Cornus stolonifera 'Arctic Fire'	ARCTIC FIRE DOGWOOD	3 GAL.	AS SHOWN
COLG	Cotoneaster adpressus 'Little Gem'	CREEPING LITTLE GEM COTONEASTER	1 GAL.	24" O.C.
CODA	Cotoneaster dammeri 'Lowfast'	LOWFAST BEARBERRY COTONEASTER	1 GAL.	24" O.C.
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.
DEGT	Deschampsia cespitosa 'Goldtau'	GOLD DEW TUFTED HAIRGRASS	1 GAL.	18" O.C.
ECPU	Echinacea purpurea 'Magnus'	MAGNUS PURPLE CONEFLOWER	1 GAL.	12" O.C.
ELAC	Eleocharis acicularis	DWARF HAIRGRASS	1 GAL.	12" O.C.
ELPA	Eleocharis palustris	CREEPING SPIKERUSH	1 GAL.	12" O.C.
EQHY	Equisetum hyemale	SCOURING RUSH	1 GAL.	12" O.C.
ERDA	Erica x darleyensis 'Kramer's Rote'	KRAMER'S ROTE WINTER HEATH	2 GAL.	AS SHOWN
EUCH	Euphorbia characias ssp. characias 'Humpty Dumpty'	HUMPTY DUMPTY EUPHORBIA	1 GAL.	18" O.C.
FEGL	Festuca glauca 'Boulder Blue'	BOULDER BLUE FESCUE	1 GAL.	12" O.C.
FEID	Festuca idahoensis	IDAHO BLUE FESCUE	1 GAL.	12" O.C.
FRCH	Fragaria chiloensis	BEACH STRAWBERRY	1 GAL.	12" O.C.
HESE	Helictotrichon sempervirens	BLUE OAT GRASS	1 GAL.	18" O.C.
HEPA	Hesperaloe parviflora 'Yellow'	YELLOW FALSE YUCCA	1 GAL.	24" O.C.
HODI	Holodiscus discolor	OCEAN SPRAY	5 GAL.	AS SHOWN
HYQU	Hydrangea quercifolia 'Pee Wee'	PEE WEE OAK LEAF HYDRANGEA	3 GAL.	AS SHOWN
ILCC	Ilex crenata 'Convexa'	CONVEXA JAPANESE HOLLY	1 GAL.	AS SHOWN
ILVO	Ilex vomitoria 'Stokes Dwarf'	STOKES DWARF YAUPON HOLLY	1 GAL.	AS SHOWN
IRTE	Iris tenax	OREGON IRIS	1 GAL.	12" O.C.
JUEF	Juncus effusus	COMMON RUSH	1 GAL.	12" O.C.

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-11-12	SK/TS		MF	ISSUED FOR CONSTRUCTION

TS DESIGNED	05-03-11	DATE
CM/AP DRAWN	08-10-11	DATE
SK/TS CHECKED	04-23-12	DATE
APPROVED	05-14-12	DATE

REGISTERED LANDSCAPE ARCHITECT
242
F. MICHAEL FAHA
10/31/1988
OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

SUBMITTED: [signature] DATE: 05-14-12

TRIMET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

APPROVED: Leah Robbins DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING LEGEND

SCALE: 1"=20' | DRAWING NO.: L15E-004 | CONTRACT NO.: RH100544JB | SHEET NO.: 268

MASTER SHRUBS/GROUNDCOVER LEGEND CONT'D

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
JUQC	Juncus effusus 'Quartz Creek'	SOFT RUSH	1 GAL.	12" O.C.
JUEN	Juncus ensifolius	DAGGER LEAF RUSH	1 GAL.	12" O.C.
JUPA	Juncus patens	SPREADING RUSH	1 GAL.	12" O.C.
JUCG	Juncus patens 'Carmen's Gray'	CARMEN'S GRAY RUSH	1 GAL.	12" O.C.
JUEB	Juncus patens 'Elk Blue'	ELK BLUE SPREADING RUSH	1 GAL.	12" O.C.
JUTE	Juncus tenuis	SLENDER RUSH	1 GAL.	12" O.C.
LEFO	Leucothoe fontanesiana 'Nana'	DWARF DROOPING LEUCOTHOE	2 GAL.	AS SHOWN
LIBB	Liriope muscari 'Big Blue'	BIG BLUE LIRIOPE	1 GAL.	12" O.C.
LIMU	Liriope muscari 'Evergreen Giant'	EVERGREEN GIANT LIRIOPE	1 GAL.	12" O.C.
LOIN	Lonicera involucrata	TWINBERRY	5 GAL.	AS SHOWN
LOPI	Lonicera pileata	BOXLEAF HONEYSUCKLE	1 GAL.	AS SHOWN
MAAQ	Mahonia aquifolium	OREGON GRAPE	3 GAL.	AS SHOWN
MAAQ	Mahonia aquifolium	OREGON GRAPE	3 GAL.	24" O.C.
MACO	Mahonia aquifolium 'Compacta'	COMPACT OREGON GRAPE	2 GAL.	24" O.C.
MANE	Mahonia nervosa	DULL OREGON GRAPE	2 GAL.	AS SHOWN
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	18" O.C.
MYCA	Myrica californica	PACIFIC WAX MYRTLE	5 GAL.	AS SHOWN
NAFO	Narcissus 'Fortissimo'	FORTISSIMO DAFFODIL	3 BULBS	12" O.C.
PATR	Parthenocissus tricuspidata	BOSTON IVY	1 GAL.	AS SHOWN STAKED
PEAL	Pennisetum alopecuroides 'Hameln'	HAMELN PENNISETUM	1 GAL.	24" O.C.
PHLE	Philadelphus lewisii	MOCK ORANGE	5 GAL.	AS SHOWN
PHCA	Physocarpus capitatus	PACIFIC NINE BARK	3 GAL.	AS SHOWN

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	AS SHOWN
RHMA	Rhododendron macrophyllum	PACIFIC RHODODENDRON	5 GAL.	AS SHOWN
RISA	Ribes sanguineum	RED FLOWERING CURRANT	3 GAL.	AS SHOWN
RORA	Rosa 'Radcor'	RAINBOW KNOCKOUT ROSE	3 GAL.	AS SHOWN
ROCS	Rosa 'Radsun'	CAREFREE SUNSHINE FLOWERING CARPET ROSE	1 GAL.	AS SHOWN
RONU	Rosa nutkana	NOOTKA ROSE	3 GAL.	AS SHOWN
RUHI	Rudbeckia hirta 'Goldsturm'	GOLDSTURM BLACK-EYED SUSAN	1 GAL.	18" O.C.
SASC	Salix scouleriana	SCOULER'S WILLOW	6' MIN. HT.	36/100 SF
SALS	Salix scouleriana	SCOULER'S WILLOW	LIVE STAKES	5' O.C.
SARA	Sambucus racemosa	RED ELDERBERRY	3 GAL.	AS SHOWN
SPBE	Spiraea betulifolia 'Tor'	BIRCHLEAF SPIREA	1 GAL.	AS SHOWN
SPBU	Spiraea x bumalda 'Gold Flame'	GOLD FLAME SPIREA	1 GAL.	AS SHOWN
SPDE	Spiraea densiflora	ALPINE SPIREA	2 GAL.	24" O.C.
SPDO	Spiraea douglasii	DOUGLAS SPIREA	3 GAL.	AS SHOWN
SPJA	Spiraea japonica 'Goldmound'	GOLDMOUND SPIREA	1 GAL.	AS SHOWN
SYMO	Symphoricarpos mollis	CREEPING SNOWBERRY	2 GAL.	24" O.C.
VAOV	Vaccinium ovatum	EVERGREEN HUCKLEBERRY	3 GAL.	24" O.C.
VIDA	Viburnum davidii	DAVID VIBURNUM	2 GAL.	AS SHOWN
VIED	Viburnum edule	HIGHBUSH CRANBERRY	2 GAL.	AS SHOWN
VITI	Viburnum tinus 'Spring Bouquet'	SPRING BOUQUET VIBURNUM	5 GAL.	AS SHOWN

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-11-12	SK/TS		MF	ISSUED FOR CONSTRUCTION

TS DESIGNED	05-03-11	DATE
CM/AP DRAWN	08-10-11	DATE
SK/TS CHECKED	04-23-12	DATE
FMF APPROVED	05-14-12	DATE

REGISTERED LANDSCAPE ARCHITECT
242
F. MICHAEL FAHA
10/31/1988
OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET

CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12

APPROVED: DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE PLANTING LEGEND

SCALE: 1"=20' | DRAWING NO.: L15E-005 | CONTRACT NO.: RH100544JB | SHEET NO.: 269

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MASTER PLANTING MIXES LEGEND

MIX A

NOTES: WOODLAND UNDERSTORY MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	40%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	30%
VAOV	Vaccinium ovatum	EVERGREEN HUCKLEBERRY	3 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	30%

MIX B

NOTES: MAHONIA/SWORD FERN MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MARE	Mahonia repens	CREEPING MAHONIA	1 GAL.	2' O.C.	GROUPS OF 5, 7, OR 9	60%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	2' O.C.	GROUPS OF 3, 5, OR 7	40%

MIX C

NOTES: UPLAND RIPARIAN MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
MANE	Mahonia nervosa	DULL OREGON GRAPE	2 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	27%
PHCA	Physocarpus capitatus	PACIFIC NINE BARK	3 GAL.	3' O.C.	GROUPS OF 1, 2, OR 3	10%
POMU	Polystichum munitum	WESTERN SWORD FERN	2 GAL.	3' O.C.	GROUPS OF 5, 7, OR 9	27%
RISA	Ribes sanguineum	RED FLOWERING CURRANT	3 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	10%
RONU	Rosa nutkana	NOOTKA ROSE	3 GAL.	3' O.C.	GROUPS OF 1, 2, OR 3	10%
SPDO	Spiraea douglasii	DOUGLAS SPIREA	3 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	10%
SYAL	Symphoricarpos albus	SNOWBERRY	1 GAL.	3' O.C.	GROUPS OF 5, 7, OR 9	6%

MIX D

NOTES: STORMWATER ZONE A

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
CAOB	Carex obnupta	SLOUGH SEDGE	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	20%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	12" O.C.	GROUPS OF 5, 7, OR 9	5%
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	20%
JUEF	Juncus effusus	COMMON RUSH	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	30%
JUEN	Juncus ensifolius	DAGGER LEAF RUSH	1 GAL.	12" O.C.	GROUPS OF 9, 12, OR 15	25%

MIX E

NOTES: STORMWATER ZONE B

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
COST	Cornus stolonifera	RED-TWIG DOGWOOD	1 GAL.	3' O.C.	GROUPS OF 7, 9, OR 12	20%
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	3' O.C.	GROUPS OF 12, 15, OR 17	25%
MAAQ	Mahonia aquifolium	OREGON GRAPE	1 GAL.	3' O.C.	GROUPS OF 12, 15, OR 17	20%
RISA	Ribes sanguineum	RED FLOWERING CURRANT	1 GAL.	3' O.C.	GROUPS OF 3, 5, OR 7	10%
SPDO	Spiraea douglasii	DOUGLAS SPIREA	1 GAL.	3' O.C.	GROUPS OF 9, 12, OR 15	25%

MIX F

NOTES: DESCHAMPSIA/JUNCUS MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
DECA	Deschampsia cespitosa	TUFTED HAIRGRASS	1 GAL.	12" O.C.	GROUPS OF 5, 7, OR 9	50%
JUPA	Juncus patens	SPREADING RUSH	1 GAL.	12" O.C.	GROUPS OF 3, 5, OR 7	50%

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	05-14-12	SK/TS	MF	ISSUED FOR CONSTRUCTION

TS DESIGNED 05-03-11 DATE
CM/AP DRAWN 08-10-11 DATE
SK/TS CHECKED 04-23-12 DATE
MF APPROVED 05-14-12 DATE

REGISTERED LANDSCAPE ARCHITECT — F. MICHAEL FAHA — 10/31/1988 — OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS — DAVID EVANS AND ASSOCIATES INC. — TRIMET

CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12
APPROVED: DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING LEGEND

SCALE: 1"=20' | DRAWING NO.: L15E-006 | CONTRACT NO.: RH100544JB | SHEET NO.: 270

MASTER PLANTING MIXES LEGEND CONT'D

MIX G

NOTES: OAK MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
BADE	Balsamorhiza deltoidea	BALSAMROOT	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
BRCA	Bromus carinatus	CALIFORNIA BROME	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
FERO	Festuca roemeri	ROEMER'S FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
FERU	Festuca rubra	RED FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
FRCH	Fragaria chiloensis	BEACH STRAWBERRY	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
RAOC	Ranunculus occidentalis	WESTERN BUTTERCUP	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
SYMO	Symphoricarpos mollis	CREEPING SNOWBERRY	2 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%

MIX H

NOTES: PLAZA MIX

TEXT SYMBOL	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	SPACING	LAYOUT	PERCENTAGE
AQFO	Aquilegia formosa	RED COLUMBINE	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
ASSU	Aster subspicatus	DOUGLAS' ASTER	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
CAQU	Camassia quamash	COMMON CAMAS	1 GAL.	18" O.C.	GROUPS OF 3, 5, OR 7	5%
DEGT	Deschampsia cespitosa 'Goldtau'	GOLD DEW TUFTED HAIRGRASS	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	30%
FEID	Festuca idahoensis	IDAHO FESCUE	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	30%
KOCR	Koehleria cristata	JUNE GRASS	1 GAL.	18" O.C.	GROUPS OF 9, 12, OR 15	20%
SIID	Sisyrinchium idahoense	BLUE-EYED GRASS	1 GAL.	18" O.C.	GROUPS OF 5, 7, OR 9	5%

SEED MIX A

NOTES: PERMANENT SEED MIX

BOTANICAL NAME	COMMON NAME	% PLS	APPLICATION RATE
Achillea millefolium	COMMON YARROW	1.5%	2 LBS./ 1,000 SF
Alyssum maritium	DWARF WHITE ALLYSSUM	2.5%	
Armeria maritima	SEA PINK	2%	
Bellis perennis	DWARF ENGLISH DAISY	1%	
Festuca ovina var. azay blue	AZAY BLUE SHEEP FESCUE	18%	
Festuca rubra var. sealink	SEALINK SLENDER CREEPING RED FESCUE	55%	
Limnanthes douglasii	DOUGLAS MEADOWFOAM	4%	
Nemophilia menziesii	BABY BLUE EYE'S	5%	
Trifolium fragiferum	STRAWBERRY CLOVER	8%	
Trifolium repens	MICRO CLOVER	3%	

SEED MIX B

NOTES: 1. PROTIME 705 PDX BY HOBBS & HOPKINS

2. PERCENTAGES OF SPECIES NOT AVAILABLE, ONLY AVAILABLE AS PROPRIETARY BLEND

BOTANICAL NAME	COMMON NAME	% PLS	APPLICATION RATE
Achillea millefolium	COMMON YARROW	N/A	2 LBS./ 1,000 SF
Festuca ovina duriuscula	HARD FESCUE	N/A	
Lobularia maritima	SWEET ALYSSUM	N/A	
Lolium perenne	DWARF PERENNIAL RYEGRASS	N/A	
Trifolium fragiferum	STRAWBERRY CLOVER	N/A	
Trifolium repens	MICRO CLOVER	N/A	

LANDSCAPE MATERIALS

	TYPE
BARK MULCH	AS SPECIFIED IN SPECIFICATION SECTION 32 93 00
ROUNDED RIVER ROCK MULCH	AS SPECIFIED IN SPECIFICATION SECTION 32 93 00, INSTALL GEOTEXTILE FABRIC UNDER ALL ROUNDED RIVER ROCK MULCH

NO.	DATE	BY	APPD.	REVISIONS
	05-14-12	SK/TS CHK.	MF	ISSUED FOR CONSTRUCTION

TS DESIGNED 05-03-11 DATE
CM/AP DRAWN 08-10-11 DATE
SK/TS CHECKED 04-23-12 DATE
APPROVED 05-14-12 DATE

REGISTERED LANDSCAPE ARCHITECT
242
F. MICHAEL FAHA
10/31/1988
OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

GREENWORKS

DAVID EVANS AND ASSOCIATES INC.

TRIMET

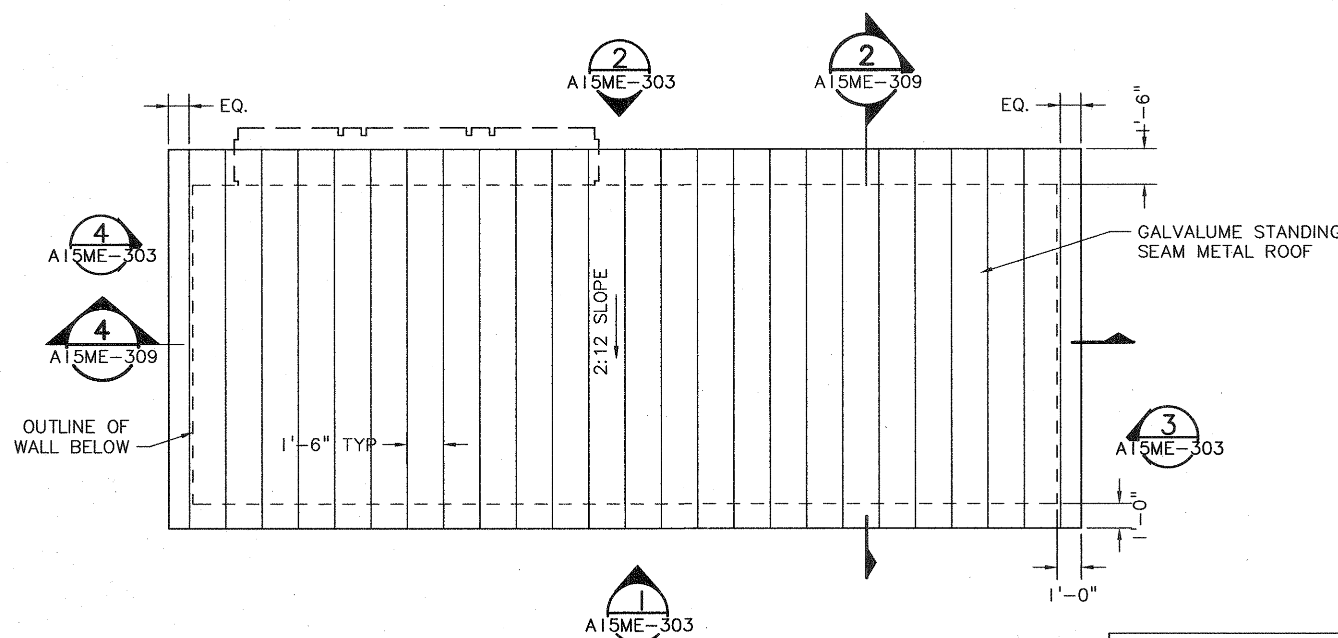
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05-14-12

APPROVED: Leah Robbins DATE: 05-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
LANDSCAPE
PLANTING LEGEND

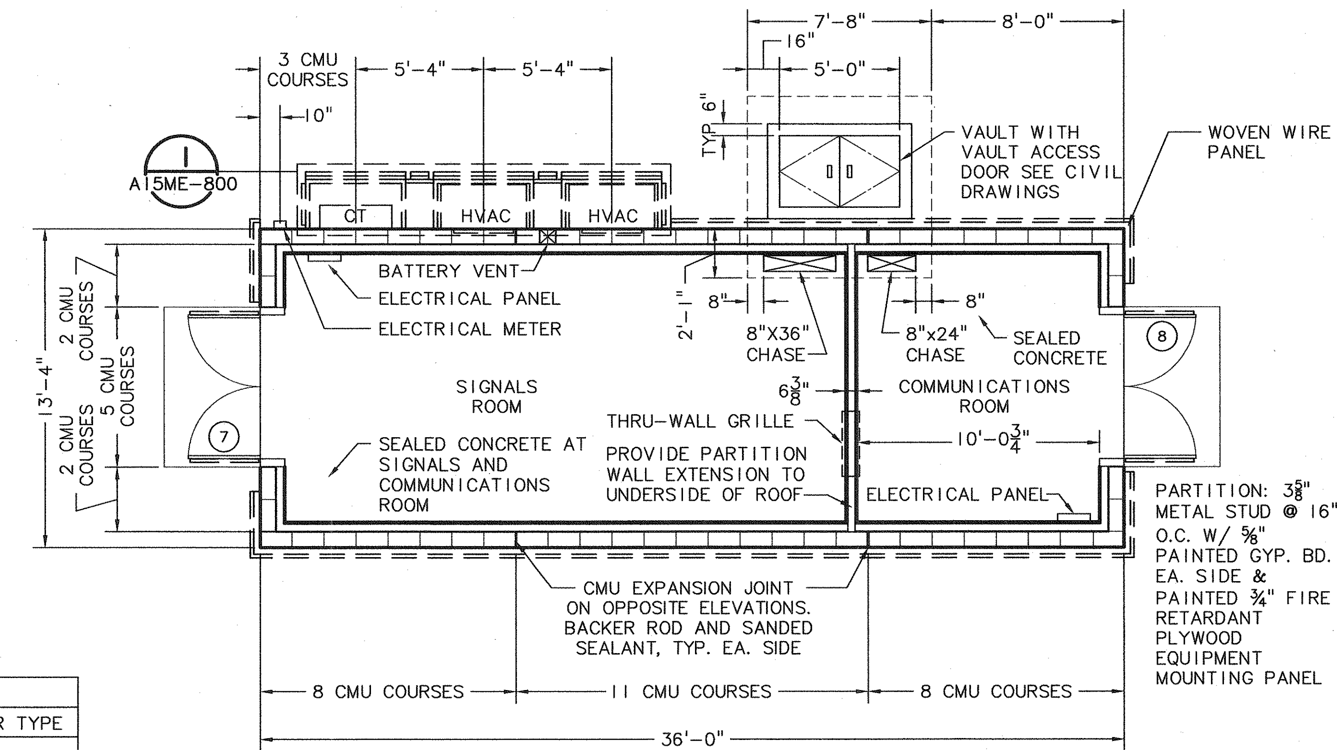
SCALE: 1"=20' | DRAWING NO.: L15E-007 | CONTRACT NO.: RH100544JB | SHEET NO.: 271



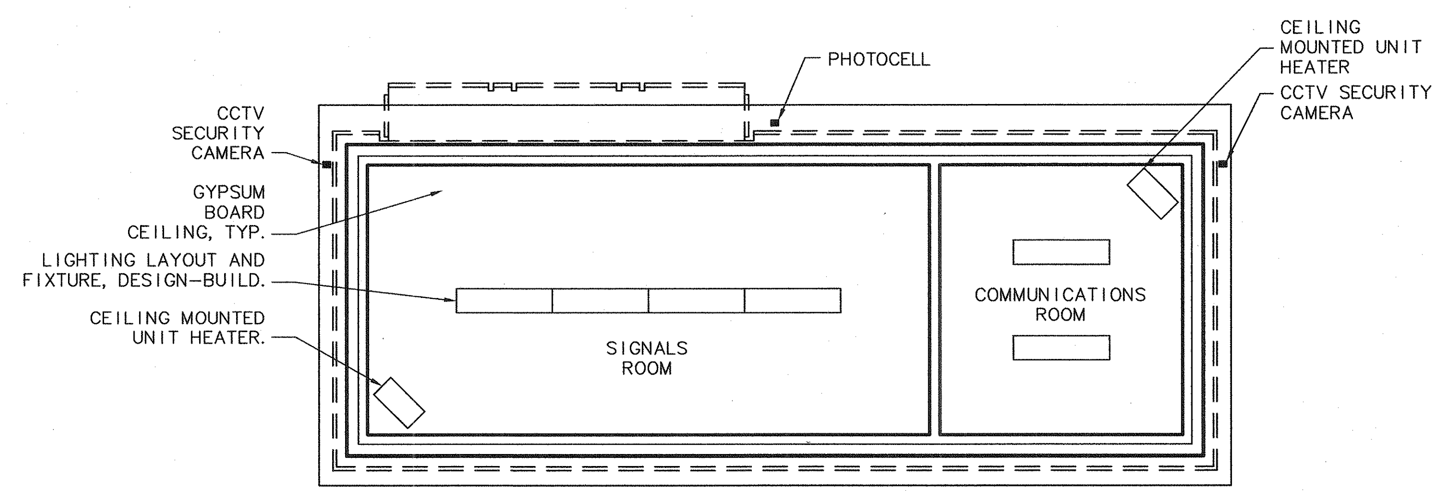
ROOF PLAN 3 A15ME-201
1/4"=1'-0"

DOOR SCHEDULE

DOOR No.	DOOR SIZE	DOOR TYPE
7	6'-0"x9'-0"	1-HR
8	6'-0"x9'-0"	1-HR



FLOOR PLAN 1 A15ME-201
1/4"=1'-0"



NOTE: METAL PANEL SOFFIT JOINTS TO MATCH WALL PANEL JOINT LOCATIONS

REFLECTED CEILING PLAN 2 A15ME-201
1/4"=1'-0"

NO.	DATE	BY	CHK. APPD.	REVISIONS
	05/14/12	SE	DB	ISSUED FOR CONSTRUCTION

JYG DESIGNED 01/27/12 DATE
JGG DRAWN 01/27/12 DATE
SE CHECKED 02/02/12 DATE
DB APPROVED 04/20/12 DATE

REGISTERED ARCHITECT
DAVID E. WARK
PORTLAND, OREGON
STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

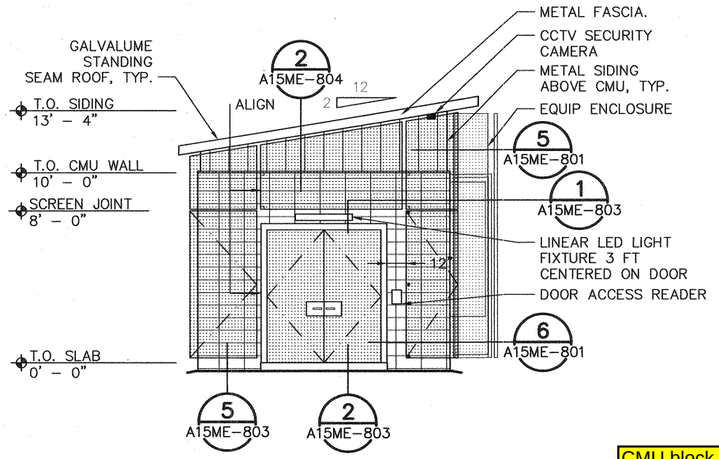
Hennebery Eddy Architects Inc.

TRI MET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

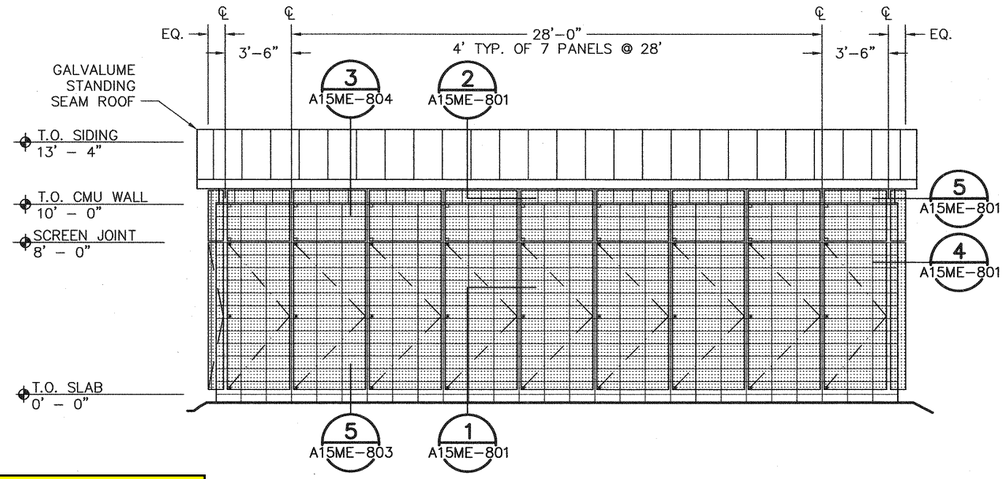
SUBMITTED: DATE: 05/14/12
APPROVED: Leah Robbins DATE: 05/14/12

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
SIGNAL/COMM BUILDING PLANS
FLOOR PLAN, ROOF PLAN AND REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0" DRAWING NO.: A15ME-201 CONTRACT NO.: RH100544JB SHEET NO.: 242



SIG/COMM SIDE 1 ELEVATION — 3 A15ME–303
SCALE: 1/4" = 1'–0"



SIG/COMM BACK ELEVATION — 1 A15ME–303
SCALE: 1/4" = 1'–0"

CMU block grey in color. Woven metal screen is galvanized. Galvalume Metal roof matches color appearance of woven screen

ELEVATION NOTES

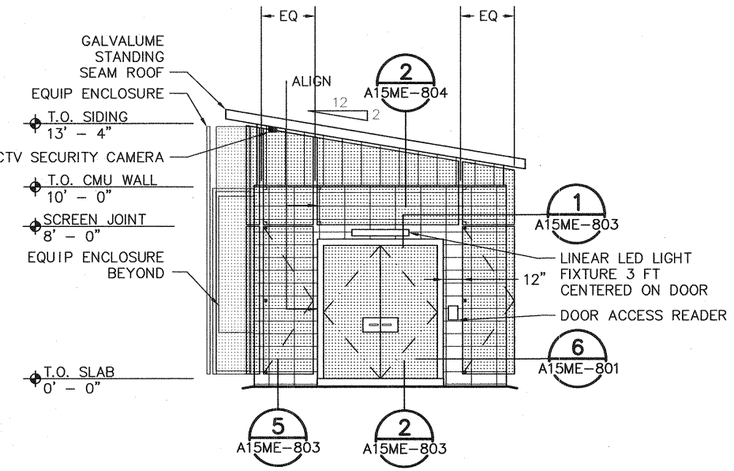
1. ALL WOVEN WIRE PANELS BELOW SCREEN JOINT ARE OPERABLE, TYP.
2. ALL WOVEN WIRE PANELS ARE 4'–0" WIDE UNLESS OTHERWISE NOTED.
3. SEE 6/A15ME–801 FOR TYPICAL DOOR JAMB, 1/A15ME–803 FOR DOOR HEAD, 2/A15ME–803 FOR DOOR THRESHOLD.

ELEVATION LEGEND

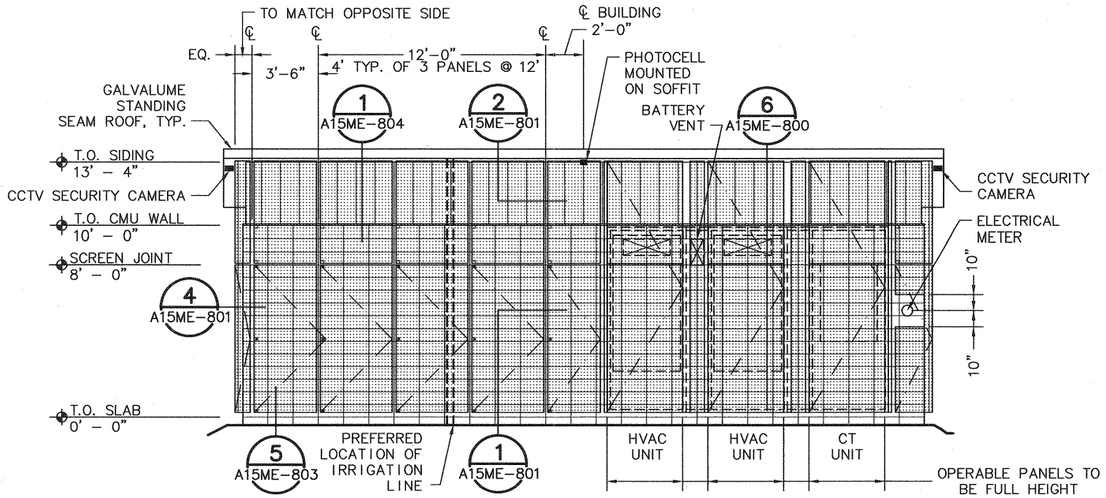
PAINTED CMU COLOR: TO BE DETERMINED BY PROJECT ENGINEER

METAL LAP SIDING FINISH: TO MATCH CMU COLOR

WOVEN WIRE PANEL GALVANIZED FINISH



SIG/COMM SIDE 2 ELEVATION — 4 A15ME–303
SCALE: 1/4" = 1'–0"



SIG/COMM FRONT ELEVATION — 2 A15ME–303
SCALE: 1/4" = 1'–0"

NO.	DATE	BY CHK.	APPD.	
	05/14/12	SE	DB	ISSUED FOR CONSTRUCTION
				REVISIONS

JYG DESIGNED	01/27/12 DATE	
JGG DRAWN	01/27/12 DATE	
SE CHECKED	02/02/12 DATE	
DB APPROVED	04/20/12 DATE	

REGISTERED ARCHITECT — DAVID E. WARK — PORTLAND, OREGON — STATE OF OREGON

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

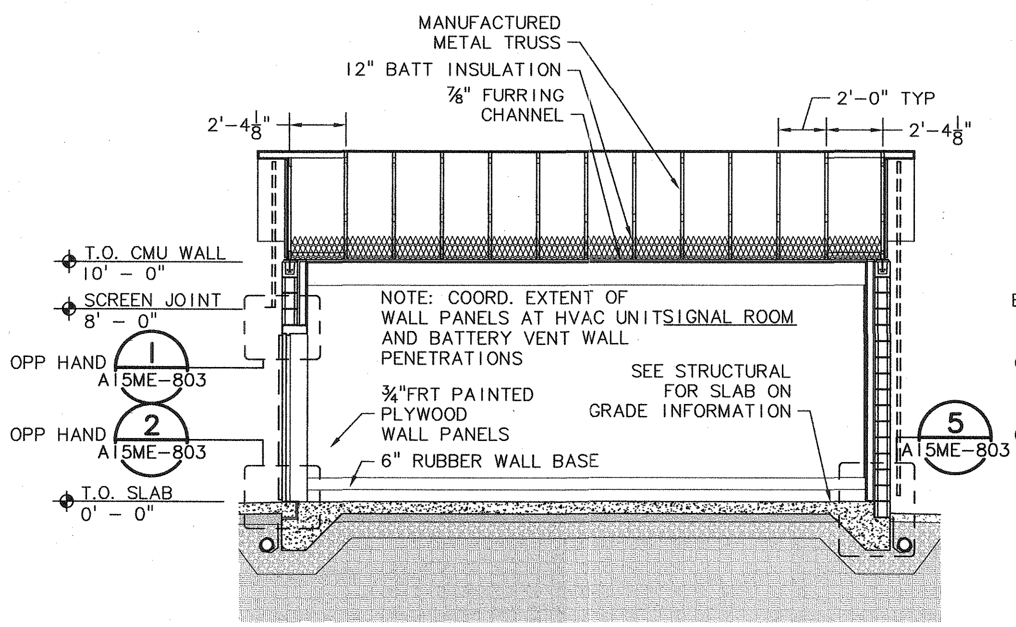
Hennebery Eddy Architects Inc.

TRIMET — CAPITAL PROJECTS DIVISION — 710 NE HOLLADAY STREET PORTLAND, OREGON 97232

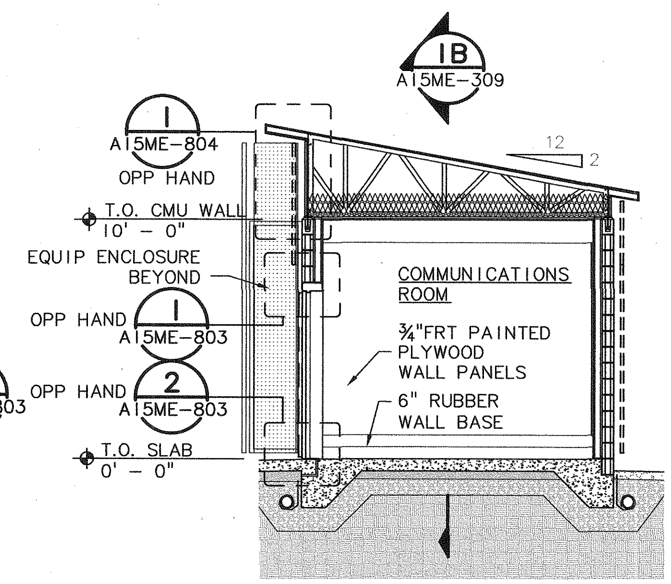
SUBMITTED:	DATE:	APPROVED:	DATE:
	05/14/12	Leah Robbins	05/14/12

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
SIGNAL/COMM BUILDING – ELEVATIONS

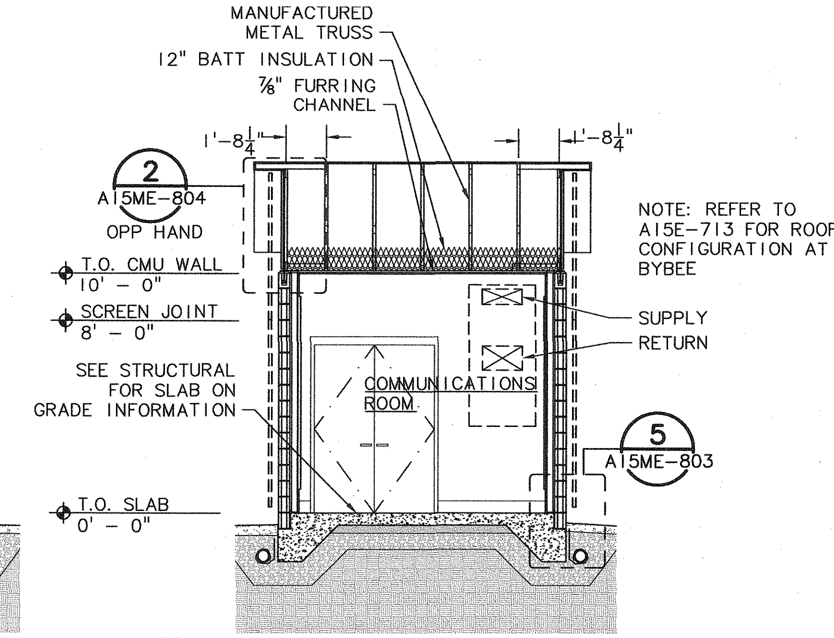
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15ME–303	RH100544JB	248



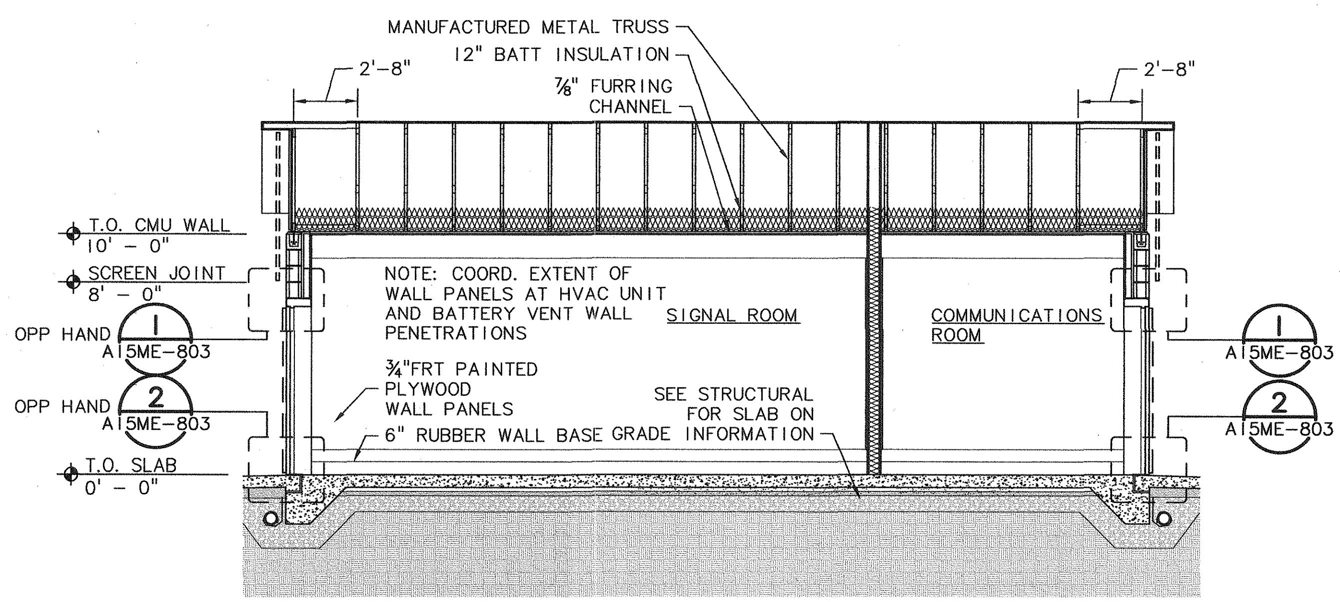
SIGNAL CROSS SECTION (3 / A15ME-309)
SCALE: 1/4" = 1'-0"



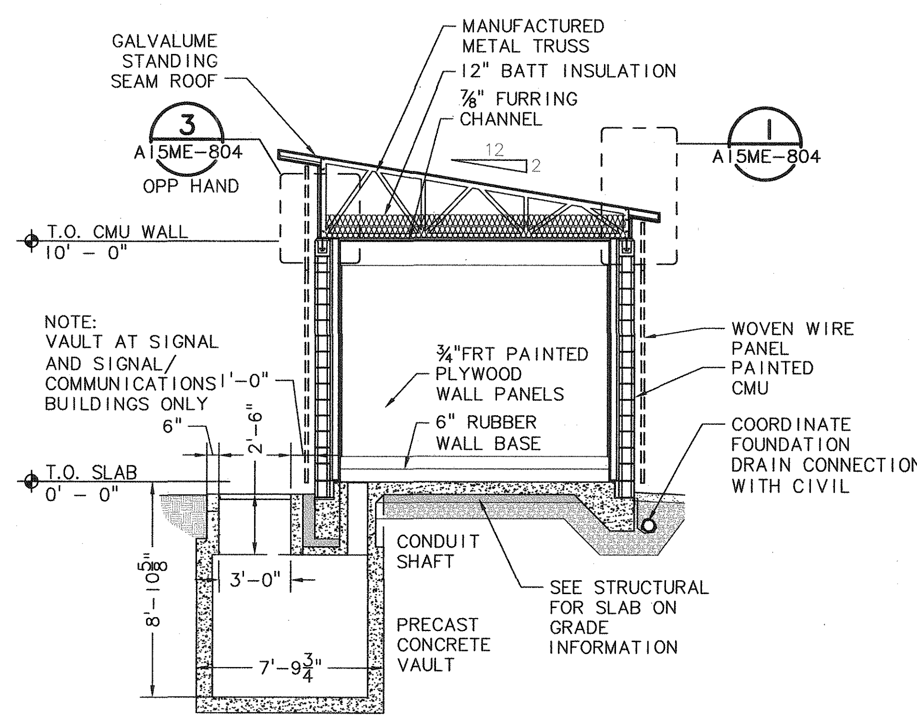
COMM CROSS SECTION (1 / A15ME-309)
SCALE: 1/4" = 1'-0"



COMM CROSS SECTION (1B / A15ME-309)
SCALE: 1/4" = 1'-0"



SIGNAL/COMMUNICATIONS CROSS SECTION (4 / A15ME-309)
SCALE: 1/4" = 1'-0"



TYPICAL CROSS SECTION (2 / A15ME-309)
SCALE: 1/4" = 1'-0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05/14/12	SE		DB	ISSUED FOR CONSTRUCTION

DESIGNED: JYG	DATE: 01/27/12
DRAWN: JGG	DATE: 01/27/12
CHECKED: SE	DATE: 2/2/2012
APPROVED: DB	DATE: 4/20/2012

REGISTERED ARCHITECT — DAVID E. MARK — PORTLAND, OREGON — STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Hennebery Eddy Architects Inc.

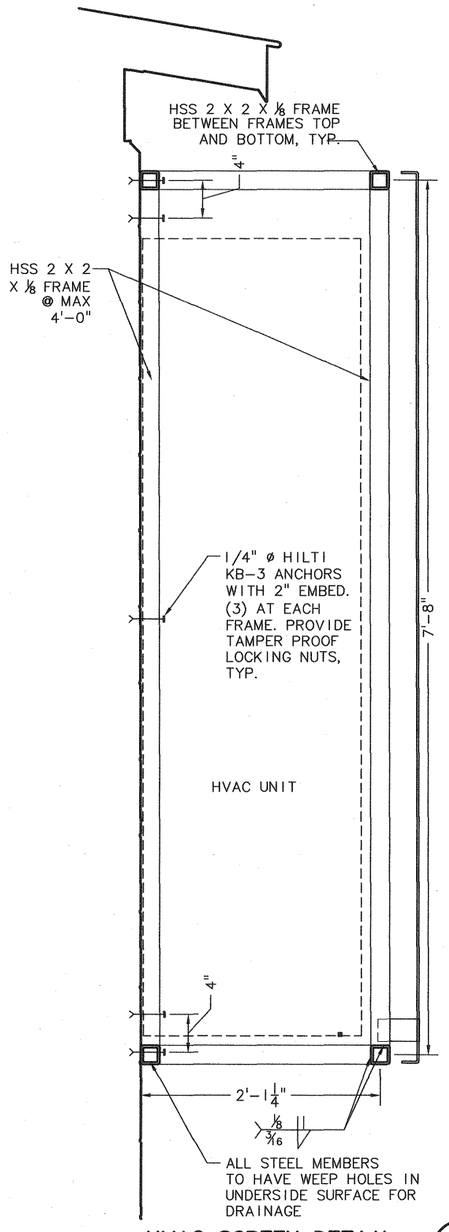
TRIMET — CAPITAL PROJECTS DIVISION — 710 NE HOLLADAY STREET, PORTLAND, OREGON 97232

SUBMITTED: [signature] DATE: 5/14/2012

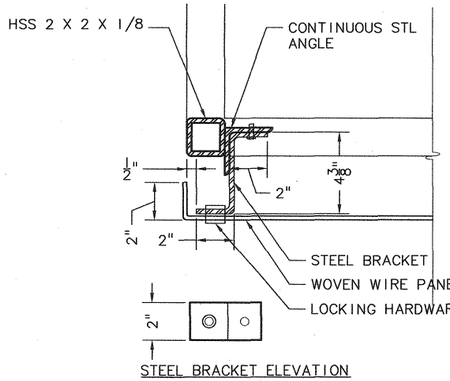
APPROVED: Leah Robbins DATE: 5/14/2012

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
SIGNAL/COMM, SIGNAL AND COMM BUILDING - SECTIONS

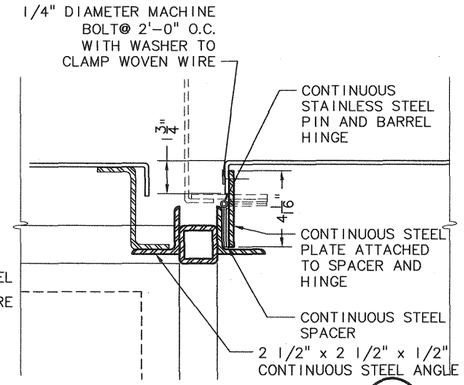
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15ME-309	RH100544JB	254



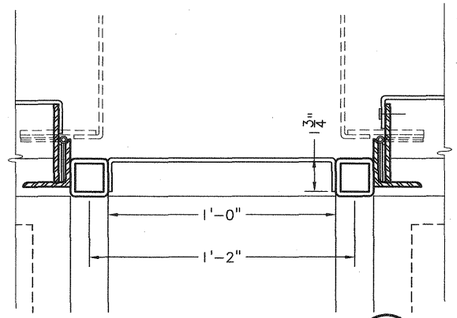
HVAC SCREEN DETAIL 6
SCALE: 1 1/2" = 1'-0" A15ME-800



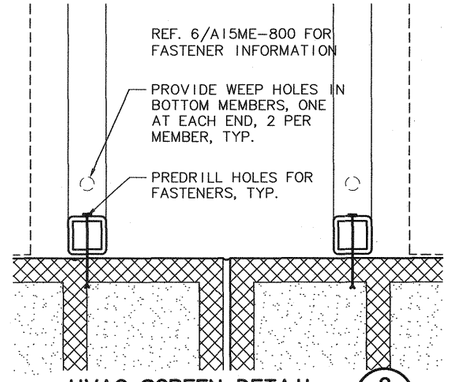
HVAC SCREEN DETAIL 5
SCALE: 3" = 1'-0" A15ME-800



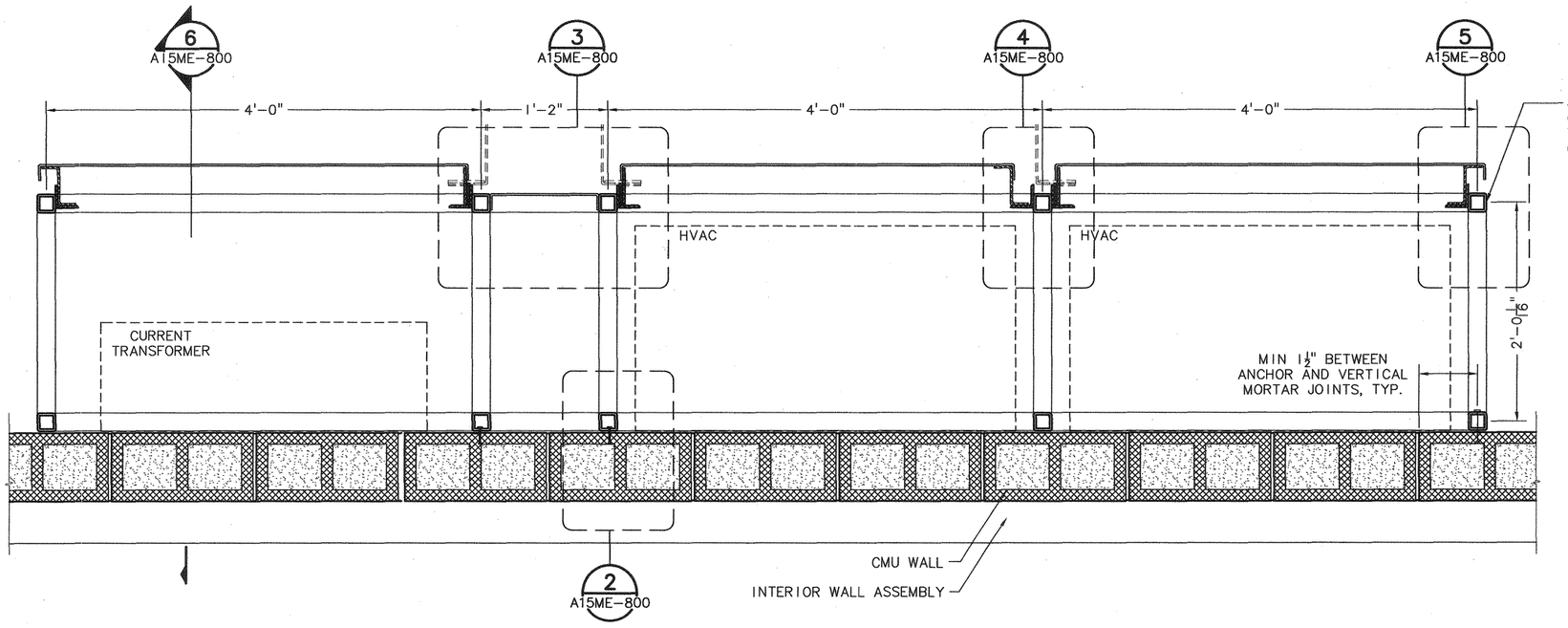
HVAC SCREEN DETAIL 4
SCALE: 3" = 1'-0" A15ME-800



HVAC SCREEN DETAIL 3
SCALE: 3" = 1'-0" A15ME-800



HVAC SCREEN DETAIL 2
SCALE: 3" = 1'-0" A15ME-800



HVAC SCREEN ENLARGED PLAN 1
SCALE: 1 1/2" = 1'-0" A15ME-800

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05/14/12	SE		DB	ISSUED FOR CONSTRUCTION

JG DESIGNED	01/27/12	DATE
JG DRAWN	01/27/12	DATE
SE CHECKED	02/02/12	DATE
DB APPROVED	04/20/12	DATE

REGISTERED ARCHITECT DAVID E. WARK STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

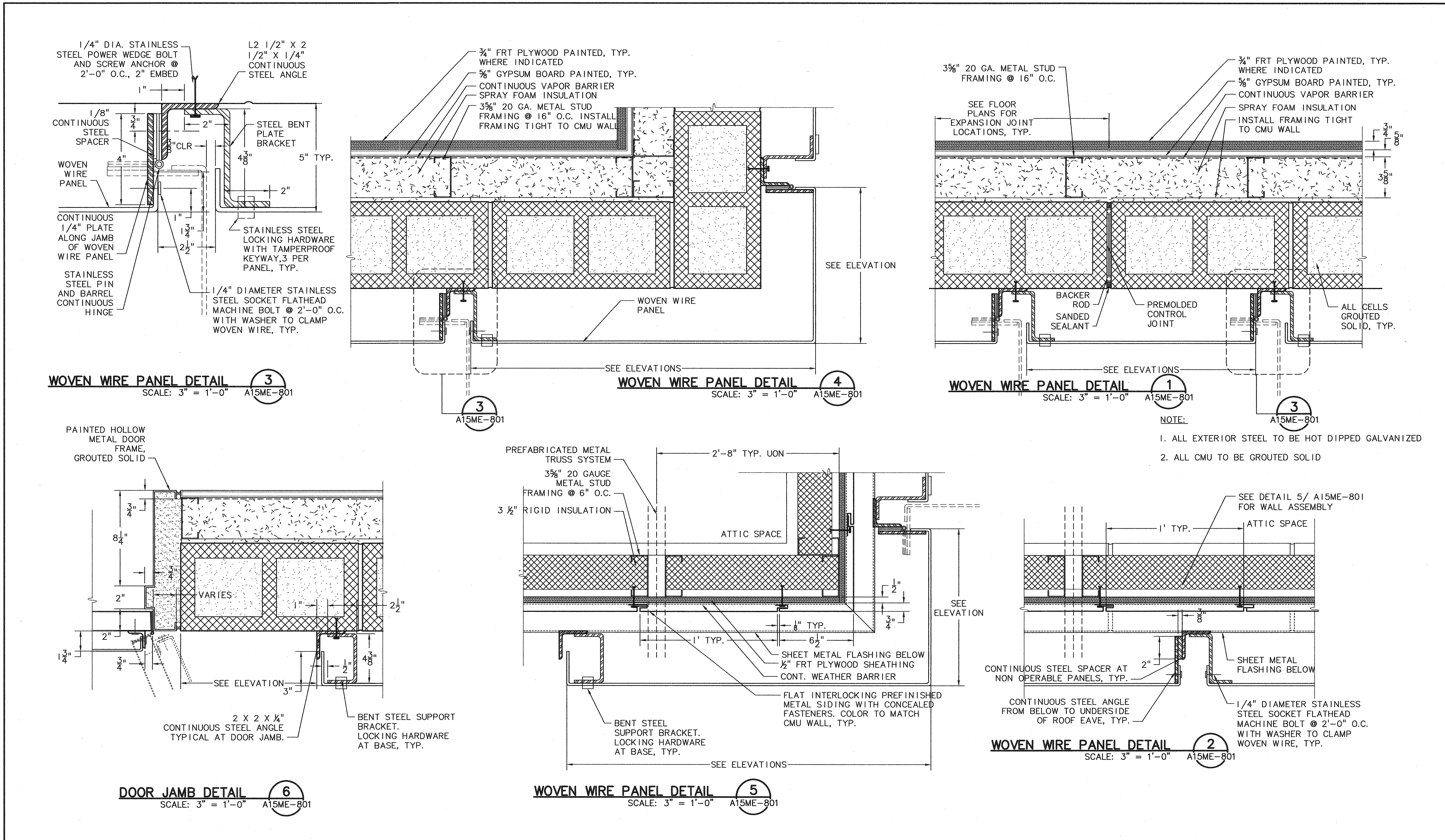
Hennebery Eddy Architects Inc.

TRIMET CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 05/14/12
APPROVED: Leah Robbins DATE: 05/14/12

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
EXTERIOR DETAILS

SCALE: AS NOTED
DRAWING NO.: A15ME-800
CONTRACT NO.: RH100544JB
SHEET NO.: 256



NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05/14/12	SE		DB	ISSUED FOR CONSTRUCTION

JG DESIGNED	01/27/12 DATE
JG DRAWN	01/27/12 DATE
SE CHECKED	02/02/12 DATE
DB APPROVED	04/20/12 DATE

REGISTERED ARCHITECT — DAVID E. WARK — PORTLAND, OREGON — STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

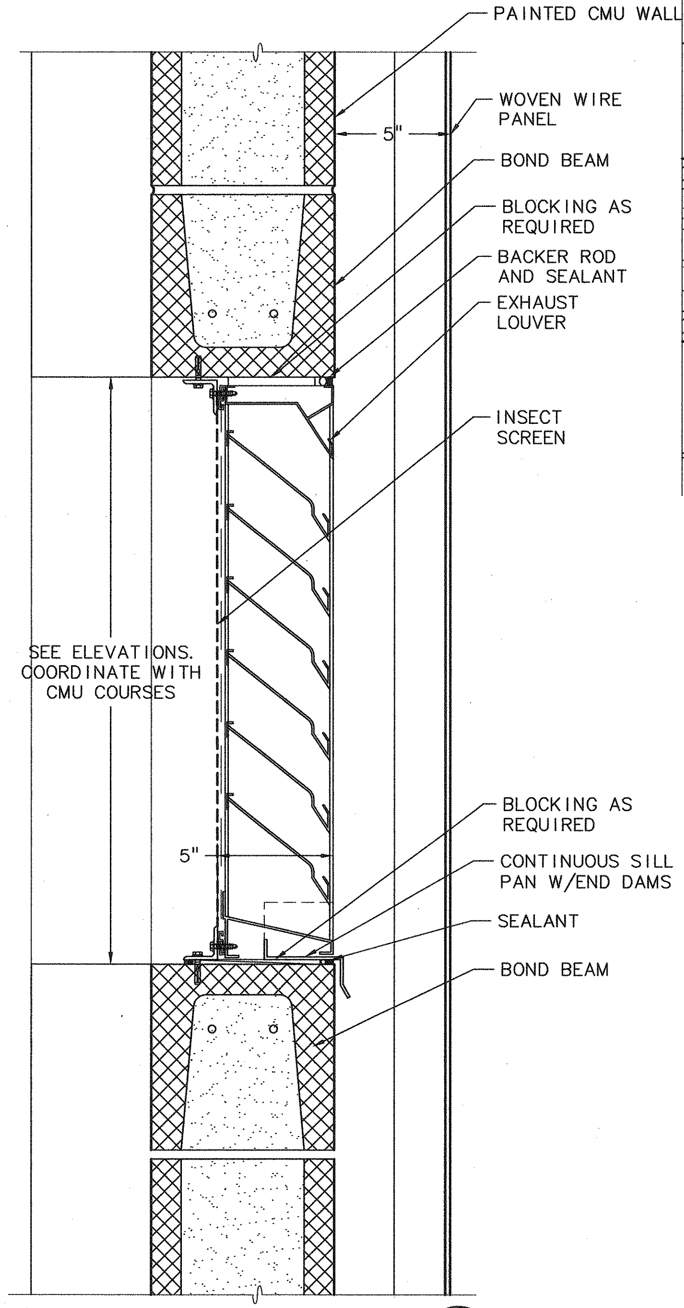
Hennebery Eddy Architects Inc.

TRIMET CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

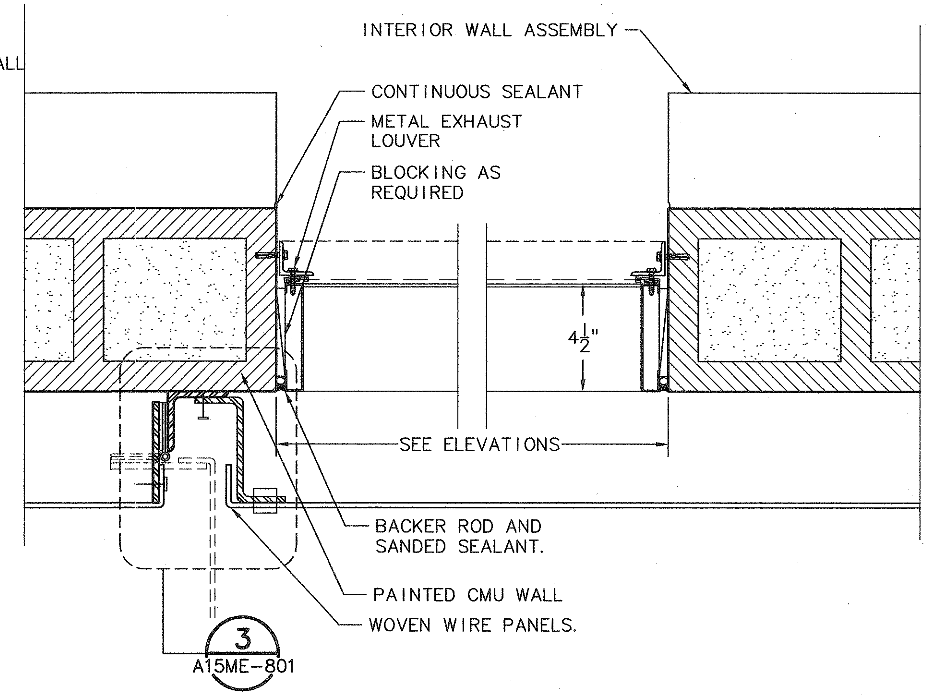
SUBMITTED: | DATE: 05/14/12 | APPROVED: | DATE: 05/14/12

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
EXTERIOR DETAILS

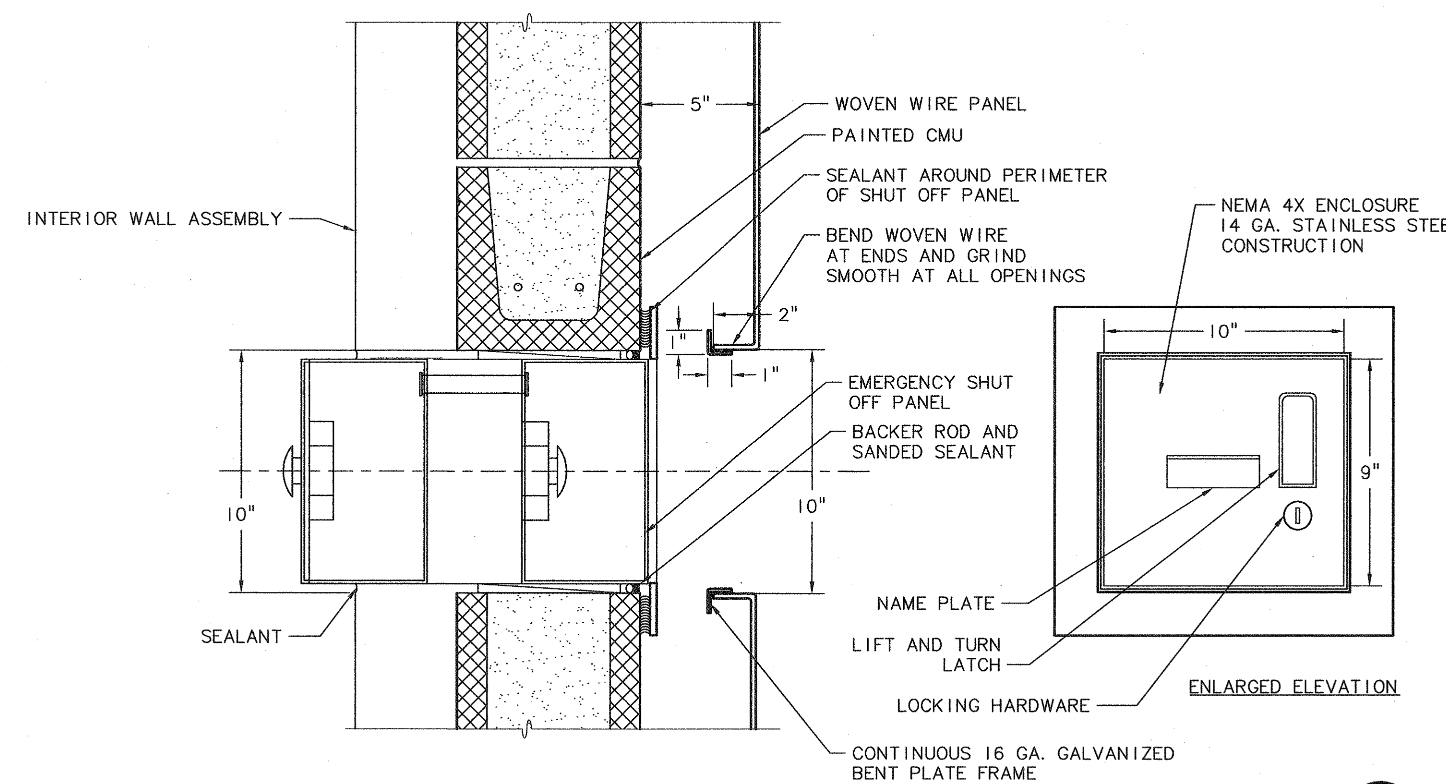
SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	A15ME-801	RH100544JB	257



LOUVER DETAIL 6 A15ME-802
SCALE: 3" = 1'-0"



LOUVER DETAIL 4 A15ME-802
SCALE: 3" = 1'-0"



EMERGENCY SHUT OFF DETAIL 2 A15ME-802
SCALE: 3" = 1'-0"

NO.	DATE	BY	CHK. APPD.	REVISIONS
	05/14/12	SE	DB	ISSUED FOR CONSTRUCTION

DESIGNED	JG	01/27/12
DRAWN	JG	01/27/12
CHECKED	SE	02/02/12
APPROVED	DB	04/20/12

REGISTERED ARCHITECT DAVID E. WARK STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

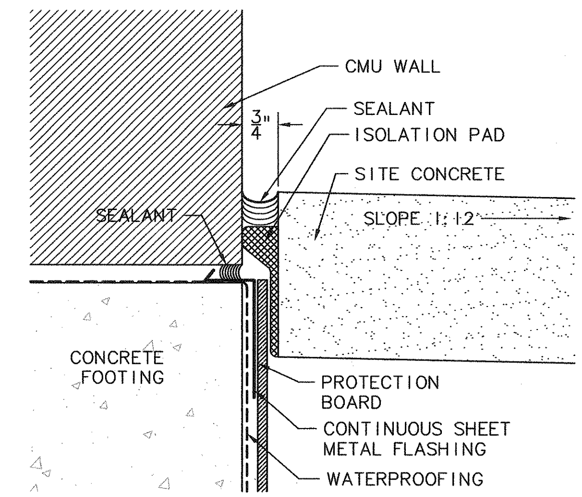
Hennebery Eddy Architects Inc.

TRIMET CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

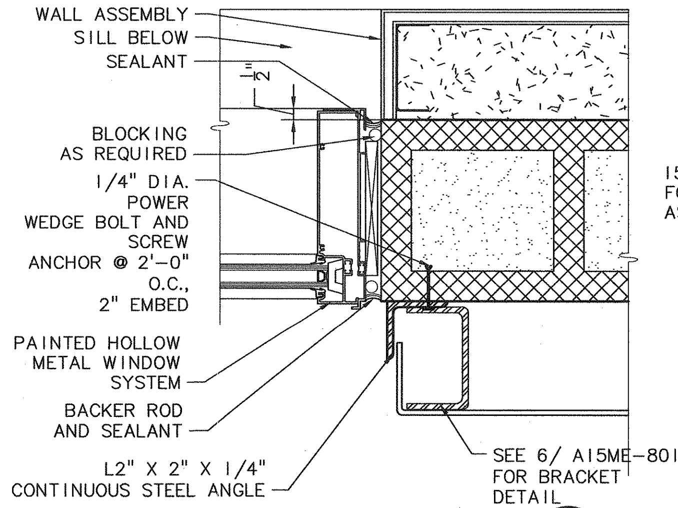
SUBMITTED: DATE: 05/14/12
APPROVED: DATE: 05/14/12

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
EXTERIOR DETAILS

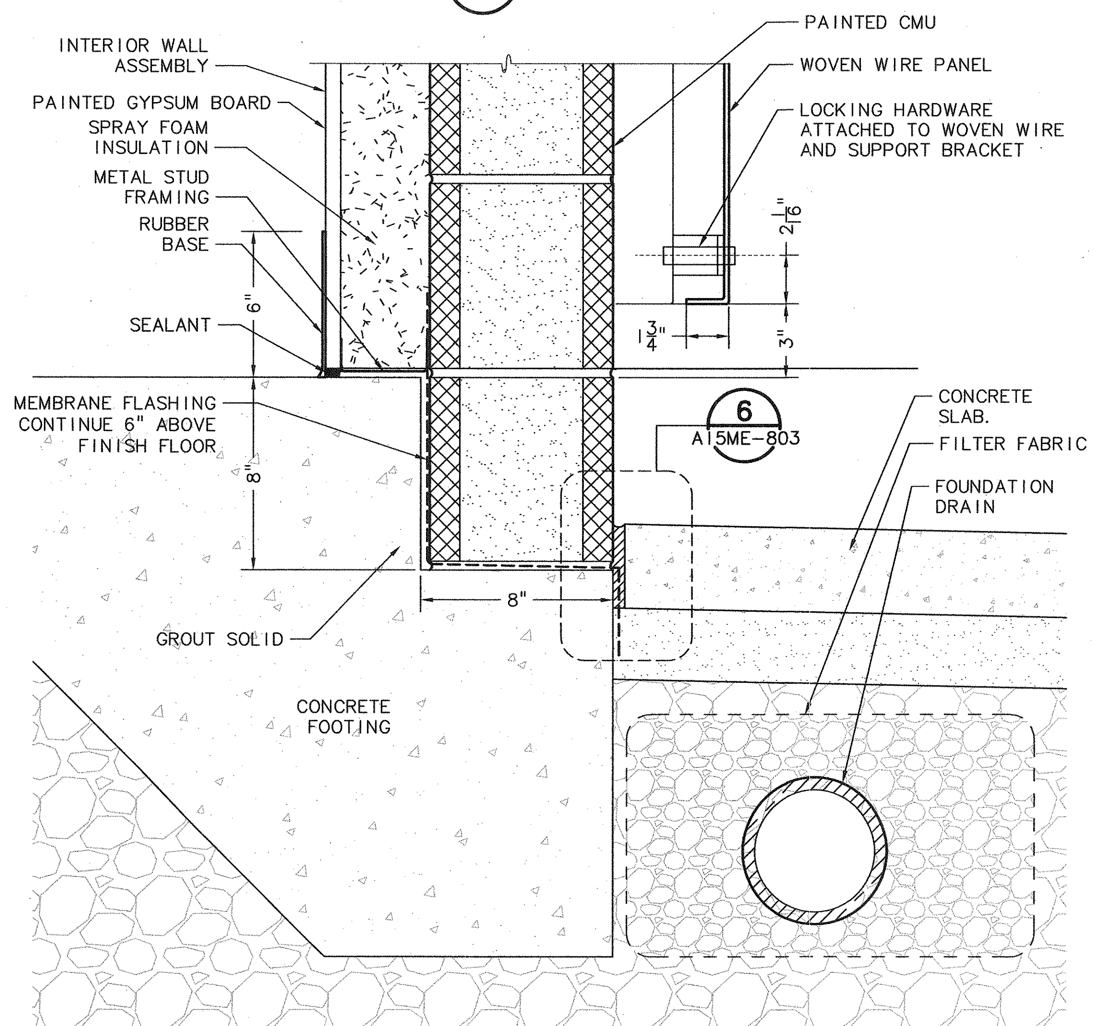
SCALE: AS NOTED | DRAWING NO.: A15ME-802 | CONTRACT NO.: RH100544JB | SHEET NO.: 258



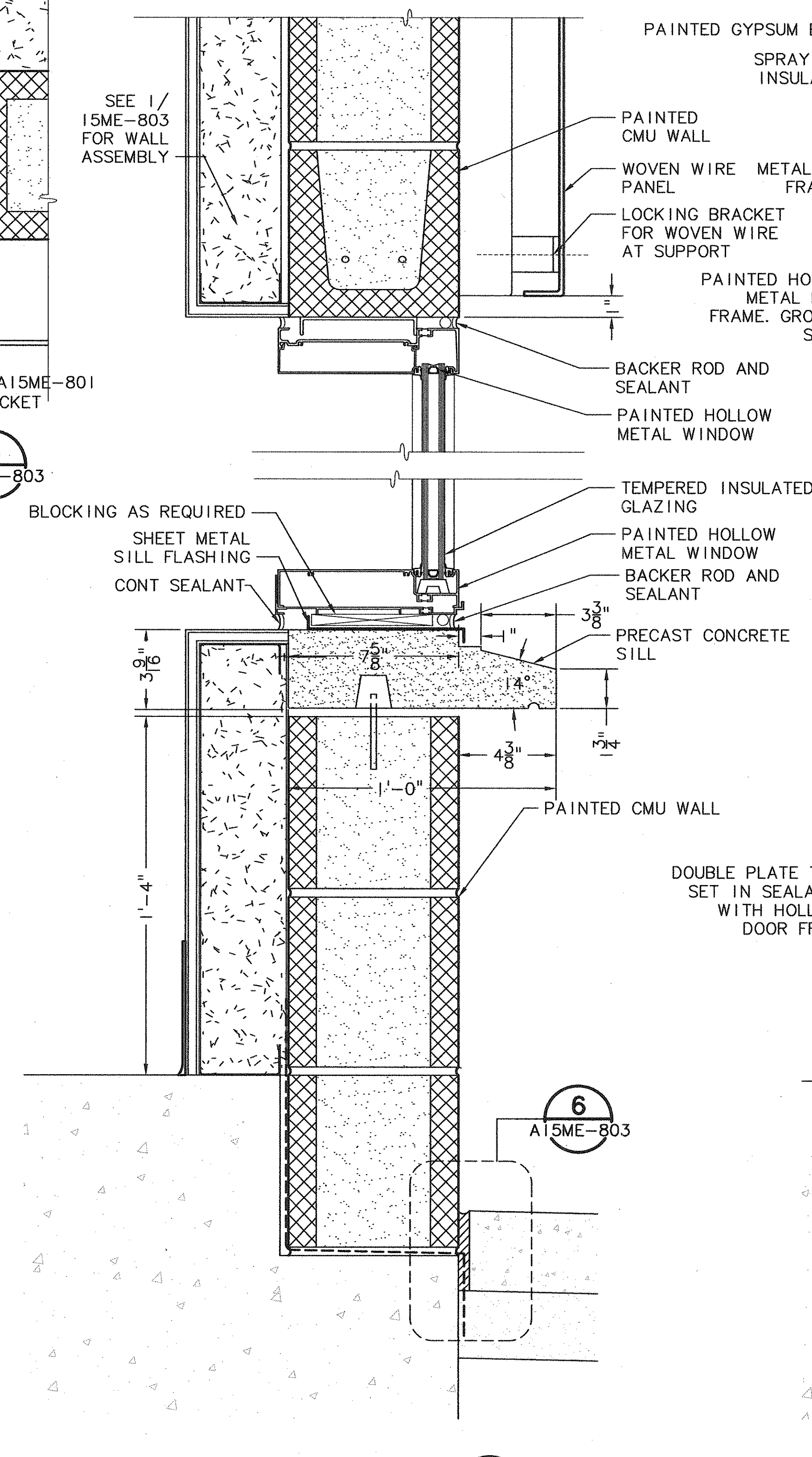
PERIMETER JOINT DETAIL (6)
SCALE: 6" = 1'-0" A15ME-803



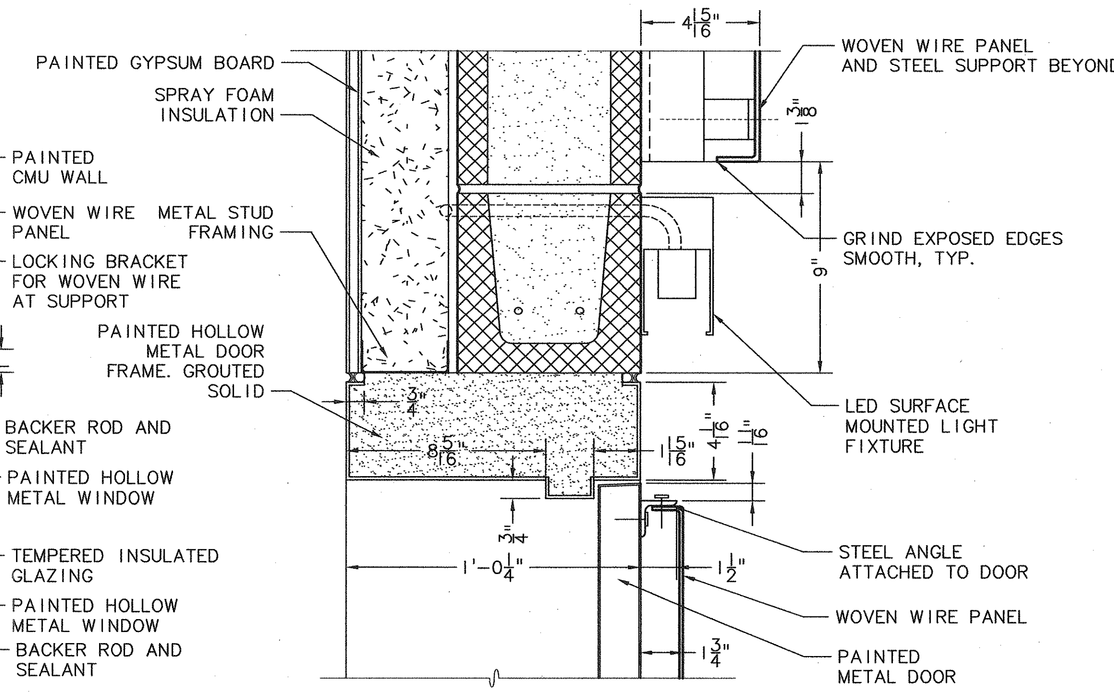
WINDOW JAMB DETAIL (3)
SCALE: 3" = 1'-0" A15ME-803



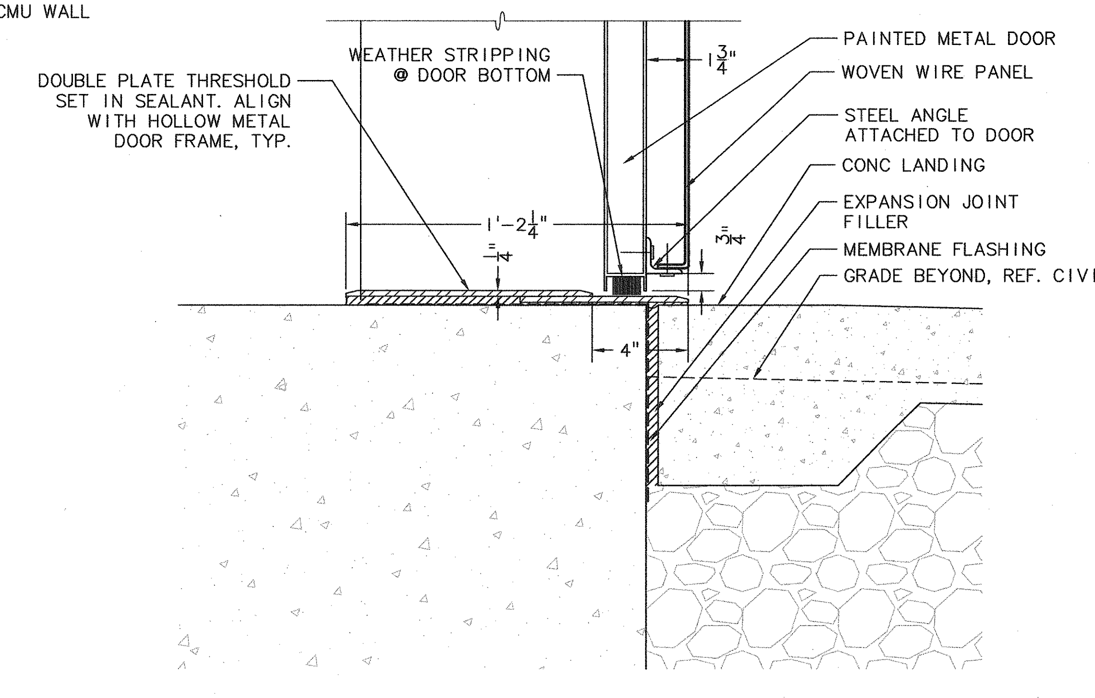
WALL BASE DETAIL (5)
SCALE: 3" = 1'-0" A15ME-803



WINDOW SILL DETAIL (4)
SCALE: 3" = 1'-0" A15ME-803



DOOR HEAD DETAIL (1)
SCALE: 3" = 1'-0" A15ME-803



DOOR THRESHOLD DETAIL (2)
SCALE: 3" = 1'-0" A15ME-803

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05/14/12	SE		DB	ISSUED FOR CONSTRUCTION

JG DESIGNED 01/27/12 DATE
JG DRAWN 01/27/12 DATE
SE CHECKED 2/2/2012 DATE
DB APPROVED 4/20/2012 DATE

REGISTERED ARCHITECT — DAVID E. WARK — PORTLAND, OREGON — STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

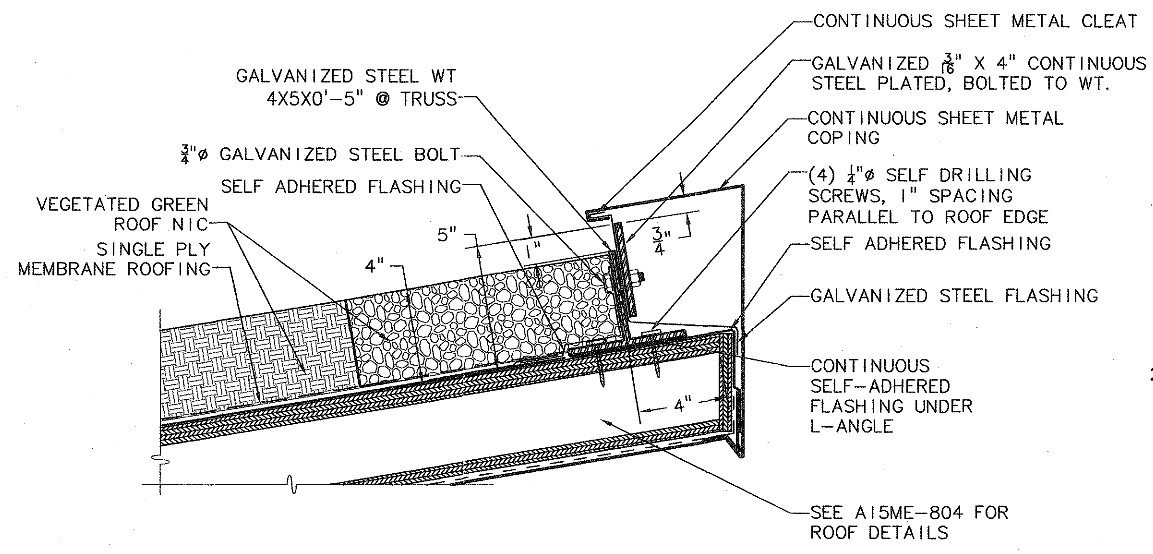
Hennebery Eddy Architects Inc.

TRIMET — CAPITAL PROJECTS DIVISION, 710 NE HOLLADAY STREET, PORTLAND, OREGON 97232

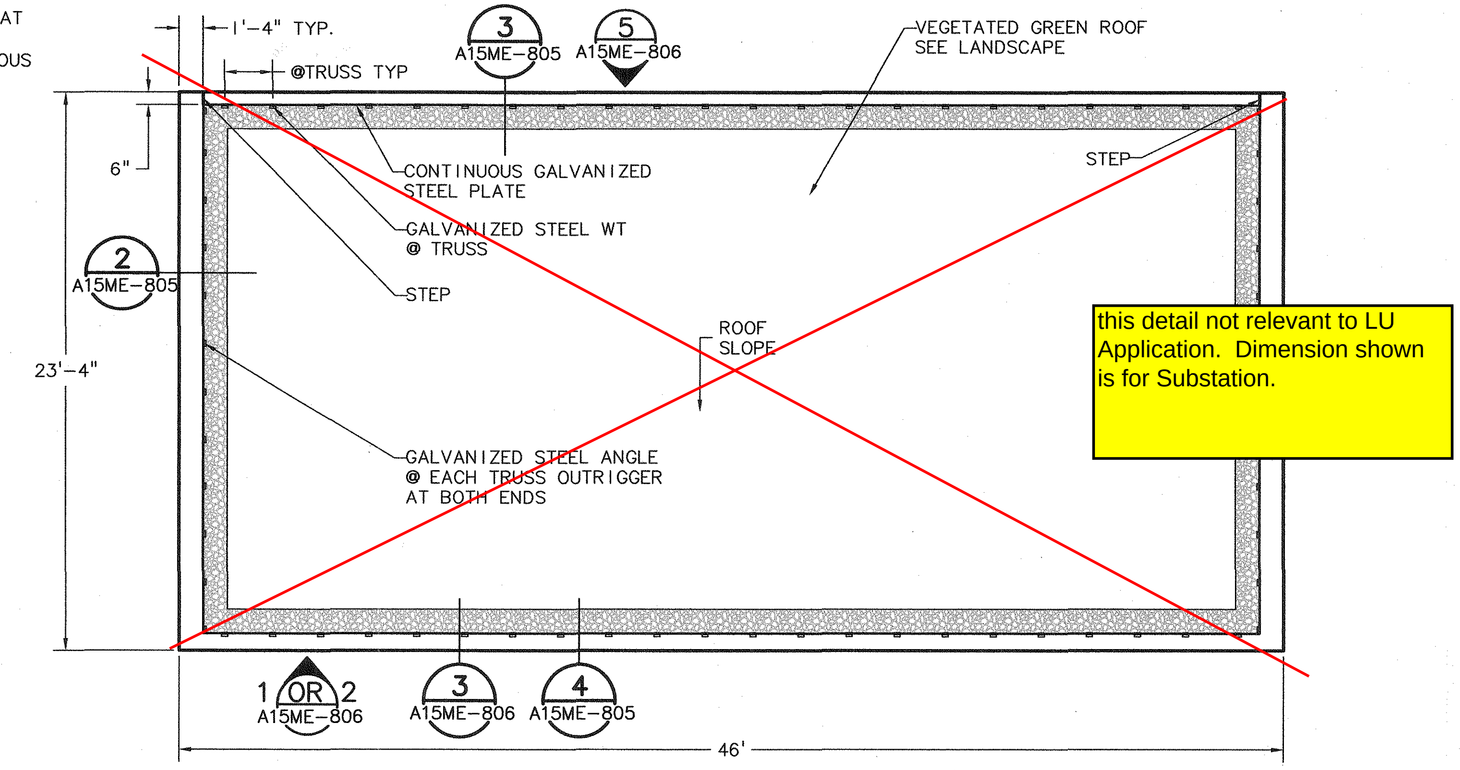
SUBMITTED: DATE: 5/14/2012 APPROVED: DATE: 5/14/2012

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
EXTERIOR DETAILS

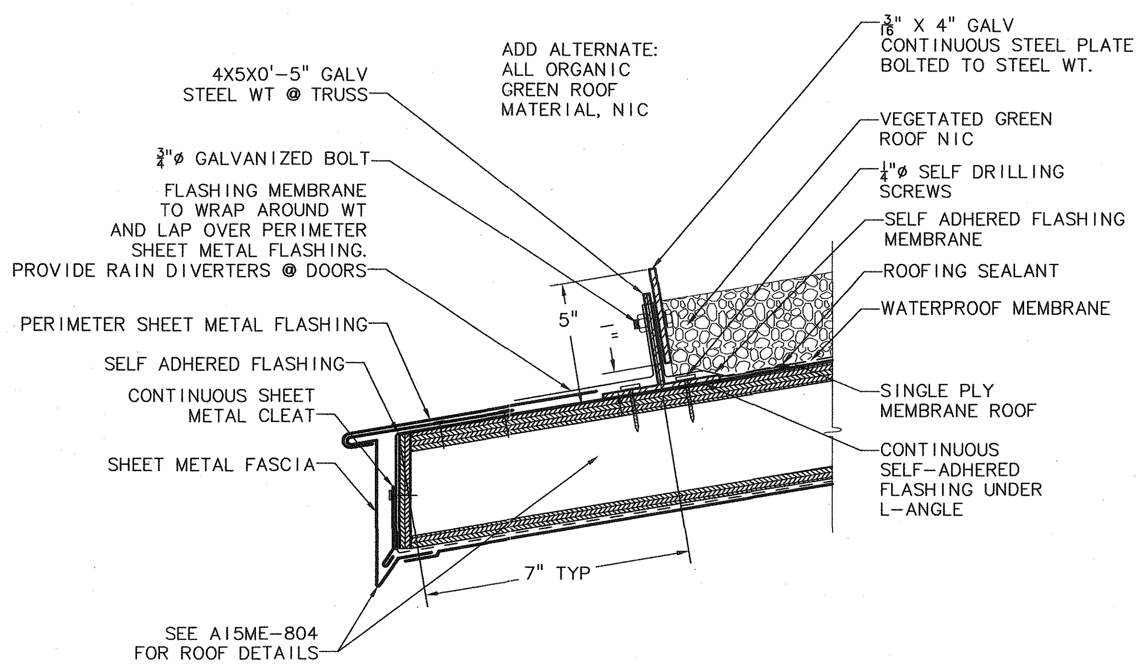
SCALE: AS NOTED | DRAWING NO.: A15ME-803 | CONTRACT NO.: RH100544JB | SHEET NO.: 259



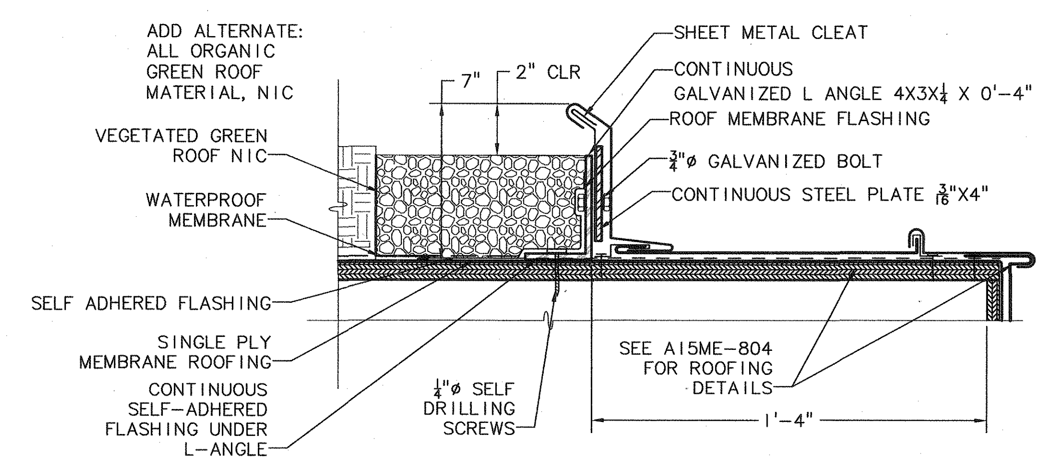
GREEN ROOF DETAIL 3
SCALE: 3" = 1'-0" A15ME-805



GREEN ROOF PLAN SHED 1
SCALE: 1/4" = 1'-0" A15ME-805



GREEN ROOF DETAIL 4
SCALE: 3" = 1'-0" A15ME-805



GREEN ROOF DETAIL 2
SCALE: 3" = 1'-0" A15ME-805

NOTES:
1. ALL PLYWOOD SHALL BE FIRE RETARDANT

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05/14/12	SE		DB	ISSUED FOR CONSTRUCTION

JG	DESIGNED	01/27/12
JG	DRAWN	01/27/12
SE	CHECKED	2/2/2012
DB	APPROVED	4/20/2012

REGISTERED ARCHITECT — DAVID C. WARK — PORTLAND, OREGON — STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

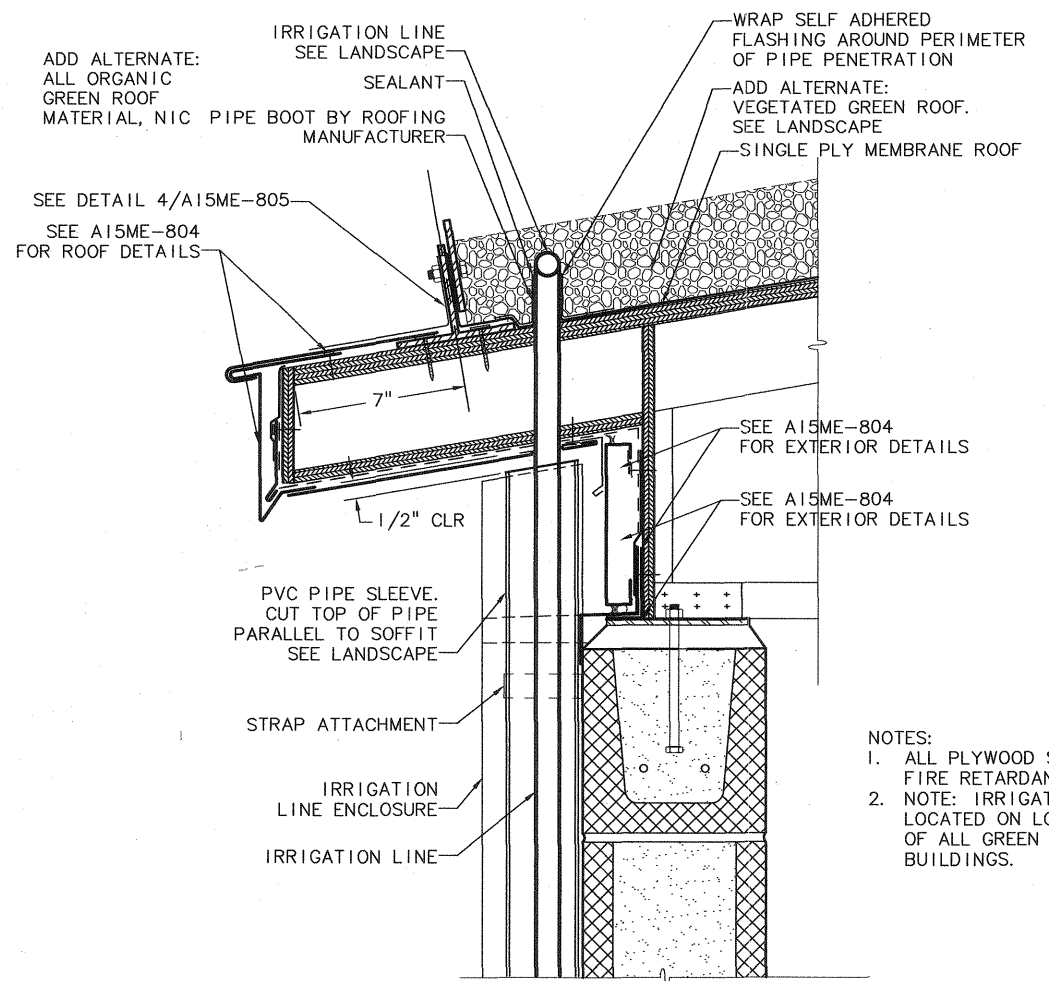
Hennebery Eddy Architects Inc.

TRI MET — CAPITAL PROJECTS DIVISION — 710 NE HOLLADAY STREET PORTLAND, OREGON 97232

SUBMITTED: [signature] DATE: 5/14/2012
APPROVED: Leah Robbins DATE: 5/14/2012

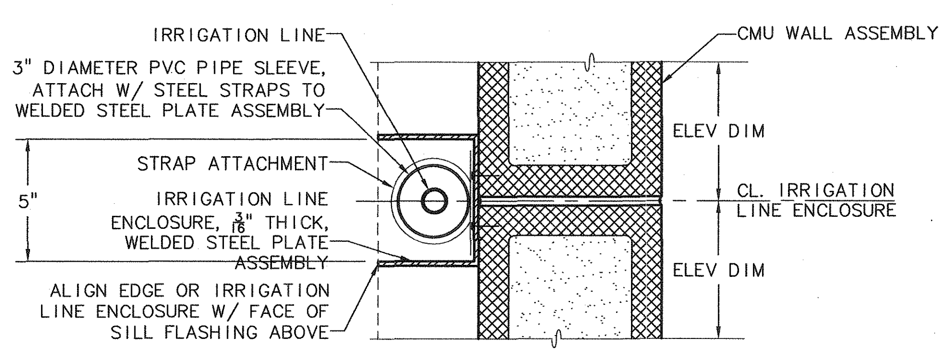
PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
GREEN ROOF DETAILS

SCALE: AS NOTED | DRAWING NO.: A15ME-805 | CONTRACT NO.: RH100544JB | SHEET NO.: 261

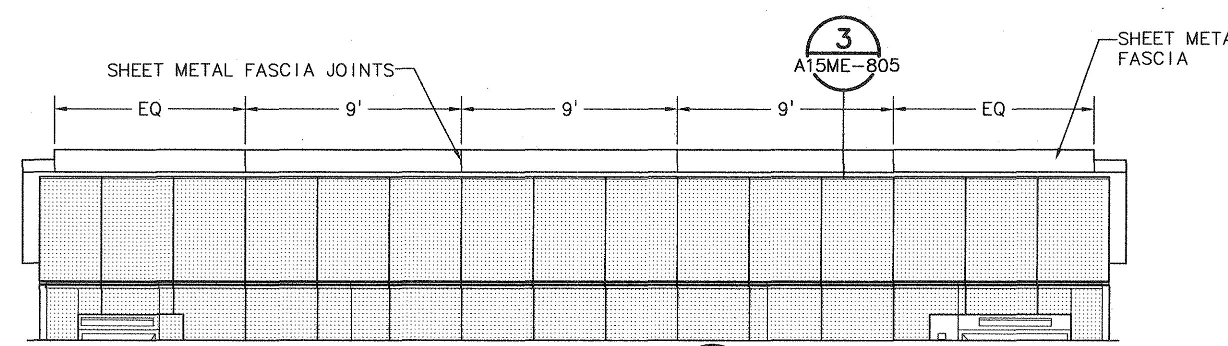


NOTES:
1. ALL PLYWOOD SHALL BE FIRE RETARDANT
2. NOTE: IRRIGATION LINES LOCATED ON LOWER EAVE OF ALL GREEN ROOF BUILDINGS.

EXTERIOR DETAIL 3 / A15ME-806
SCALE: 3" = 1'-0"



EXTERIOR DETAIL 4 / A15ME-806
SCALE: 3" = 1'-0"



PARTIAL UPPER EAVE ELEVATION 5 / A15ME-806
SCALE: 1/4" = 1'-0"

NO.	DATE	BY / CHK.	APPD.	REVISIONS
	05/14/12	SE	DB	ISSUED FOR CONSTRUCTION

JYG (DESIGNED)	01/27/12 (DATE)
JYG (DRAWN)	01/27/12 (DATE)
SE (CHECKED)	2/2/2012 (DATE)
DB (APPROVED)	4/20/2012 (DATE)

REGISTERED ARCHITECT
DAVID E. WARK
PORTLAND, OREGON
STATE OF OREGON

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

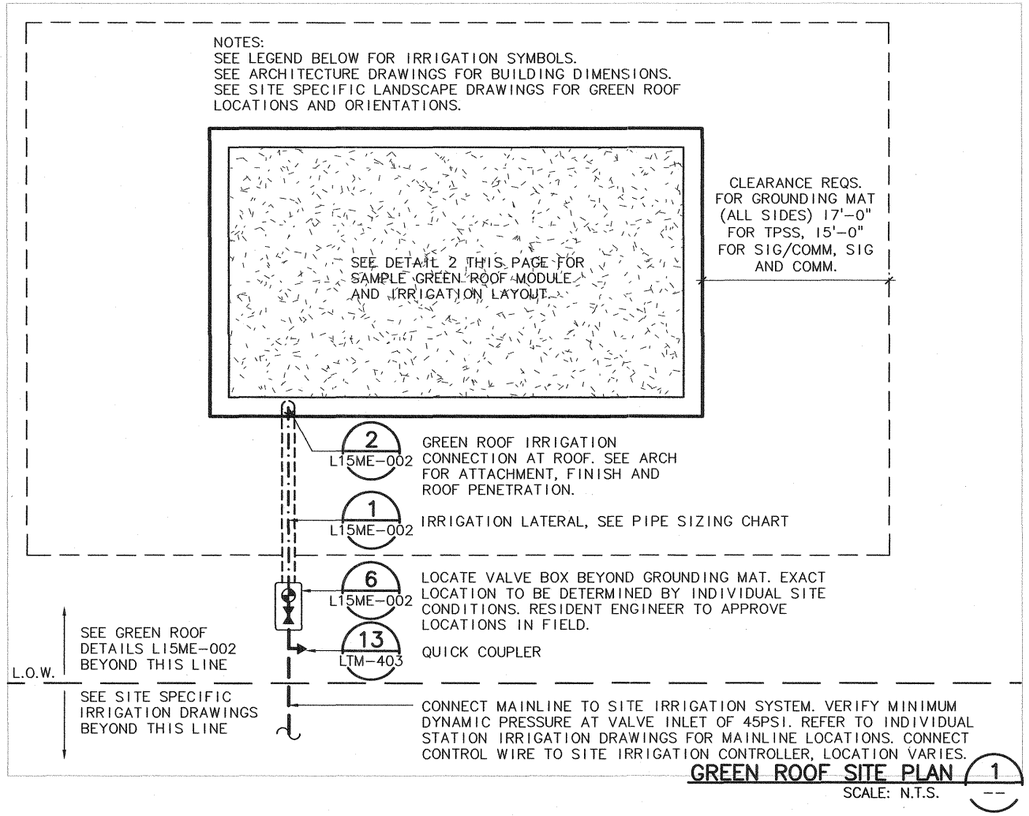
Hennebery Eddy Architects Inc.

TRIMET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

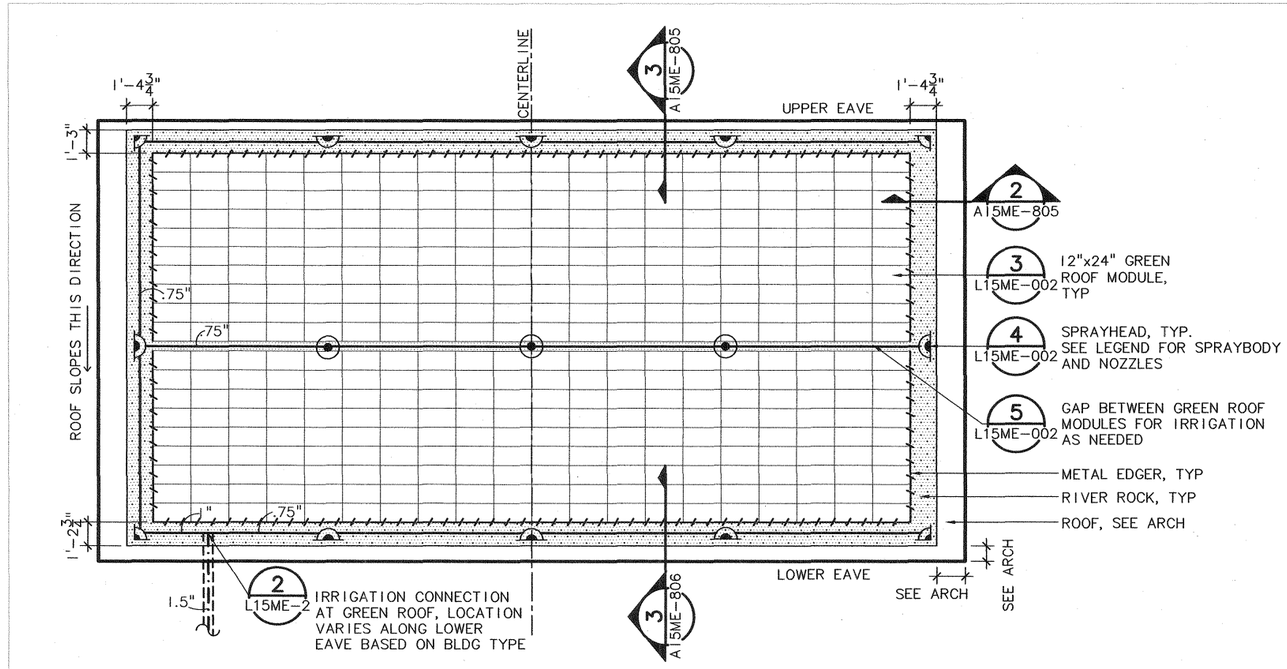
SUBMITTED: DATE: 5/14/2012
APPROVED: Leah Robbins DATE: 5/14/2012

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
GREEN ROOF DETAILS

SCALE: AS NOTED | DRAWING NO.: A15ME-806 | CONTRACT NO.: RH100544JB | SHEET NO.: 262



GREEN ROOF SITE PLAN 1
SCALE: N.T.S.



GREEN ROOF SAMPLE LAYOUT PLAN (BASED ON TPSS SHED ROOF) 2
SCALE: 1/4" = 1'-0"

EQUIPMENT	
SYMBOL	DESCRIPTION
	REMOTE CONTROL VALVE, SEE SPECS AND DETAILS
	GATE VALVE, SEE SPECS AND DETAILS
	QUICK COUPLER, SEE SPECS AND DETAILS
	MAINLINE, SEE SITE SPECIFIC IRRIGATION DRAWINGS
.75"	LATERAL LINE, SCHEDULE 40 PVC, SIZED AS NOTED OR PER SIZING CHART
.75"	LATERAL LINE, POLYETHYLENE, SIZED AS NOTED OR PER SIZING CHART
	IRRIGATION SLEEVE, 3" SCHEDULE 40 UVR PVC

SPRAY HEADS						PIPE SIZING CHART	
SYMBOL	SPRAY BODY	NOZZLE	GPM	PSI	RAD.	FLOW RATE*	PIPE SIZE
	RAINBIRD 1804-SAM-PRS	10Q	.39	30	10'	0-6 GPM	3/4"
	RAINBIRD 1804-SAM-PRS	10H	.79	30	10'	6-10 GPM	1"
	RAINBIRD 1804-SAM-PRS	10F	1.58	30	10'	10-26 GPM	1-1/2"
	RAINBIRD 1804-SAM-PRS	12Q	.65	30	12'	*FLOW RATE= TOTAL GPM RUNNING THROUGH A GIVEN LENGTH OF PIPE	
	RAINBIRD 1804-SAM-PRS	15Q	.92	30	15'		
	RAINBIRD 1804-SAM-PRS	15H	1.85	30	15'		

IRRIGATION LEGEND 3
SCALE: N.T.S.

GENERAL NOTES (THESE APPLY TO ALL DETAILS SHOWN ON SHEETS L15ME-001 AND L15ME-002):

1. BEFORE WORK BEGINS, COORDINATE WITH SITE SPECIFIC LANDSCAPE AND IRRIGATION PLANS TO CONFIRM LOCATION OF IRRIGATION CONTROLLER, AVAILABILITY OF A DESIGNATED STATION FOR GREEN ROOF IRRIGATION AND MINIMUM PRESSURE/FLOW REQUIREMENTS.
2. LOCATION OF IRRIGATION POINT OF CONNECTION WILL VARY AT EACH INDIVIDUAL SITE.
3. LAYOUT: CENTER WHOLE GREEN ROOF MODULES (WHEREVER POSSIBLE) IN BOTH DIRECTIONS SO THAT THE ROCK BAND IS THE SAME WIDTH ON OPPOSING EDGES AND WITHIN THE GIVEN MINIMUM/MAXIMUM DIMENSION. MODULES SHOULD BE CONSISTENT IN THEIR ORIENTATION, BUT MAY BE ROTATED 90 DEGREES TO BEST FIT ANY GIVEN BUILDING TYPE AND MAXIMIZE COVERAGE.
4. SAMPLE IRRIGATION AND GREEN ROOF MODULE LAYOUT PROVIDED IN DETAIL 2 FOR CONTRACTOR'S CONVENIENCE. PRIOR TO INSTALLATION CONTRACTOR TO SUBMIT COMPLETE SHOP DRAWINGS FOR APPROVAL FOR EACH GREEN ROOF SITE, INCLUDING MODULE LAYOUT, SPRAYHEADS AND PIPE SIZING CALCULATIONS USING THE PROVIDED CHART.
5. ONCE INSTALLED, ADJUST SPRAYHEADS TO ACCOUNT FOR ROOF SLOPE AND TO ACHIEVE HEAD-TO-HEAD COVERAGE WHILE MINIMIZING OVERSPRAY.
7. SEE GREEN ROOF PLANTING AND IRRIGATION SPECIFICATION SECTION 075501 FOR ADDITIONAL REQUIREMENTS. SEE ARCHITECTURAL SPECIFICATIONS FOR WATERPROOFING AND SLIP SHEET.
8. IF FALL ARREST ANCHORS FALL WITHIN GREEN ROOF PANELS, TRIM PANELS TO FIT AND FILL GAP WITH ROUNDED RIVER ROCK. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS.

ABBREVIATIONS:

ARCH	ARCHITECTURE
BLDG	BUILDING
L.O.W.	LIMIT OF WORK
MAX.	MAXIMUM
MIN.	MINIMUM
REQS	REQUIREMENTS
SIM	SIMILAR
SPECS	SPECIFICATIONS
TYP	TYPICAL

GENERAL NOTES AND ABBREVIATIONS 4
SCALE: N.T.S.

NO.	DATE	BY CHK.	APPD.	REVISIONS
	5/14/12			ISSUED FOR CONSTRUCTION

JH DESIGNED	10/15/11	DATE
EK DRAWN	10/28/11	DATE
KL CHECKED	11/10/11	DATE
JH APPROVED	5/14/12	DATE

REGISTERED 408 Jane Hansen OREGON 11/13/98 LANDSCAPE ARCHITECT

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Hennebery Eddy Architects Inc.

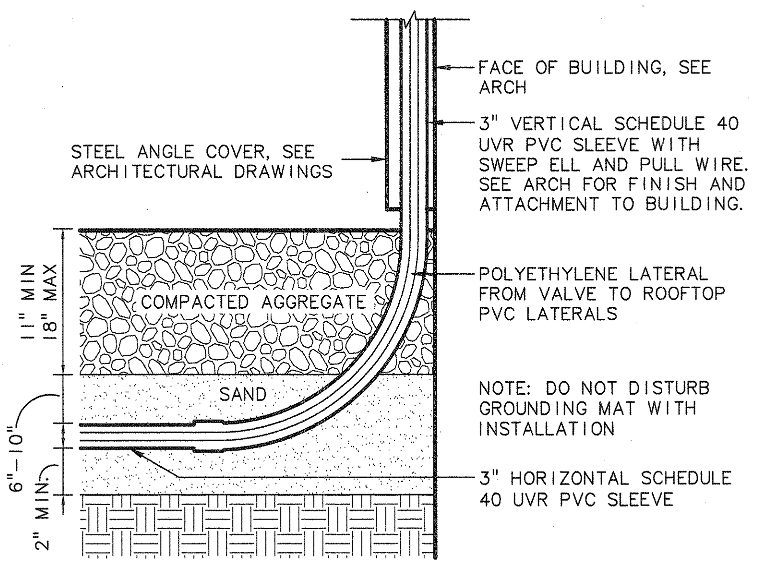
lango.hansen LANDSCAPE ARCHITECTS PC
1100 nw glisan #3B portland OR 97209 T 503 295.2437

TRIMET CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

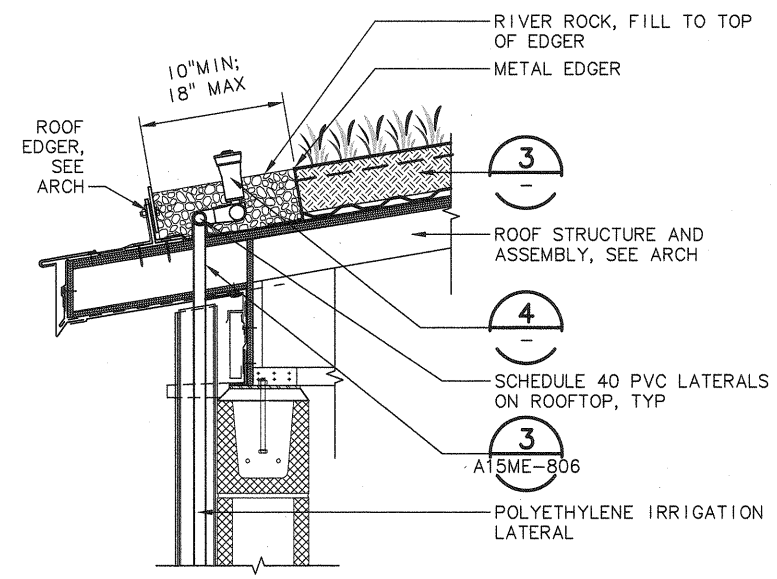
SUBMITTED: DATE: 5/14/12
APPROVED: DATE: 5/14/12

PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
LANDSCAPE
GREEN ROOF DETAILS

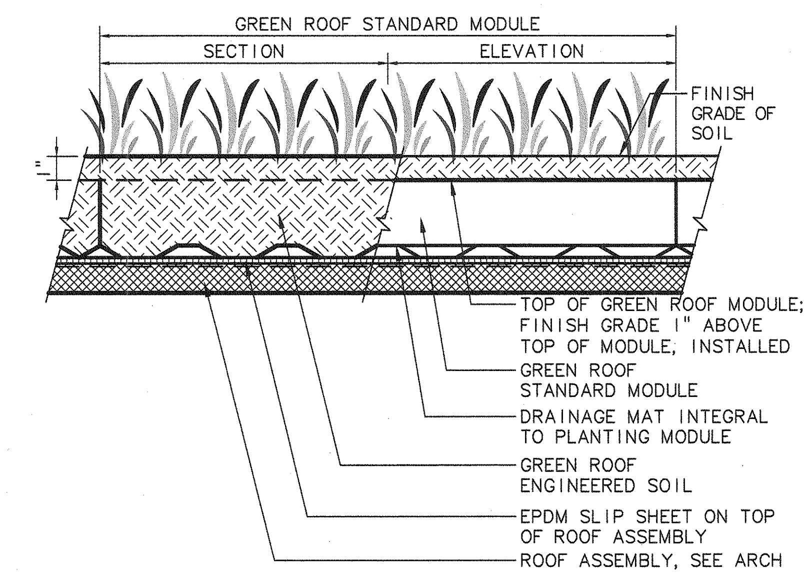
SCALE: AS NOTED | DRAWING NO.: L15ME-001 | CONTRACT NO.: RH100544JB | SHEET NO.: 263



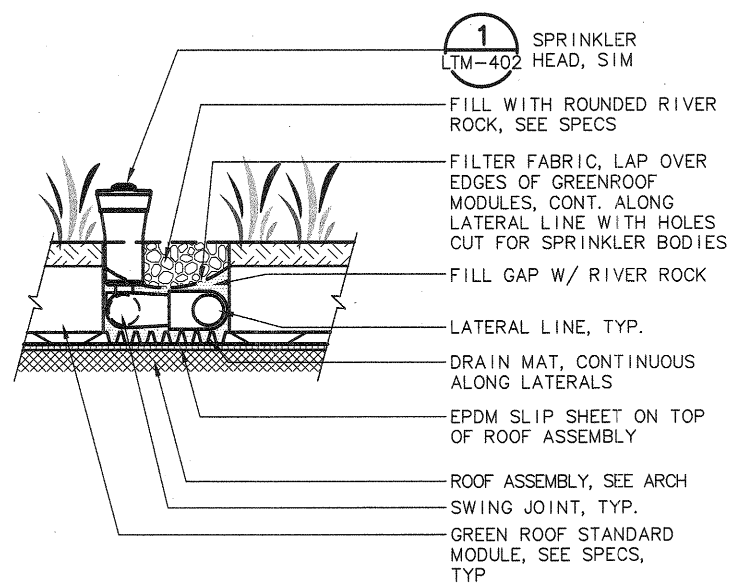
IRRIGATION SLEEVE TO VERTICAL TRANSITION (1 / --)
SCALE: 1 1/2" = 1'-0"



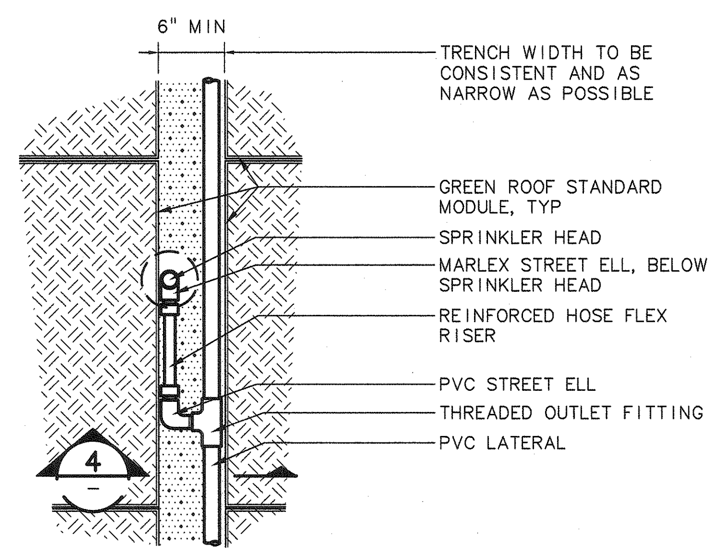
GREEN ROOF EDGE CONDITION (2 / --)
SCALE: 1 1/2" = 1'-0"



GREEN ROOF MODULE (3 / --)
SCALE: 3" = 1'-0"

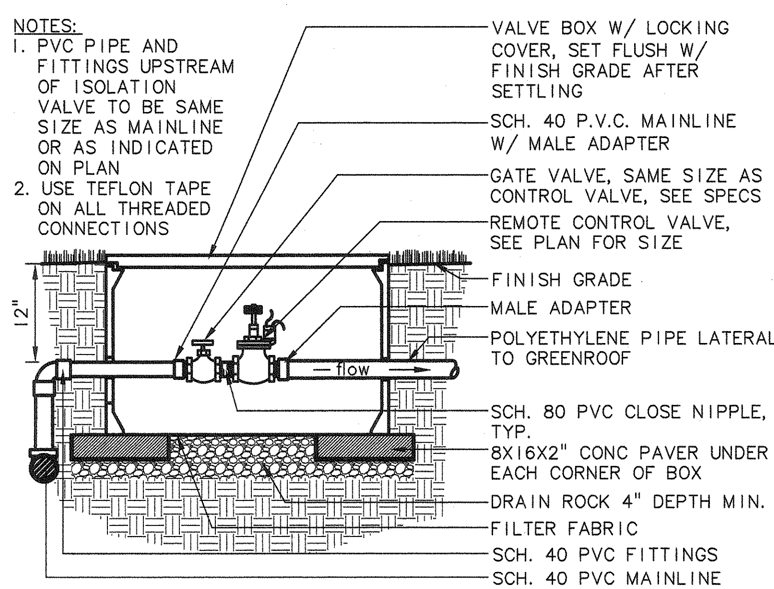


SPRAYHEAD AND GREEN ROOF IRRIGATION (4 / --)
SCALE: 3" = 1'-0"



GREEN ROOF IRRIGATION TRENCH (5 / --)
SCALE: 1 1/2" = 1'-0"

NOTES:
1. PVC PIPE AND FITTINGS UPSTREAM OF ISOLATION VALVE TO BE SAME SIZE AS MAINLINE OR AS INDICATED ON PLAN
2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS



VALVE BOX (6 / --)
SCALE: N.T.S.

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5/14/12				ISSUED FOR CONSTRUCTION

DESIGNED: JH	DATE: 10/15/11
DRAWN: EK	DATE: 10/28/11
CHECKED: KL	DATE: 11/10/11
APPROVED: JH	DATE: 5/14/12

REGISTERED LANDSCAPE ARCHITECT 408 Jane Hansen OREGON 11/13/98

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Hennebery Eddy Architects Inc.

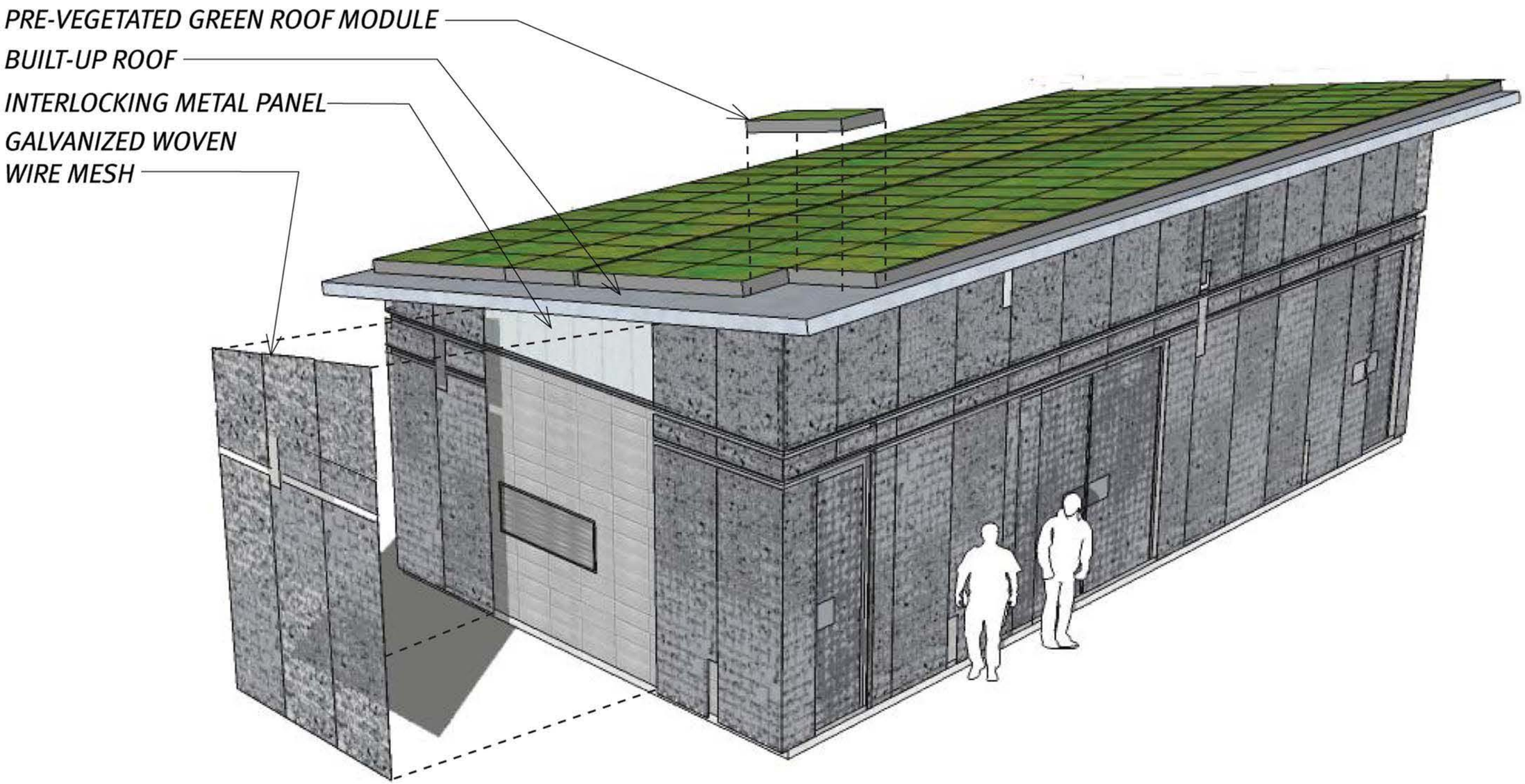
lango.hansen LANDSCAPE ARCHITECTS PC
1100 nw glisan #3B portland OR 97209 T 503 295.2437

TRI MET
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 5/14/22
APPROVED: Leah Robbins DATE: 5/14/12

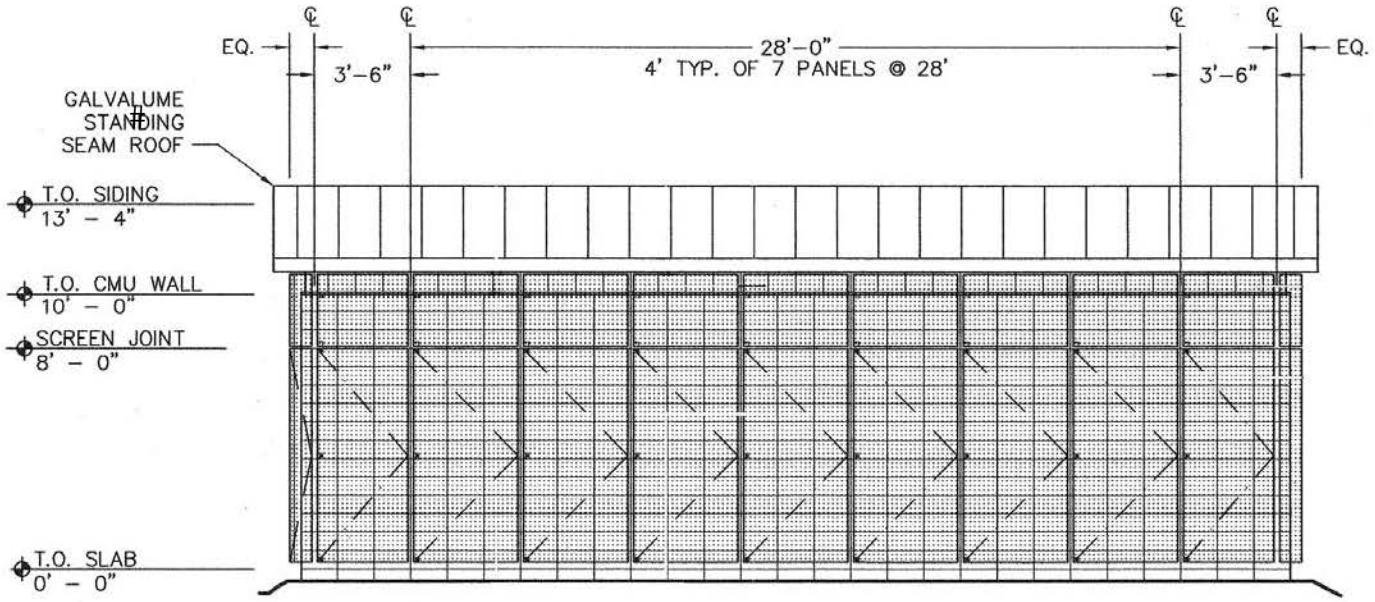
PORTLAND MILWAUKIE LIGHT RAIL
EAST SEGMENT
LANDSCAPE
GREEN ROOF DETAILS

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
AS NOTED	L15ME-002	RH100544JB	264



TPSS WITH MODULAR GREEN ROOF AND GALVANIZED WOVEN WIRE MESH

Green Roof Diagrammatic Rendering



Sig Com Building With Galvanized Roof

Exhibit P 25

WINLINE SURFACE LINEAR

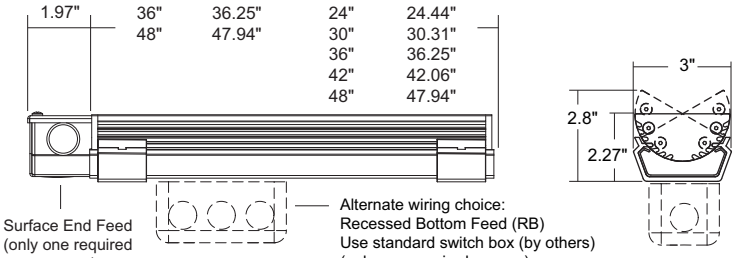
402/404 DRY

403W/405W DAMP/WET

The WINLINE SURFACE LINEAR 400 SERIES are the largest of Winona Lighting's linear LED luminaires. Models 402/404/403W/405W are high performance linear LED luminaires suitable for the illumination and grazing of walls, ceilings, and other planes.

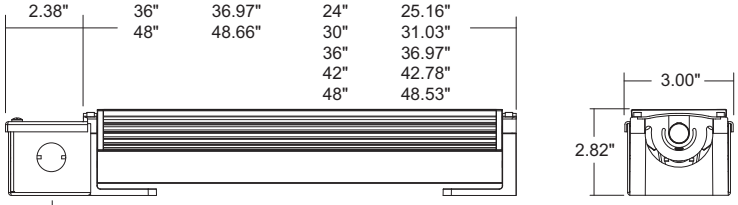
FIXED MOUNT

model 402/403W		model 404/405W	
Nominal Length	Installed Length	Nominal Length	Installed Length
12"	12.57"	12"	12.57"
24"	24.44"	18"	18.50"
36"	36.25"	24"	24.44"
48"	47.94"	30"	30.31"
		36"	36.25"
		42"	42.06"
		48"	47.94"



ADJUSTABLE MOUNT

model 402/403W		model 404/405W	
Nominal Length	Installed Length	Nominal Length	Installed Length
12"	13.28"	12"	13.28"
24"	25.16"	18"	19.22"
36"	36.97"	24"	25.16"
48"	48.66"	30"	31.03"
		36"	36.97"
		42"	42.78"
		48"	48.53"



Winline Surface Linear - **WSL** → **WSL** (series)

model 402 dry - **402**
model 404 high output dry - **404**
model 403W damp/wet - **403W**
model 405W high output damp/wet - **405W**
(model)

Total Run Length in Feet
402/403W offered in 12" increments
404/405W offered in 6" increments starting at 12"
ex. 60FT = 60 foot run
or
Preconfigured Run Length Code
see submittal at www.winonalighting.com
(additional information see page 18)
or
To Be Determined
TBD when run length unknown
(run length code)

12° high intensity close-up grazing - **12**
30° tight linear flood - **30**
60° wall and ceiling washing - **60**
100° wall and ceiling washing - **100**
(beam spread)

POWER AND DIMMING

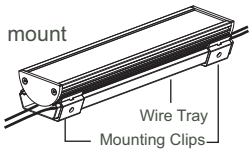
Winline 402/403W power consumption is 8W/ft (maximum run length 40'). Winline 404/405W power consumption is 15W/ft (maximum run length 28'). The Winline 400 series operates on 24VAC and can be dimmed with commonly available low voltage magnetic dimming equipment. A wide range of remote transformers are available in 120V and 277V primary (see page 19).

ANSI-binned 2700K - **27K**
ANSI-binned 3000K - **30K**
ANSI-binned 3500K - **35K**
ANSI-binned 4000K - **40K**
non-ANSI-binned 5000K - **50K**
(LED code)

non-dimming 24 volt AC - **ND24V**
dimming 24 volt AC - **DM24V**
(voltage)

FIXED MOUNTING AND ADJUSTING — fixed mount

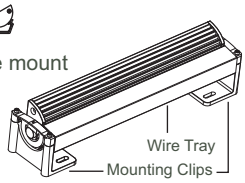
A unique 1-piece mount combined with an integral wire tray allows the 400 Series to be mounted almost anywhere. The luminaire snaps into the mount clips in seven positions enabling up to 60 degrees of adjustment in 10 degree increments.



fixed - **F**
adjustable - **A**
(mount)

ADJUSTABLE MOUNTING — adjustable mount

The 400 Series adjustable mount allows for 186 degree continuous rotation. Luminaire can then be locked into place once desired position is established.



natural type III anodized aluminum - **NAA**
semi gloss black paint - **SGB**
semi gloss white paint - **SGW**
custom paint finish - **CPF**
(finish)

surface end feed - **SE**
recessed bottom feed - **RB***
**available on F(fixed) only*
(power feed)

OPERATING TEMPERATURE

-22°F TO 122°F (-30°C to 50°C)

COLOR AND LIGHT OUTPUT

The 400 Series utilizes Nichia 183 white LEDs in five standard colors. Models 402/403W feature (6) LEDs/ft, while models 404/405W feature (12) LEDs/ft.

LM79 Data - Based on WSL404/30°/3000K Test Report: BALL 15223

Color	Total Lumens	Lamp Watts	Lumens per Watt	CRI	Power Factor
ANSI-binned 2700K	1775	58.5	30.3	85.7	.97
ANSI-binned 3000K	1820	58.5	31.1	88.1	.96
ANSI-binned 3500K	2129	58.5	36.4	84.5	.96
ANSI-binned 4000K	2202	58.5	37.6	88.5	.96
non-ANSI-binned 5000K	2512	58.5	43.0	70.1	.95

Complete photometric data and submittals at www.winonalighting.com

none - **X**
(options)

standard - **STD**
modified - **MOD**
(special)

RoHS COMPLIANT

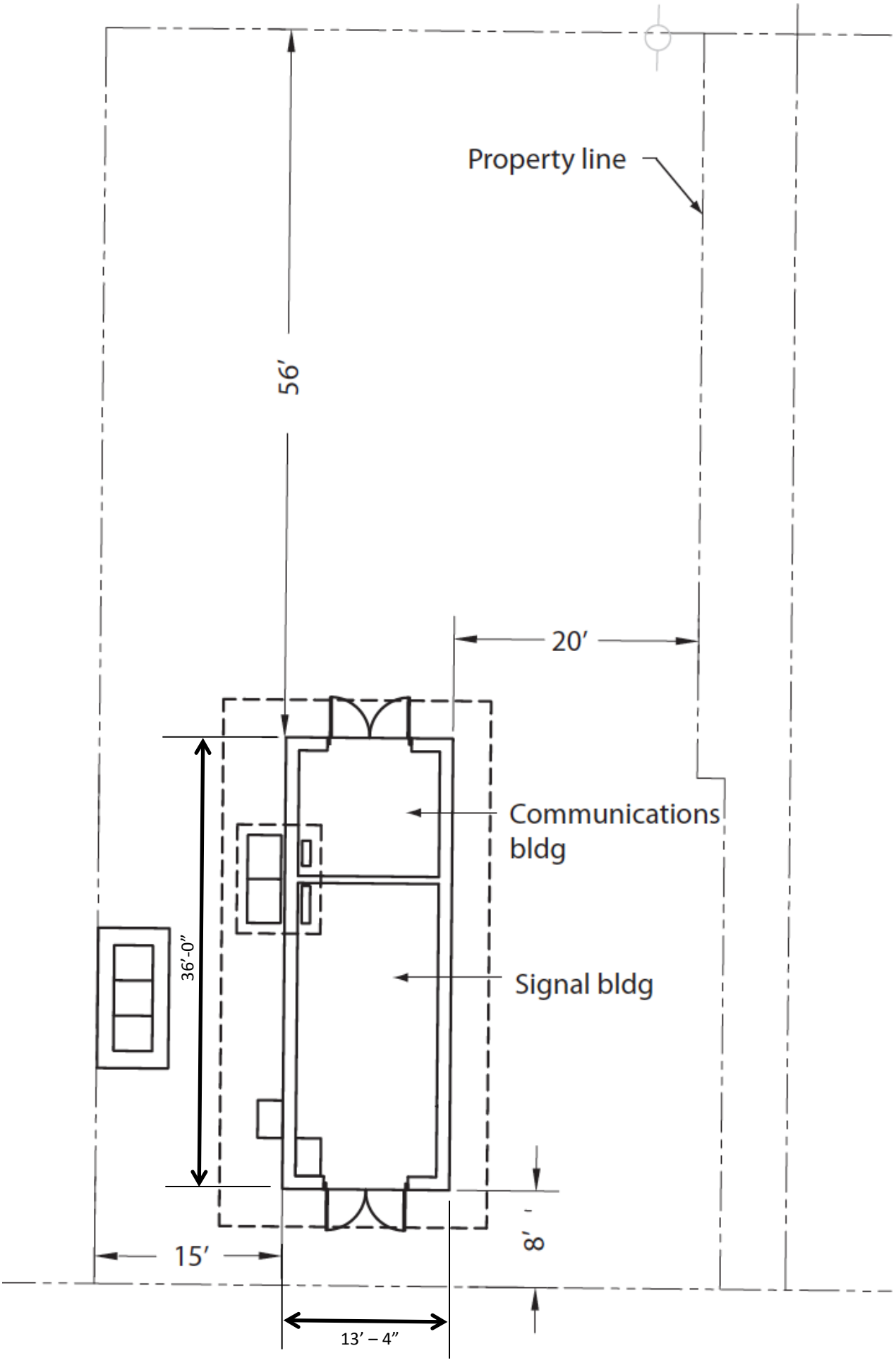
IP66

3190865

Winline Surface Linear 402/404 are ETL listed for dry location. 403W/405W are ETL listed for wet location. This complies with UL Standard 2108.

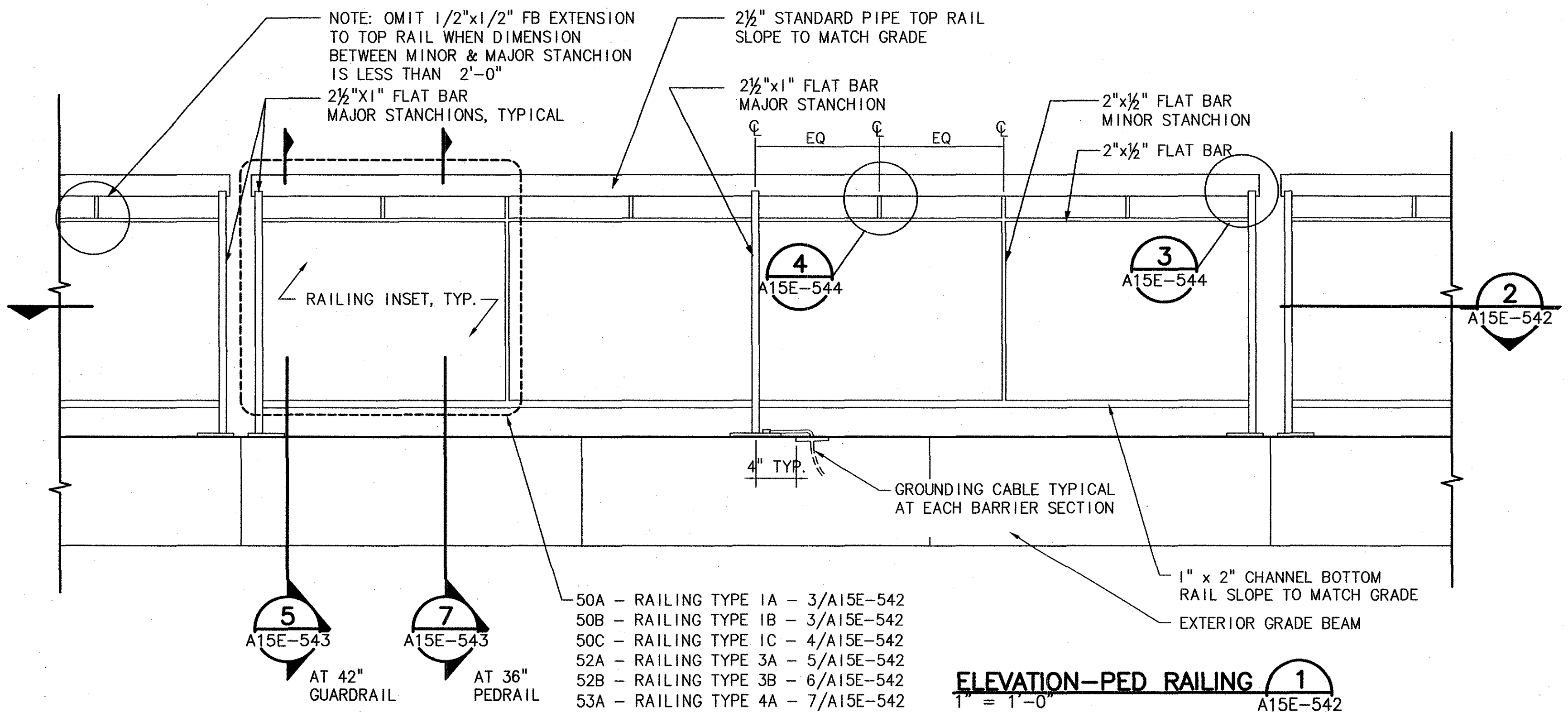
Exhibit P26

Complete Product Information Available at www.winonalighting.com



Sig Com Building Site Plan With Setback and Building Footprint Dimensioning

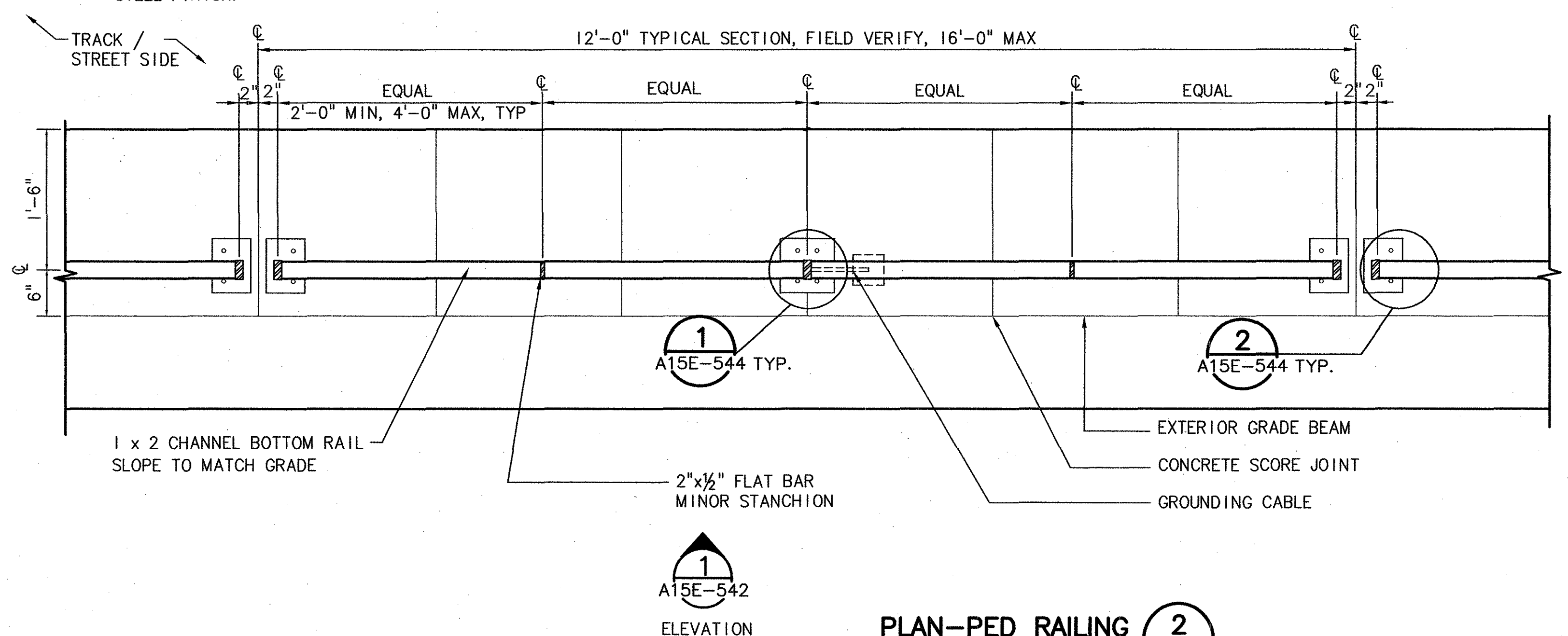
Exhibit P 27



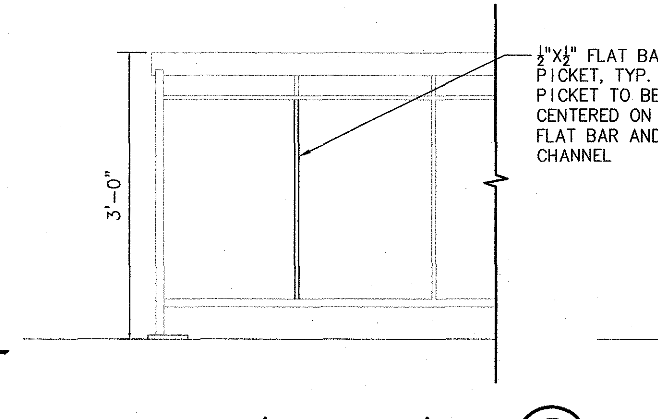
ELEVATION—PED RAILING (1 / A15E-542)
1" = 1'-0"

GENERAL NOTES:

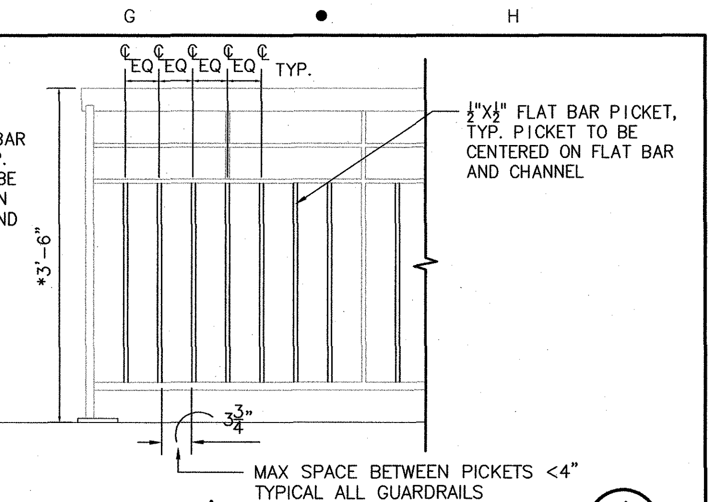
1. SUPPORTS AND PICKETS TO BE VERTICAL, REGARDLESS OF PAVING SLOPE.
2. BUILD GUARD/PED-RAIL IN STRAIGHT SECTIONS TANGENT WITH SIDEWALK PROFILE.
3. HOT DIP GALVANIZE AFTER FABRICATION, TYPICAL, UNLESS OTHERWISE NOTED.
4. RAILING COMBINATION WITH INSET 52A AND 52B TO BE PAINTED P2 BLACK.
5. HANDRAIL, WHERE OCCURS, TO REMAIN STAINLESS STEEL FINISH.



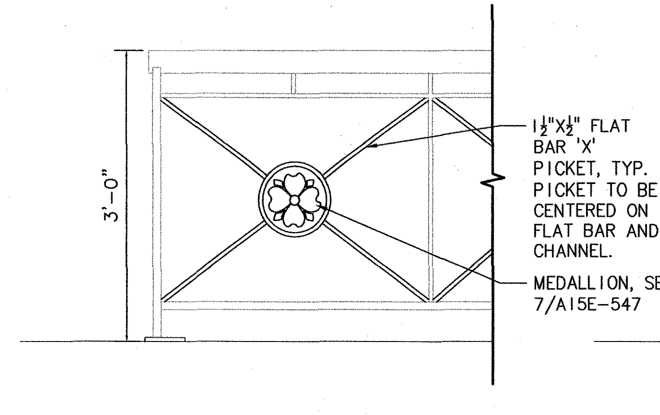
PLAN—PED RAILING (2 / A15E-542)
1"=1'-0"



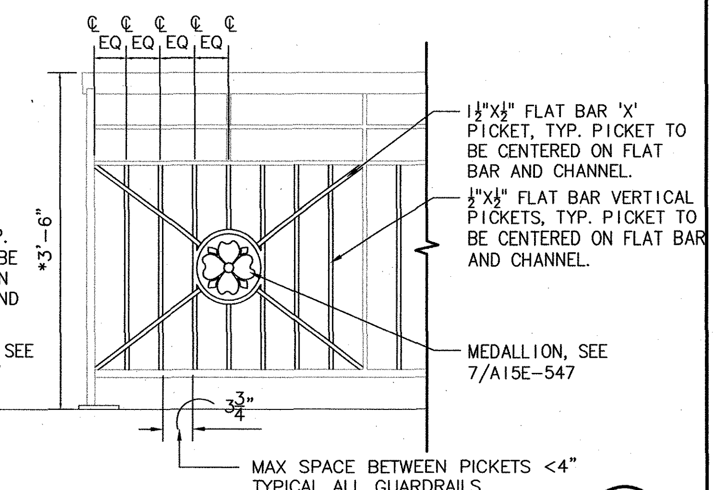
INSET 50A/1A & 50B/1B (3 / A15E-542)
1" = 1'-0"



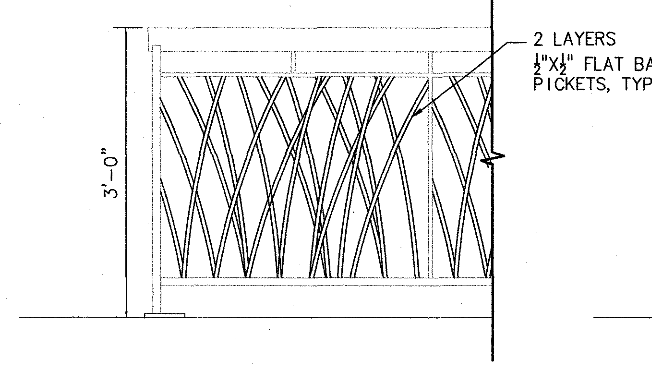
INSET 50C/1C — GUARD (4 / A15E-542)
1" = 1'-0"



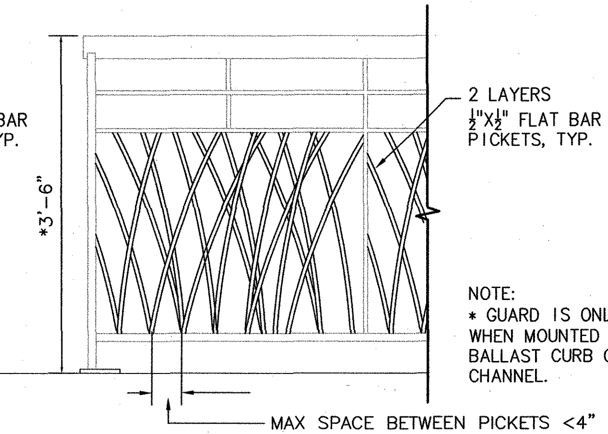
INSET 52A/3A (5 / A15E-542)
1" = 1'-0"



INSET 52B/3B — GUARD (6 / A15E-542)
1" = 1'-0"



INSET 53A/4A (7 / A15E-542)
1" = 1'-0"



NOTE:
* GUARD IS ONLY 3'-0" WHEN MOUNTED ON BALLAST CURB OR STL. CHANNEL.

INSET 53B/4B — GUARD (8 / A15E-542)
1" = 1'-0"

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	05-14-12				ISSUED FOR CONSTRUCTION

DESIGNED	MM	5-01-11
DRAWN	MH	2-12-12
CHECKED	WB	04-13-12
APPROVED	[signature]	5-14-12

REGISTERED ARCHITECT — JON C. STYNER — PORTLAND, OREGON — STATE OF OREGON

TRI–COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

waterleaf architecture, interiors & planning

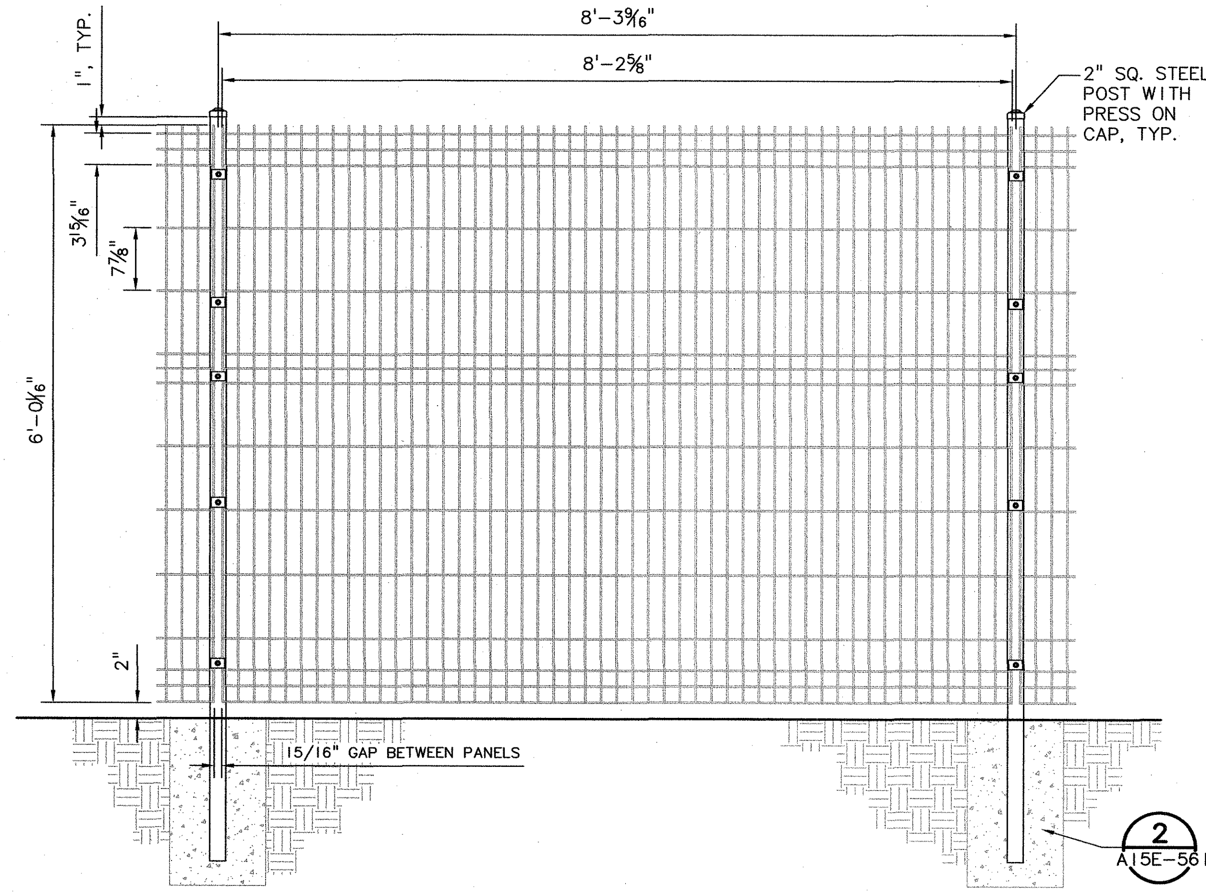
DAVID EVANS AND ASSOCIATES INC.

TRIMET — CAPITAL PROJECTS DIVISION, 710 NE HOLLADAY STREET, PORTLAND, OREGON 97232

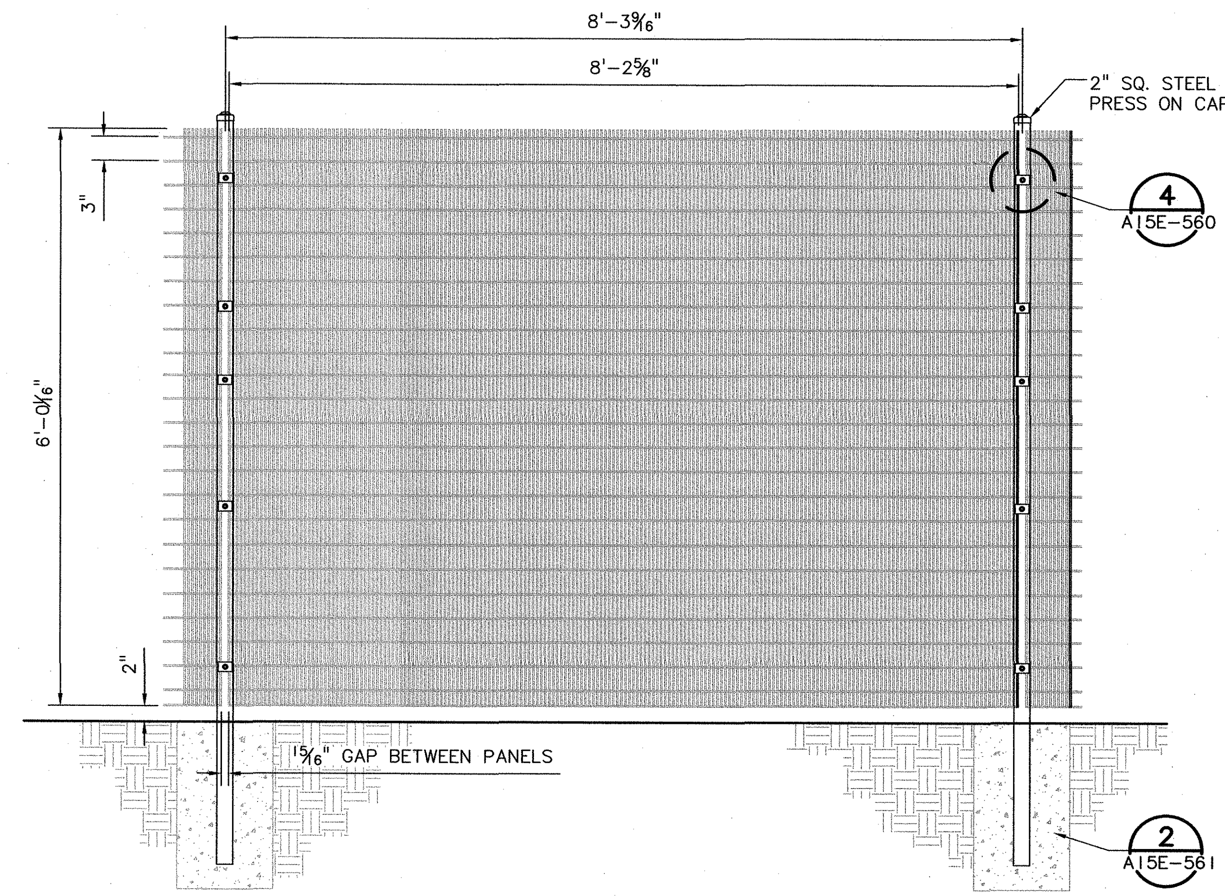
PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
TYPICAL GUARD / PED RAILING
ELEVATIONS

EXHIBIT P28

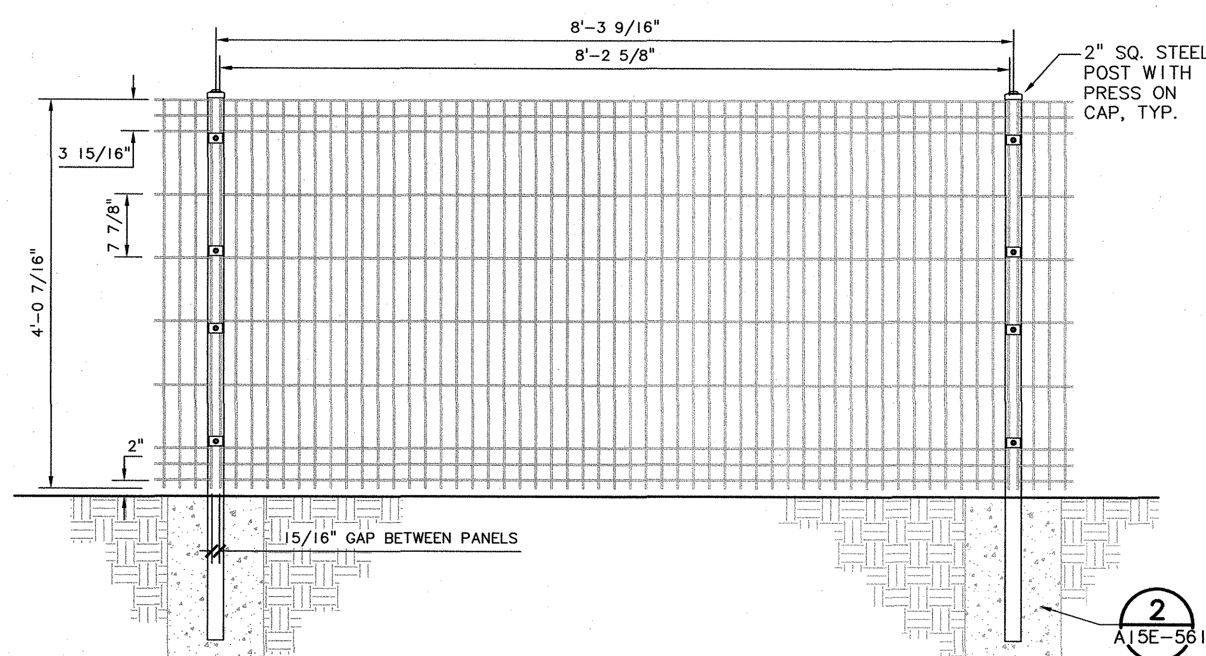
SUBMITTED:	DATE: 5-14-12	APPROVED:	DATE: 5-14-12	SCALE: VARIES	DRAWING NO.: A15E-542	CONTRACT NO.: RH100544JB	SHEET NO.: 184



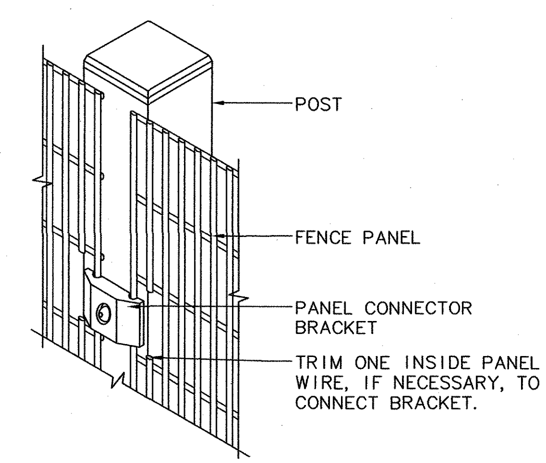
FENCE – TYPE 9B/9D
72" WELDED WIRE FENCE
SCALE: NTS
1
–



FENCE – SCREEN
72" WELDED WIRE FENCE
SCALE: NTS
2
–



FENCE – TYPE 9A/9C
48" WELDED WIRE FENCE
SCALE: NTS
3
–



FENCE – SCREEN
PANEL CONNECTION
SCALE: NTS
4
–

NOTES FOR SHEETS A15E-500 AND A15E-501:

1. FOR FENCE TRANSITIONS, REF. DET 2/A51E-562.
2. TYPE 9B WWM FENCE TO BE BLACK POWDERCOATED FINISH.
3. TYPE 9D WWM FENCE TO BE GALVANIZED FINISH.
4. FOR ALL FENCE PANELS THAT NEED TO BE CUT TO SHORTER LENGTHS, FILE THE CUTS SO THERE ARE NO BURRS OR SHARP EDGES. FOR TYPE 9A, PAINT ALL EXPOSED STEEL WITH ONE COAT ZINC ENRICHED PRIMER AND TWO COATS OF AUTOMOTIVE GRADE ACRYLIC PAINT TO MATCH FENCE COLOR AND GLOSS.

NO.	DATE	BY	CHK. APPD.	REVISIONS
	5-14-12	RAH	CMR	ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11 DATE
SPT DRAWN	06-01-11 DATE
RAH CHECKED	04-17-12 DATE
APPROVED	5-14-12 DATE

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET

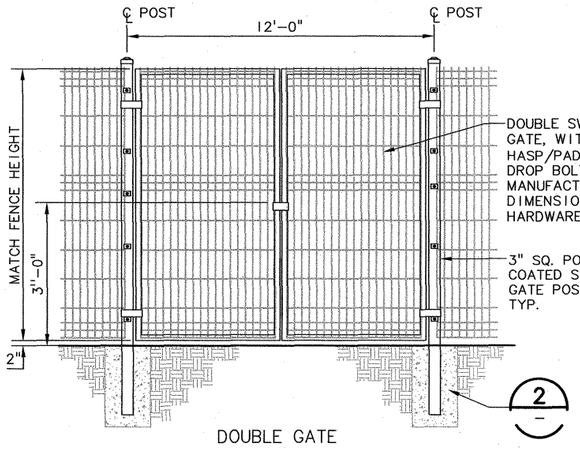
CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: 5-14-12 APPROVED: DATE: 5-14-12

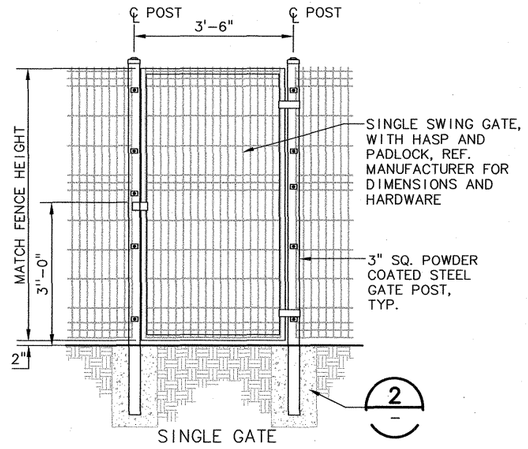
PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL DETAILS – FENCING

EXHIBIT P29

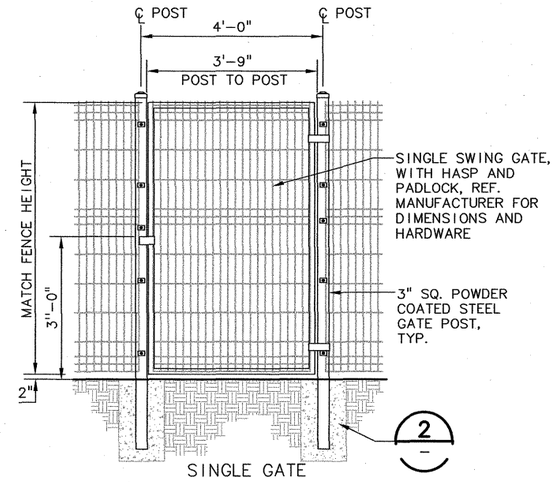
SCALE: VARIES | DRAWING NO.: A15E-560 | CONTRACT NO.: RH100544JB | SHEET NO.: 199



DOUBLE GATE



SINGLE GATE

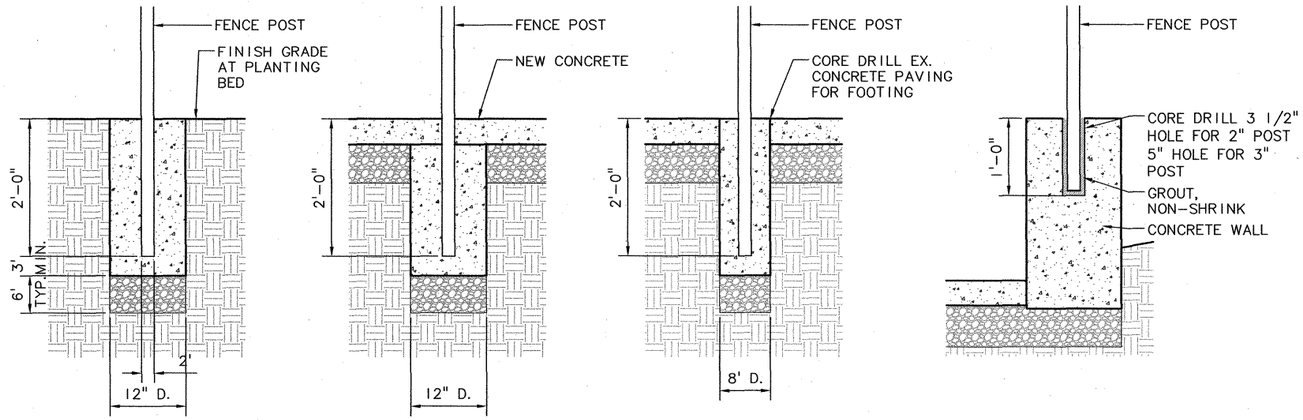


SINGLE GATE

GATE – WELDED WIRE FENCE MATCH FENCE HEIGHT

SCALE: NTS

1



A – IN PLANTING BED

B – IN NEW CONC. PAVING

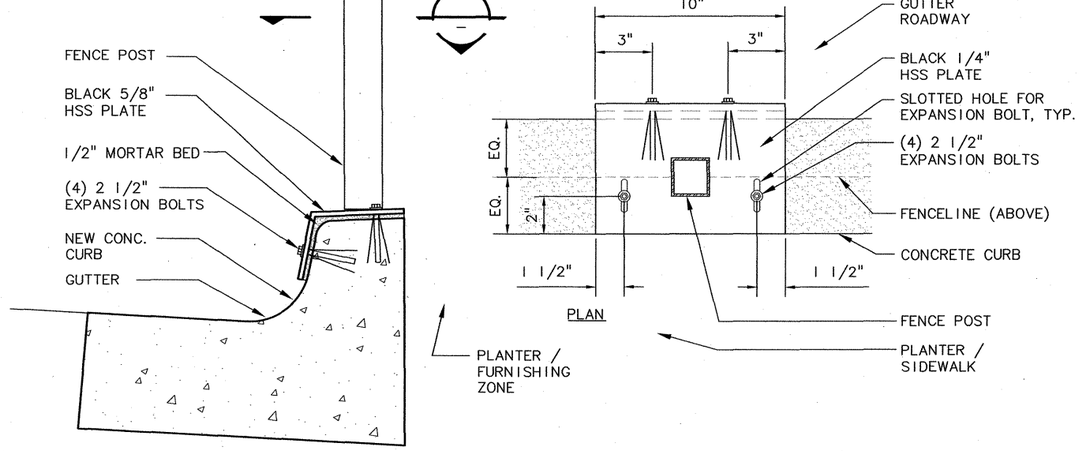
C – IN EX. CONC. PAVING

D – ON NEW CONC. WALL/CURB

FENCE POST FOOTING – SECTIONS

SCALE: NTS

2



FENCE POST MOUNT TO STD. CURB AND GUTTER

SCALE: NTS

3

NOTES FOR SHEETS A15E-561 AND A15E-562:

1. FOR FENCE TRANSITIONS, REF. DET 2/A51E-562.
2. TYPE 9B WWM FENCE TO BE BLACK POWDERCOATED FINISH.
3. TYPE 9D WWM FENCE TO BE GALVANIZED FINISH.
4. FOR ALL FENCE PANELS THAT NEED TO BE CUT TO SHORTER LENGTHS, FILE THE CUTS SO THERE ARE NO BURRS OR SHARP EDGES. FOR TYPE 9A, PAINT ALL EXPOSED STEEL WITH ONE COAT ZINC ENRICHED PRIMER AND TWO COATS OF AUTOMOTIVE GRADE ACRYLIC PAINT TO MATCH FENCE COLOR AND GLOSS.

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	RAH	CMR		ISSUED FOR CONSTRUCTION

JMS DESIGNED	06-01-11	DATE
SPT DRAWN	06-01-11	DATE
RAH CHECKED	04-17-12	DATE
APPROVED	5-14-12	DATE

REGISTERED 82 CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed

DAVID EVANS AND ASSOCIATES INC.

TRIMET

CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

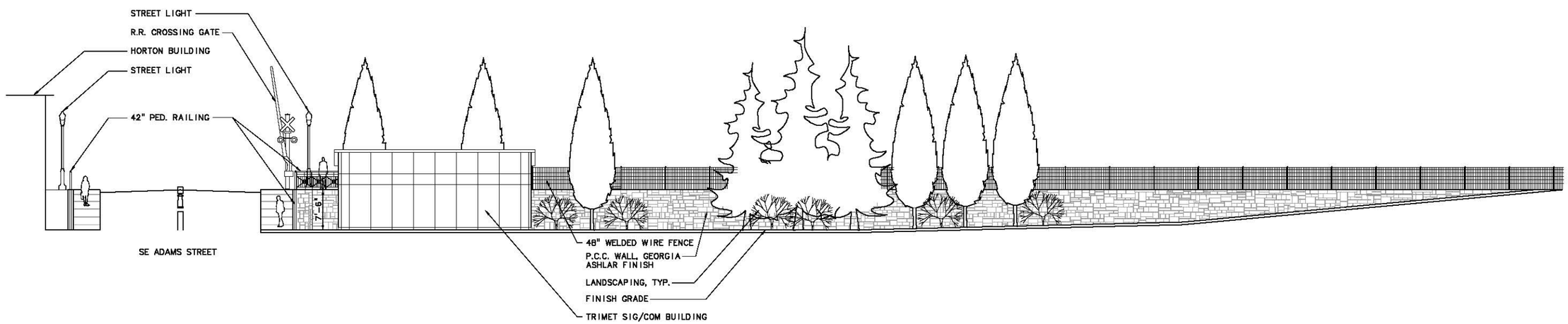
SUBMITTED: DATE: 5-14-12

APPROVED: DATE: 5-14-12

PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL DETAILS – FENCING

EXHIBIT P30

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
VARIES	A15E-561	RH100544JB	200



ELEVATION @ SE ADAMS STREET (1)
SCALE: 1" = 10'-0"

10' 5' 0' 10' 20'
SCALE: 1" = 10'

NO.	DATE	BY / CHK.	APPD.	REVISIONS

DESIGNED DATE
DRAWN DATE
CHECKED DATE
APPROVED DATE

PRELIMINARY

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

TRIMET — CAPITAL PROJECTS AND FACILITIES DIVISION
710 N.E. HOLLADAY STREET
PORTLAND, OREGON 97232

SUBMITTED: DATE: APPROVED: DATE:

PORTLAND – MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
ELEVATION – MILWAUKIE

EXHIBIT P31

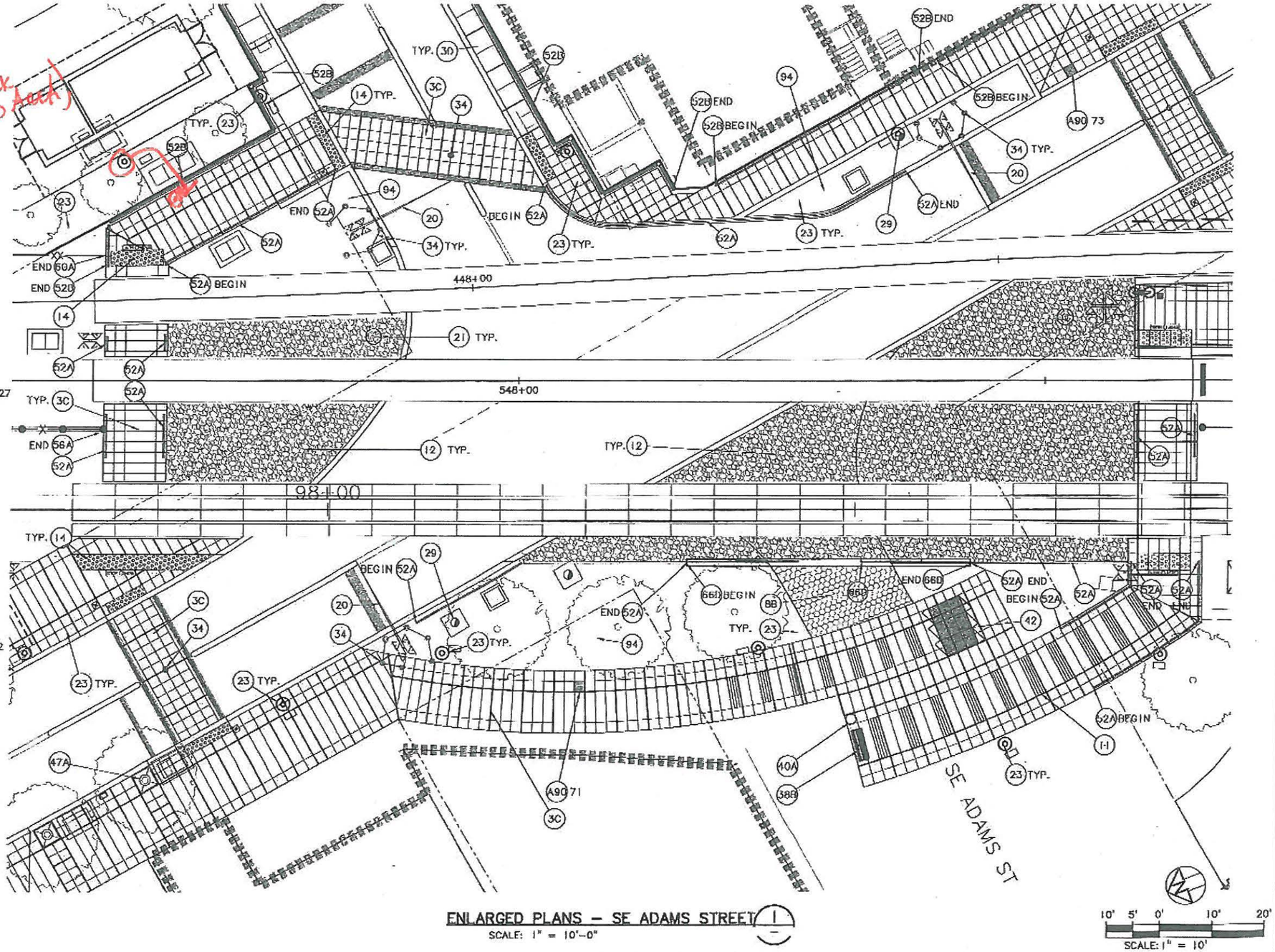
SCALE: MILWAUKIE WALL ELEVATION ADAMS
DRAWING NO.:
CONTRACT NO.:
SHEET NO.:

M:\LA PROJECTS\PME\design\sheets\PERMIT MIL DESIGN REVIEW\Milwaukie Wall Elevation Adams.dwg
Jun 08, 2012 8:51am
Rifelden

Move light into SIDEWALK (COM MAINTAINED Area)

ARCHITECTURAL KEYNOTES

- (3C) P.C.C. SIDEWALK, C.O.M. STD. REF. 3/A15E-524
- (30) P.C.C. SIDEWALK, SCORING PER PLANS
- (88) FLEXIBLE POROUS PAVING, REF. 1/A15E-526
- (11) SCORING BAND, V GROOVE AT P.C.C. PAVING, REF. 3/A15E-527
- (12) COBBLE PAVING, REF. 1 & 2/A15E-525
- (14) TACTILE WARNING AT SIDEWALK, REF. CIVIL
- (20) CROSSING GATE, REF. CIVIL
- (21) OCS POLE, REF. SYSTEMS
- (23) LIGHT, REF. ELECTRICAL
- (29) TRAFFIC SIGNAL POLE, REF. TRAFFIC PLANS
- (34) BOLLARD – C.O.M., REF. CIVIL
- (38B) BENCH – TYPE A – C.O.M. STD. (O.F.C.I), REF. 1/A15E-572
- (40A) TRASH RECEPTACLE – TYPE A – C.O.M. STD. REF. 2/A15E-572
- (42) BIKE LOCKER (O.F.C.I.)
- (47A) TREE WELL WITH GRATE, 4'X4' – C.O.M. STD, REF. 3/A15E-524, 5 & 6/A15E-527
- (52A) RAILING – TYPE 3A, REF. 1/A15E-542
- (52B) RAILING – TYPE 3B, REF. 1/A15E-542
- (56A) RAILING – TYPE 7A, REF. 1/A15E-550
- (60A) FENCE – TYPE 9B – 48" WELDED WIRE FENCE, REF. 1/A15E-560
- (66D) GATE – FIRE ACCESS, REF. 1/A15E-547
- (94) PLANTING AREA, REF. CIVIL / LANDSCAPING
- (A90) XX CONCRETE STAMPING – "XX" NUMBER REFERS TO SITE SPECIFIC TEXT IDENTIFIED BY ARTIST



ENLARGED PLANS – SE ADAMS STREET (1)
SCALE: 1" = 10'-0"

10' 5' 0' 10' 20'
SCALE: 1" = 10'

NO.	DATE	BY	CHK.	APPD.	REVISIONS
	5-14-12	JMS		CMR	ISSUED FOR CONSTRUCTION

RAH DESIGNED	06-01-11 DATE	
JFC DRAWN	06-01-11 DATE	
JMS CHECKED	04-17-12 DATE	
APPROVED	5-14-12 DATE	

REGISTERED CAROL MAYER-REED OREGON LANDSCAPE ARCHITECT

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Mayer/Reed | DAVID EVANS AND ASSOCIATES INC.

SUBMITTED: [signature] DATE: 5-14-12

TRIMET CAPITAL PROJECTS DIVISION
710 NE HOLLADAY STREET
PORTLAND, OREGON 97232

APPROVED: Leah Robins DATE: 5-14-12

PORTLAND TO MILWAUKIE LRT
EAST SEGMENT
ARCHITECTURAL
ENLARGED PLAN
SE ADAMS ST

SCALE:	DRAWING NO.:	CONTRACT NO.:	SHEET NO.:
1"=10'	A15E-316	RH100544JB	125

ATTACHMENT 5

Alligood, Li

From: Larsen, Tom
Sent: Thursday, June 14, 2012 10:32 AM
To: Alligood, Li
Subject: 2103 SE Adams - Tri-Met application.

Hi Li,
I have no specific comment regarding this application.
Thanks,

Tom Larsen, CBO
Building Official, City of Milwaukie
Phone: (503) 786-7611
Fax: (503) 786-7612

MEMORANDUM

TO: Community Development Department

THROUGH: Gary Parkin, Director of Engineering

FROM: Zach Weigel, Civil Engineer

RE: Community Service Use – 2103 SE Adams Street
CSU-12-07, DR-12-05, VR-12-04

DATE: June 26, 2012

Construction of a Portland Milwaukie Light Rail signal and communications building.

1. MMC Chapter 19.700 – Public Facility Improvements

   The Planning Commission finds that the following complies with the applicable criteria of MMC Chapter 19.700.

   A. 19.702 Applicability

      The proposed development consists of new construction.

      The Planning Commission finds that the proposed development is subject the standards and requirements of MMC Chapter 19.700.

   B. 19.703 .1 Preapplication Conference

      A pre-application conference for the proposed development was held on November 17, 2011.

      The Planning Commission finds that the proposed development complies with MMC Section 19.703.1.

   C. 19.703.2 Application Submittal

      The Engineering Director has determined that a transportation impact study is not required as part of the proposed development in accordance with MMC Section 19.704. A TFR land use application is not required. The proposed development requires submission of other land use applications. Compliance with MMC 19.700 will be reviewed concurrently with as part of the other land use applications.

      The Planning Commission finds that the proposed development complies with MMC Section 19.703.2.

   D. 19.703.3 Approval Criteria

      Public facility improvements associated with the proposed development comply with the standards and requirements of MMC Chapter 19.700, as provided herein. Public facility improvements shall comply with the Public Works Standards at the time of development.

The applicant proposes transportation facility improvements and mitigation at the time of development in rough proportion to the potential impacts of the development in accordance with MMC Section 19.705.

The applicant proposes transportation facility improvements that meet or exceed the safety and functionality standards of MMC Section 19.703.3.C

The Planning Commission finds that the proposed development, as conditioned, meets the approval criteria of MMC Section 19.703.3.

E. 19.704 Transportation Impact Evaluation

The projected increase in trip generation resulting from the proposed development, being a building to house mechanical equipment in support of light rail operations, is minimal. The Engineering Director has determined that the projected impacts to the transportation system are not significant enough to require a transportation impact study.

The Planning Commission finds that the proposed development complies with MMC Section 19.704.

F. 19.705 Rough Proportionality

The proposed development consists of new construction on an existing lot. The applicant proposes design and construction of transportation facility improvements along the full length of Adams Street fronting the development parcel. The proposed transportation facility improvements are consistent with the Public Works Standards. The transportation facility improvements are roughly proportional to the impacts of the proposed development.

The Planning Commission finds that the proposed development complies with MMC Section 19.705.

G. 19.706 Fee In Lieu of Construction

The applicant proposes to construct the required transportation facility improvements.

The Planning Commission finds that the proposed development complies with MMC Section 19.706.

H. 19.707 Agency Notification and Coordinated Review

The proposed development is within 300 feet of a public railroad crossing. Notice of the proposed land use application has been provided to ODOT Rail Division for their review and comment.

The proposed development is within 200 feet of a designated arterial roadway, SE 21st Avenue. Notice of the proposed land use application has been provided to Metro and Clackamas County for their review and comment.

The proposed development is within 200 feet of a transit route, Line 32 on SE 21st Avenue. Notice of the proposed land use application has been provided to TriMet for their review and comment.

The Planning Commission finds that the proposed development complies with MMC Section 19.707.

I. 19.708 Transportation Facility Requirements

The applicant proposes a single, 16-foot wide shared driveway approach with the property east of development property as the access. The applicant shall provide access in accordance with the access management standards of MMC Chapter 12.16.

The applicant shall demonstrate compliance with the clear vision standards of MMC Chapter 12.24 prior to start of construction.

The proposed development is located within a downtown zone. Transportation facility improvements are subject to the requirements of the Milwaukie Downtown and Riverfront Plan: Public Area Requirements. The surveyed right-of-way of Adams Street fronting the proposed development property is less than indicated in the Public Area Requirements. The City Engineer has modified the Adams Street cross-section, in accordance with the Public Work Standards, to fit within the actual right-of-way width. The applicant proposes transportation facility improvements fronting the proposed development property on Adams Street consistent with public area requirements, as modified by the City Engineer.

The Planning Commission finds that the proposed development, as conditioned, complies with MMC Section 19.708.

J. 19.709 Public Utility Requirements

The Engineering Director has determined that the existing public utilities are adequate to serve the proposed development.

The Planning Commission finds that the proposed development complies with MMC Section 19.709.

Recommended Conditions of Approval

Prior to issuance of building permit, the following shall be resolved.

1. Demonstrate compliance with clear vision standards of MMC Section 12.24.

Prior to final inspection of building permit, the following shall be resolved.

2. Provide access to the proposed development property in accordance with MMC Section 12.16.
3. Construct transportation facility improvements fronting the proposed development property on Adams Street in accordance with the Milwaukie Downtown and Riverfront Plan: Public Area Requirements, as modified by the City Engineer.

Advisory Notes

The following are advisory notes for the applicant. The advisory notes are a list of requirements that may apply to the proposed development at the time of building permit. The advisory notes are for informational purposes only.

Storm Water Management

Submit a storm water management plan prepared by a qualified professional engineer with required development/building permits as part of the proposed development. The plan shall conform to Section 2 – Stormwater Design Standards of the City of Milwaukie Public Works Standards.

- The storm water management plan shall demonstrate that the post-development runoff does not exceed the pre-development, including any existing storm water management facilities serving the development site.
- The storm water management plan shall demonstrate compliance with water quality standards in accordance with the City of Portland Stormwater Management Manual.

Development/building permits will not be issued for construction until the storm water management plan has been approved by the City of Milwaukie.

Clackamas County Fire District #1
Fire Prevention Office

E-mail Memorandum

To: City of Milwaukie Planning Department

From: **Shawn Olson, Clackamas Fire District #1**

Date: **6/26/2012**

Re: **2103 SE Adams St, Signal and Communications Building**

This review is based upon the current version of the Oregon Fire Code (OFC), as adopted by the Oregon State Fire Marshal's Office. The scope of review is typically limited to fire apparatus access and water supply, although the applicant must comply with all applicable OFC requirements. ***When buildings are completely protected with an approved automatic fire sprinkler system, the requirements for fire apparatus access and water supply may be modified as approved by the fire code official.*** The following items should be addressed by the applicant:

COMMENTS:

The Fire District has no comments on this proposal at this time.

2930 S.E. Oak Grove Blvd. • Milwaukie, OR 97267 • 503-742-2660

Alligood, Li

From: Hemmen, Wendy
Sent: Thursday, June 28, 2012 12:28 PM
To: Alligood, Li
Cc: Siegel, Scot; Weigel, Zachary
Subject: RE: CSU-12-07 Engineering Staff Report #01

Li,

Upon further discussion and understanding of the light pole and intended purpose the onsite light pole needs to be in public right of way. This light is serving the public pedestrian facility and track crossing. This light is not intended for site use. Please condition the light to be relocated to public right of way. It may be combined with an adjacent light also to be in public right of way fronting Adams St.

Thank you for catching this!
Wendy

From: Alligood, Li
Sent: Tuesday, June 26, 2012 4:08 PM
To: Hemmen, Wendy
Cc: Siegel, Scot; Weigel, Zachary
Subject: RE: CSU-12-07 Engineering Staff Report #01

Hi Wendy,

I haven't drafted the PC staff report yet, but will be working on it next week. The DLC staff report is here: Z:\Planning\AAA- Land Use Applications\2012\CSU-12-07_Joslin_PMLR Sig Comm Bldg\Staff Report and NOD\DLC 02 Jul 2012\DR-12-05_Staff Report.docx. The staff report and findings/conditions are related to design review. Additional findings or conditions will be reviewed by the PC.

The DLC is reviewing the standing seam metal roof option, with the understanding that if the funding for a green roof is available, then a green roof will be installed. The findings and conditions assume a standing seam metal roof; they may be revised to indicate that a green roof is preferred.

I don't know how they are handling the existing sewer easement – Jeb is aware of it and has indicated that the construction will retain access to the easement. I will include that as a condition for PC review, because it is a condition of approval from an earlier land use application.

There is a process through design review that allows the applicant to requests authorization to use prohibited materials, and the DLC will make a recommendation. See the staff report for a discussion of the materials.

I just became aware of the light pole on site, so that wasn't addressed in the staff report or findings/conditions.

Thanks,

Li Alligood
Associate Planner
City of Milwaukie Planning Department
6101 SE Johnson Creek Blvd

Milwaukie, OR 97206
P 503-786-7627
F 503-774-8236
alligoodl@ci.milwaukie.or.us

From: Hemmen, Wendy
Sent: Tuesday, June 26, 2012 3:40 PM
To: Alligood, Li
Cc: Siegel, Scot
Subject: RE: CSU-12-07 Engineering Staff Report #01

Li,

I looked through the application materials and have a few questions for consideration. Do you have links to the draft staff report?

A green roof is proposed and discussed at length, yet verbage specifies that it may not materialize, what condition or recommendation are you proposing?

How is TriMet handling the existing sanitary sewer lateral on the property serving a northerly property? Should there be a condition to retain or provide alternative?

Have you solved the CMU metal cladding issue?

I second Zach's stormwater condition.

Thanks,
Wendy

Wendy Hemmen, PE
Light Rail Design Coordinator
City of Milwaukie
6101 SE Johnson Creek Blvd.
Milwaukie, OR 97206
Direct 503-786-7694
hemmenw@ci.milwaukie.or.us

From: Weigel, Zachary
Sent: Tue 6/26/2012 3:21 PM
To: Alligood, Li
Cc: Hemmen, Wendy; Parkin, Gary; Siegel, Scot
Subject: CSU-12-07 Engineering Staff Report #01

Li,

Here is a link to my staff report for the PMLR Signal/Communications Building. Let me know if you have any questions.

Thanks,

Zachary J. Weigel, PE
Civil Engineer
City of Milwaukie
6101 SE Johnson Creek Blvd.

ATTACHMENT 6

List of Materials & Exhibits for Land Use File CSU-12-07
(CSU-12-07, DR-12-05, VR-12-04)
Portland Milwaukie Light Rail Signal and Communications Building

The following documents are part of the official record for this application:

1. Application
   - A. Milwaukie pre-application conference report, November 17, 2011 (PA #11-012)
   - B. Submittal forms date stamped May 2, 2012 (land use application forms, property owner authorization, submittal requirements form, design review checklist, fee receipt)
   - C. Responses to code standards and criteria date stamped June 8, 2012
   - D. Site plans date stamped June 8, 2012 (unless otherwise noted)
     - i) Exhibits D1 – D9 (Illustrative drawings)
     - ii) Exhibits P1 – P31 (Architectural plans)
     - iii) Revised Exhibit P2 showing relocated light fixture, dated July 2, 2012

2. Notification information
   - A. Application referral dated June 13, 2012
   - B. Design review meeting notice (DR-12-05)
     - i) Meeting notice, June 22, 2012
     - ii) Notice map
     - iii) Meeting notice affidavit, June 22, 2012
     - iv) Meeting notice posted on site
       - a) Affidavit of sign posting, June 26, 2012
       - b) Photos of posted notice sign, June 26, 2012
   - C. Public hearing notice
     - i) Meeting notice July 3, 2012
     - ii) Notice map
     - iii) Meeting notice affidavit, July 3, 2012
     - iv) Meeting notice posted on site
       - a) Affidavit of sign posting, July 10, 2012
       - b) Photos of posted sign, July 11, 2012

3. Materials from City Planning Staff
   - A. Letter deeming application incomplete, May 14, 2012
   - B. Letter deeming application complete, June 11, 2012

C. July 2, 2012, Design Review Meeting
   i) Staff report
   ii) Staff presentation
   iii) Items 5.B-D
   iv) Item 1.D.iii

D. July 24, 2012, Public Hearing
   i) Staff report
   ii) Staff presentation

4. Materials Received at the Meeting/Hearing

A. July 2, 2012, Design Review Meeting
   i) Chair Hemer declaration of ex parte contact and potential conflict of interest
   ii) Applicant presentation
   iii) Interested persons sign-in sheet
   iv) Comment cards (O'Donnell)

B. July 24, 2012, Planning Commission Hearing

5. Agency Comments

A. Tom Larsen, Building Official, June 14, 2012: No specific comments regarding this application.

B. Zach Weigel, Civil Engineer, June 26, 2012: Recommended conditions of approval regarding clear vision, and advisory notes regarding stormwater management.

C. Shawn Olson, Clackamas County Fire District #1, June 26, 2012: No comments at this time.

D. Wendy Hemmen, Light Rail Design Coordinator, June 28, 2012: On-site pole light needs to be relocated to public right-of-way.

6. Public Comments

A. Patrick O'Donnell, Myles O'Donnell & Co, 2105 SE Adams St, July 2, 2012: Concerns about off-street parking, maneuvering on site, retaining walls and fencing along Adams St in front of his business, and visibility of business signage.

MILWAUKIE
Dogwood City of the West

To: **Planning Commission**

From: **Alicia Martin, Administrative Specialist**

Date: **July 20, 2012 for July 24, 2012 Public Hearing**

Subject: **Supplemental Packet for the 7/24/12 PC Meeting**

The following additional item is being provided to you for the packet you received this week:

1. Item S2.2 June 12, 2012 Planning Commission Minutes

CITY OF MILWAUKIE
PLANNING COMMISSION
MINUTES
Milwaukie City Hall
10722 SE Main Street
TUESDAY, June 12, 2012
6:30 PM

COMMISSIONERS PRESENT	STAFF PRESENT
Lisa Batey, Chair	Katie Mangle, Planning Director
Nick Harris, Vice Chair	Scot Siegel, Interim Planning Project Manager
Chris Wilson	Ryan Marquardt, Associate Planner
Mark Gamba	Li Alligood, Assistant Planner
Scott Churchill	Kenny Asher, Community Development Director
Clare Fuchs	
Shaun Lowcock	Damien Hall, City Attorney

1.0 Call to Order – Procedural Matters*

Chair Batey called the meeting to order at 6:30 p.m. and read the conduct of meeting format into the record.

***Note**: The information presented constitutes summarized minutes only. The meeting video is available by clicking the Video link at http://www.ci.milwaukie.or.us/meetings.*

2.0 Planning Commission Minutes

2.1 April 10, 2012

Chair Batey noted a correction on Line 32 to read "Commission***er*** Lowcock introduced…"

Commissioner Gamba moved to approve the April 10, 2012, Planning Commission minutes as corrected. Vice Chair Harris seconded the motion, which passed unanimously.

3.0 Information Items

Katie Mangle, Planning Director, noted Scot Siegel had been selected as the Interim Planning Director as a consultant until the position was filled.

4.0 Audience Participation –This is an opportunity for the public to comment on any item not on the agenda. There was none.

5.0 Worksession Items

5.1 Summary: Neighborhood Main Streets Project update
Staff: Ryan Marquardt

Ryan Marquardt, Associate Planner, introduced the project.

Jay Higgins and Kelly Moosbrugger of the PSU team of graduate students presented their recommendations for the Neighborhood Main Streets project.

6.0 Public Hearings

5.1 Summary: Portland to Milwaukie Downtown Light Rail Station
Applicant/Owner: KLK Consulting/TriMet
Address: 11301 SE 21st Ave
File: CSU-12-03
Staff: Li Alligood

Chair Batey opened the public hearing for CSU-12-03 and read the conduct of minor quasi-judicial hearing into the meeting record.

Li Alligood, Assistant Planner, presented the staff analysis and recommendation via PowerPoint.

Jeb Doran, TriMet, presented the application and outlined how he believed it met the Downtown Design Guidelines.

The Commission asked questions regarding catenary poles, the future station building site to the southeast, security, bike parking, phones on the platform, and platform paving patterns.

Chantelle Gamba and Greg Hemer of the Design and Landmarks Committee (DLC) presented the DLC's recommendation on the Design Review application.

Ms. Alligood clarified that improvements in the right-of-way were not triggered by the development on site nor subject to the Design Review process.

Chair Batey called for public testimony.

David Aschenbrenner commented as a Milwaukie resident and as a light rail Citizen Advisory Committee (CAC) member. He agreed with the DLC's recommendations but disagreed with the proposed bike parking condition, and questioned how bus transit would work after light rail was complete.

Mr. Aschenbrenner thanked Katie Mangle for all she had done for the City and what he had learned from her, and wished her well.

Mr. Hemer was concerned about lack of ADA access from the south, and was supportive of benches but concerned about implications of future development on the station building site.

Chair Batey called for questions for staff and Applicant's rebuttal.

Kenny Asher, Community Development Director, addressed questions regarding future development of the station building site.

Mr. Doran explained the bench placement strategy and requested that no additional condition be made to add more benches.

The Commission asked staff to clarify on-street parking and ADA access to the south end of the platform.

Chair Batey closed public testimony.

The Commission discussed the need for more bike parking and benches, the interim conditions of the station building site, and agreed that the shelter did not need a cornice. They agreed with the bench condition as recommended by staff.

Commissioner Churchill clarified that the station building site was not subject to design review with this application. Staff asked if this was a concern of the Commission. The Commission was frustrated by the situation.

It was moved by Commissioner Gamba and seconded by Commissioner Wilson to approve CSU-12-03, DR-12-04, VR-12-02 Portland to Milwaukie Light Rail Downtown Station with revised findings and conditions requiring an increase by 12 to 48 bicycle parking spaces onsite or adjacent to the site. The motion passed unanimously

7.0 Planning Department Other Business/Updates

7.1 Meeting schedule for July – discuss possible need for 3rd meeting in July to accommodate public hearings.

Ms. Mangle reviewed the forecast of public hearings for the summer. The Commission agreed to cancel the June 26th meeting and add a possible third meeting to July on July 31st.

8.0 Planning Commission Discussion Items

9.0 Forecast for Future Meetings:

June 20, 2012	1. Public Hearing: ZA-11-02 Residential Development Standards *continued from 4/24/12*
June 26, 2012	1. Public Hearing: CSU-12-03 Downtown Light Rail Station *tentative continued*

Meeting adjourned at approximately 10:34 p.m.

Respectfully submitted,

Alicia Martin, Administrative Specialist II

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Lisa Batey, Chair