City of Oregon City

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

Meeting Agenda

Planning Commission

Monday, February 27, 2017 | **7:00 PM** | **Commission Chambers**

1. Call to Order

2. Public Comments

3. Public Hearing

3a. AN-16-0004 / ZC-16-0001: Annexation and Zone Change of 35.65 Acres North of Holcomb Boulevard

Attachments:
- Commission Report
- Recommended Findings
- Lancaster Eng TIA and TPR Analysis 021317
- Replinger and Associates Comments on TIA / TPR
- AN-16-0004 / ZC 16-0001 Revised Application
- Additional Applicant Park & Trail Narrative
- Additional Applicant Utilities Narrative
- Records for Legality of 20 foot strip
- AN-16-0004 Original Submitted Application
- Parks Master Plan Update 2008
- Parks Master Plan 1999
- Trails Master Plan Map
- Trails Master Plan 2004
- PC 02.13.2017 Bob LaSalle Comments
- PC 02.13.2017 Comment Cards
- PC 02.13.2017 Exhibit List
- CC 02.01.2017 Barbara Renken Comments
- CC 02.01.2017 Mike Marchione and Kathleen Eisele Comments
- 12-6-16 Neighborhood Meeting Sign-In Sheets
- 12-6-16 Neighborhood Meeting Notes
- PPCP NBHD Meeting Notes 12-06-2016

4. Interview for Planning Commissioner Vacancy

Bob La Salle
Thomas Batty

5. Communications

6. Adjournment

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

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

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

City of Oregon City

625 Center Street
Oregon City, OR 97045
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Staff Report

File Number: PC 17-018

Agenda Date: 2/27/2017

Status: Agenda Ready

To: Planning Commission

Agenda #: 3a.

From: Community Development Director Laura Terway

File Type: Planning Item

SUBJECT:
AN-16-0004 / ZC-16-0001: Annexation and Zone Change of 35.65 Acres North of Holcomb Boulevard

RECOMMENDED ACTION (Motion):
Staff recommends that the Planning Commission recommend approval of AN-16-0004 / ZC-16-0001 to the City Commission.

BACKGROUND:
This item was continued from February 13, 2017.

This proposal is for annexation and rezoning to R-10 Single Family Residential of property north of Holcomb Boulevard (35.65 acres) into Oregon City. The property is located at Clackamas County Map 2-2E-28A, Tax Lots 500, 580, and 590 and 2-2E-21D, Tax Lots 2100, 2190 & 2100 and is within the Oregon City Urban Growth Boundary.
Staff has completed review of the proposal. The applicant has included a transportation impact analysis (TIA) in support of the proposed zone change for the annexation, which includes an analysis of compliance with the State of Oregon Transportation Planning Rule (TPR). The TIA was prepared by Lancaster Engineering in consultation with ODOT and City Staff. The City's transportation consultant, Replinger and Associates, has reviewed the TIA / TPR analysis and their comments are attached.A condition of approval has been added to the findings for approval of the annnexation to address transportation impacts at the time of development. No development is proposed with this application.

The applicant also provided additional narratives to address the adequacy and availability of public sewer, water, stormwater, parks and trails, which are attached.

All written public comments received to date are attached.

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All written public comments received to date are attached.

OREGON CITY

Community Development – Planning

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

STAFF REPORT WITH FINDINGS AND RECOMMENDATION

FILE NOs.: AN-16-0004 / ZC-16-0001

APPLICATION TYPE: Annexation of 35.65 acres into Oregon City limits with Zone Change

HEARING DATES: *Planning Commission*
Monday, February 27th, 2017 - 7:00 p.m., Oregon City City Hall
625 Center Street, Oregon City, OR 97045

City Commission
Wednesday, March 1st, 2017 - 7:00 p.m., Oregon City City Hall
625 Center Street, Oregon City, OR 97045

APPLICANT: Serres Family H, LLC, 15207 S Forsythe Rd, Oregon City, OR 97045

OWNER(s): Same as Applicant (See petition signature sheet for details)

REPRESENTATIVE: Rick Givens, 18680 Sunblaze Dr, Oregon City, OR 97045

REQUEST: Annexation and Zone Change of six properties north of Holcomb Blvd and west of Winston Drive totaling 35.65 acres into Oregon City. The subject territory is within the Oregon City Urban Growth Boundary, and has a Comprehensive Plan designation of LR – Low Density Residential. Applicant has requested zone change to R-10 Single Family Residential.

LOCATION: Clackamas APN 2-2E-28A, TL 500 (3.3 ac), TL 580 (9.7 ac), and TL 590 (4.9 ac)
Clackamas APN 2-2E-21D, TL 2100 (5.0 ac), TL 2190 (5.0 ac), and TL 2200 (7.2 ac)

STAFF REVIEWER: Pete Walter, AICP, Planner

COMPREHENSIVE PLAN DESIGNATION: LR – Low Density Residential

CURRENT ZONING: Clackamas County FU-10 (Future Urban - 10 Acre)

RECOMMENDATION: Approval.

PROCESS: The applicant and all documents submitted by or on behalf of the applicant are available for inspection at no cost at the Oregon City Planning Division, 221 Molalla Avenue, Oregon City, Oregon 97045, from 8:30am to 3:30pm Monday thru Friday. The staff report, with all the applicable

approval criteria, will also be available for inspection 7 days prior to the hearings. Copies of these materials may be obtained for a reasonable cost in advance.

Please be advised that this is a Type IV proceeding. All new evidence must be submitted before the Planning Commission closes the public record. The City Commission's review will be on the record and limited to evidence that was submitted before the Planning Commission. Any issue that is intended to provide a basis for appeal must be raised before the close of the City Commission hearing, in person or by letter, with sufficient specificity to afford the City Commission and the parties an opportunity to respond to the issue. Failure to raise an issue with sufficient specificity will preclude any appeal on that issue. After considering the recommendation by the Planning Commission, the City Commission will make a determination as to whether the application has or has not complied with the factors set forth in section 14.04.060 of the Oregon City Municipal Code. Since the site has an acknowledged Comprehensive Plan map designation, upon annexation, the site shall be rezoned to implement the comprehensive plan.

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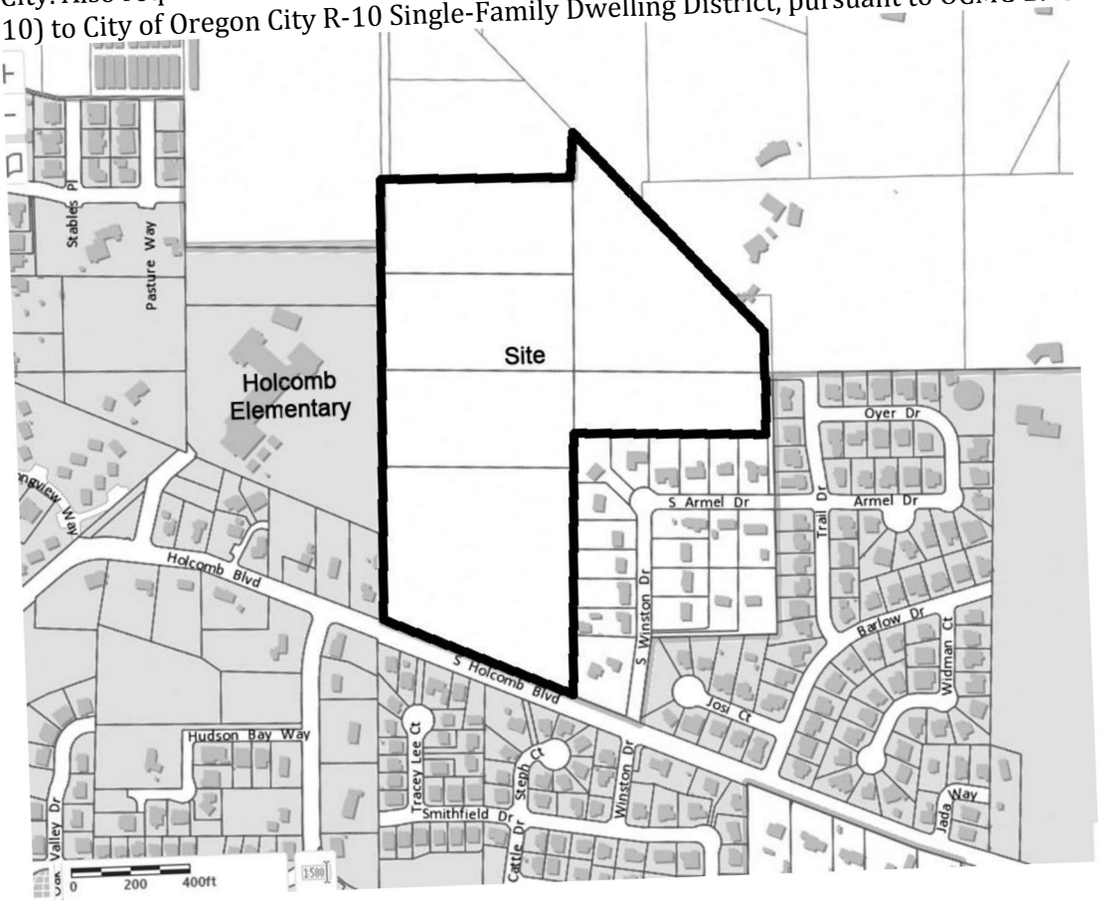
I. INTRODUCTION
GENERAL INFORMATION

This application requests approval to annex approximately 35.65 acres of land to the City of Oregon City. Also requested is a concurrent zone change from Clackamas County Future Urbanizable-10 (FU-10) to City of Oregon City R-10 Single-Family Dwelling District, pursuant to OCMC 17.68.025A.



The subject property is located on the north side of Holcomb Blvd., west of Winston Drive, east of Holcomb Elementary School, and south of the Urban Growth Boundary.

The subject property is described as Tax Lots 2100, 2190 and 2200 of Clackamas County Assessor's Map 22E21D, and Tax Lots 500, 580 and 590 on Map 22E 28A. The property is vacant and parts of it have been in use for production of row crops.

The annexation petition is signed by a Single Owner of all land in the territory, Serres Family LLC, (approximately 35.65 acres). The petition thus meets the requirement for initiation set forth in ORS 222.125.

SB 1573
If the City Commission determines that the proposed annexation should be approved, the City Commission is required by the Charter to submit the annexation to the electors of the City. However,

the passage of SB 1573 requires that the City annex the territory without submitting the proposal to the electors of the city if:

(a) The territory is included within an urban growth boundary adopted by the city or Metro, as defined in ORS 197.015;
Finding: The territory is included within the City's UGB adopted by the City and Metro.

(b) The territory is, or upon annexation of the territory into the city will be, subject to the acknowledged comprehensive plan of the city;
Finding: The territory has a Comprehensive Plan Designation of Low Density Residential pursuant to the acknowledged Oregon City Comprehensive Plan.

(c) At least one lot or parcel within the territory is contiguous to the city limits or is separated from the city limits only by a public right of way or a body of water; and
Finding: The territory is contiguous to the City Limits along its southern and western edge for approximately 2,213 feet. The City limits extend to the north side of Holcomb Boulevard abutting the property.

(d) The proposal conforms to all other requirements of the city's ordinances.

Finding: As demonstrated within this report, the proposal can meet the City's applicable ordinances.

Thus, the proposal meets items (a) through (d), with the conditions of approval and the City may annex the territory without submitting the proposal to the electors of the city.

SUMMARY OF PROPOSAL AND DISCUSSION OF ZONE CHANGE CRITERIA

There is no proposal to develop the site at the present time. The most recent revision to the application includes a request by the Applicant to be automatically rezoned to R-10 Single Family Residential upon approval of the annexation. The applicant has provided additional argument to support the zone change in their revised narrative:

> ***1. Concurrent Zoning Map Amendment from (FU-10) to (R-10).***
>
> *The Site has an acknowledged Oregon City Comprehensive Plan map designation of Low Density Residential, (see Appendix A, "Oregon City's Comprehensive Plan Land Use Map" in the Oregon City Comprehensive Plan). Oregon City Municipal Code ("OCMC") 17.68.025.A.provides that "notwithstanding any other section of this code", a concurrent zoning map application under OCMC Chapter 17.50 is required. Further, this section requires that the zoning map designation correlate to the corresponding Comprehensive Plan map designation for the site as shown in OCMC 17.68.025.A. The section is mandatory; it provides that "the property shall be rezoned upon annexation to the corresponding zoning designation as follows..."(emphasis added). In other words, there is no discretion to be applied to the zoning map amendment and not only is a concurrent zoning map amendment required, the outcome is automatic based on the acknowledged OCMC.*
>
> *Further, compliance with OCMC Chapter 17.50 requires a zoning map amendment application but does not require compliance with the discretionary zoning map amendment application in OCMC 17.68.020.*

The Planning Commission can find that the Application satisfies the approval criteria in OCMC 17.68.025.A. and B. and the zoning map amendment shall be approved.

Please see findings on Page 35.

2. Transportation a Planning Rule ("TPR") Compliance.

The applicant submitted a Transportation Impact Analysis (TIA), prepared by Lancaster Engineering, which includes an analysis of future trip generation and distribution, safety analysis, operational analysis and a discussion of compliance with the State Transportation Planning Rule OAR in support of the requested rezoning to R-10.

The TIA was prepared in consultation with City and Oregon Department of Transportation (ODOT) staff and analyses the performance of three off-site intersections that would be impacted by future development of the annexation area.

The City's transportation consultant, Replinger and Associates, reviewed the applicant's TIA and TPR analysis and provided findings with recommended conditions of approval for the annexation and rezoning.

Please see findings on Page 37.

EXISTING CONDITIONS

The territory is located in Northeastern Oregon City in the Park Place neighborhood, north of Holcomb Boulevard. The site is comprised of six tax lots that total approximately 35.65 acres. The entire area is currently zoned County FU-10. This is a Clackamas County zone district with a 10-acre minimum parcel size that is intended as a holding zone that precludes urbanization until properties are annexed into the City from within the Urban Growth Boundary. The property is vacant and parts of it have been in use for production of row crops. The site is partially forested along the eastern boundary with the abutting county subdivision to the east. The land slopes to the northwest with most of site at grades between 5%, although some smaller portions of the eastern side of the property have sloped up to 20%. There are no structures on the properties. The property is vacant and parts of it have been in use for production of row crops.

Uses surrounding the site are described below.

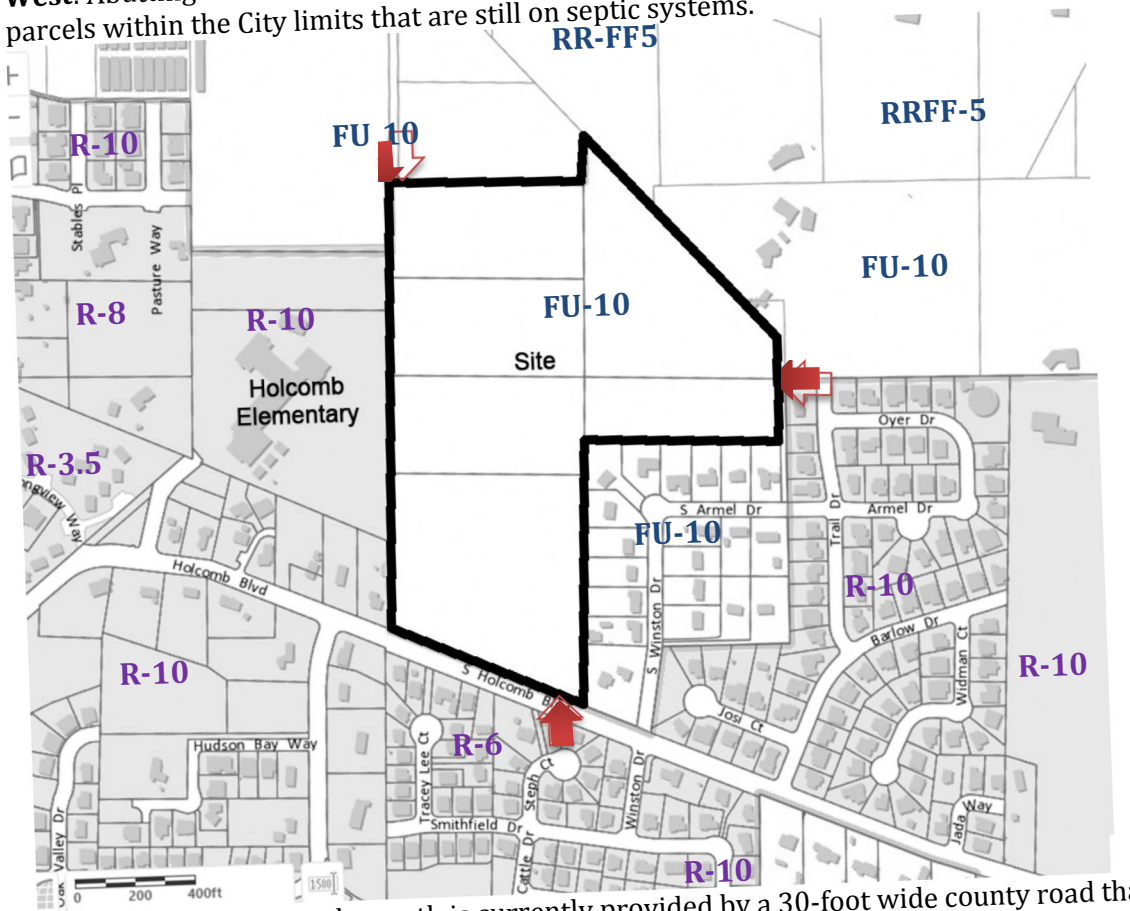
Holcomb Boulevard is a minor arterial road with a current right-of-way width of 74 feet. The north side of Holcomb Boulevard does not have sidewalks yet, but includes a striped 3' shoulder and a 12-foot wide paved travel lane.

North: The northern boundary of the territory is the UGB. Land uses to the north include agricultural land zoned FU-10 and Rural Residential Farm Forest zoned RRFF-5 by Clackamas County.

East: The site is bordered on the east by rural residential lands outside the Urban Growth Boundary, city subdivision (Barlow Crest), a county subdivision (Winston Hills).

South: To the south, directly across Holcomb Boulevard, are City residential subdivisions (Tracey Heights and Wasko Acres) zoned R-6 Single Family Residential.

West: Abutting to the west is Holcomb Elementary School and some larger R-10 single family zoned parcels within the City limits that are still on septic systems.



Access to the site from the north is currently provided by a 30-foot wide county road that is unimproved, and from the south off Holcomb Boulevard via a narrow gravel driveway on the eastern corner of the site. There is also access from the east via S. Umber View Lane from the Barlow Crest subdivision.

SITE HISTORY

The proposed annexation territory has long been planned for urban levels of development. The property was included in the original UGB boundary when it was established by Metro in 1979. Due to fact that the territory is part of the original UGB, the property is not subject to Metro Title 11 requirements (concept plans), prior to annexation.

II. APPLICABLE REGULATIONS AND APPROVAL CRITERIA

The remainder of this staff report provides findings to demonstrate that the proposed annexation and zone change is consistent with applicable approval criteria. The findings are based largely on the applicant's submitted approval criteria narrative, with additional details and specificity provided where necessary.

Annexations in Oregon City are governed at both local (city) regional (Metro) and State level. Locally, annexations are regulated by Title 14 of the Oregon City Municipal Code, and by goals and policies in the adopted Comprehensive Plan. Regionally, annexations are regulated by Metro's Code Section 3.09, which establishes requirements for local government boundary changes.

Annexations are required to demonstrate a "positive balance of factors" in order to comply with the approval criteria in Chapter 14.04.060. Findings for compliance with the Annexation criteria are provided in section II.A. below.

Zone Changes in Oregon City are governed by the criteria in *OCMC Chapter 17.68 – Zoning Changes and Amendments*, and *OCMC Chapter 17.06 – Zoning District Classifications.* Each of these two chapters includes a specific subsection related to zoning of annexed areas. Findings for compliance with the applicable zone change criteria are provided in section II.B. on Page 31. In the case of annexation areas, the Applicant's proposal is that staff apply the R-10 zone without discretion pursuant to the pursuant to OCMC 17.68.025.A.

Annexation and Zone Changes are both discretionary decisions requiring the Planning Commission make a recommendation to the City Commission regarding the approval or denial of the application and any conditions necessary to assure compliance with the applicable approval criteria.

II A. ANNEXATION CRITERIA
COMPLIANCE WITH METRO CODE 3.09 – LOCAL GOVERNMENT BOUNDARY CHANGES

Metro Code Section 3.09 establishes requirements for local government boundary changes. The criteria for a minor boundary change are found in Section 3.09.050.D and are applicable to this annexation request. This annexation is considered an expedited decision pursuant to Metro code. Additional petition and notice requirements are also noted below.

3.09.030 Notice Requirements

B. Within 45 days after a reviewing entity determines that a petition is complete, the entity shall set a time for deliberations on a boundary change. The reviewing entity shall give notice of its proposed deliberations by mailing notice to all necessary parties, by weatherproof posting of the notice in the general vicinity of the affected territory, and by publishing notice in a newspaper of general circulation in the affected territory. Notice shall be mailed and posted at least 20 days prior to the date of deliberations. Notice shall be published as required by state law.

Finding: The proposal is consistent with this requirement. The public notice requirements were met as described below.

Public Notices for AN-16-0004:

The City provided initial public notice of the original application for annexation, AN-16-0004, to all property owners within 300 feet of the property prior to October 25th, 2016. Notice was provided to affected agencies, utilities and affected parties, including all Oregon City Neighborhood Associations,

the Hamlet of Beavercreek Community Planning Organization (CPO), the Holcomb-Outlook CPO and the Central Point / Leland Road / New Era CPO via email on October 7th, 2016.

Notice was provided to Metro and DLCD on October 7, 2016.

Public Notices for the Revised Application - AN-16-0004 / ZC-16-0004:
Following revision of the application to include a Zone Change, the City provided a revised public notice of AN-16-0004 / ZC-16-0004 to all property owners within 300 feet of the property prior on December 1st, 2016. Notice was published in the Clackamas Review / Oregon City News on December 14, 2016. Notice was provided to affected agencies, DLCD, Metro, utilities and affected parties, including all Oregon City Neighborhood Associations, the Hamlet of Beavercreek Community Planning Organization (CPO), the Holcomb-Outlook CPO and the Central Point / Leland Road / New Era CPO via email on December 1st, 2016.

Due to a typographic error on the AN-16-0004 / ZC-16-0001 public notice, staff provided a corrected second notice to all of the parties listed above on December 5th, 2016.

The Land Use Notice Sign was posted on the property 21 days prior the public hearing.

Due to the revisions to the application, the initial Public Hearing for AN-16-0004 / ZC-16-0001 has been continued by the Planning Commission and City Commission on several dates with the record open.

Public Hearings and Continuances

Planning Commission	City Commission
November 14, 2016	December 7, 2016
January 9, 2017	February 1, 2017
February 13, 2017	March 1, 2017
February 27, 2017	

Public Comments
Verbal testimony given at the Public Hearings listed above for this file is available via the City's meeting website, which includes all agendas, meeting materials and includes streaming videos of all public meetings at https://oregon-city.legistar.com/Calendar.aspx
Minutes will be made available once approved by the Planning and Commission.

The following written public comments have been received so far and are attached to the record.

02/13/2017 – Planning Commission
Bob LaSalle – Written Testimony
Note: the written testimony from the 02/01/2017 City Commission hearing was entered

02/01/2017 – City Commission Testimony
Barbara Renken - Written testimony
Mike Marchione and Kathleen Eisele - Written testimony

Email
10/25/2016 - Jim and Lynn Charriere – 15990 and 15998 Umber View Lane

The Charrieres did not receive a mailed public notice due to a technical error with the city's GIS based mailing label generator, which did not include four properties within 300 feet of the annexation territory but outside the Urban Growth Boundary. Staff has corrected the error and provided updated mailed notice.

3.09.040 Requirements for Petitions

A. A petition for a boundary change must contain the following information:
1. The jurisdiction of the reviewing entity to act on the petition;
2. A map and a legal description of the affected territory in the form prescribed by the reviewing entity;
3. For minor boundary changes, the names and mailing addresses of all persons owning property and all electors within the affected territory as shown in the records of the tax assessor and county clerk; and
4. For boundary changes under ORS 198.855(3), 198.857, 222.125 or 222.170, statements of consent to the annexation signed by the requisite number of owners or electors.
Finding: The proposal is consistent with this requirement. Items 1-4 were submitted.

Consistency with Metro Code 3.09.04(D)(1) for Expedited Decisions

a. Any applicable urban service agreement adopted pursuant to ORS 195.065;
Finding: This criterion requires that annexations be consistent with applicable provision of annexation plans and/or agreements that have been adopted pursuant to ORS 195. Urban services are defined as: sanitary sewers, water, fire protection, parks, open space, recreation and streets, roads and mass transit, and have been addressed in the Statements of Availability of Facilities and Services findings of this report as required by under OCMC 14.04 .040 and Metro Code 3.09.

The City has an Intergovernmental cooperative agreement (IGA) with Clackamas River Water (CRW) known as the HOPP Area Water Service Plan (Holcomb-Outlook-Park Place) agreement adopted in 1998 to provide water service for urbanizing areas above the 450' pressure zone from the Barlow Crest Pump Station and the upstream Hunter's Heights Reservoir system. The HOPP agreement is provided as an exhibit.

b. Any applicable annexation plan adopted pursuant to ORS 195.205;
Finding: This criteria is not applicable. There is no annexation plan applicable to the subject site. Therefore, this criterion does not apply.

c. Any applicable cooperative planning agreement adopted pursuant to ORS 195.020(2) between the affected entity and a necessary party;
Finding: The proposal is consistent with this requirement. The City and the County have an Urban Growth Management Agreement (UGMA) for portions of the property, which is a part of their Comprehensive Plans.

Clackamas County – City of Oregon City Urban Growth Management Agreement (UGMA, 1990)
The City and the County have an Urban Growth Management Agreement (UGMA), which is a part of their Comprehensive Plans. The territory to be annexed falls within the Urban Growth Management Boundary (UGMB) identified for Oregon City and is subject to the agreement.

The Agreement presumes that all the urban lands within the UGMB will ultimately annex to the City. It specifies that the city is responsible for the public facilities plan required by Oregon Administrative Rule Chapter 660, division 11. The Agreement goes on to say:

- *City and County Notice and Coordination*

** * **

D. The CITY shall provide notification to the COUNTY, and an opportunity to participate, review and comment, at least 20 days prior to the first public hearing on all proposed annexations . . .

** * **

5. City Annexations

A. CITY may undertake annexations in the manner provided for by law within the UGMB. CITY annexation proposals shall include adjacent road right-of-way to properties proposed for annexation. COUNTY shall not oppose such annexations.

B. *Upon annexation, CITY shall assume jurisdiction of COUNTY roads and local access roads that are within the area annexed. As a condition of jurisdiction transfer for roads not built to CITY street standards on the date of the final decision on the annexation, COUNTY agrees to pay to CITY a sum of money equal to the cost of a two-inch asphaltic concrete overlay over the width of the then-existing pavement; however, if the width of pavement is less than 20 feet, the sum shall be calculated for an overlay 20 feet wide. The cost of asphaltic concrete overlay to be used in the calculation shall be the average of the most current asphaltic concrete overlay projects performed by each of CITY and COUNTY. Arterial roads will be considered for transfer on a case- by-case basis. Terms of transfer for arterial roads will be negotiated and agreed to by both jurisdictions.*

C. Public sewer and water shall be provided to lands within the UGMB in the manner provided in the public facility plan . . .

Finding: The proposal is consistent with this requirement. The required notice was provided to Clackamas County at least 20 days before the Planning Commission hearing. The UGMA requires that adjacent road rights-of-way be included within annexations. The right-of-way adjacent to the subject site is already within the City Limit and jurisdiction of the Right-of-Way is under the city.

d. Any applicable public facility plan adopted pursuant to a statewide planning goal on public facilities and services;
Finding: The proposal is consistent with this requirement. The proposed annexation is consistent with adopted public facility plans, as described below.

Water: The city's 2012 *Water Distribution System Master Plan (WMP)* identifies recommended improvement projects intended to serve the proposed annexation area. Those projects include:

Additional storage reservoir capacity of 1mg at the existing Barlow Crest reservoir site including various water mains between 8 and 12 inches. The applicant has reviewed the WMP and notes that on page ES-3 the plan states,

"Water demands were projected through buildout of the City's Urban Growth Boundary (UGB) using a unit demand methodology based on land uses in the City's Comprehensive Plan."

The proposed zone change would adopt the default R-10 zoning applicable to the Low Density Residential comprehensive plan designation applied to the subject property. Thus, the Water Distribution Master Plan has accounted for the increased demand that would be generated in the future by this zone change. The lower portion of the property would be served from existing City lines and existing water storage reservoirs. The upper portion would be served by Clackamas River Water District through the existing HOPP agreement.

Sewer: The *Oregon City Sanitary Sewer Master Plan* (2014) also identifies recommended improvements intended to accommodate future demand in the proposed annexation area. Those improvements consist of gravity sewer extensions throughout the annexation area connecting to Holcomb Boulevard and existing sewer stubs on adjacent properties where feasible.

Figure 5-1a. indicates a proposed gravity sewer extension through the annexation area to serve future development.

The SSMP indicates the need for 8" and 10" sewer mains to serve the annexation area.

Transportation: The City's 2013 Transportation System Plan identifies the following planned improvements intended to serve the area:

- Project S11 – This project is a shared-use path connecting Holcomb Blvd to Forsythe Road that would be located on the Holcomb School property to the west, not on the applicant's property. The estimated cost is $433,000, funding is unlikely and the priority is Long-Term Phase 4.
- Metro Regional Transportation Plan (RTP) project 10150 is the Barlow Road Trail. The historic corridor of the Barlow Trail crosses the property and this project will follow the pioneer wagon train route from the Cascades west to the End of the Oregon Trail Center in Oregon City.
- Project B12 - this project would add bicycle lanes on both sides of Holcomb Boulevard. It has a total estimated cost of $272,500, is medium term priority (5-10 years), and is listed as Likely to be Funded.
- Project W12 – this project would add sidewalks on both sides of Holcomb Boulevard from Longview Way to Winston Drive. It has an estimated cost of $271,500, is medium term priority, and is listed as likely to be funded.

With the exception of the RTP project 10150, all TSP projects improvements abutting or located on the annexation property are designated as Likely to be Funded System Projects.

The TSP is implemented through the City Code section 12.04 at the time a development is proposed. The TSP and Chapter 12.04 require that development provide on-site and off-site mitigation based on their impacts. This includes requiring that local street connections and abutting existing streets be brought up to current standards throughout the annexation area when development occurs.

Developers must also pay all applicable Transportation Related System Development Charges with future building permits, provide dedications of land for all new and upgraded local and arterial public streets, and provide new road pavement, curbs, gutters, sidewalks and street trees pursuant to OCMC 12.04 at the time of development.

Stormwater: On-site or sub-regional stormwater drainage, water quality, and detention facilities will be required at the time of development. The City's stormwater management standards, set forth in OCMC 13.12 and the City's Stormwater and Grading Design Standards, emphasize low-impact development (LID) practices, source controls for higher pollutant generating activities, erosion prevention and sediment controls, and operation and maintenance practices designed to properly manage stormwater runoff and protect water resources. When development is proposed for the subject site, the owner will be required to design a stormwater drainage plan that is consistent with these standards.

Police, Emergency and Fire Protection:
The area to be annexed lies within the Clackamas County Service District for Enhanced Law Enforcement, which provides additional police protection to the area. The combination of the county-wide service and the service provided through the Enhanced Law Enforcement CSD results in a total level of service of approximately 1 officer per 1000 population. According to ORS 222.120 (5) the City may provide in its approval ordinance for the automatic withdrawal of the territory from the District upon annexation to the City. If the territory were withdrawn from the District, the District's levy would no longer apply to the property.

Upon annexation, the Oregon City Police Department will serve the subject site. Oregon City currently fields approximately 1.25 officers per 1,000 people. The Oregon City Police Department has a goal of four-minute emergency response, 7 to 9 minute actual, and twenty-minute non-emergency response times. As no development is proposed as part of this annexation application, this annexation will have a minimal impact on police services.

The proposed annexation area is currently, and will remain, within the Clackamas Fire District #1. The Clackamas Fire District provides all fire protection for Oregon City since the entire city was annexed into their district in 2007. Clackamas Fire District #1 was provided notice of the proposed annexation and did not comment. Oregon Revised Statute 222.120 (5) allows the City to specify that the territory be automatically withdrawn from the District upon approval of the annexation; however, based on the November 2007 fire district annexation approval, staff recommends that the properties remain within the fire district.

Emergency Medical Services to the area are provided through American Medical Response (AMR) through a contract with Clackamas County. Oregon City and the unincorporated areas surrounding Oregon City are all part of the AMR contract service area. Clackamas Fire District#1 provides EMS service to all areas they serve include ALS (advanced life support) staffing. This means all fire apparatus are staffing with a minimum of one firefighter/paramedic; usually there are more than one. Additionally, Clackamas Fire does provide ambulance transport when an AMR unit is not readily available. Therefore EMS services are provided from Clackamas Fire #1 with AMR being dispatched as well.

e. Any applicable comprehensive plan;
Finding: The proposal is consistent with this requirement. The Oregon City Comprehensive Plan and zoning code will guide future development in the proposed annexation area. The annexation area is part of the original UGB and no concept planning pursuant to Metro Title 11 is required prior to annexation. The Comprehensive Plan serves as the principal guiding land use document for annexation and urbanization of the area, as well as four recent major public facilities master plan updates; the Water System Master Plan (2012), the Sanitary Sewer Master Plan (2014), the Transportation System Plan (2013), and the Stormwater and Grading Design Standards (2015).

The applicant has requested automatic default rezoning (R-10) to implement the comprehensive plan designation of LR (Low Density Residential) upon annexation. Findings are provided under Section IIB of this report.

The annexation area zoning designation of FU-10 is consistent with Clackamas County's Comprehensive Plan. The Clackamas County Comprehensive Plan implements the Oregon City Comprehensive Plan for lands within the Urban Growth Boundary. The plan designation for these properties on the County's Urban Area Land Use Plan the properties as Urban. According to the County's Plan,

"Urban areas include all land inside urban growth boundaries. Urban areas are either developed or planned to be developed with adequate supportive public services provided by cities or by special districts. Urban areas have concentrations of people, jobs, housing, and commercial activity."

The Land Use section of the Clackamas County Comprehensive Plan, Chapter 4, further distinguishes Urban Areas into Immediate Urban Areas and Future Urban Areas.

Immediate Urban Areas: Immediate urban areas are lands that are within urban growth boundaries, are planned and zoned for urban uses, and meet at least one of the following conditions:

1. Served by public facilities, including sanitary sewage treatment, water, storm drainage, and transportation facilities;
2. Included within boundaries of cities or within special districts capable of providing public facilities and planned to be served in the near future; or
3. Substantially developed or surrounded by development at urban densities.

The County's plan and map 4-1 identifies the territory proposed for annexation as a future urban area, which is defined as:

"Future urbanizable areas are lands within the Urban Growth Boundaries but outside Immediate Urban areas. Future Urbanizable areas are planned to be served with public sewer, but are currently lacking a provider of sewer service. Future Urbanizable areas are substantially underdeveloped and will be retained in their current use to insure future availability for urban needs.

Section 4.A of the County's Plan includes several policies that address the conversion of Future Urbanizable lands to Immediate Urban lands to "Provide for an orderly and efficient transition to urban land use." and "Encourage development in areas where adequate public services and facilities can be provided in an orderly and economic way."

Further, County Land Use Policy 4.A.1 requires that the County "Coordinate with Metro in designating urban areas within Metro's jurisdiction. Recognize the statutory role of Metro in maintenance of and amendments to the Portland Metropolitan Urban Growth Boundary."

Finally, 4.C. the County's Future Urban Policy 4.C.1. requires that the County control premature development (before services are available) by:

4.C.1.1. Applying a future urban zone with a 10-acre minimum lot size within the Portland Metropolitan UGB except those lands identified in Subsection 7.1.b.

The subject site is adjacent to the City limits of Oregon City. As demonstrated within this report, public facilities and urban services can be provided in an orderly economically efficient manner to the subject site. Nothing in the County Plan speaks directly to criteria for annexation of property from the County to the City, although the Urban Growth Management Agreement (UGMA) between the City and the County does address these requirements as discussed above.

f. Any applicable concept plan; and
Finding: Not applicable. As discussed above, there are no concept plans applicable to the subject property.

Consideration under Metro Code 3.09.045(D)(2) for Expedited Decisions

a. Promote the timely, orderly and economic provision of public facilities and services;
Finding: The proposal is consistent with this requirement. The proposed annexation site is inside the UGB, contiguous with the city limits, and directly adjacent to developed areas that currently receive public facilities and services. Public facilities (water, sewer and transportation) are available near the proposed annexation site and the city has adopted public facilities plans that provide for extension of those facilities to serve the site to accommodate future development. A future development application will need to be filed and approved by the City of Oregon City prior to any development occurring. Upon approval of a development plan, the developer will provide for the installation of needed public facilities and services.

b. Affect the quality and quantity of urban services; and
Finding: The proposal is consistent with this requirement. The city has updated its sewer, water and transportation facilities master plans to plan for future extension of those services into the proposed annexation area. The annexation of this property will have no immediate impact upon the quality or quantity of urban services since no development is proposed. At such time as the site is developed in the future, it will be in a manner consistent with the Low Density Residential designation of the property. The City has planned for the provision of necessary public facilities and services in this area in its Public Facilities Plan and Transportation Systems Plan. Since the future development will conform to the anticipated level of development, it will not have a negative impact upon the quality or quantity of urban services.

c. Eliminate or avoid unnecessary duplication of facilities or services.
Finding: The proposal is consistent with this requirement. The city notified all applicable service providers of this annexation request for their review and comment. Annexation to, or withdrawal from, service provider districts has been addressed in this report as part of the final recommendations, and will be done concurrent or subsequent to this proposed annexation. With the exception of water, all services in this area will be provided by the City of Oregon City so there will be no unnecessary duplication of facilities and services. Water services in this area are provided by the City and Clackamas River Water District. These agencies have a plan and agreement that governs the provision of water services so as to avoid unnecessary duplication of facilities and services.

The Metro Code also contains a second set of 10 factors that are to be considered where: 1) no ORS 195 agreements have been adopted, and 2) a necessary party is contesting the boundary change. Those 10 factors are not applicable at this time to this annexation because no necessary party has contested the proposed annexation. **This criterion is not applicable.**

COMPLIANCE WITH OREGON CITY MUNICIPAL CODE

OCMC Chapter 14.04

14.04.050 - Annexation Procedures
A. Application Filing Deadlines
Finding: The proposal is consistent with this requirement. Annexation of these properties may not be subject to vote provided that the application meets all of the requirements of SB 1573. Should an annexation approval require subsequent approval by the Voters of Oregon City, staff will prepare the necessary ballot title and resolution scheduling an election pursuant to this requirement and in sufficient time for the matter to be submitted to the voters as provided by the election laws of the State of Oregon.

B. Pre-Application Review
Finding: The proposal is consistent with this requirement. The applicant and applicant's representative attended a pre-application review meeting with city staff on November 29, 2016. Pre-application meeting notes are included with the application.

C. Neighborhood Contact
Finding: The proposal is consistent with this requirement. The subject property is within the Park Place Neighborhood Association boundaries. The applicant contacted the Park Place Neighborhood Association, as required by city standards, and a meeting was held on June 7, 2016 at Alliance Charter Academy. A second Neighborhood Meeting on December 6, 2016 was conducted in order to address the need to include a concurrent zone change application.

D. Signatures on Consent Form and Application.
Finding: The proposal is consistent with this requirement. The application submittal package includes the application form and consent form signed by the owners of the subject properties.

E. Contents of Application. An applicant seeking to annex land to the city shall file with the city the appropriate application form approved by the city manager. The application shall include the following:

1. Written consent form to the annexation signed by the requisite number of affected property owners, electors or both, provided by ORS 222, if applicable;
2. A legal description of the territory to be annexed, meeting the relevant requirements of the Metro Code and ORS Ch. 308. If such a description is not submitted, a boundary survey may be required. A lot and block description may be substituted for the metes and bounds description if the area is platted. If the legal description contains any deed or book and page references, legible copies of these shall be submitted with the legal description;
3. A list of property owners within three hundred feet of the subject property and, if applicable, those property owners that will be "islanded" by the annexation proposal, on mailing labels acceptable to the city manager;
4. Two full quarter-section county tax assessor's maps, with the subject property(ies) outlined;
5. A site plan, drawn to scale (not greater than one inch = fifty feet), indicating:
a. The location of existing structures (if any);
b. The location of streets, sewer, water, electric and other utilities, on or adjacent to the property to be annexed;
c. The location and direction of all water features on and abutting the subject property. Approximate location of areas subject to inundation, stormwater overflow or standing water. Base flood data showing elevations of all property subject to inundation in the event of one hundred year flood shall be shown;

d. Natural features, such as rock outcroppings, marshes or wetlands (as delineated by the Division of State Lands), wooded areas, identified habitat conservation areas, isolated preservable trees (trees with trunks over six inches in diameter—as measured four feet above ground), and significant areas of vegetation;
e. General land use plan indicating the types and intensities of the proposed, or potential development;
6. If applicable, a double-majority worksheet, certification of ownership and voters. Certification of legal description and map, and boundary change data sheet on forms provided by the city.

Finding: The proposal is consistent with this requirement. The materials required in items 1 through 6 are included in the application submittal.

AVAILABLE PUBLIC FACILITIES AND SERVICES

OCMC 14.04.050(E)(7)(a) - (g) NARRATIVE STATEMENTS

This code section requires a series of narrative statements explaining how and when public facilities and services will be provided to serve the annexation property when development occurs. These statements and the findings that follow provide additional factual basis for a determination of a "positive balance of factors" required for approval of an annexation petition, as required under OCMC 14.04.060, which section follows this one.

In addition to the narrative submitted at the time of application, the applicant's planner provided an additional narrative regarding the adequacy and availability of public water, sanitary sewer and storm drainage on February 13, 2017. These responses were reviewed by the Development Services Engineering Division, whose findings are incorporated into this report. As explained by the applicant's planner,

> *The property can presently be developed with three homes under County zoning. With the annexation and zone change to City R-10 zoning, the development potential would increase to approximately 124 units. This assumes a deduction of 20 percent of the 35.65 acre site for streets and infrastructure. The proposed re-zoning would, therefore, add potential future development of 121 lots over the existing condition. It should be noted that the actual development of the site cannot occur until some point in the future when the City adopts alternative mobility standards for the transportation system.*

The applicant's narrative statements required under this section are summarized below.

7. A narrative statement explaining the conditions surrounding the proposal and addressing the factors contained in the ordinance codified in this chapter, as relevant, including:

a. Statement of availability, capacity and status of existing water, sewer, drainage, transportation, park and school facilities;

Finding: The proposal is consistent with this requirement. Overall, the land proposed for annexation is largely undeveloped and located within a future urban zone at the edge of urban/rural development. Although the subject property will not be developed at this time and will remain undeveloped for the immediate future, services are available to allow for the future

development of this site. The following information describes the existing availability, estimate of increased demand, and notes improvements that may be required to provide these services:

Water

There are existing City of Oregon City water lines in Holcomb Blvd., along the subject property's frontage on that street, and Ames Street. Water service in this area is also provided by Clackamas River Water District.

The City of Oregon City and Clackamas River Water have an active agreement in place for water service within the proposed annexation area, titled the Holcomb-Overlook-Park Place (HOPP) Agreement. The HOPP Agreement will guide how the proposed annexation area is served domestic water. The proposed annexation area is within two water system pressure zones: Park Place Intermediate and Park Place Upper.

An existing City 16-inch D.I. waterline exists within Holcomb Boulevard along with an abandoned 6-inch CRW D.I. waterline.

The 2012 Water Distribution System Master Plan was adopted in February 2012.

At the time that a subdivision is proposed for the subject property, water improvements will be required. The water improvements are based on the 2012 Water Distribution System Master Plan. Actual improvements required may vary depending on the proposed developed area.

The applicant has indicated via memorandum prepared by Rick Givens, dated February 13, 2017 that discussions with City staff indicate that a reservoir is planned as a condition of approval of a recent subdivision in this area. However, City staff does not have knowledge of a reservoir being installed in this area.

Sanitary Sewer

Existing sanitary sewer service in the vicinity of the proposed annexation consists of an 8" pipe in Holcomb Boulevard and an 8" pipe in Ames Street. The Oregon City Sanitary Sewer Master Plan (2014) identifies a number of recommended future capital improvement projects intended to serve the area.

Based on the existing topography of the area, the southern portion of the proposed annexation area can discharge sanitary sewer flows to the existing sanitary sewer system within Holcomb Boulevard, whereas the northern portion of the proposed annexation area will discharge to the existing sanitary sewer system located within Ames Street. The applicants also own the intervening property separating this site from the sewer in Ames Street and have indicated they will grant the required easement needed for the future extension to service the subject property. A more detailed analysis of sanitary sewer discharge locations will be performed at the time of future development.

The 2014 Sanitary Sewer Master Plan identifies an existing 8-inch sanitary sewer main on Holcomb Boulevard (near the intersection with Holcomb School Road) that needs to be upsized to a 10-inch sanitary sewer main to take on additional sanitary sewer flows. If future development proposes sanitary sewer discharge to this existing Holcomb Boulevard system, this existing main will need to be upsized.

Stormwater Drainage

The proposed annexation site slopes generally to the northwest via sheet flow. There are no existing stormwater conveyance facilities currently serving the site. The City's Stormwater Master Plan has not

yet been completed. Future stormwater facilities to serve anticipated development will be consistent with the City's Stormwater and Grading Design Standards and will be constructed concurrently with site development. Improvements will comply with the Master Plan at time of its eventual adoption.

Stormwater run-off generated from future development will generally flow in the northwesterly direction. This flow must be conveyed to a natural drainage channel located north of Forsythe Road and east of Highland Road. Flow to the stormwater system located within Ames Street, and to the natural drainage channel to which this system flows, will not be permitted as this system is at capacity. The applicant should anticipate making upgrades to the downstream (offsite) system.

Transportation

The existing transportation network currently serving the proposed annexation area consists of Holcomb Boulevard and some county gravel roads that abut the site to the north and east.

For a discussion of the transportation impact analysis (TIA) of future development, please refer to the applicant's submitted TIA, and City Transportation Consultant's review of the TIA and the findings on pages 36.

The nearest available public transit (TriMet bus lines) are located along Holcomb Boulevard at the Clackamas Housing Authority View Manor site approximately ¼ mile to the west.

Parks

The applicant provided additional narrative regarding parks and trails. The applicant notes in that letter the following:

> *We would note that the proposed annexation and zone change do not in and of themselves generate any immediate need for park resources. The need for park lands in this area would come with future development of this and other properties. Since this application will be conditioned to restrict development until such time as the alternative mobility standards are adopted by the City, there is ample time for the City to amend its Parks SDC to include the Park Place neighborhood so that future homes to be built on this and other properties in this neighborhood would contribute to the costs of park acquisitions.*

There are currently no Oregon City parks in the immediate vicinity of the proposed annexation area. The nearest park is Park Place Park ½ mile to the west. Oregon City's Parks and Recreation Plan identifies open space and park locations to serve the community. Although not indicated within the annexation, in this general area, the Parks plan identifies the following:

The 1999 Parks Master Plan and its 2008 update does not indicate the need for parks or open space within the annexation area.

The 2008 Parks Master Plan update states that focus groups who participated in the update identified the Park Place area as one of several areas of the city that are currently "underserved" by parks and recreation facilities (P. 51), and which also have challenging physical characteristics that serve as a barrier to pedestrian access to existing facilities due to major roads, railroads and natural features (P. 93). Based on the Level-of-Service (LOS) methodology used in the plan, Area 3 – Park Place has an LOS of 28.63 compared to the City's average LOS of 45, and the plan states that the "Quality and diversity of services in this area should be improved in the future, especially if the area continues to develop and

expand to the west" (P. 94). The 2008 update mentions the following Goals, Objectives and Strategies that are pertinent to the area affected by the annexation:

(See P.12, Oregon City, Parks and Recreation Master Plan Update 2008)

Goal 3: Increase access to parks by implementing trails plan.

Objective: Continue to plan for parkland acquisition.

Future park acquisition should be considered on an individual basis for its current or potential recreational value.

Strategies:

• Work to fund Tier 1 local trails as identified in the 2004 Trails Master Plan. Place emphasis on constructing trails that connect parks to other parks, trails, or neighborhoods. For example: Park Place Development Trails (L4), Barclay Park Connection (L11), Parks Trail (L21), and Wesley Lynn – Chapin Trail (L23).

• Continue to fund planning and construction for Tier 1 Regional Trails as identified in the 2004 Trails Master Plan. Use the Trails Master Plan for priorities and specifics about implementation costs.

• As funding permits, determine the existing condition and location of the Oregon Trail-Barlow Road Historic Corridor and review the existing standards within the Oregon City Municipal Code to determine if modifications to the development standards and/or City master plans are necessary to protect the corridor. If modifications to the existing code language are proposed, they should include methods to encourage property owners to preserve the historic corridor in the original condition while allowing the property to be used in an economically viable manner. This strategy recommendation shall utilize/reference the Barlow Road Historic Corridor Westernmost Segment of the Oregon Trail Background Report & Management Plan (Clackamas County, 1993), or most current adopted report.

Parks Place Concept Plan Parks and Open Space

The Park Place Concept Plan identifies a large 8-10 acre park on the South side of Holcomb Boulevard, in additional to protected natural areas within stream buffers and areas which would remain undeveloped due to slopes and geologic hazards. This park would serve existing and future developed areas within a half mile both north and south of Holcomb Boulevard, provided adequate pedestrian and bicycle access via path, sidewalks and trails is provided.

Currently, there are no specific code requirements that require developers to dedicate land for trails and open space as exactions. Typically the process for obtaining park land requires several additional steps by the Community Services Department, which is responsible for City parks, involving identification of property, appraisal, negotiation and purchase. Due to extremely limited resources the Parks Department has been challenged with maintaining the current park system without further expansions. The most recent capital improvement master planning for parks was for the regional park west of Oregon City High School and south of Clackamas Community College off Glen Oak Road and long awaited improvements to the Filbert Run park site to serve the South End / Hazel Grove - Westling Farms neighborhoods.

In light of this uncertainty and lack of resources, in order to demonstrate adequacy of parks facilities, the City has relied on the long-standing policy that future development must pay Parks System Development Charges in accordance with OCMC 13.20 with building permits. The current 2017 Parks

SDC for a Single Family Home is $4,881. It should be noted that the Parks SDC fee, as with other city SDCs, is increased annually based on the Engineering News Record Construction Cost Index and, in the case of the parks SDCs only, is also tied to the Average Market Value Growth Rate for Clackamas County. The typical SDC increase varies on average annually between 2-4%, while the Average Market Value Growth Rate for Clackamas County was 26% in 2017[1]. The actual Parks SDC increases for the last four years are as follows:

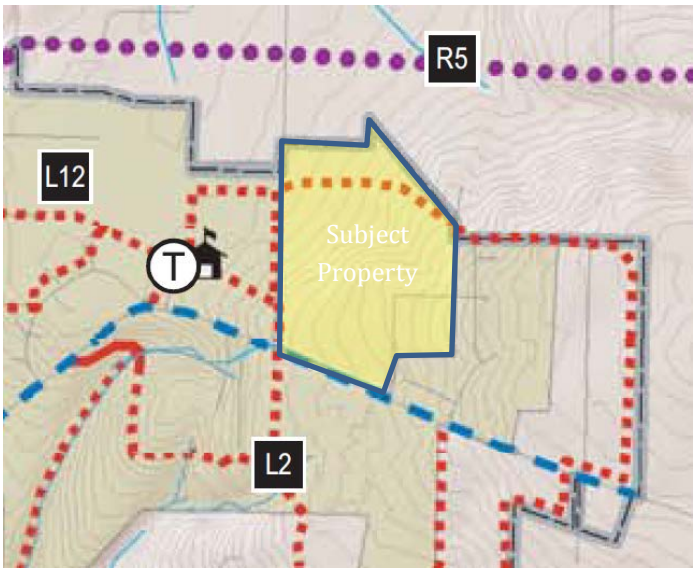
Effective Date	Fee
1/1/2017	$4,881
1/1/2016	$4,279
1/1/2015	$4,034
1/1/2014	$3,835

The Park's SDC methodology may need to be updated to include needed park facilities in the three concept plan areas (Park Place, South End and Beavercreek Road). Other sources of funding that the City has relied upon in the past to support park and trail improvements include grants from Metro and funding organizations and donations.

This approach is consistent with the City's policy of charging SDS's, along with development exactions and dedications permitted by code, for adequacy of public facilities when the exact location and impact of development is unknown at the time of annexation and zoning, and staff recommends that the City continue to find that this approach is suitable for the subject annexation proposal.

Based on the above facts, it is feasible and likely that adequate park facilities can be made available to serve the annexation area at the time of development.

Trails



The applicant provided additional narrative regarding parks and trails. With respect to the Holcomb Ridge Loop Trail L2, the Oregon City Conceptual Trails Map in the Oregon City Trails Master Plan indicates a conceptual alignment for a future trail across the subject property.

The adopted Trails Master Plan (2004) identifies the need for a future local trail known as Trail L2 - "Holcomb Ridge Loop Trail" within the annexation property which would connect to Holcomb Elementary with other trails in the vicinity. On Page 57 the plan describes this trail segment as part of:

"A series of trails that would follow the perimeter of Holcomb Elementary school and the UGB to the future Park Place development. The trails would then connect through the Holcomb Ridge development on existing roadways

[1] Communication with Oregon City Finance Department staff.

and trails and connect back to the elementary school on Holcomb Blvd." The trail would consist of both paved trail and earthen hiking trail.

The parks master plan describes the implementation method as "Easements as part of new development, easements if some parcels are not developed".

Responsibility for the implementation according to the plan would be a collaboration between Oregon City Parks and Recreation, Oregon City Public Works, Clackamas County, and the Park Place Neighborhood Association. The priority is indicated as a "2", meaning 10-25 years, and the Planning Estimate Capital Costs (Excluding Property Acquisition/Easement) of the trail segment is listed as $729,281. A more detailed breakdown of the estimated cost is provided on Table 6 on Page 64 of the plan, which indicates that the cost estimate assumed that wider sidewalks within subdivisions would make up a significant portion of the local trail system.

The trails shown are largely conceptual. Most need to be further studied and designed. The location of the trails may change as a result.

With regard to implementation, the trails master plan clearly states in Chapter IV. Recommended Trail Network and Implementation Measures on Page 50:

"many of the trails shown on the Conceptual Trails Map, particularly local trails located along roadways or intended as accessways, will be developed over time by Oregon City property owners and new development, much like the sidewalk system and the current accessway system has been developed. In some cases, the City will be able to require the property owner to construct the trail as part of the development review process. In other cases, the City will work with the property owner to ensure the City can develop the trail itself in the future."

This trail could also be combined with a wider sidewalk system or as part of the Barlow Trail historic corridor, which is also indicated on the property and discussed further in this report under Goal 5 historic resources.

It is feasible that an appropriate mechanism for construction of the needed trail system can be determined at the time of development review, including, as the applicant notes, amending the Parks SDC to include the Park Place neighborhood so that future homes built on this property and other properties in this neighborhood contribute to the costs of park acquisitions. Based on the above facts, it is feasible and likely that adequate trail facilities can be made available to serve the annexation area at the time of development.

Schools

Oregon City School District received notice of the application and did not comment as of the date of this Staff Report. Staff coordinates with the Oregon City School District ways during the development review process in accordance with adopted Comprehensive Plan Goals and Policies. Standard procedures for the Planning Division includes notice of all land use actions, both long range and current proposals, to the School District, the School District actively participates at pre-application conferences in anticipation of development. The School District, not the City, is responsible for long range planning of needed school facilities.

Findings of consistency with applicable Comprehensive Plan policies regarding coordination of planning efforts between Oregon City School District and the City have been provided elsewhere in this report on pages 29 and 30.

b. Statement of increased demand for such facilities to be generated by the proposed development, if any, at this time;

Finding: The proposal is consistent with this requirement. The above item applies to development being proposed at this time and anticipates that no development may be proposed as part of an annexation application. Although the subject property will not be developed at this time and will remain undeveloped for the immediate future, services are available to allow for the future development of the site. As discussed elsewhere in this report, all applicable public facilities and services to serve future development of the site will be made available pursuant to the adopted Public Facilities plans that the City has adopted, which take future development within the Urban Growth Boundary into account based on estimates of growth capacity for the area in question.

c. Statement of additional facilities, if any, required to meet the increased demand and any proposed phasing of such facilities in accordance with projected demand;

Finding: The proposal is consistent with this requirement. The above item applies to development being proposed at this time and anticipates that no development may be proposed as part of an annexation application. No development is being proposed as part of this annexation application.

As discussed elsewhere in this report, all applicable public facilities and services to serve future development of the site have been or will be made available pursuant to the adopted Public Facilities plans that the City has adopted, which take future development within the Urban Growth Boundary into account based on estimates of growth capacity for the area in question. Although not required for approval of the annexation, the City is required by law to assure that System Development Charges commensurate with the projected level of demand for public facilities are applicable and payable by new development.

There are four recent major public facilities master plan updates which are part of the City's Capital Improvement Program; the Water System Master Plan (2012), the Sanitary Sewer Master Plan (2014), the Transportation System Plan (2013), and the Stormwater and Grading Design Standards (2015). These facilities are mainly funded, part of the City's Capital Improvement Program, and the City is collecting System Development Charges to fund these improvements.

d. Statement outlining method and source of financing required to provide additional facilities, if any;

Finding: The proposal is consistent with this requirement. Each of the City's recently adopted public facilities for Transportation, Sewer, and Water include a discussion of methods and sources of financing required to provide such facilities to the proposed annexation area. Specific funding mechanisms are not required to be identified until the time a development is proposed. Although not required for approval of the annexation, the City is required by law to assure that System Development Charges commensurate with the projected level of demand for public facilities are applicable and payable by new development.

Typical development funded improvements to offset direct impacts of planned development include dedications of right-of-way and land for storm detention, easements, exactions, and construction of sewer, water, stormwater and transportation improvements.

Given the size of the annexation area it is anticipated that the developer will be wholly responsible for the cost of providing and constructing public improvements and that should other methods of

financing capital improvements be required, then they will utilize full capital-cost and operating cost recovery methods to avoid unsustainable fiscal impacts to the City's general fund. Hence, existing funding sources, including System Development Charges (SDCs), utility fees, connection charges and rates, and capital improvement programs are in place prior to annexation and development.

Advance financing required for system upsizing and large sewer improvements would likely require some form of developer or city financing, which could include the use of a local improvement district, reimbursement district, grants, bonds and loan, though none of these has been determined to be necessary at this time.

e. Statement of overall development concept and methods by which the physical and related social environment of the site, surrounding area and community will be enhanced;

Finding: The proposal is consistent with this requirement. The adopted City of Oregon City Comprehensive Plan designation is Low Density Residential. The implementing zones for this plan designation are R-6, R-8 and R-10. The applicant has requested the default zoning of R-10 at this time. The development of this site in a manner consistent with the adopted Comprehensive Plan will serve to provide needed housing to accommodate the projected population growth of the City of Oregon City. The site is well suited from a physical standpoint to be developed in this manner as it is free of any significant development constraints, other than a very small area of moderately steep slopes. Providing for future development of needed housing within walking distance of Holcomb Elementary School for school and recreational services will assist in providing for a beneficial social environment in this neighborhood.

f. Statement of potential physical, aesthetic, and related social effects of the proposed, or potential development on the community as a whole and on the small subcommunity or neighborhood of which it will become a part; and proposed actions to mitigate such negative effects, if any;

Finding: The proposal is consistent with this requirement. There will be no immediate physical, aesthetic, or related social effects from the annexation of this property because there will be no development at this time. Future development of the property will result in typical Low Density Residential impacts on traffic, schools, and public infrastructure, but these impacts have been anticipated by the City's Comprehensive Plan. Impacts to public facilities and services have been assessed in the existing public facilities plans adopted by the City for the Urban Growth Boundary, and mitigation measures will be further determined when development is proposed.

In terms of physical effects of potential development, the annexation area will eventually be developed with a mix of housing types and densities. A new street network will be developed. Public facilities will be extended to serve the site. The annexation site will be subject to existing city code requirements related to impacts of new development, including protection of natural resources, street design, and buffering and landscaping.

Socially, the proposed annexation site will ultimately be developed to be part of a complete community, one that integrates a diverse mix of uses, including housing, services, and public spaces. Eventually the Park Place Concept Plan area south of Holcomb Boulevard will develop and provide greater commercial amenities and housing choices as well. New streets and street improvements will be designed to maximize safety and convenience for all users, including pedestrians and cyclists. Natural resources will be managed for optimum ecological health to help protect watersheds.

Overall, the annexation site will be developed in accordance with the vision identified in the Oregon City Comprehensive Plan that was adopted by the city to guide future growth in a way that will contribute to Oregon City as a whole.

g. Statement indicating the type and nature of any comprehensive plan text or map amendments, or zoning text or map amendments that may be required to complete the proposed development;

Finding: The proposal is consistent with this requirement. No change to the comprehensive plan text or map designation is proposed for this site, which is LR – Low Density Residential. The applicant requests that the zone change from Clackamas County FU-10 to Oregon City R-10 per the provisions of OCMC 17.68.025.A. This zone change is in conformance with the acknowledged Low Density Residential land use designation for the property. Please refer to the discussion of the zone change proposal in Section IIB of this report.

8. The application fee for annexations established by resolution of the city commission and any fees required by metro. In addition to the application fees, the city manager shall require a deposit, which is adequate to cover any and all costs related to the election;

Finding: The proposal is consistent with this requirement. The application was paid as part of this application submittal.

9. Paper and electronic copies of the complete application as required by the community development director.

Finding: The proposal is consistent with this requirement. Paper and electronic copies of this narrative have been included as part of this submittal package.

COMPLIANCE WITH OCMC 14.04.060 – ANNEXATION FACTORS

A. When reviewing a proposed annexation, the commission shall consider the following factors, as relevant:

1. Adequacy of access to the site;

Finding: The proposal is consistent with this requirement. The site has direct access onto Holcomb Blvd., an arterial street. This street would serve as the primary access for the future development of the property. A secondary access to the site is available via S. Umber View Lane, but would possibly be restricted to emergency vehicle access as it is only a one-half street connection. Future extension of Ames St. would be provided for with the provision of a street stub, but would be dependent upon future expansion of the Urban Growth Boundary for completion.

The specific design of the local street system is subject site has not been determined at this time, but is subject to additional subdivision review by the city at the time a development is proposed.

2. Conformity of the proposal with the city's comprehensive plan;

Finding: The proposal is consistent with this requirement. The proposed annexation is consistent with the comprehensive plan in that the property is within the UGB, is designated Low Density Residential, and is intended to be served by the City of Oregon City. Compliance with specific plan policies is discussed below in this report.

Comprehensive Plan Section 2 Land Use

Goal 2.1 Efficient Use of Land
Ensure that property planned for residential, commercial, office, and industrial uses is used efficiently and that land is developed following principles of sustainable development.
Finding: The proposal is consistent with this requirement. The proposed annexation property is part of the Urban Growth Boundary and is designated for low density residential use. As a whole, the annexation area will support the city's goal of ensuring an adequate supply of housing in an area that can be provided with urban services in an efficient and timely manner.

Goal 2.7 Oregon City Comprehensive Plan Land-Use Map
Maintain the Oregon City Comprehensive Plan Land-Use Map as the official long-range planning guide for land-use development of the city by type, density and location.
Finding: The proposal is consistent with this requirement. The Oregon City Comprehensive Plan Land-Use Map remains the long-range planning guide for development in the city and applies to this area. Therefore, this annexation application has no impact on this policy.

Section 14 Urbanization
Goal 14.3 Orderly Provision of Services to Growth Areas
Plan for public services to lands within the Urban Growth Boundary through adoption of a concept plan and related Capital Improvement Program, as amendments to the Comprehensive Plan.
Finding: The proposal is consistent with this requirement. This policy contains a requirement that the city plan for public services to lands within the urban growth boundary through concept plans and a related capital improvement program. The property is part of the original Urban Growth Boundary and no concept plan is adopted for this area, nor is one required prior to annexation. This policy, then, is not directly applicable to this annexation request. In any event, the proposed annexation area is within an area that is long planned for residential growth. The city has updated its water, sewer and transportation master plans to include new projects intended to serve the annexation area. The following four recent major public facilities master plan updates are part of the City's Capital Improvement Program; the Water System Master Plan (2012), the Sanitary Sewer Master Plan (2014), the Transportation System Plan (2013), and the Stormwater and Grading Design Standards (2015).

Details regarding planned capital improvements to provide public services to the annexation site are below.

Water: Recommended future water service improvements identified in the 2012 *Water Distribution System Master Plan* include:

- Pipeline project no. F-CIP-10
- Project Vicinity: Ames St to S Holcomb Blvd.
- Project Description: This project is intended to supply future growth in the area and will likely be developer driven. It also completes a loop in the area providing enhanced reliability of the system. Route shown may have constructability issues near the school and will need refinement at the time of design. Add 4,140 feet of 12-inch diameter piping North of Holcomb Boulevard.
- Total estimated cost is $828,00.
- Pipeline project no. F-CIP-11
- Project Vicinity: Clackamas Heights Airport from S Barlow Dr to S Holcomb Blvd.

- This project is intended to supply future growth in the area and add additional looping for added reliability. It will likely be developer driven, and will not be the responsibility of the City until this area is taken over from CRW. Route shown may have constructability issues and will need refinement at the time of design. Add 1,472 feet of 12-inch diameter piping North of Holcomb Boulevard.
- Total estimated cost is $294,400.

Sewer: The *Oregon City Sanitary Sewer Master Plan* (2014) identifies recommended improvements intended to accommodate future demand in the proposed annexation area. Those improvements consist of 8-inch, 10-inch and 12-inch gravity sewer line extensions throughout the annexation area connecting to an existing line in Holcomb Boulevard.

Transportation: The 2013 *Oregon City Transportation System Plan* (TSP) identifies the following planned improvements intended to serve the annexation area:

- Project S11 – This project is a shared-use path connecting Holcomb Blvd to Forsythe Road that would be located on the Holcomb School property to the west, not on the applicant's property. The estimated cost is $433,000, funding is unlikely and the priority is Long-Term Phase 4.
- Metro Regional Transportation Plan (RTP) project 10150 is the Barlow Road Trail. The historic corridor of the Barlow Trail crosses the property and this project would provide trails following the pioneer wagon train route from the Cascades west to the End of the Oregon Trail Center in Oregon City.
- Project B12 - this project would add bicycle lanes on both sides of Holcomb Boulevard. It has a total estimated cost of $272,500, is medium term priority (5-10 years), and is listed as Likely to be Funded.
- Project W12 – this project would add sidewalks on both sides of Holcomb Boulevard from Longview Way to Winston Drive. It has an estimated cost of $271,500, is medium term priority, and is listed as likely to be funded.

With the exception of the RTP project 10150 (the Barlow Trail), all TSP projects improvements abutting or located on the annexation property are designated as Likely to be Funded System Projects.

The TSP is implemented through the City Code section 12.04. The TSP and the Chapter 12.04 require that development provide on-site and off-site mitigation based on their impacts. This includes requiring that local street connections and abutting existing streets be brought up to current standards throughout the annexation area when development occurs.

Developers must also pay all applicable Transportation Related System Development Charges with future building permits, provide dedications of land for all new and upgraded local and arterial public streets, and provide new road pavement, curbs, gutters, sidewalks and street trees pursuant to OCMC 12.04 at the time of development.

Analysis of the adequacy of the public facilities to serve the site without diminishing service or increasing costs to existing customers is required prior to any subsequent development proposal of the annexed property. Future development of the annexed properties will be required to construct or pay fee-in-lieu of construction of all necessary city public facilities to serve the subject site, as well as paying applicable System Development Charges.

Policy 14.3.1

Maximize new public facilities and services by encouraging new development within the Urban Growth Boundary at maximum densities allowed by the Comprehensive Plan.
Finding: The proposal is consistent with this requirement. The subject property is designated Low Density Residential by the Oregon City Comprehensive Plan. The proposed R-10 zoning implements the Low Density Residential designation applicable to this property. The R-8 and R-6 zones also implement the Low Density Residential plan designation, but the table in OCMC 17.68.025.A. requires the application of R-10 in LDR areas upon annexation. A zone change to a higher density may be included in a future application for development of the property. Any future development of the property will be reviewed for compliance with maximum and minimum density standards at the time of application for subdivision approval.

Policy 14.3.2
Ensure that the extension of new services does not diminish the delivery of those same services to existing areas and residents in the city.
Finding: The proposal is consistent with this requirement. As noted previously, the city has updated its water, sewer and transportation master plans to plan for extension of services to the annexation area. The updated public facility master plans take into account the demand for services from both existing and planned development in the city. Public facility plans identify future capital improvement projects intended to ensure that public services can be maintained and extended as needed to meet demand. The proposed annexation does not affect the ability of the city to deliver services to existing areas, at existing densities, and residents in the city.

Further analysis of the adequacy of the public facilities to serve the site without diminishing service to existing customers is required prior to any subsequent development proposal of the annexed property, including any zone changes, land divisions, or other development approvals required. Future development of the annexed properties will be required to construct or pay fee-in-lieu of construction of all necessary city public facilities to serve the subject site, as well as paying applicable System Development Charges.

Policy 14.3.3
Oppose the formation of new urban services districts and oppose the formation of new utility districts that may conflict with efficient delivery of city utilities within the Urban Growth Boundary.
Finding: Not applicable. The proposed annexation does not involve formation of any new urban service or utility districts.

Policy 14.3.4
Ensure the cost of providing new public services and improvements to existing public services resulting from new development are borne by the entity responsible for the new development to the maximum extent allowed under state law for Systems Development Charges.
Finding: The proposal is consistent with this requirement. All utilities that will be provided to serve the future development of this site will be the responsibility of the developer. The future homes to be built on this property will pay required Systems Development Charges at the time of application for building permits. As noted previously, the city's water, sewer and transportation master plans have been updated to plan for extension of those services to the proposed annexation area. Capital improvement projects needed to provide those services are identified in the master plans and the city's system development charges (SDCs) have been updated accordingly. The updated SDCs will ensure that new development in the annexation area will fund those public improvements to the maximum extent allowed under state law.

Goal 14.4 Annexation of Lands to the City

Annex lands to the city through a process that considers the effects on public services and the benefits to the city as a whole and ensures that development within the annexed area is consistent with the Oregon City Comprehensive Plan, City ordinances, and the City Charter.
Finding: The proposal is consistent with this requirement. This annexation application will be reviewed through a process that considers the effects on public services and benefits to the city. Consistency with the Comprehensive Plan and applicable city ordinances is required for annexation approval and has been demonstrated in this narrative and in the supporting materials provided with the application package.

The applicant revised the original application to include a zone change, and has provided additional narrative to adequately demonstrate that the impacts due to the development that would be authorized by approval of the zone change can be mitigated in accordance with the City's comprehensive plan. Further, as no additional development is proposed as part of this annexation and rezoning application, the proposal annexation will have no greater effect on public services that it currently does with the lands located outside city boundaries but within the UGB. By approving this annexation and zoning, the city takes the next step in urbanizing this area, realizing the objectives identified in the Comprehensive Plan. Several significant reviews steps remain to be taken by both the City and the applicant in order to authorize development of the property, further ensuring consistency with this Goal.

Policy 14.4.1 *Promote compact urban form and support efficient delivery of public services by ensuring that lands to be annexed are within the City's Urban Growth Boundary, and contiguous with the city limits. Do not consider long linear extensions, such as cherry stems and flag lots, to be contiguous with the city limits.*
Finding: The proposal is consistent with this requirement. This application supports this policy by proposing annexation of property that is within the city's urban growth boundary and is contiguous with the existing city limits. The subject property is entirely within the City's Urban Growth Boundary and is contiguous with the existing city limits along its entire western border and its frontage on Holcomb Blvd. This application does not propose long linear extensions such as cherry stems or flag lots.

Policy 14.4.2 *Include an assessment of the fiscal impacts of providing public services to unincorporated areas upon annexation, including the costs and benefits to the city as a whole as a requirement for concept plans.*
Finding: The proposal is consistent with this requirement. This policy contains a requirement that the city include a fiscal impact assessment as part of the preparation of concept plans. This policy, then, is not directly applicable to this annexation request, because this annexation area is not part of a concept plan. In any event, the proposed annexation will have no fiscal impacts upon the cost of providing public services because no development will be allowed until such time as all Transportation Planning Rule requirements can be met as discussed later in this report, and a development application is conditionally approved.

The City's various public facilities plans described earlier in this report, and the 2013 Transportation System Plan anticipate the future development of the subject property at Low Density Residential densities and each of the those plans provides an analysis of the costs of providing adequate levels of service in the Holcomb Boulevard area. The future development of this property will bear these costs by providing on-site infrastructure, as well as off-site storm drainage improvements, at the cost of the developer. Each future home will be assessed appropriate System Development Charges to cover the proportionate impact of the future development of this site.

Policy 14.4.3 *Evaluate and in some instances require that parcels adjacent to proposed annexations be included to:*

- *avoid creating unincorporated islands within the city;*
- *enable public services to be efficiently and cost-effectively extended to the entire area; or*
- *implement a concept plan or sub-area master plan that has been approved by the Planning and City Commissions.*

Finding: The proposal is consistent with this requirement. The proposed annexation will not create an unincorporated island within the city so this policy recommendation is met. The Winston Hills subdivision in unincorporated Clackamas County that abuts the subject property along its eastern border will only remain connected to the unincorporated area by a 20-foot wide strip of land, as shown on the map below.

The applicant points out that while the Winston Hills subdivision will only be connected to the unincorporated area by a strip of land, this will have no impact upon the efficiency of provision of public facilities and services.

Sewer, water and storm drainage all are provided from either Holcomb Blvd. or to the northwest.

In the future, at such time as the Winston Hills neighborhood wishes to annex to the City, the future development of the subject property will aid in providing needed services and facility connections. The annexation of the Winston Hills neighborhood at this time is not needed in order to implement a sub-area master plan.

Policy 14.4.4
Expedite the annexation of property as provided by state law in order to provide sewer service to adjacent unincorporated properties when a public health hazard is created by a failing septic tank sewage system.
Finding: Not applicable. The subject property is not subject to a public health hazard associated with a failing septic system.

Goal 2.4 Neighborhood Livability
Policy 2.4.5
Ensure a process is developed to prevent barriers in the development of neighborhood schools, senior and childcare facilities, parks, and other uses that serve the needs of the immediate area and the residents of Oregon City.
Finding: The proposal is consistent with this requirement. Development of the subject site will be subject to adopted public facilities plans. Development of this Low Density Residential property will require payment of construction excise taxes for school development. The eventual

development of this area will not present a barrier to the development of any of the facilities identified in this policy.

Goal 2.6 Industrial Land Development
Policy 2.6.3
Protect the city's supply of undeveloped and underdeveloped land zoned for industrial uses by limiting non-industrial community uses, such as schools, parks, and churches on such properties and by limiting larger commercial uses within those areas.
Finding: Not applicable. Development of the subject site will be subject to adopted public facilities plans. Development of this Low Density Residential property will require payment of construction excise taxes for school development. The eventual development of this area will improve the tax base and will not limit the availability of industrial land supply.

The following excerpt is from the Oregon City Comprehensive Plan Section 11 - Public Facilities Education, on Page. 83:

> *K-12. The public education system in Oregon City consists of elementary schools, middle schools, and one high school. The Oregon City School District projects enrollment based on demographic trends and a ratio of 0.94 school children per residential household. A rolling five-year projection is done every fall to ensure that the facilities will accommodate growth. The preferred number of students per classroom is 25, with the maximum considered to be 30.*
>
> *To the extent possible, future school facilities should be located in, or at least adjacent to, residential areas to reduce traffic impact, maintain convenience for students, provide a focus for the neighborhoods, and promote energy conservation. Neighborhood schools and their athletic facilities should also serve as community centers by being available for community meetings and events in the evenings and on weekends.*

Finding: The proposal is consistent with this requirement. No school sites have been identified for the subject property at this time. The site is close to Holcomb Elementary School and would eventually be connected to the school site through a trail system and sidewalk improvements.

The City continues to coordinate with the school district to review new development and development of this Low Density Residential property will require payment of construction excise taxes for school development. The eventual development of this area close to an existing school could help to achieve many of the benefits discussed above.

As discussed on Page 118 of the Comprehensive Plan under *Partnerships with Other Governments.*

> *The City does not provide all of the urban services within the city limits. Clackamas County, the Oregon City School District, the Oregon Department of Transportation, the TriCities Sewer District, Clackamas Community College, and many other agencies also provide necessary services to residents and employees. In order to efficiently and effectively use the public dollars available to all of these different agencies, the City should be proactive in forming excellent working relationships with other agencies to address urban service issues.*

Urbanization
Policy 14.5.2

Coordinate public facilities, services and land-use planning through intergovernmental agreements with the school district, Clackamas Community College, Clackamas County Fire District #1, Tri-Cities Services District and other public entities as appropriate.
Finding: The proposal is consistent with this requirement. The City continues to coordinate with the school district to conduct long range planning within the UGB through the adoption of concept plans and other planning efforts, and to review current development proposals. Development of this Low Density Residential property will require payment of construction excise taxes for school development. At this time, the school district has not indicated that an intergovernmental agreement is necessary to assure adequacy of school facilities to serve the proposed annexation property, which is already within the school district.

Compliance with OCMC 14.04.060 – Annexation Factors – Continued

3. Adequacy and availability of public facilities and services to service potential development;
Finding: The proposal is consistent with this requirement. The adequacy and availability of public facilities and services to service the potential development of the property was discussed earlier under the applicant's statements section.

4. Compliance with applicable sections of ORS Ch. 222, and Metro Code Section 3.09;
Finding: The proposal is consistent with this requirement. See findings earlier in this report for Metro 3.09. ORS 222 requires the proposed annexation property be contiguous with the city and provides several options for annexing land into a city. As noted in 14.04.050(E)(1), this annexation relies on ORS 222.125, annexation by consent of all land owners and a majority of electors. The requirements of ORS 222, then, are met. Metro Section 3.09 is addressed separately in earlier in this report.

Compliance with OCMC 14.04.060 – Annexation Factors – Continued

5. Natural hazards identified by the city, such as wetlands, floodplains and steep slopes;
Finding: The proposal is consistent with this requirement. The City Comprehensive Plan identifies water resource and steep slope areas that will require further investigation at time of development to demonstrate compliance with Oregon City's overlay district zoning; OCMC Chapter 17.49 regulating water resource and habitat protection and OCMC Chapter 17.44 regulating development in and near geologic hazards and steep slopes. Future development of the site will be required to meet all applicable city, state and federal requirements, which will be addressed through the land development processes (site plan and design review, land divisions, etc.). As no development is proposed as part of this annexation application, this annexation will have no impact on identified natural hazards to any greater degree than development that is currently permitted.

A title 3 wetland is indicated on property to the north of the site aligned with the property boundary and city limit/UGB. The roadside ditch along Holcomb Boulevard is also indicated as a Title 13 habitat resource, although the integrity and values of the ditch as a functional habitat area in unknown. Nonetheless, Oregon City code Chapter 17.49 protects inventoried Title 3 water resources and their associated corridors through the application of a vegetated corridor buffer of 15' to 50'. The 50' wetland buffer extends onto the property on the north side. The future application for subdivision of the property must provide a current delineation and report of these Title 3 and 13 resources, evaluating their condition and determining whether any water and habitat

resources may be affected by development. If the resources and their functions are still present, and impacts are unavoidable, then the application must provide proportional and appropriate mitigation under the mitigation standards of OCMC 17.49.

Oregon City's NROD standards are in substantial compliance with Metro Title 3 and Title 13 and Statewide Goal 5.

6. Any significant adverse effects on specially designated open space, scenic, historic or natural resource areas by urbanization of the subject property at time of annexation;

Finding: The proposal is consistent with this requirement. The above mentioned resources are Goal 5 resources that were are addressed in detail in the Natural Resource and cultural and historic inventories as part of the existing conditions analysis required during the last Comprehensive Plan update. OCMC 17.49 code requires that further on-site analysis be conducted to determine the current extent of any protected resources which initially was done with the comprehensive plan. More detailed, site specific delineations of the resources and the required associated vegetated corridors next to any wetlands or streams is required prior to development, along with impact analysis and mitigation for impacts. These existing restrictions will adequately protect natural resource areas and to the extent necessary serve as a natural resource protection plan.

The only specially designated open space, scenic, historic or natural resource indicated in the City's Comprehensive Plan that is applicable to the subject area is the alignment of the Oregon Trail-Barlow Road Historic Corridor across a portion of the property. This will require compliance with OCMC 17.40.060-H by the future development plan. This code section requires that developers dedicate a visual corridor easement for the alignment of the 1993 Barlow Road Historic Corridor inventory on redeveloped land. Proposals to re-align the easement away from the adopted 1993 corridor must be approved by the Historic Review Board, whiles proposals that meet the following sections of OCMC 17.40.060-H may be approved by Planning Staff:

Within the Oregon Trail-Barlow Road historic corridor:

1. *A minimum of a thirty-foot wide-open visual corridor shall be maintained and shall follow the actual route of the Oregon Trail, if known. If the actual route is unknown, the open visual corridor shall connect within the open visual corridor on adjacent property.*
2. *No new building or sign construction shall be permitted within required open visual corridors. Landscaping, parking, streets, driveways are permitted within required open visual corridors.*

The Barlow Road corridor easement is either recorded on the final plat of any land division and/or as a deed restriction that runs with the land for any new lot affected by the easement. This requirement has been applied for several recently approved subdivisions, including Barlow Place (TP 13-05 / HR 13-05), and Sunnybrook II (ZC 14-01 / TP 14-01), and Abernethy Landing (TP 16-01).

No additional historic or cultural resources have been identified at this that are not regulated under existing city codes.

7. Lack of any significant adverse effects on the economic, social and physical environment of the community by the overall impact of the annexation.

Finding: The proposal is consistent with this requirement. Because there will be no development on this site until such time as the criteria of Title 12 can be met and a future development application is submitted for approval, there will be no immediate impact upon the economic, social and physical environment of the community by the overall impact of the annexation. At such time as the site is developed, it will be in a manner consistent with the planned Low Density Residential designation for the property. This land use is consistent with the surrounding land use pattern. Required public utilities and services are available or will be made available concurrently with the development of the site. The site has no significant development constraints and is not designated for protection as open space. As such, the future development of the property will not have any significant impact upon the economic, social and physical environment of the community.

Staff interprets the "community" as including the City of Oregon City and the lands within its urban service area. The city will obtain a small increase in property tax revenues from adding assessed value to its tax roll as a result of annexing the territory. The city will also obtain land use jurisdiction over the territory. Finally, it will have service responsibilities including fire, police, and general administration. The increases in service responsibilities to the area that result from the annexation will be insignificant.

The proposed annexation area has not been subdivided or partitioned and such land division must occur before development at any density other than FU-10 can be approved. Further, conditions of approval prohibit any R-10 authorized development until it will satisfy the applicable performance standards. As a result, any impacts on the community resulting from land division or development permits will be a direct consequence of , subdivision and development permit approval sometime in the future and are not the result of this annexation. Before any urban development can occur, the applicant must show compliance with the applicable transportation performance standards, and the territory must also be annexed to the Tri-City Service District.

COMPLIANCE WITH APPLICABLE PROVISIONS OF ORS 222

Finding: The proposal is consistent with this requirement. ORS 222 requires the proposed annexation property be contiguous with the city and provides several options for annexing land into a city. As noted in 14.04.050(E)(1), this annexation relies on ORS 222.125, annexation by consent of all land owners and a majority of electors. The requirements of ORS 222, then, are met.

TRANSPORTATION PLANNING RULE (OAR 660-012-0060)

Finding: Please see findings below under Zone Change Criteria.

The city requires a transportation discussion to determine whether or not the proposed annexation complies with the Transportation Planning Rule (TPR). The primary "test" of the TPR is to determine if an amendment to a functional plan, acknowledged comprehensive plan, or a land use regulation will significantly affect an existing or planned transportation facility.

The applicant has revised the original application, which did not request rezoning, to include a rezoning request, and subsequently the applicant must address the relevant portions of the TPR.

II B. ZONE CHANGE CRITERIA

1. CONCURRENT ZONING MAP AMENDMENT FROM (FU-10) TO (R-10).

The applicant revised the original application to include a zone change from FU-10 to R-10, and has provided narrative responses indicating that this zone change is automatic pursuant to the code.

The Site has an acknowledged Oregon City Comprehensive Plan map designation of Low Density Residential, (see Appendix A, "Oregon City's Comprehensive Plan Land Use Map" in the Oregon City Comprehensive Plan). Oregon City Municipal Code ("OCMC") 17.68.025.A. provides that "notwithstanding any other section of this code", a concurrent zoning map application under OCMC Chapter 17.50 is required. Further, this section requires that the zoning map designation correlate to the corresponding Comprehensive Plan map designation for the site as shown in OCMC 17.68.025.A. The applicant asserts that this section is mandatory; it provides that "the property *shall* be rezoned upon annexation to the corresponding zoning designation as follows..."(emphasis added). In other words, there is no discretion to be applied to the zoning map amendment and not only is a concurrent zoning map amendment required, the outcome is automatic based on the acknowledged section of the Oregon City Municipal Code.

Please note that neither the process of annexation or zoning is not considered "Development" under the City's zoning code definition.[2]

The applicant further asserts that compliance with OCMC Chapter 17.50 requires a zoning map amendment application but does not require compliance with the discretionary zoning map amendment application in OCMC 17.68.020. See also 17.68.025B.

For this reason, the applicant did not respond to the criteria for a zone change which are typically applied when a development seeks a discretionary zone change decision, which are provided below:

17.68.020 - Criteria.
The criteria for a zone change are set forth as follows:
A. The proposal shall be consistent with the goals and policies of the comprehensive plan.

B. That public facilities and services (water, sewer, storm drainage, transportation, schools, police and fire protection) are presently capable of supporting the uses allowed by the zone, or can be made available prior to issuing a certificate of occupancy. Service shall be sufficient to support the range of uses and development allowed by the zone.

C. The land uses authorized by the proposal are consistent with the existing or planned function, capacity and level of service of the transportation system serving the proposed zoning district.

D. Statewide planning goals shall be addressed if the comprehensive plan does not contain specific policies or provisions which control the amendment.

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[2] OCMC 17.04.300 - *Development.* "Development" means a building or grading operation, making a material change in the use or appearance of a structure or land, dividing land into two or more parcels, partitioning or subdividing of land as provided in ORS 92.010 to 92.285 or the creation or termination of an access right.

The applicant requests that the Planning Commission find that the application satisfies the approval criteria in OCMC 17.68.025.A. and B. and the zoning map amendment be approved.

Staff agrees that OCMC 17.68.025.A requires a concurrent zone change when the lands subject to annexation are designated by an acknowledged City Comprehensive Plan. Use of the term "shall" suggests that re-zoning is mandatory and cannot be subject to the highly discretionary criteria contained within OCMC 17.68.020. Such an approach makes sense because R-10 development was fully contemplated and planned for in the City's Comprehensive Plan and utility master plans. This makes the act of re-zoning largely ministerial. Although staff believes that these criteria are not applicable, as a practical matter, staff notes that they mirror the annexation factors and as a result, would be satisfied, with the exception of the transportation impacts which are dealt with through a condition of approval.

17.06.030 - Zoning of annexed areas.
All lands within the urban growth boundary of Oregon City have been classified according to the appropriate city land use designation as noted on the comprehensive plan map (per the city/county urban growth management area agreement). The planning department shall complete a review of the final zoning classification within sixty days after annexation. The zoning classification shall reflect the city land use classification as illustrated in Table 17.06.

Table 17.06.030

CITY LAND USE CLASSIFICATIONS	
Residential Plan Classification	*City Zone*
Low-Density Residential	*R-10, R-8, R-6*
Medium-Density Residential	*R-3.5, R-5*
High-Density Residential	*R-2*
Commercial Plan Classification	*City Zone*
General Commercial	*C*
Mixed-Use Downtown	*MUD, WFDD*
Mixed-Use Corridor	*MUC I, MUC 2, NC, HC*
Mixed-Use Employment	*MUE*
Industrial Plan Classification	*City Zone*
Industrial	*CI, GI*

In those cases where only a single city zoning designation corresponds to the comprehensive plan designation and thus the rezoning decision does not require the exercise of legal or policy judgment on the part of the community development director, Chapter 17.68 shall control. The decision in these cases shall be a ministerial decision of the community development director made without notice or any opportunity for a hearing.
A. A public hearing shall be held by both the planning commission and city commission in accordance with the procedures outlined in Chapter 17.68 (except for the provisions of Section 17.68.025) for those instances in which more than one zoning designation carries out a city plan classification.

Finding: The proposal is consistent with this requirement.
The applicant asserts that compliance with OCMC Chapter 17.50 requires a zoning map amendment application but does not require compliance with the discretionary zoning map amendment application in OCMC 17.68.020. Since the applicant has requested the lowest density zone applicable to the LR – Low Density Residential land use category, R-10, the rezoning decision does not require the exercise of legal or policy judgment on the part of the community development director, and Chapter 17.68 controls.

Plan Designation	*Zone*
Low Density Residential	*R-10 Single Family Dwelling*
Medium Density Residential	*R-5 Single Family Dwelling*
High Density Residential	*R-2 Multi-Family Dwelling*

Based on the additional analysis provided by the applicant as documented in this report regarding impacts to the public transportation system, sewer, water and stormwater, and police and emergency services, staff supports the default zone change to R-10 with the findings and conditions attached to the staff report. Note that with the condition of approval proposed by the applicant, no development beyond that permitted under the County's FU-10 zoning may occur until compliance with specific transportation system requirements met, as discussed below.

2. TRANSPORTATION PLANNING RULE ("TPR") COMPLIANCE.

OAR 660-012-0060(1) and (2) requires land use regulation amendments, including amendments to zoning maps, to determine if the amendment will have a "significant affect" on transportation facilities and, if so, mitigation is required.

The required transportation improvements identified by the City's 2013 Transportation System Plan to serve the area were discussed earlier in this report. Additionally the applicant submitted a Transportation Impact Analysis (TIA) on February 15, 2017 to support the requested Zone Change to R-10. The TIA was prepared by Mike Ard, P.E. of Lancaster Engineering, and reviewed by the City's Transportation Consultant, John Replinger, P.E. The TIA was prepared in consultation with the City and ODOT engineering staff and analyzed three intersections that would be impacted by the eventual development of the annexation property with 121 homes under R-10 zoning.

Because the proposed annexation also involves rezoning of the property to R-10, a TPR analysis is also included. The analysis is predicated on the development of the land at a density that would allow 121 additional single-family dwellings. The applicant's engineer states that the proposal does not change the functional classification of any existing or planned transportation facility and does not alter the standards for implementing the functional classification system. As discussed in #6, above, the development of the Serres Farm property is predicted to degrade the performance of the transportation system such that it would not meet applicable performance standards. Two specific intersections were identified: Highway 213/Redland Road and Redland Road/Holcomb Boulevard/Abernethy Road. Further analysis and actions will be required before development can undertaken.

Mr. Replinger's conclusion regarding the TIA and TPR analysis follows:

I find that the TIS provides an adequate basis upon which to assess the impacts of the proposed annexation and rezoning. I agree that the proposal does not cause the need for change in the functional classification of any existing or planned facility. I concur with the engineer's analysis concluding that key intersections will fail to meet adopted performance standards at the intersections of Highway 213/Redland Road and Redland Road/Holcomb Boulevard/Abernethy Road.

Since development is not proposed at this time, I remind the applicant that at such time as a development is proposed, a transportation analysis will need to be prepared that addresses the requirements outlined in the city's Guidelines for Transportation Impact Analyses.

With regard to the proposed annexation and zone change, I recommend that as a condition of approval the following be included:

No development, except that permitted under the County's Future Urban FU-10 zoning designation, in effect as of the date of this application's submittal, shall be allowed until the following occurs and the Applicant demonstrates compliance with these requirements:

a. Highway 213 at Redland Road intersection (an Oregon Highway intersection) is forecasted to fall below adopted performance standards prior to year 2035. As a result, a new Refinement Plan, including elements such as financially constrained projects and alternative mobility standards, and amendments to OCMC Chapter 12.04 implementing the new Refinement Plan, shall be adopted and acknowledged.

b. Redland Road at Holcomb Boulevard/Abernethy Road (a non-Oregon Highway intersection) is forecasted to fall below adopted performance standards prior to year 2035. As a result, the City must do one of the following:

(1) Adopt amendments to the City's Transportation System Plan and OCMC Chapter 12.04 to include projects that satisfy the then-applicable performance standards and these standards must be acknowledged; or

(2) Condition the approval of a land division application that satisfies then-applicable OCMC Chapter 12.04 by including proportional mitigation of the application's impacts on that intersection, or such other mitigation measure(s) as may be approved which assure(s) that the intersection will either meet, or perform no worse than, the then-applicable performance standards.

Planning staff concurs with Mr. Replinger and recommends that the annexation and zoning decision, if approved, include the conditions included with the findings attached to this report.

III. STAFF RECOMMENDATION

Based on the study and the Proposed Findings and Reasons for Decision for this annexation, the staff recommends that the Planning Commission:

Make a recommendation on Proposal No. AN-16-0004 / ZC-16-0001 to the City Commission regarding how the proposal has or has not complied with the factors set forth in Section 14.04.060. Staff has prepared draft Findings and stands ready to adjust them as needed.

If the Planning Commission sends forward a positive recommendation, then the staff further recommends that the Planning Commission forward the following proposed findings and reasons for decision for adoption by the City Commission.

IV. PROPOSED FINDINGS AND REASONS FOR DECISION

Based on the Findings provided above, the Commission determines:

1. The Metro Code calls for consistency of the annexation with the Regional Framework Plan or any functional plan. The Commission concludes the annexation is not inconsistent with this criterion because there were no directly applicable criteria for boundary changes found in the Regional Framework Plan, the Urban Growth Management Function Plan, or the Regional Transportation Plan.

2. Metro Code 3.09.050(d)(1) requires the Commission's findings to address consistency with applicable provisions of urban service agreements or annexation plans adopted pursuant to ORS 195. As noted in the Findings, there are no such plans or agreements in place. Therefore the Commission finds that there are no inconsistencies between these plans/agreements and this annexation.

3. The Metro Code, at 3.09.050(d)(3), requires the City's decision to be consistent with any "directly applicable standards or criteria for boundary changes contained in comprehensive land use plans and public facilities plans." The County Plan also states that conversion of future urban lands to immediate urban lands "Provide for an orderly and efficient transition to urban land use" and "encourage development in areas where adequate public services and facilities can be provided in an orderly and economic way." The applicant has demonstrated that the City can provide all necessary urban services. Nothing in the County Plan speaks directly to criteria for annexation. Therefore the Commission finds this proposal is consistent with the applicable plan as required Metro Code 3.09.050 (d)(3).

4. The Commission concludes that the annexation is consistent with the City Comprehensive Plan that calls for a full range of urban services to be available to accommodate new development as noted in the Findings above. The City operates and provides a full range of urban services. Specifically with regard to water and sewer service, the City has both of these services available to serve some of the area from existing improvements in Holcomb Boulevard.

5. Water service is available in large water mains in Holcomb Boulevard; the existing homes will continue to be serviced by Clackamas River Water (CRW) pursuant to the existing HOPP Intergovernmental Agreement.

6. With regard to storm drainage, the City has the service available in the form of regulations to protect and control stormwater management. The specifics of applying these will be a part of the development review process.

7. The Commission notes that the Metro Code also calls for consistency of the annexation with urban planning area agreements. As stated in the Findings, the Oregon City-Clackamas County Urban Growth Management Agreement specifically provides for annexations by the City.

8. Metro Code 3.09.050(d)(5) states that another criterion to be addressed is "Whether the proposed change will promote or not interfere with the timely, orderly, and economic provision of public facilities and services." Based on the evidence in the Findings, the Commission concludes that the annexation will not interfere with the timely, orderly, and economic provision of services.

9. The Oregon City Code Chapters 14 and 17 contains provisions on annexation processing. Section 6 of the ordinance requires that the City Commission consider seven factors if they are relevant. These factors are covered in the Findings and on balance the Commission believes they are adequately addressed to justify approval of this annexation.

10. The City Commission concurs with Tri-City Service District's annexation of the subject property in the enacting City ordinance.

11. The Commission determines that the property should be withdrawn from the Clackamas County Service District for Enhanced Law Enforcement as allowed by statute since the City will provide police services upon annexation.

12. The Commission determines that the property should not be withdrawn from the Clackamas Fire District #1 as allowed by statute.

13. The Commission determines that the property should be not be withdrawn from the Clackamas River Water District at this time and remain in the District pursuant to the existing HOPP IGA with CRW.

14. In accordance with City, County and State transportation requirements, no development, except that permitted under the County's Future Urban FU-10 zoning designation, in effect as of the date of this application's submittal, shall be allowed until the following occurs and the Applicant demonstrates compliance with these requirements:

    a. Highway 213 at Redland Road intersection (an Oregon Highway intersection) is forecasted to fall below adopted performance standards prior to year 2035. As a result, a new Refinement Plan, including elements such as financially constrained projects and alternative mobility standards, and amendments to OCMC Chapter 12.04 implementing the new Refinement Plan, shall be adopted and acknowledged.

    b. Redland Road at Holcomb Boulevard/Abernethy Road (a non-Oregon Highway intersection) is forecasted to fall below adopted performance standards prior to year 2035. As a result, the City must do one of the following:

(1) Adopt amendments to the City's Transportation System Plan and OCMC Chapter 12.04 to include projects that satisfy the then-applicable performance standards and these standards must be acknowledged; or

(2) Condition the approval of a land division application that satisfies then-applicable OCMC Chapter 12.04 by including proportional mitigation of the application's impacts on that intersection, or such other mitigation measure(s) as may be approved which assure(s) that the intersection will either meet, or perform no worse than, the then-applicable performance standards.

SERRES FARM ANNEXATION
TRAFFIC IMPACT STUDY

OREGON CITY, OREGON

DATE:
February 13, 2017

PREPARED FOR:
Mark Handris

PREPARED BY:
Michael Ard, PE
Daniel Stumpf, EI

2/15/17

REGISTERED PROFESSIONAL ENGINEER
54983PE
OREGON
JULY 10, 2002
MICHAEL T. ARD

EXPIRES: 12/31/17

LANCASTER ENGINEERING

321 SW 4th Ave., Suite 400 | Portland, OR 97204 | 503.248.0313 | lancasterengineering.com

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EXECUTIVE SUMMARY

1. A 35.65-acre property located on the north side of Holcomb Boulevard between S Oak Tree Terrace and S Winston Drive is proposed for annexation into the City of Oregon City. Upon annexation, the property will be rezoned to R-10 zoning in conformance with the city's Comprehensive Plan.

2. Based on a comparison of the allowed uses under the existing and proposed zoning of the subject property, the proposed annexation could result in up to 91 additional trips during the morning peak hour, with 22 entering and 69 exiting the site. During the evening peak hour121 additional site trips are projected, with 76 entering and 45 exiting the site.

3. Based on the detailed review of crash history at the study area intersections, the intersections of Highway 213 at Redland Road and Redland Road at Holcomb Boulevard/Abernethy Road are currently operating acceptably with respect to safety.

4. The intersection of Highway 213 at Beavercreek Road was found to be among the top ten percent of high-crash intersections in the State of Oregon, with the vast majority of the reported crashes being rear-end collisions. One potential safety mitigation would be installing flashing warning signs that alert drivers to the potential for stopped queues ahead. These warning signs are most appropriate for the high-speed approaches on Highway 213, and particularly the southbound approach which has uninterrupted flow for 2.5 miles. This project is already included as a "likely to be funded" project for near-term implementation in the city's Transportation System Plan. Since the proposed annexation and zone change will not significantly impact either operation or safety of this intersection, no specific mitigation is recommended in conjunction with the currently-proposed land use action.

5. Based on the operational analysis, the study area intersections are not projected to meet the relevant operational standards of Oregon City and ODOT under year 2035 traffic conditions either with or without the addition of site trips from the proposed annexation and zone. Although the intersection of Highway 213 at Beavercreek Road is not projected to experience a change in operation as a result of the proposed annexation and zone change, the intersections of Highway 213 at Redland Road and Redland Road at Holcomb Boulevard are projected to experience further degradation in performance upon development within the subject property. Potential mitigations include the addition of an eastbound right-turn lane on the Abernethy Road approach to Redland Road and providing three eastbound left-turn lanes from Redland Road onto Highway 213.

6. Based on the Transportation Planning Rule analysis, the city may find that the proposed annexation and zone change will not significantly effect an existing or planned transportation facility since the city's acknowledged Transportation System Plan already accounted for development under the proposed zoning. Alternatively, conditions of development or a development agreement may be implemented to ensure that no development can occur except as permitted under the existing zoning until refinement plans for the impacted intersections are prepared to address future capacity concerns, or proportionate mitigation is provided concurrent with development to offset the actual traffic impacts of the development.

PROJECT DESCRIPTION

INTRODUCTION

A 35.65-acre property located on the north side of Holcomb Boulevard between S Oak Tree Terrace and S Winston Drive is proposed for annexation into the City of Oregon City. The proposed annexation will also result in a zone change from the existing Clackamas County zoning to R-10 zoning on conformance with Oregon City's Comprehensive Plan.

The purpose of this study is to assess the potential impacts of the proposed annexation and address the transportation analysis requirements of Oregon City, the Oregon Department of Transportation (ODOT), and Oregon's Transportation Planning Rule. The report will identify the potential net increase in traffic and examine the transportation impacts of the added trips at the planning horizon. The report will include level of service calculations and volume-to-capacity calculations for existing conditions as well as year 2035 traffic conditions both with and without the proposed annexation. The analysis will also include a detailed examination of crash history at the study intersections.

Detailed information on traffic counts, crash data, and level of service calculations are included in the appendix to this report.

LOCATION DESCRIPTION

The subject property is located on the north side of Holcomb Boulevard east of S Oak Tree Terrace and west of S Winston Drive. It is also located immediately east of the Holcomb Elementary School site. The subject property has frontage along Holcomb Boulevard, which will ultimately provide access to the future development within the site.

Based on discussions with Oregon City and ODOT staff, three intersections were identified as requiring analysis. These consisted of Redland Road at Holcomb Boulevard/Abernethy Road, Highway 213 at Redland Road, and Highway 213 at Beavercreek Road. These intersections were examined during the morning and evening peak hours.

It should be noted that the need for analysis of other intersections was discussed with both Oregon City and ODOT staff and determined not to be necessary. In particular, the intersection of Highway 213 at Washington Street/Clackamas River Drive and Highway 213 at I-205 was determined not to be critical for analysis, since it was recently improved and has significant residual capacity. Similarly, the intersections of Highway 213 at the I-205 ramps were determined not to require analysis. Other intersections such as I-205 at Highway 99E will experience traffic increases far below the levels at which Oregon City and ODOT would require analysis to determine whether there is a significant effect from the proposed annexation and zone change (20 peak-hour trips and 400 daily trips, respectively).

Highway 213 is classified by ODOT as a District Highway. Its cross-section varies between four and six through lanes between I-205 and Molalla Avenue. The posted speed varies between 35 mph and

55 mph and additional left and right turn lanes are provided at intersections along this segment of Highway 213. Sidewalks are partially provided along this roadway south of Beavercreek Road and north of Clackamas River Drive. Bicycle facilities are provided along both sides of this roadway.

Redland Road is classified by Oregon City as a Minor Arterial. The segment of Redland Road between Highway 213 and Abernethy Road/Holcomb Road has a roadway cross-section of five lanes, which consists of through, left-turn, and right-turn lanes. South of Holcomb Road the roadway consists of one through lane in each direction. It has a posted speed of 45 mph. Sidewalks extend south of the intersection of Redland Road at Abernethy Road for approximately 450 feet. Bike lanes are available along both sides of Redland Road.

Abernethy Road is classified by Oregon City as a Minor Arterial. This roadway has one through lane in each direction and a shared left turning median lane with a posted speed of 35 mph. Sidewalks are provided on the southern side of the roadway and partially on the northern side. Bike lanes are in place along both sides of the roadway near the vicinity of Redland Road.

Holcomb Boulevard is classified by Oregon City as a Minor Arterial. The roadway has one through lane in each direction with a posted speed of 40 mph. Partial sidewalks and bike lanes are in place on both sides of the roadway.

Beavercreek Road is classified by Oregon City as a Major Arterial east of Molalla Avenue. It has two through lanes in each direction, with additional left-turn and right-turn lanes provided at intersecting roads. The posted speed is 35 mph. Sidewalks and bike lanes are provided on both sides of the roadway.

INTERSECTION DESCRIPTIONS

The intersection of Highway 213 at Redland Road is a T-intersection controlled by a traffic signal. The eastbound approach has two left-turn lanes and one right-turn lane. The southbound approach has two through lanes and one right-turn lane. The northbound approach has two through lanes and one left-turn lane operating with protected signal phasing. The eastbound and northbound approaches have marked crosswalks with pedestrian signals in place.

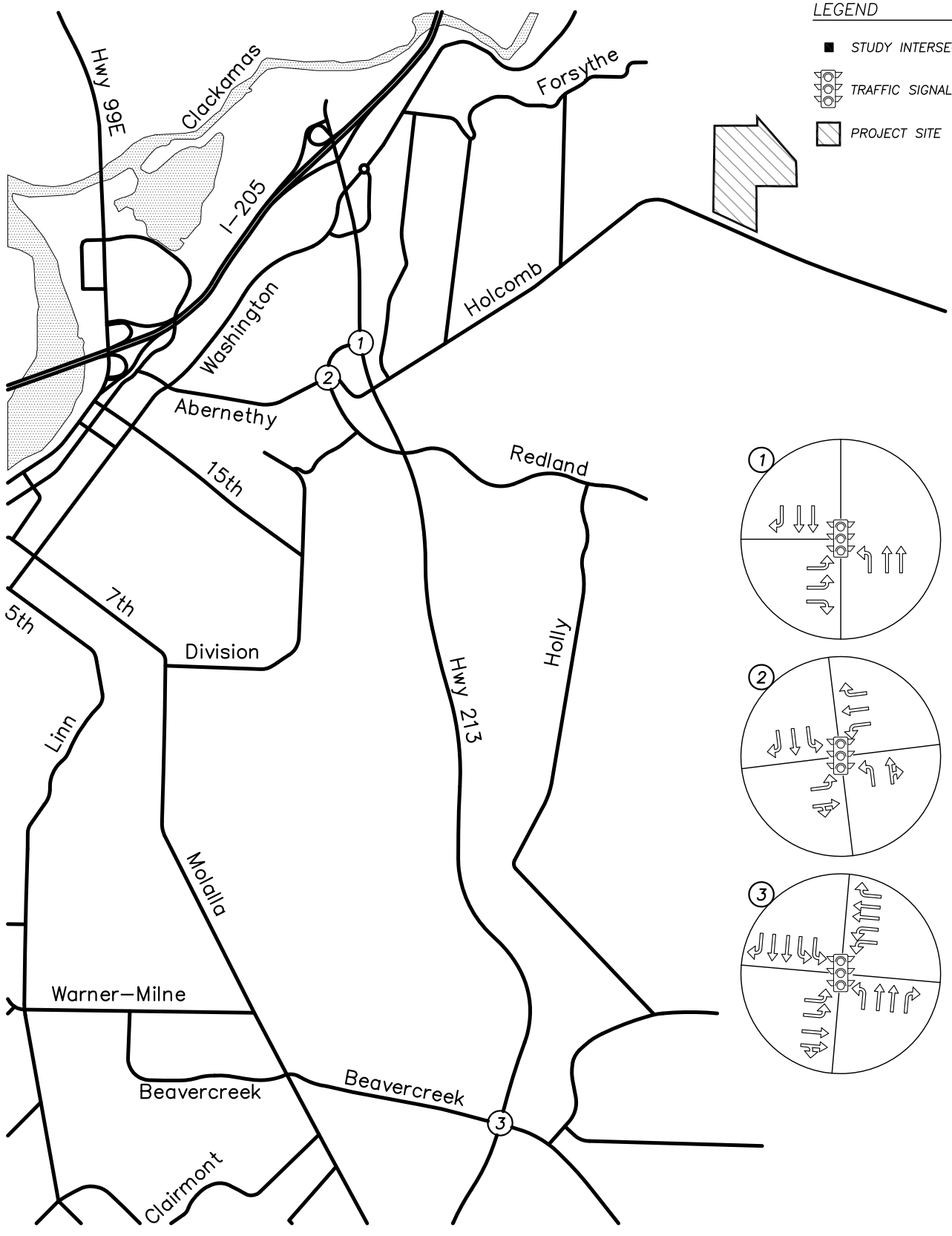
The intersection of Redland Road at Abernethy Road and Holcomb Boulevard is a 4-way intersection controlled by a traffic signal. The eastbound and northbound approaches each have a left-turn lane operating with protected signal phasing and a shared through/right-turn lane. The westbound approach has a left-turn lane operating with protected signal phasing, one through lane, and one shared through/right-turn lane. The southbound approach has one left-turn lane operating with protected signal phasing, one through lane, and one right-turn lane. All four approaches have marked crosswalks with pedestrian signals in place.

The intersection of Highway 213 at Beavercreek Road is a 4-way intersection controlled by a traffic signal. The eastbound approach has two left-turn lanes operating with protected signal phasing, one through lane, and one shared through/right-turn lane. The westbound and southbound approaches have two left-turn lanes operating with protected signal phasing, two through lanes, and one right-turn lane. The northbound approach has one left-turn lane operating with protected signal phasing,

two through lanes, and one right-turn lane. All four approaches have marked crosswalks with pedestrian signals in place.

Manual turning movement counts were made at the study intersections during January 2017 from 7:00 to 9:00 AM and from 4:00 to 6:00 PM. The peak hours occurred from about 7:10 to 8:10 AM and from 4:30 to 5:30 PM. Detailed traffic count data is included in the appendix to this report.

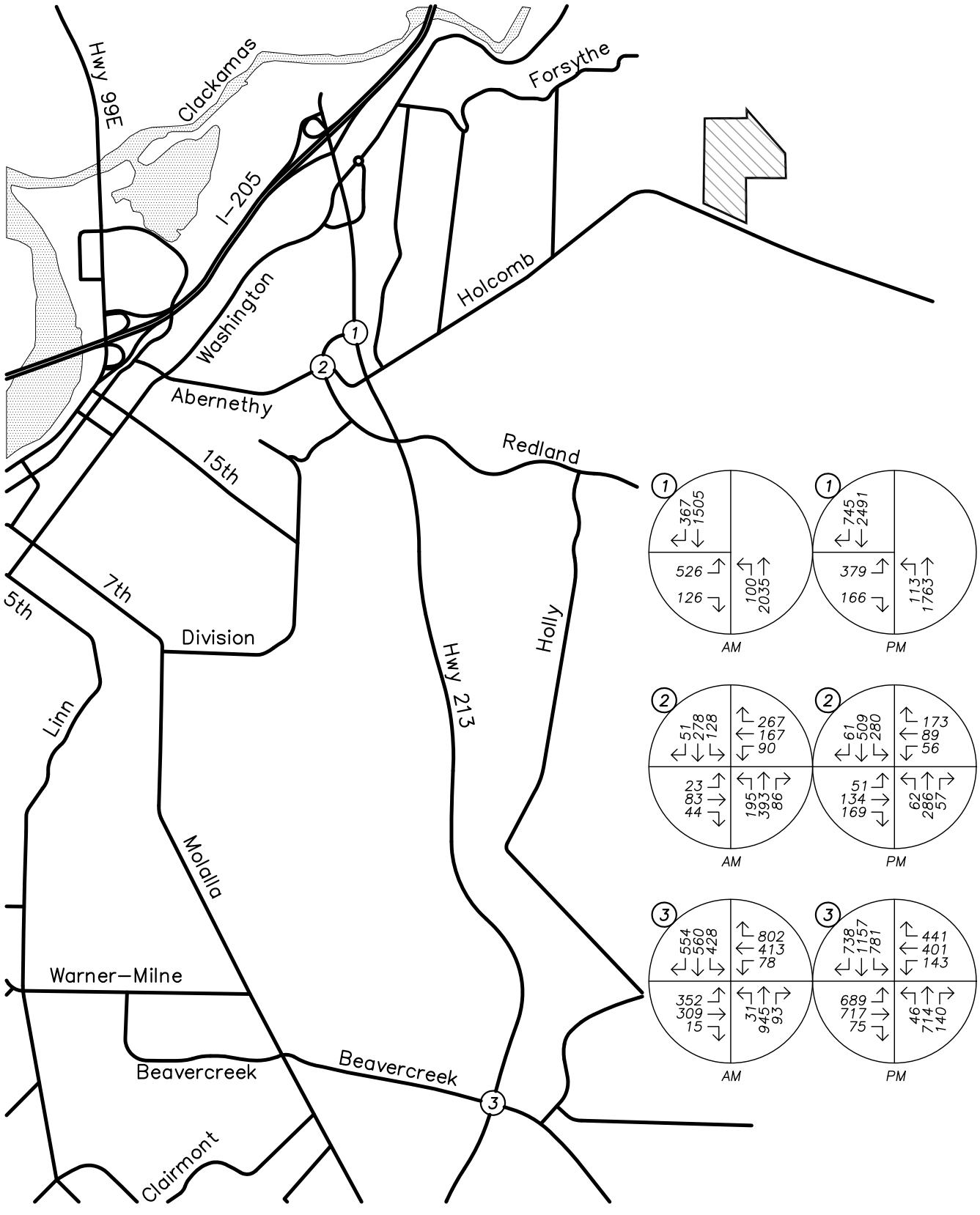
Figure 1 on page seven shows the project study area and the location of the site. Figure 2 on page eight shows the existing traffic volumes at the study area intersections.



VICINITY MAP

no scale

FIGURE 1



TRAFFIC VOLUMES
2017 Existing Conditions
AM & PM Peak Hours

no scale

FIGURE 2

TRIP GENERATION & DISTRIBUTION

TRIP GENERATION

The subject property consists of 35.65 acres currently zoned Future-Use 10-acre minimum (FU-10) by Clackamas County. Upon annexation of the property into the City of Oregon City, the property will be rezoned for residential use with a minimum lot size of 10,000 sf (R-10).

Under the existing Clackamas County zoning, the property can be developed with up to 3 lots with each lot having an area of at least 10 acres. Each lot may be developed with a single-family home.

Under the proposed zoning, the property can be developed with up to 124 lots of at least 10,000 square feet. Again, each lot may be developed with a single-family home.

Based on the comparison between the existing and proposed zonings, annexation of the subject property would be expected to result in the addition of up to 121 new homes within the subject property.

To estimate the number of trips that could be generated under the existing and proposed zonings, trip generation data from the Trip Generation Manual, 9th Edition, published by the Institute of Transportation Engineers was used. The trip data was drawn from land use 210, *Single-Family Detached Housing*, and is based on the number of dwelling units.

The calculations indicate that the proposed annexation and zone change could result in up to 91 additional trips during the morning peak hour, with 22 entering and 69 exiting the site. During the evening peak hour, 121 additional trips could be expected, with 76 entering and 45 exiting the site. A daily increase of 1,152 trips is projected, with half entering and half exiting the site.

A summary of the trip generation calculation is provided in the table below. Detailed trip generation worksheets are included in the attached technical appendix.

TRIP GENERATION SUMMARY

	AM Peak Hour			PM Peak Hour			Daily Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
3 Single-Family Homes	1	1	2	2	1	3	14	14	28
124 Single-Family Homes	23	70	93	78	46	124	590	590	1180
Net New Site Trips	**22**	**69**	**91**	**76**	**45**	**121**	**576**	**576**	**1,152**

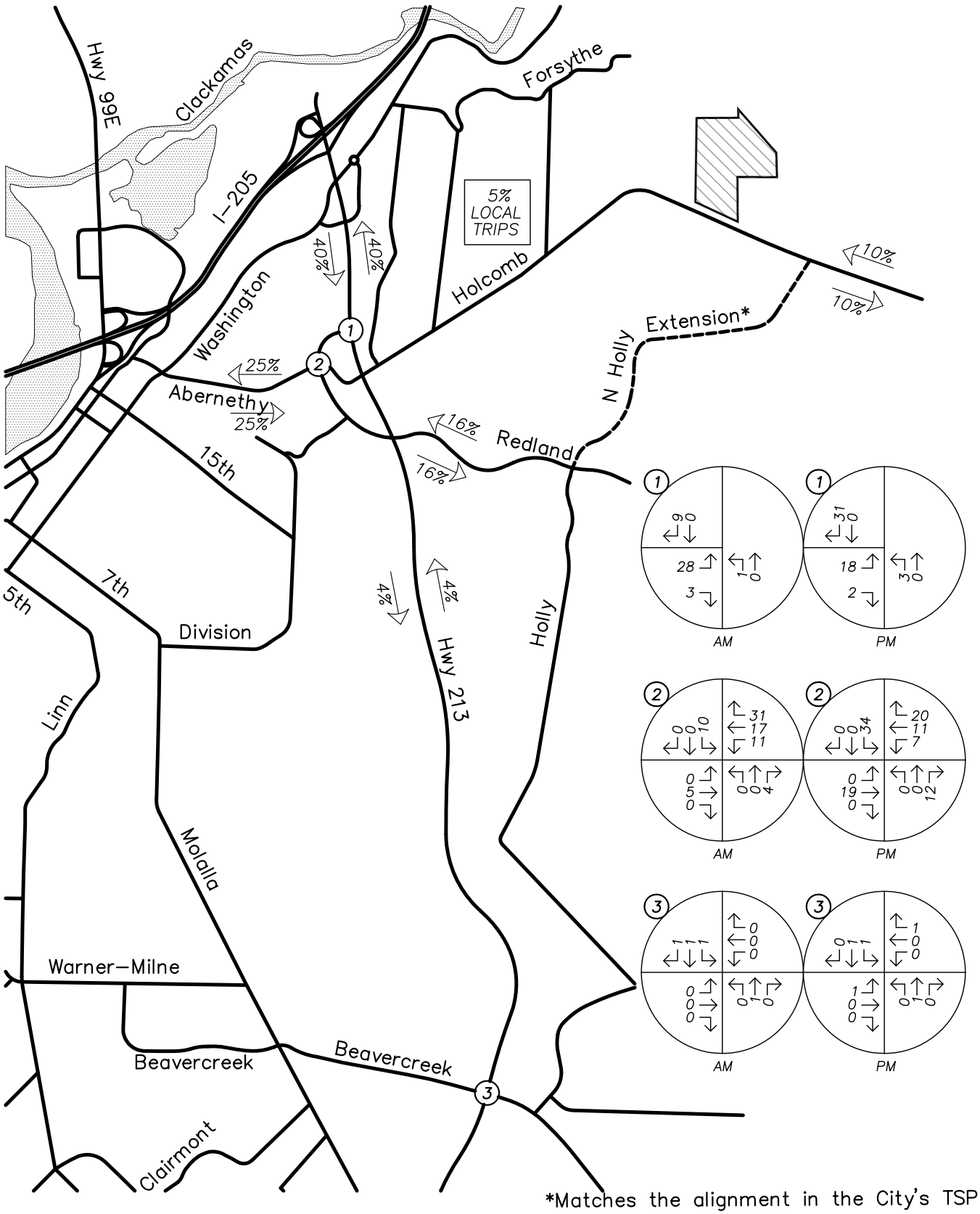
TRIP DISTRIBUTION

The distribution of site trips was determined based on existing travel patterns in the site vicinity. Approximately 85 percent of site trips are projected to travel to and from the west through the intersection of Redland Road at Holcomb Boulevard/Abernethy Road. The remaining 15 percent of site trips are projected to travel either to and from the east along Holcomb Boulevard or to destinations east of Redland Road along Holcomb Boulevard, such as other homes in the site vicinity, Holcomb Elementary School, Steve's Marketplace and the Quick Stop Market.

It should be noted that Holly Lane is planned for an extension from its current terminus at Redland Road to Holcomb Boulevard. Upon completion of this extension, it is expected that some trips currently traveling west along Holcomb Boulevard and then south on Redland Road to Holly Lane will divert to the new street connection. Some site trips from the proposed development will likewise divert to this new travel path, thereby bypassing the intersection of Redland Road at Holcomb Boulevard/Abernethy Road.

A detailed diagram showing the distribution and assignment of site trips is provided on the following page. Based on the existing travel patterns in the site vicinity, 16 percent of site trips are projected to travel to and from the south along Redland Road, 25 percent of site trips are projected to travel to and from the west along Abernethy Road, 40 percent of site trips are projected to travel to and from the north along Highway 213, and 4 percent of site trips are projected to travel to and from the south along Highway 213.

The trip distribution patterns and trip assignment for the net increase in site trips associated with the proposed development are shown in Figure 3 on page 10.



SITE TRIP DISTRIBUTION & ASSIGNMENT
Zone Change Site Trips
AM & PM Peak Hours

no scale

FIGURE 3

SAFETY ANALYSIS

CRASH HISTORY

In order to identify any existing safety hazards in the site vicinity, a three-year crash history was obtained from ODOT's Crash Analysis and Reporting Unit. The data covered the period from January, 2013 through December 2015.

A brief discussion of crashes is provided for each of the study area intersections. In addition to the crash descriptions, calculated crash rates were determined for each location. Examination of the crash rate, expressed as the number of crashes per million entering vehicles (CMEV), allows intersections with widely different traffic volumes to be compared on the basis of relative crash risk. Based on ODOT data for signalized intersections in urban areas throughout the state, the intersections were evaluated to determine whether the crash history may be indicative of design deficiencies.

The intersection of Redland Road at Holcomb Boulevard/Abernethy Road had 11 reported crashes during the three-year analysis interval. These included 6 read-end collisions, 4 turning-movement collisions and 1 angle collision. The crashes resulted in 2 non-incapacitating injuries and 2 reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 0.54 crashes per million entering vehicles. This crash rate is below the 90th percentile crash rate for signalized 4-legged intersections in the State of Oregon (0.860 CMEV). Based on the crash rate and crash severity, no significant safety hazards were identified and no specific safety mitigation is recommended.

The intersection of Highway 213 at Redland Road had had 27 reported collisions during the three-year analysis period. The crashes included 22 rear-end collisions, 4 turning-movement collisions, and 1 sideswipe-overtaking collision. The crashes resulted in no significant injuries or fatalities; however, there were 27 reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 0.46 crashes per million entering vehicles. This crash rate is below the 90th percentile crash rate for signalized 3-legged intersections in the State of Oregon (0.509 CMEV). Based on the crash rate and crash severity, no significant safety hazards were identified and no specific safety mitigation is recommended.

The intersection of Highway 213 at Beavercreek Road had 80 reported collisions during the three-year analysis period. These included 70 rear-end collisions, 5 turning-movement collisions, 3 sideswipe-overtaking collisions, 1 angle collision and 1 backing collision. The crashes resulted in 6 non-incapacitating injuries and 41 reports of a "possible injury/complaint of pain". The crash rate for the intersection was calculated to be 1.27 crashes per million entering vehicles. This crash rate is above the 90th percentile crash rate for signalized 4-legged intersections in the State of Oregon (0.860 CMEV), indicating that the intersection is among the top 10 percent of high crash intersections in the State of Oregon. The intersection is also noted as a high-crash location in the city's Transportation System Plan.

It should also be noted that a fatal collision occurred at this intersection in September, 2011, prior to the most recent three years for which data is available. The fatality occurred when an eastbound

driver entered the intersection against the red indication and was struck by a southbound vehicle. Alcohol was determined to be a contributing factor in the collision.

Based on the detailed review of crash history at the intersection of Highway 213 and Beavercreek Road, the number of crashes occurring at the intersection is higher than would be expected for a typical intersection with similar characteristics. The vast majority of the reported crashes (87.5%) were rear-end collisions. However, the rear-end collisions were distributed evenly among the intersection approaches, with 18 on the northbound approach, 18 on the southbound approach, 21 on the westbound approach and 10 on the eastbound approach. (The remaining two rear-end collisions were noted as "unknown" with respect to travel direction.) Since the rear-end collisions are occurring with similar frequency on the approaches, it is unlikely that the crashes result from any specific deficiency of the intersection design.

Based on the detailed crash data, no specific safety mitigations are recommended for the intersections of Highway 213 at Redland Road and Redland Road at Holcomb Boulevard/Abernethy Road.

For the intersection of Highway 213 at Beavercreek Road, it is recommended that consideration be given to installing flashing warning signs that alert drivers to the potential for stopped queues ahead. These warning signs are most appropriate for the high-speed approaches on Highway 213, and particularly the southbound approach since the nearest traffic signal to the north is approximately 2.5 miles away at Redland Road. It should be noted that such a system is included in the city's Transportation System Plan (project D14), which will install a queue warning system for southbound drivers on OR 213 which includes a variable message sign. The project is within the "likely to be funded" list and is designated for near-term implementation.

OPERATIONAL ANALYSIS

BACKGROUND TRAFFIC

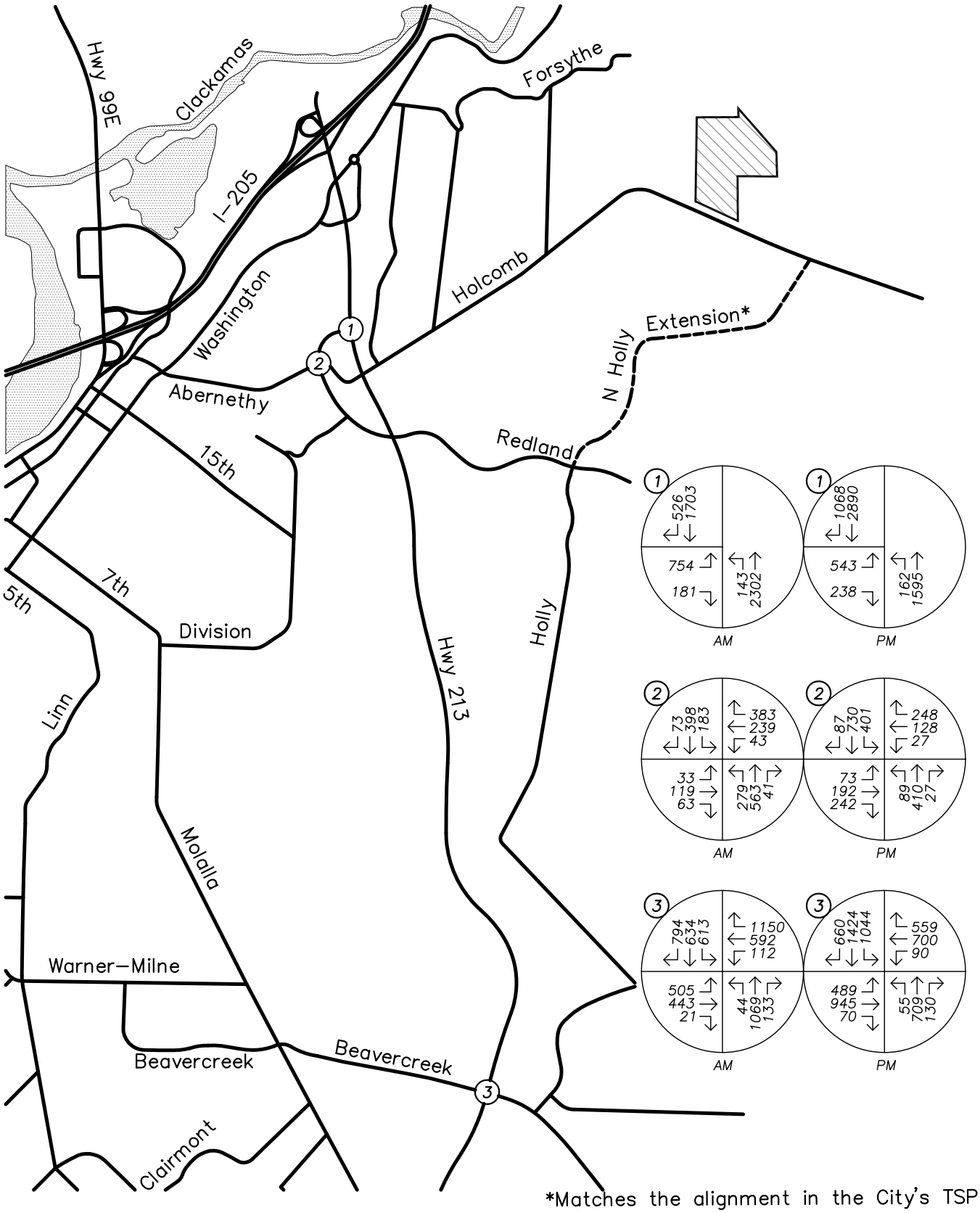
In order to assess the impacts of the proposed annexation on traffic conditions at the planning horizon, the existing traffic volumes at the study area intersections were increased to account for anticipated growth through year 2035. Growth for other facilities within Oregon City was estimated based on in conformance with growth data from the 2013 Transportation System Plan, which shows an overall growth from 33,012 trips during the evening peak hour in 2010 to 54,461 trips during the evening peak hour in 2035. This equates to an exponential growth rate of 2.02 percent per year, which was applied to all intersection movements except the through movements along Highway 213. Traffic volume growth along Highway 213 was estimated using data from ODOT's Future Volume Tables, which show a projected linear growth rate of 0.73 percent per year.

For the intersection of Highway 213 at Beavercreek Road, Oregon City's 2013 Transportation System Plan included projected year 2035 volumes for the PM peak hour. In order to ensure consistency with the city's TSP, these volumes were used for this intersection's evening peak hour analysis scenario. Additionally, traffic volumes along Highway 213 were balanced between the Beavercreek and Redland Road intersections to ensure that the Redland Road intersection analysis was also consistent with the TSP.

In addition to the increase in traffic volumes within the site vicinity, completion of the North Holly Lane Extension is expected to result in some re-distribution of existing traffic volumes in the site vicinity. Specifically, it is anticipated that approximately two thirds of the trips between Holcomb Boulevard and Redland Road south of Holcomb Boulevard will utilize the new Holly Lane extension, since this route will provide a more direct connection between these roadways. It is also anticipated that some site trips between Holcomb Boulevard and Highway 213 south of Redland Road will divert to the new North Holly Lane extension, since this route will provide a good connection between Holcomb Boulevard and destinations such as Oregon City High School and the Berry Hill Shopping Center.

The background conditions analysis volumes include all city-identified projected development through the 2035 planning horizon, with the exception of the Serres Farm property. Omission of this property from the background conditions allows for a meaningful comparison between future background conditions without approval of the proposed zone change and the 2035 "zone change" conditions, which include the addition of site trips from the Serres Farm property.

Figure 4 on page 15 shows the year 2035 background traffic volumes at the study intersections. Figure 5 on page 16 shows the year 2035 background traffic with addition of potential site trips from the proposed annexation and zone change.

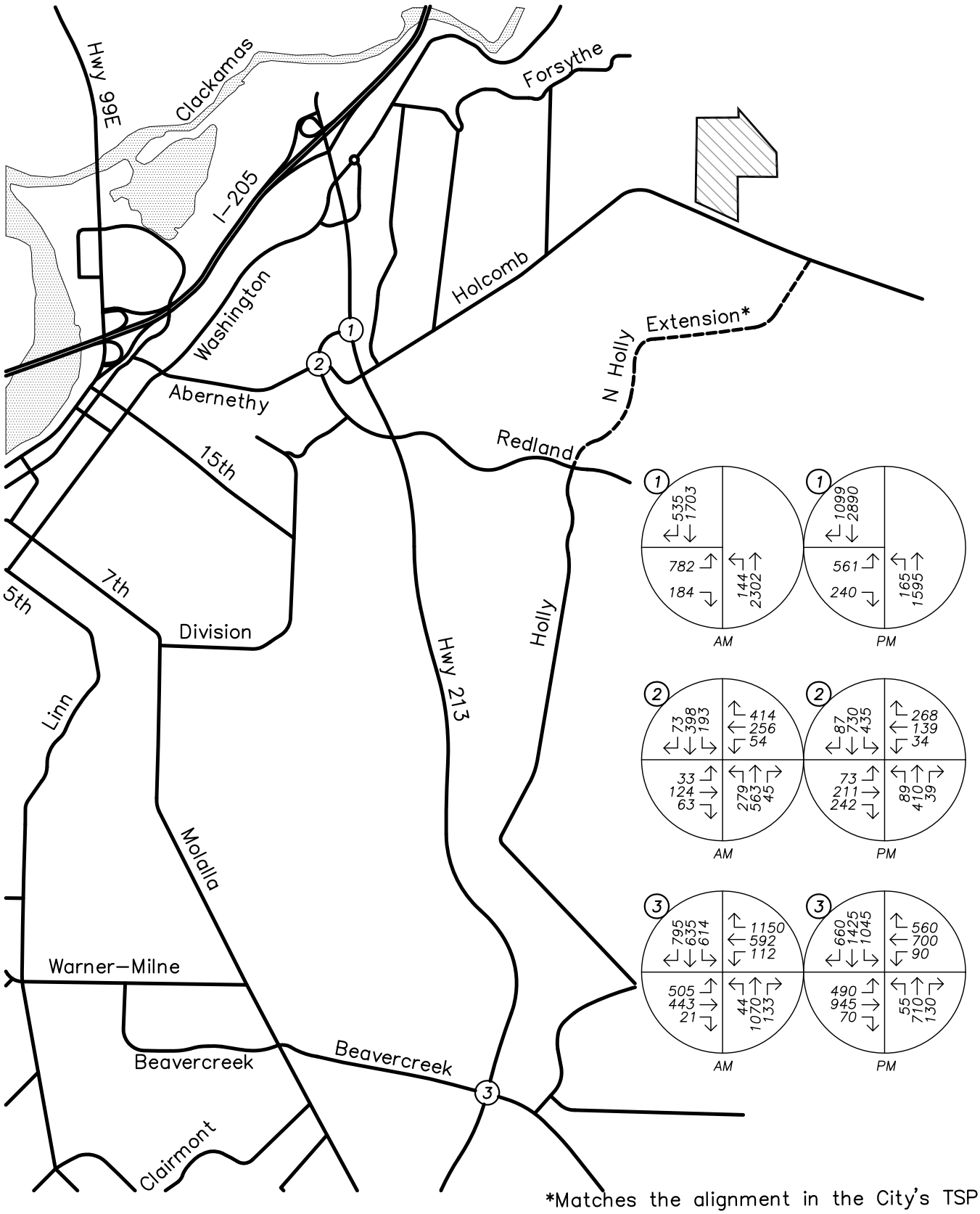


*Matches the alignment in the City's TSP

TRAFFIC VOLUMES
Year 2035 Background Conditions
AM & PM Peak Hours

no scale

FIGURE 4



TRAFFIC VOLUMES
Year 2035 Background Plus Zone Change
AM & PM Peak Hours

no scale

FIGURE 5

PAGE 16

CAPACITY ANALYSIS

To determine the level of service at the study intersections, a capacity analysis was conducted. The analysis was conducted according to the signalized intersection analysis methodologies in the *HIGHWAY CAPACITY MANUAL* (HCM) published by the Transportation Research Board. Level of service can range from A, which indicates little or no delay, to F, which indicates a significant amount of congestion and delay. Oregon City has recently established new operational standards for intersection performance. Intersections outside the Regional Center but designated on the Arterial and Throughway Network are required to operate with a v/c ratio of 0.99 or less. Signalized intersections outside the boundaries of the Regional Center and not on the Arterial and Throughway Network are required to operate at level of service "D" or better and with no approach operating at worse than LOS "E" and with a v/c ratio not higher than 1.0 for the sum of the critical movements.

The intersection of Redland Road at Holcomb Boulevard/Abernethy Road is currently operating with a v/c ratio of 0.87 during the morning peak hour and 1.01 during the evening peak hour. Under year 2035 background conditions, the intersection is projected to operate with a v/c ratio of 1.04 during the morning peak hour and 1.23 during the evening peak hour. With the addition of site trips from the proposed annexation and zone change, the intersection is projected to operate with a v/c ratio of 1.05 during the morning peak hour and 1.24 during the evening peak hour. If the eastbound approach was converted to have two dedicated left-turn lanes and a shared left/right lane, intersection operation would improve to a v/c ratio of 1.00 during the morning peak hour and 1.22 during the evening peak hour. This potential mitigation is sufficient to offset the impacts of the proposed annexation and zone change; however, it should be noted that a more comprehensive solution will be necessary to restore acceptable operation of the intersection. The city's Transportation System Plan includes unfunded improvements to the intersection such as converting the northbound and southbound approaches to have three through lanes in each direction.

The intersection of Highway 213 at Redland Road currently operates at level of service C with a v/c ratio of 0.76 during the morning peak hour and at level of service C with a v/c ratio of 0.78 during the evening peak hour. Under year 2035 background conditions the intersection is projected to operate at level of service D with a v/c ratio of 0.88 during the morning peak hour and level of service E with a v/c ratio of 1.07 during the evening peak hour. With the addition of site trips from the proposed annexation and zone change, the intersection is projected to operate at level of service D with a v/c ratio of 0.90 during the morning peak hour and at level of service E with a v/c ratio of 1.11 during the evening peak hour. If an eastbound right-turn lane is added to the intersection, it is projected to operate at level of service D or better and with a v/c ratio of 0.95 or less under all year 2035 scenarios.

The Synchro operational analysis for the intersection of Highway 213 at Beavercreek Road indicates that the westbound right-turn movement is currently operating with volumes far in excess of capacity during the morning peak hour. Since the count data demonstrates that all observed vehicles were able to make this turning movement during the morning peak hour, it is clear that the operational analysis is inaccurate with respect to the westbound right-turn movement. Accordingly, the Synchro model was modified to remove this yield-controlled movement from the analysis and obtain accurate analysis with respect to the other intersection movements. It should be noted that this analysis approach

inherently acknowledges that the westbound right-turn movement is operating near capacity and will require some form of capacity enhancement in the near future.

Based on the analysis, the intersection of Highway 213 at Beavercreek Road is currently operating with a v/c ratio of 0.79 during the morning peak hour and 0.92 during the evening peak hour. Under year 2035 traffic conditions, the intersection is projected to operate with a v/c ratio of 1.04 during the morning and evening peak hours either with or without the addition of site trips from the proposed annexation and zone change. Since the proposed land use action will not significantly affect operation of the intersection, no mitigation is proposed in conjunction with the Serres Farm Annexation.

The results of the capacity analysis, along with the Levels of Service (LOS) and delay are shown in the table on the following page. Detailed capacity analysis results are included in the appendix to this report.

LEVEL OF SERVICE SUMMARY

	AM Peak Hour			PM Peak Hour		
	LOS	Delay	V/C	LOS	Delay	V/C
Highway 213 at Redland Road						
2017 Existing Conditions	C	22	0.87	D	38	1.01
2035 Background	D	39	1.04	F	84	1.23
2035 Bkgd plus Zone Change	D	41	1.05	F	85	1.24
2035 Bkgd plus ZC Mitigated[1]	C	33	1.00	F	82	1.22
Redland Road at Holcomb Boulevard/Abernethy Road						
2017 Existing Conditions	C	27	0.76	C	29	0.78
2035 Background	D	40	0.88	E	57	1.07
2035 Bkgd plus Zone Change	D	44	0.90	E	69	1.11
2035 Bkgd plus ZC Mitigated[2]	D	44	0.90	D	52	0.95
Highway 213 at Beavercreek Road						
2017 Existing Conditions	D	39	0.79	D	49	0.92
2035 Background	E	66	1.04	E	64	1.04
2035 Bkgd plus Zone Change	E	66	1.04	E	64	1.04

LOS = Level of Service
Delay = Average Delay per Vehicle in Seconds
V/C = Volume-to-Capacity ratio

[1] Eastbound approach has 2 exclusive left-turn lanes and a shared left/right lane.

[2] Eastbound approach has a left-turn lane, a through lane and a right-turn lane.

Although specific mitigation sufficient to offset the impacts of future development following the proposed annexation and zone change on the subject property, it should be noted that there may be other mitigations that would equally or better serve the needs of the development, Oregon City, and the Oregon Department of Transportation.

In particular, the mitigation described for the intersection of Highway 213 at Redland Road is sufficient to ensure there is no further degradation to performance of the intersection as a result of development within the subject property; however additional mitigation would be required to restore the intersection to acceptable operation per ODOT and Oregon City standards. It is therefore advisable that a more comprehensive study be conducted for the intersection which accommodates the anticipated traffic volumes at the planning horizon and results in acceptable intersection operation.

The applicant is not currently proposing to make any physical improvements at any area intersections in conjunction with the proposed zone change. Rather, the improvements listed were included as suggestions of possible mitigation. The currently-proposed mitigation for the requested annexation and zone change consists of conditions of approval pursuant to OAR 660-012-0060(2)(d), as described in the Transportation Planning Rule Analysis portion of this report on pages 20-22.

TRANSPORTATION PLANNING RULE ANALYSIS

The Transportation Planning Rule (TPR) is in place to ensure that the transportation system is capable of supporting the potential increase in traffic intensity that could result from changes to adopted plans and land use regulations. The applicable portions of the TPR are quoted in *italics* below, with responses directly following.

660-012-0060

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

The proposed zone change will not necessitate changes to the functional classification of existing or planned transportation facilities. Accordingly, this section is not triggered.

(b) Change standards implementing a functional classification system; or

The proposed zone change will not change any standards implementing the functional classification system. Accordingly, this section is also not triggered.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

In this instance the proposed zone change would be expected to degrade the performance of the intersections of Highway 213 at Redland Road and Redland Road at Holcomb Boulevard/Abernethy Road. Both intersections are projected not to meet the relevant performance standards of Oregon City and the Oregon Department of Transportation.

The proposed zone change is not projected to degrade the performance of the intersection of Highway 213 at Beavercreek Road since the annexation and zone chance would be projected to result in no more than five additional peak-hour trips or 50 additional daily trips through the intersection. The Oregon Highway Plan's Policy 1.F.5 specifically indicates that "a small increase in traffic does not cause 'further degradation' of the facility" and defines a "small increase in traffic" as "Any proposed amendment that does not increase the average daily trips by more than 400."

Since the proposed zone change does not result in an increase in the intersection v/c ratio and is defined as a small increase in traffic under the Oregon Highway Plan, no mitigation is necessary or recommended for the intersection of Highway 213 at Beavercreek Road in conjunction with the proposed annexation and zone change.

Having determined that the proposed annexation and zone change may result in a significant effect on operation of the intersections of Highway 213 at Redland Road and Redland Road at Holcomb Boulevard/Abernethy Road, the Transportation Planning Rule also includes the following language:

(9) Notwithstanding section (1) of this rule, a local government may find that an amendment to a zoning map does not significantly affect an existing or planned transportation facility if all of the following requirements are met.

(a) The proposed zoning is consistent with the existing comprehensive plan map designation and the amendment does not change the comprehensive plan map;

(b) The local government has an acknowledged TSP and the proposed zoning is consistent with the TSP; and

(c) The area subject to the zoning map amendment was not exempted from this rule at the time of an urban growth boundary amendment as permitted in OAR 660-024-0020(1)(d), or the area was exempted from this rule but the local government has a subsequently acknowledged TSP amendment that accounted for urbanization of the area.

In this instance, the proposed zoning is consistent with the Comprehensive Plan map designation, Oregon City has an acknowledged Transportation System Plan that accounted for future development under the proposed zoning, and the area was not exempted from the rule at the time of the urban growth boundary amendment. Accordingly, the city may find that the proposed annexation and zone change is consistent with the city's adopted plans and does not significantly effect an existing or planned transportation facility.

Alternatively, if it is determined that mitigation may be required for the proposed annexation and zone change, the requirements of the Transportation Planning Rule are as follows:

(2) If a local government determines that there would be a significant effect, then the local government must ensure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility measured at the end of the planning period identified in the adopted TSP through one or a combination of the remedies listed in (a) through (e) below, unless the amendment meets the balancing test in subsection (2)(e) of this section or qualifies for partial mitigation in section (11) of this rule. A local government using subsection (2)(e), section (3), section (10) or section (11) to approve an amendment recognizes that additional motor

vehicle traffic congestion may result and that other facility providers would not be expected to provide additional capacity for motor vehicles in response to this congestion.

(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.

(c) Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

(d) Providing other measures as a condition of development or through a development agreement or similar funding method, including, but not limited to, transportation system management measures or minor transportation improvements. Local governments shall, as part of the amendment, specify when measures or improvements provided pursuant to this subsection will be provided.

(e) Providing improvements that would benefit modes other than the significantly affected mode, improvements to facilities other than the significantly affected facility, or improvements at other locations, if:

(A) The provider of the significantly affected facility provides a written statement that the system-wide benefits are sufficient to balance the significant effect, even though the improvements would not result in consistency for all performance standards;

(B) The providers of facilities being improved at other locations provide written statements of approval; and

(C) The local jurisdictions where facilities are being improved provide written statements of approval.

In this instance, option (d) would allow conditions of development or a development agreement to be adopted for the subject property to mitigate any potential traffic impacts. Appropriate conditions of approval could consist either of requirements to construct mitigation sufficient to offset traffic impacts at the intersections of Highway 213 and Redland Road as well as Redland Road at Holcomb Boulevard or a requirement to delay development until the city's Transportation System Plan is amended to specifically address operation of these intersections.

Since site development is not currently proposed and it is anticipated that refinement plans will be developed by Oregon City in conjunction with the Oregon Department of Transportation, a condition of approval is proposed which will limit development within the subject property to levels permissible under the existing zoning until a refinement plan including financially constrained projects and alternative mobility standards is completed for the intersection of Highway 213 at Redland Road. Similarly, for the Redland Road at Holcomb Road intersection, either proportional mitigation or adoption of alternative mobility standards will be required.

CONCLUSIONS

The intersection of Highway 213 at Beavercreek Road was found to be among the top ten percent of high-crash intersections in the State of Oregon, with the vast majority of the reported crashes being rear-end collisions. One potential safety mitigation would be installing flashing warning signs that alert drivers to the potential for stopped queues ahead. These warning signs are most appropriate for the high-speed approaches on Highway 213, and particularly the southbound approach which has uninterrupted flow for 2.5 miles. This project is already included as a "likely to be funded" project for near-term implementation in the city's Transportation System Plan. Since the proposed annexation and zone change will not significantly impact either operation or safety of this intersection, no specific mitigation is recommended in conjunction with the currently-proposed land use action.

Based on the operational analysis, the study area intersections are not projected to meet the relevant operational standards of Oregon City and ODOT under year 2035 traffic conditions either with or without the addition of site trips from the proposed annexation and zone. Although the intersection of Highway 213 at Beavercreek Road is not projected to experience a change in operation as a result of the proposed annexation and zone change, the intersections of Highway 213 at Redland Road and Redland Road at Holcomb Boulevard are projected to experience further degradation in performance upon development within the subject property. Potential mitigations include the addition of an eastbound right-turn lane on the Abernethy Road approach to Redland Road and providing three eastbound left-turn lanes from Redland Road onto Highway 213.

Based on the Transportation Planning Rule analysis, the city may find that the proposed annexation and zone change will not significantly effect an existing or planned transportation facility since the city's acknowledged Transportation System Plan already accounted for development under the proposed zoning. Alternatively, conditions of development or a development agreement may be implemented to ensure that no development can occur except as permitted under the existing zoning until refinement plans for the impacted intersections are prepared to address future capacity concerns, or proportionate mitigation is provided concurrent with development to offset the actual traffic impacts of the development.

APPENDIX

LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS

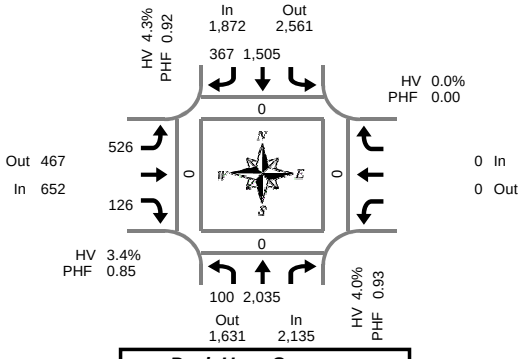
LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:20 AM to 8:20 AM

Hwy 213 & Redland Rd

Wednesday, January 25, 2017
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	8	139		0	75	17		0	55		18	0				0	312	0	0	0	0
7:05 AM	7	183		0	100	24		0	49		6	0				0	369	0	0	0	0
7:10 AM	0	164		0	93	16		0	43		17	0				0	333	0	0	0	0
7:15 AM	7	154		0	105	26		0	67		15	0				0	374	0	0	0	0
7:20 AM	10	197		0	125	40		0	34		12	0				0	418	0	0	0	0
7:25 AM	4	189		0	116	35		0	40		18	0				0	402	0	0	0	0
7:30 AM	4	172		0	109	29		0	58		16	0				0	388	0	0	0	0
7:35 AM	14	179		0	112	31		0	48		12	0				0	396	0	0	0	0
7:40 AM	10	178		0	168	35		0	33		9	0				0	433	0	0	0	0
7:45 AM	7	169		0	116	32		0	50		10	0				0	384	0	0	0	0
7:50 AM	13	149		0	132	26		0	45		13	0				0	378	0	0	0	0
7:55 AM	8	160		0	149	25		0	32		4	0				0	378	0	0	0	0
8:00 AM	6	148		0	121	30		0	35		9	0				0	349	0	0	0	0
8:05 AM	7	154		0	90	31		0	62		10	0				0	354	0	0	0	0
8:10 AM	8	181		0	119	31		0	41		4	0				0	384	0	0	0	0
8:15 AM	9	159		0	148	22		0	48		9	0				0	395	0	0	0	0
8:20 AM	6	132		0	89	41		0	58		13	0				0	339	0	0	0	0
8:25 AM	3	137		0	112	25		0	32		4	0				0	313	0	0	0	0
8:30 AM	6	141		0	148	33		0	40		14	0				0	382	0	0	0	0
8:35 AM	5	142		0	106	15		0	40		8	0				0	316	0	0	0	0
8:40 AM	11	154		0	128	33		0	53		9	0				0	388	0	0	0	0
8:45 AM	9	129		0	147	21		0	41		8	0				0	355	0	0	0	0
8:50 AM	4	143		0	118	26		0	43		4	0				0	338	0	0	0	0
8:55 AM	12	123		0	124	18		0	49		11	0				0	337	0	0	0	0
Total Survey	178	3,776		0	2,850	662		0	1,096		253	0				0	8,815	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	15	486		0	268	57		0	147		41	0				0	1,014	0	0	0	0
7:15 AM	21	540		0	346	101		0	141		45	0				0	1,194	0	0	0	0
7:30 AM	28	529		0	389	95		0	139		37	0				0	1,217	0	0	0	0
7:45 AM	28	478		0	397	83		0	127		27	0				0	1,140	0	0	0	0
8:00 AM	21	483		0	330	92		0	138		23	0				0	1,087	0	0	0	0
8:15 AM	18	428		0	349	88		0	138		26	0				0	1,047	0	0	0	0
8:30 AM	22	437		0	382	81		0	133		31	0				0	1,086	0	0	0	0
8:45 AM	25	395		0	389	65		0	133		23	0				0	1,030	0	0	0	0
Total Survey	178	3,776		0	2,850	662		0	1,096		253	0				0	8,815	0	0	0	0

Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	2,135	1,631	3,766	0	1,872	2,561	4,433	0	652	467	1,119	0	0	0	0	0	4,659	0	0	0	0
%HV	4.0%				4.3%				3.4%				0.0%				4.1%				
PHF	0.93				0.92				0.85				0.00				0.96				

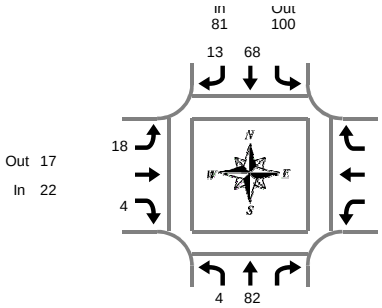
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Total
	L	T		Total		T	R	Total	L		R	Total				Total	
Volume	100	2,035		2,135		1,505	367	1,872	526		126	652				0	4,659
%HV	4.0%	4.0%	NA	4.0%	NA	4.5%	3.5%	4.3%	3.4%	NA	3.2%	3.4%	NA	NA	NA	0.0%	4.1%
PHF	0.81	0.91		0.93		0.90	0.88	0.92	0.87		0.68	0.85				0.00	0.96

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
7:00 AM	92	2,033		0	1,400	336		0	554		150	0				0	4,565	0	0	0	0
7:15 AM	98	2,030		0	1,462	371		0	545		132	0				0	4,638	0	0	0	0
7:30 AM	95	1,918		0	1,465	358		0	542		113	0				0	4,491	0	0	0	0
7:45 AM	89	1,826		0	1,458	344		0	536		107	0				0	4,360	0	0	0	0
8:00 AM	86	1,743		0	1,450	326		0	542		103	0				0	4,250	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Redland Rd

Wednesday, January 25, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:20 AM to 8:20 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
7:00 AM	1	5		6	9	2	11		1		1	2				0	19
7:05 AM	1	5		6	1	0	1		3		2	5				0	12
7:10 AM	0	10		10	3	0	3		4		0	4				0	17
7:15 AM	2	7		9	8	2	10		4		1	5				0	24
7:20 AM	1	6		7	4	0	4		1		0	1				0	12
7:25 AM	0	8		8	10	0	10		3		0	3				0	21
7:30 AM	0	3		3	5	0	5		1		1	2				0	10
7:35 AM	0	5		5	0	2	2		2		0	2				0	9
7:40 AM	0	2		2	8	0	8		2		0	2				0	12
7:45 AM	1	12		13	7	2	9		4		0	4				0	26
7:50 AM	0	9		9	4	2	6		1		0	1				0	16
7:55 AM	0	11		11	3	2	5		1		1	2				0	18
8:00 AM	1	10		11	4	1	5		0		2	2				0	18
8:05 AM	0	3		3	6	0	6		1		0	1				0	10
8:10 AM	0	6		6	8	4	12		1		0	1				0	19
8:15 AM	1	7		8	9	0	9		1		0	1				0	18
8:20 AM	0	5		5	8	2	10		2		2	4				0	19
8:25 AM	0	5		5	12	3	15		5		0	5				0	25
8:30 AM	0	7		7	3	4	7		3		1	4				0	18
8:35 AM	1	13		14	4	4	8		2		0	2				0	24
8:40 AM	0	8		8	9	0	9		2		0	2				0	19
8:45 AM	0	6		6	4	1	5		1		1	2				0	13
8:50 AM	0	7		7	15	2	17		0		0	0				0	24
8:55 AM	0	5		5	9	3	12		1		0	1				0	18
Total Survey	9	165		174	153	36	189		46		12	58				0	421

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
7:00 AM	2	20		22	13	2	15		8		3	11				0	48
7:15 AM	3	21		24	22	2	24		8		1	9				0	57
7:30 AM	0	10		10	13	2	15		5		1	6				0	31
7:45 AM	1	32		33	14	6	20		6		1	7				0	60
8:00 AM	1	19		20	18	5	23		2		2	4				0	47
8:15 AM	1	17		18	29	5	34		8		2	10				0	62
8:30 AM	1	28		29	16	8	24		7		1	8				0	61
8:45 AM	0	18		18	28	6	34		2		1	3				0	55
Total Survey	9	165		174	153	36	189		46		12	58				0	421

Heavy Vehicle Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Redland Rd			Westbound Redland Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	86	72	158	81	100	181	22	17	39	0	0	0	189
PHF	0.65			0.75			0.69			0.00			0.79

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	4	82		86	68	13	81		18		4	22				0	189
PHF	1.00	0.64		0.65	0.74	0.54	0.75		0.56		0.33	0.69				0.00	0.79

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

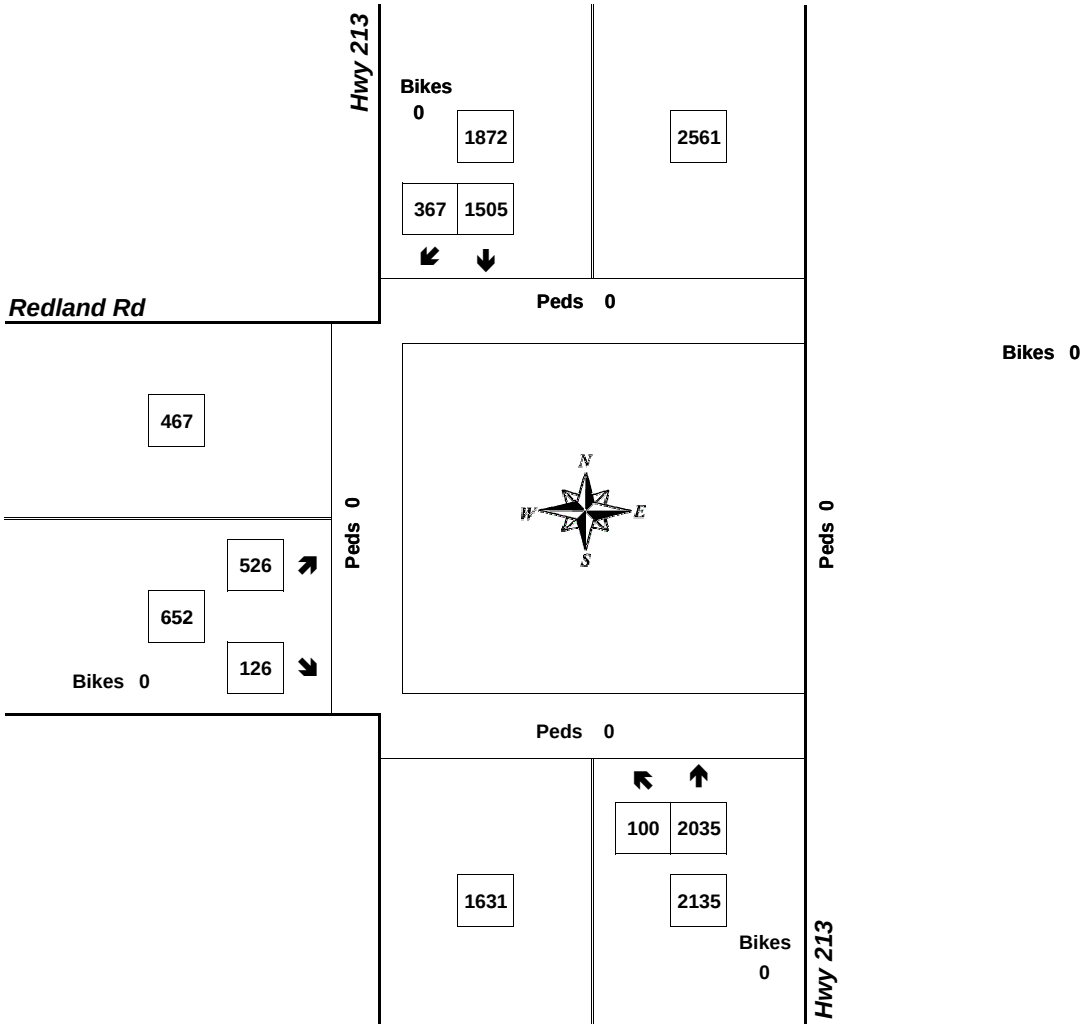
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
7:00 AM	6	83		89	62	12	74		27		6	33				0	196
7:15 AM	5	82		87	67	15	82		21		5	26				0	195
7:30 AM	3	78		81	74	18	92		21		6	27				0	200
7:45 AM	4	96		100	77	24	101		23		6	29				0	230
8:00 AM	3	82		85	91	24	115		19		6	25				0	225

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Redland Rd

7:20 AM to 8:20 AM
Wednesday, January 25, 2017

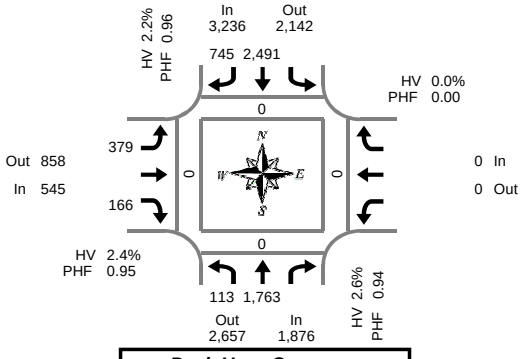


Approach	PHF	HV%	Volume
EB	0.85	3.4%	652
WB	0.00	0.0%	0
NB	0.93	4.0%	2,135
SB	0.92	4.3%	1,872
Intersection	0.96	4.1%	4,659

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:10 PM to 5:10 PM

Hwy 213 & Redland Rd

Tuesday, January 24, 2017
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
4:00 PM	11	148		0	204	67	0		26		6	0				0	462	0	0	0	0
4:05 PM	7	140		0	216	54	0		28		12	0				0	457	0	0	0	0
4:10 PM	9	160		0	187	58	0		42		15	0				0	471	0	0	0	0
4:15 PM	14	153		0	202	63	0		26		12	0				0	470	0	0	0	0
4:20 PM	11	151		0	207	65	0		32		13	0				0	479	0	0	0	0
4:25 PM	6	113		0	216	57	0		34		10	0				0	436	0	0	0	0
4:30 PM	14	128		0	194	60	0		34		15	0				0	445	0	0	0	0
4:35 PM	8	140		0	232	74	0		29		15	0				0	498	0	0	0	0
4:40 PM	3	157		0	228	51	0		30		9	0				0	478	0	0	0	0
4:45 PM	12	147		1	181	61	0		42		18	0				0	461	0	0	0	0
4:50 PM	8	144		0	221	71	0		24		10	0				0	478	0	0	0	0
4:55 PM	8	169		0	223	68	0		30		10	0				0	508	0	0	0	0
5:00 PM	15	148		0	178	54	0		31		20	0				0	446	0	0	0	0
5:05 PM	5	153		0	222	63	0		25		19	0				0	487	0	0	0	0
5:10 PM	11	144		0	226	46	0		32		11	0				0	470	0	0	0	0
5:15 PM	11	130		0	198	56	0		44		8	0				0	447	0	0	0	0
5:20 PM	17	148		0	194	44	0		28		4	0				0	435	0	0	0	0
5:25 PM	6	127		0	229	69	0		26		6	0				0	463	0	0	0	0
5:30 PM	6	114		0	205	58	0		25		17	0				0	425	0	0	0	0
5:35 PM	14	137		0	177	58	0		32		9	0				0	427	0	0	0	0
5:40 PM	8	134		0	217	63	0		21		4	0				0	447	0	0	0	0
5:45 PM	7	148		0	220	60	0		18		8	0				0	461	0	0	0	0
5:50 PM	8	129		0	177	62	0		32		6	0				0	414	0	0	0	0
5:55 PM	9	115		0	197	40	0		19		9	0				0	389	0	0	0	0
Total Survey	228	3,377		1	4,951	1,422	0		710		266	0				0	10,954	0	0	0	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
4:00 PM	27	448		0	607	179	0		96		33	0				0	1,390	0	0	0	0
4:15 PM	31	417		0	625	185	0		92		35	0				0	1,385	0	0	0	0
4:30 PM	25	425		0	654	185	0		93		39	0				0	1,421	0	0	0	0
4:45 PM	28	460		1	625	200	0		96		38	0				0	1,447	0	0	0	0
5:00 PM	31	445		0	626	163	0		88		50	0				0	1,403	0	0	0	0
5:15 PM	34	405		0	621	169	0		98		18	0				0	1,345	0	0	0	0
5:30 PM	28	385		0	599	179	0		78		30	0				0	1,299	0	0	0	0
5:45 PM	24	392		0	594	162	0		69		23	0				0	1,264	0	0	0	0
Total Survey	228	3,377		1	4,951	1,422	0		710		266	0				0	10,954	0	0	0	0

Peak Hour Summary
4:10 PM to 5:10 PM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1,876	2,657	4,533	1	3,236	2,142	5,378	0	545	858	1,403	0	0	0	0	0	5,657	0	0	0	0
%HV	2.6%				2.2%				2.4%				0.0%				2.4%				
PHF	0.94				0.96				0.95				0.00				0.98				

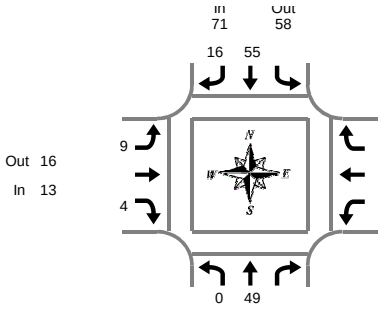
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	113	1,763		1,876	2,491	745	3,236		379		166	545				0	5,657
%HV	0.0%	2.8%	NA	2.6%	2.2%	2.1%	2.2%		2.4%	NA	2.4%	2.4%	NA	NA	NA	0.0%	2.4%
PHF	0.83	0.94		0.94	0.95	0.93	0.96		0.94		0.85	0.95				0.00	0.98

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total	Pedestrians Crosswalk			
	L	T		Bikes	T	R		Bikes	L		R	Bikes				Bikes		North	South	East	West
4:00 PM	111	1,750		1	2,511	749	0		377		145	0				0	5,643	0	0	0	0
4:15 PM	115	1,747		1	2,530	733	0		369		162	0				0	5,656	0	0	0	0
4:30 PM	118	1,735		1	2,526	717	0		375		145	0				0	5,616	0	0	0	0
4:45 PM	121	1,695		1	2,471	711	0		360		136	0				0	5,494	0	0	0	0
5:00 PM	117	1,627		0	2,440	673	0		333		121	0				0	5,311	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Redland Rd

Tuesday, January 24, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:10 PM to 5:10 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	0	4		4	4	3	7		1		0	1				0	12
4:05 PM	1	8		9	8	0	8		1		3	4				0	21
4:10 PM	0	7		7	5	0	5		1		1	2				0	14
4:15 PM	0	4		4	9	1	10		1		0	1				0	15
4:20 PM	0	5		5	8	1	9		0		0	0				0	14
4:25 PM	0	4		4	4	3	7		0		0	0				0	11
4:30 PM	0	4		4	2	1	3		2		0	2				0	9
4:35 PM	0	3		3	11	2	13		2		0	2				0	18
4:40 PM	0	6		6	0	1	1		0		1	1				0	8
4:45 PM	0	3		3	4	1	5		0		1	1				0	9
4:50 PM	0	2		2	4	4	8		0		0	0				0	10
4:55 PM	0	3		3	4	1	5		1		0	1				0	9
5:00 PM	0	4		4	2	1	3		1		0	1				0	8
5:05 PM	0	4		4	2	0	2		1		1	2				0	8
5:10 PM	0	4		4	4	1	5		0		0	0				0	9
5:15 PM	0	1		1	6	0	6		1		0	1				0	8
5:20 PM	1	3		4	3	0	3		1		0	1				0	8
5:25 PM	0	2		2	3	1	4		0		1	1				0	7
5:30 PM	0	2		2	3	2	5		1		0	1				0	8
5:35 PM	0	3		3	5	0	5		1		0	1				0	9
5:40 PM	0	3		3	2	1	3		0		0	0				0	6
5:45 PM	0	3		3	6	0	6		0		1	1				0	10
5:50 PM	0	1		1	5	1	6		2		0	2				0	9
5:55 PM	0	2		2	1	2	3		0		0	0				0	5
Total Survey	2	85		87	105	27	132		17		9	26				0	245

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	1	19		20	17	3	20		3		4	7				0	47
4:15 PM	0	13		13	21	5	26		1		0	1				0	40
4:30 PM	0	13		13	13	4	17		4		1	5				0	35
4:45 PM	0	8		8	12	6	18		1		1	2				0	28
5:00 PM	0	12		12	8	2	10		2		1	3				0	25
5:15 PM	1	6		7	12	1	13		2		1	3				0	23
5:30 PM	0	8		8	10	3	13		2		0	2				0	23
5:45 PM	0	6		6	12	3	15		2		1	3				0	24
Total Survey	2	85		87	105	27	132		17		9	26				0	245

Heavy Vehicle Peak Hour Summary
4:10 PM to 5:10 PM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Redland Rd			Westbound Redland Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	49	59	108	71	58	129	13	16	29	0	0	0	133
PHF	0.77			0.68			0.65			0.00			0.77

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Total
	L	T		Total	T	R	Total		L		R	Total				Total	
Volume	0	49		49	55	16	71		9		4	13				0	133
PHF	0.00	0.77		0.77	0.63	0.67	0.68		0.56		0.50	0.65				0.00	0.77

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

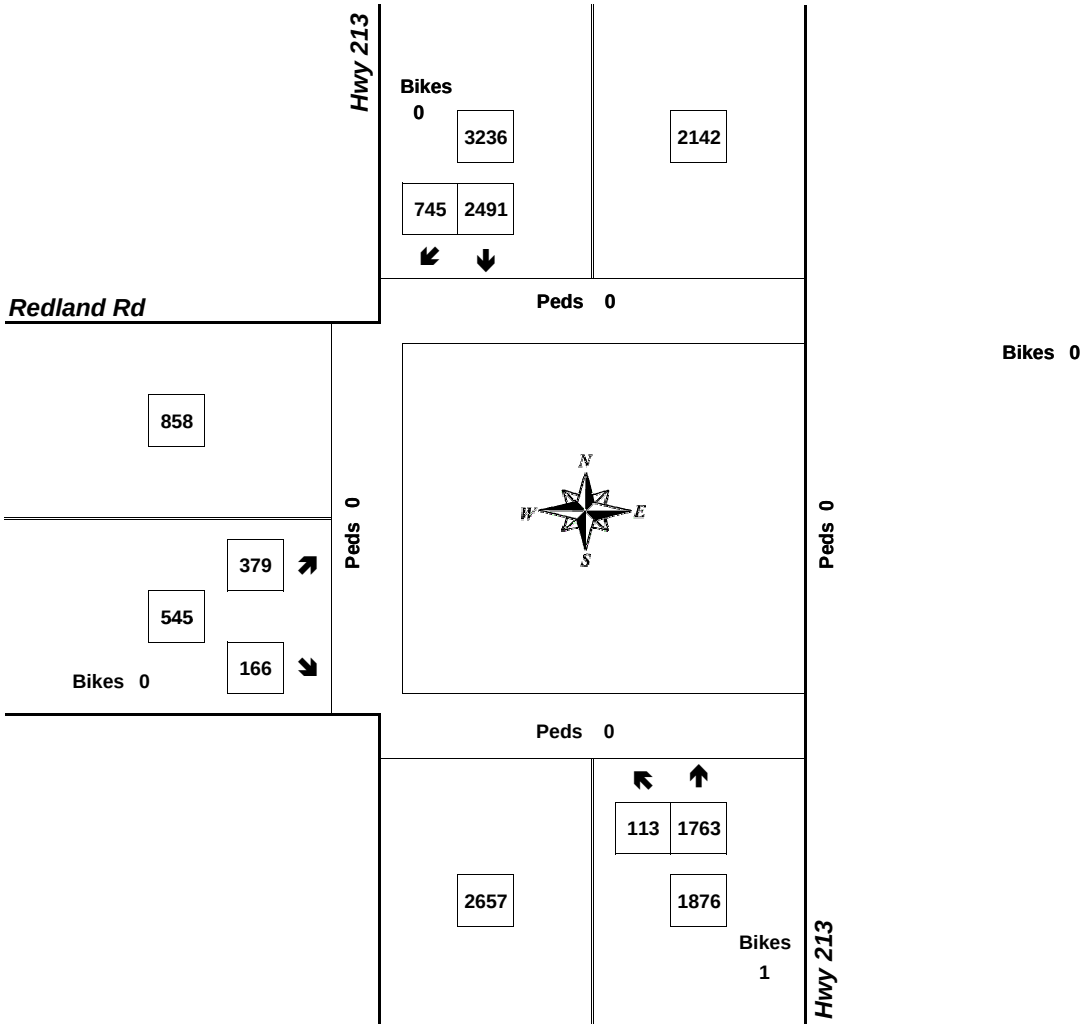
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Redland Rd				Westbound Redland Rd				Interval Total
	L	T		Total	T	R	Total		L		R	Total				Total	
4:00 PM	1	53		54	63	18	81		9		6	15				0	150
4:15 PM	0	46		46	54	17	71		8		3	11				0	128
4:30 PM	1	39		40	45	13	58		9		4	13				0	111
4:45 PM	1	34		35	42	12	54		7		3	10				0	99
5:00 PM	1	32		33	42	9	51		8		3	11				0	95

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Redland Rd

4:10 PM to 5:10 PM
Tuesday, January 24, 2017

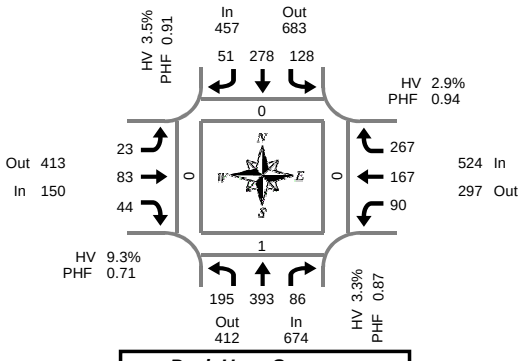


Approach	PHF	HV%	Volume
EB	0.95	2.4%	545
WB	0.00	0.0%	0
NB	0.94	2.6%	1,876
SB	0.96	2.2%	3,236
Intersection	0.98	2.4%	5,657

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:20 AM to 8:20 AM

Redland Rd & Holcomb Blvd

Wednesday, January 25, 2017
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	12	29	1	0	6	13	4	0	0	6	0	0	4	11	27	0	113	0	0	0	0
7:05 AM	15	37	3	0	8	15	4	0	0	2	2	0	4	5	20	0	115	0	0	0	0
7:10 AM	12	38	0	0	6	13	4	0	2	3	1	0	4	15	34	0	132	0	0	0	0
7:15 AM	16	29	1	0	14	17	3	0	2	3	7	0	1	10	30	0	133	0	0	0	0
7:20 AM	22	28	2	0	12	20	7	0	1	6	3	0	6	11	21	0	139	0	0	0	0
7:25 AM	16	37	6	0	6	28	3	0	1	7	5	0	8	16	26	0	159	0	0	0	0
7:30 AM	18	42	4	0	11	28	2	0	4	3	4	0	7	12	25	0	160	0	0	0	0
7:35 AM	22	35	10	0	11	24	5	0	0	9	2	0	2	14	23	0	157	0	0	0	0
7:40 AM	16	32	15	0	9	28	5	0	3	12	5	0	4	17	23	0	169	0	0	0	0
7:45 AM	9	30	13	0	9	25	9	0	7	7	4	0	10	17	19	0	159	0	0	0	0
7:50 AM	18	26	10	0	17	19	1	0	0	12	3	0	8	17	17	0	148	0	0	0	0
7:55 AM	12	27	7	0	8	28	2	0	0	10	2	0	8	17	22	0	143	0	0	0	0
8:00 AM	13	27	2	0	18	14	4	0	1	5	1	0	5	7	23	0	120	0	0	0	0
8:05 AM	12	28	5	0	12	22	4	0	1	5	5	0	7	17	25	0	143	0	0	0	0
8:10 AM	18	34	6	0	8	22	5	0	1	4	6	0	16	9	24	0	153	0	1	0	0
8:15 AM	19	47	6	0	7	20	4	0	4	3	4	0	9	13	19	0	155	0	0	0	0
8:20 AM	8	25	5	0	8	21	8	0	3	7	4	0	5	8	22	0	124	0	1	0	0
8:25 AM	21	22	8	0	10	24	1	0	4	4	3	0	7	4	15	0	123	0	0	0	0
8:30 AM	15	34	2	0	11	18	5	0	3	4	7	0	10	6	27	0	142	0	0	0	0
8:35 AM	14	27	1	0	8	22	3	0	1	8	3	0	6	6	13	0	112	0	0	0	0
8:40 AM	14	39	9	0	12	17	5	0	0	5	9	0	6	5	21	0	142	0	0	0	0
8:45 AM	14	37	6	0	17	14	3	0	0	8	3	0	3	12	20	0	137	0	0	0	0
8:50 AM	16	34	6	0	13	15	6	0	1	8	4	0	2	13	11	0	129	0	0	0	0
8:55 AM	5	27	4	0	7	12	10	0	3	9	8	0	8	8	25	0	126	0	0	0	0
Total Survey	357	771	132	0	248	479	107	0	42	150	95	0	150	270	532	0	3,333	0	2	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	39	104	4	0	20	41	12	0	2	11	3	0	12	31	81	0	360	0	0	0	0
7:15 AM	54	94	9	0	32	65	13	0	4	16	15	0	15	37	77	0	431	0	0	0	0
7:30 AM	56	109	29	0	31	80	12	0	7	24	11	0	13	43	71	0	486	0	0	0	0
7:45 AM	39	83	30	0	34	72	12	0	7	29	9	0	26	51	58	0	450	0	0	0	0
8:00 AM	43	89	13	0	38	58	13	0	3	14	12	0	28	33	72	0	416	0	1	0	0
8:15 AM	48	94	19	0	25	65	13	0	11	14	11	0	21	25	56	0	402	0	1	0	0
8:30 AM	43	100	12	0	31	57	13	0	4	17	19	0	22	17	61	0	396	0	0	0	0
8:45 AM	35	98	16	0	37	41	19	0	4	25	15	0	13	33	56	0	392	0	0	0	0
Total Survey	357	771	132	0	248	479	107	0	42	150	95	0	150	270	532	0	3,333	0	2	0	0

Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	674	412	1,086	0	457	683	1,140	0	150	413	563	0	524	297	821	0	1,805	0	1	0	0
%HV	3.3%				3.5%				9.3%				2.9%				3.7%				
PHF	0.87				0.91				0.71				0.94				0.93				

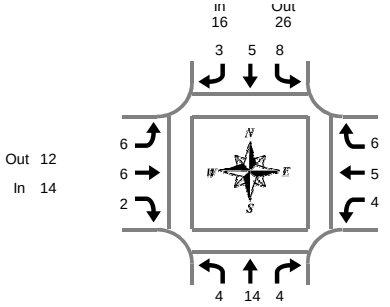
By Movement	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	195	393	86	674	128	278	51	457	23	83	44	150	90	167	267	524	1,805
%HV	2.1%	3.6%	4.7%	3.3%	6.3%	1.8%	5.9%	3.5%	26.1%	7.2%	4.5%	9.3%	4.4%	3.0%	2.2%	2.9%	3.7%
PHF	0.87	0.86	0.57	0.87	0.74	0.87	0.67	0.91	0.58	0.67	0.73	0.71	0.70	0.82	0.90	0.94	0.93

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	188	390	72	0	117	258	49	0	20	80	38	0	66	162	287	0	1,727	0	0	0	0
7:15 AM	192	375	81	0	135	275	50	0	21	83	47	0	82	164	278	0	1,783	0	1	0	0
7:30 AM	186	375	91	0	128	275	50	0	28	81	43	0	88	152	257	0	1,754	0	2	0	0
7:45 AM	173	366	74	0	128	252	51	0	25	74	51	0	97	126	247	0	1,664	0	2	0	0
8:00 AM	169	381	60	0	131	221	58	0	22	70	57	0	84	108	245	0	1,606	0	2	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Redland Rd & Holcomb Blvd

Wednesday, January 25, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:20 AM to 8:20 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
7:05 AM	0	2	0	2	1	1	0	2	0	1	0	1	1	0	3	4	9
7:10 AM	0	2	0	2	1	0	0	1	1	0	0	1	1	1	1	3	7
7:15 AM	1	4	0	5	2	1	0	3	0	0	0	0	0	1	1	2	10
7:20 AM	0	2	0	2	0	0	2	2	0	0	0	0	0	0	0	0	4
7:25 AM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	6
7:30 AM	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	1	4
7:35 AM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0	4
7:40 AM	0	2	1	3	1	0	0	1	0	0	0	0	0	0	0	0	4
7:45 AM	0	0	1	1	2	1	0	3	4	1	0	5	1	0	1	2	11
7:50 AM	2	1	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
7:55 AM	2	1	0	3	0	2	0	2	0	0	0	0	0	2	2	4	9
8:00 AM	0	1	0	1	2	0	0	2	0	1	0	1	0	1	1	2	6
8:05 AM	0	0	2	2	0	0	0	0	0	0	1	1	1	2	0	3	6
8:10 AM	0	1	0	1	0	2	0	2	0	0	1	1	2	0	0	2	6
8:15 AM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	1	1	3
8:20 AM	0	1	0	1	2	0	0	2	2	0	1	3	1	0	1	2	8
8:25 AM	0	3	0	3	1	0	0	1	1	0	1	2	0	0	0	0	6
8:30 AM	0	3	1	4	2	2	0	4	0	0	2	2	1	0	2	3	13
8:35 AM	0	0	0	0	0	4	2	6	0	1	1	2	0	1	0	1	9
8:40 AM	0	0	0	0	0	1	0	1	0	1	1	2	0	2	1	3	6
8:45 AM	0	2	0	2	1	1	0	2	0	0	2	2	0	0	0	0	6
8:50 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
8:55 AM	0	1	0	1	0	2	2	4	0	0	2	2	0	1	0	1	8
Total Survey	5	33	5	43	19	18	7	44	10	9	12	31	8	13	15	36	154

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	5	0	5	3	1	0	4	1	1	0	2	2	1	4	7	18
7:15 AM	1	11	0	12	2	1	2	5	0	1	0	1	0	1	1	2	20
7:30 AM	0	3	1	4	2	0	0	2	2	3	0	5	0	0	1	1	12
7:45 AM	4	2	1	7	3	3	0	6	4	1	0	5	1	2	3	6	24
8:00 AM	0	2	2	4	2	2	0	4	0	1	2	3	3	3	1	7	18
8:15 AM	0	4	0	4	4	0	1	5	3	0	2	5	1	0	2	3	17
8:30 AM	0	3	1	4	2	7	2	11	0	2	4	6	1	3	3	7	28
8:45 AM	0	3	0	3	1	4	2	7	0	0	4	4	0	3	0	3	17
Total Survey	5	33	5	43	19	18	7	44	10	9	12	31	8	13	15	36	154

Heavy Vehicle Peak Hour Summary
7:20 AM to 8:20 AM

By Approach	Northbound Redland Rd			Southbound Redland Rd			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	22	11	33	16	26	42	14	12	26	15	18	33	67
PHF	0.79			0.67			0.50			0.42			0.70

By Movement	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	4	14	4	22	8	5	3	16	6	6	2	14	4	5	6	15	67
PHF	0.25	0.50	0.50	0.79	0.50	0.42	0.38	0.67	0.38	0.38	0.25	0.50	0.33	0.25	0.50	0.42	0.70

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

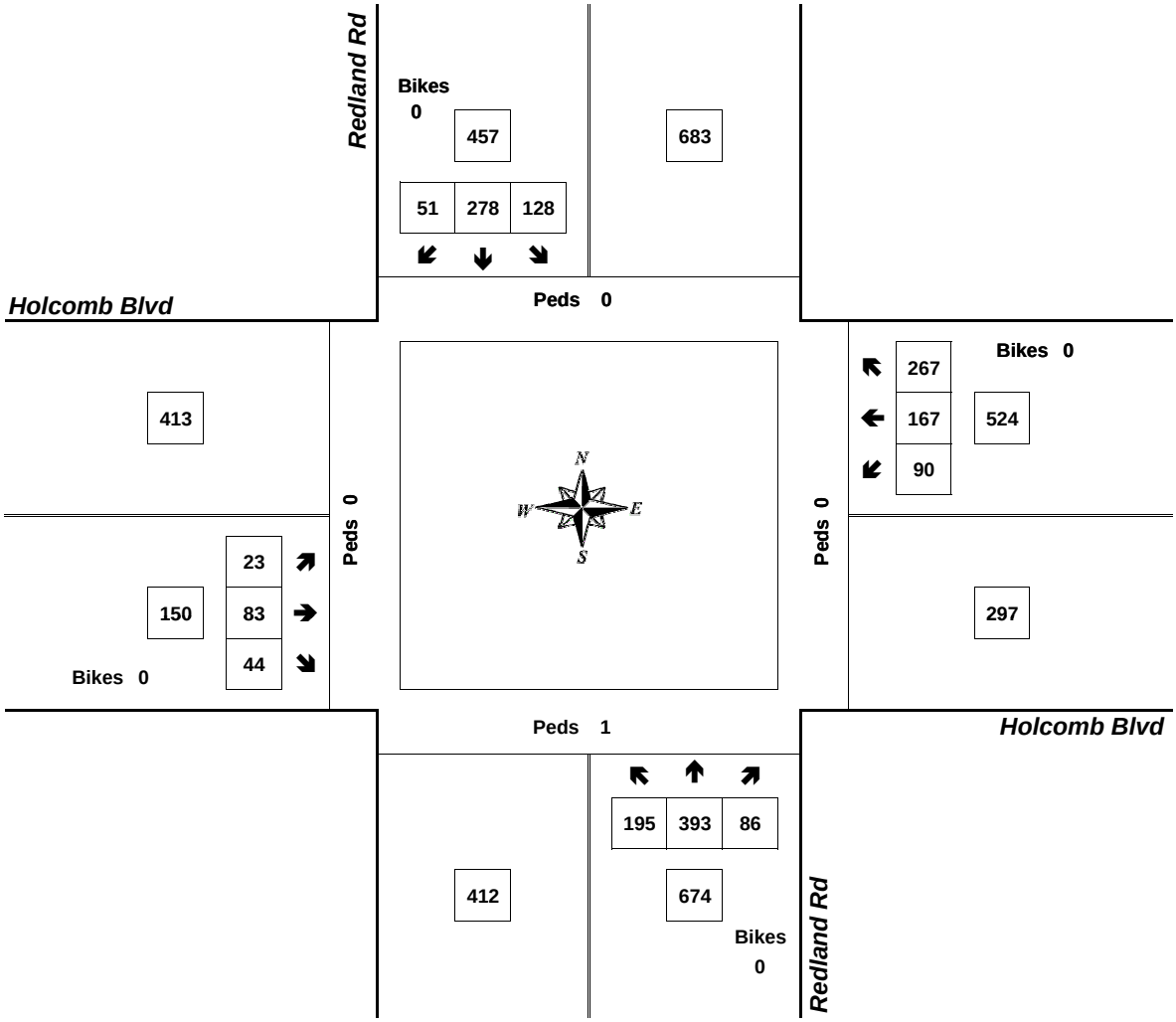
Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	5	21	2	28	10	5	2	17	7	6	0	13	3	4	9	16	74
7:15 AM	5	18	4	27	9	6	2	17	6	6	2	14	4	6	6	16	74
7:30 AM	4	11	4	19	11	5	1	17	9	5	4	18	5	5	7	17	71
7:45 AM	4	11	4	19	11	12	3	26	7	4	8	19	6	8	9	23	87
8:00 AM	0	12	3	15	9	13	5	27	3	3	12	18	5	9	6	20	80

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Redland Rd & Holcomb Blvd

7:20 AM to 8:20 AM
Wednesday, January 25, 2017

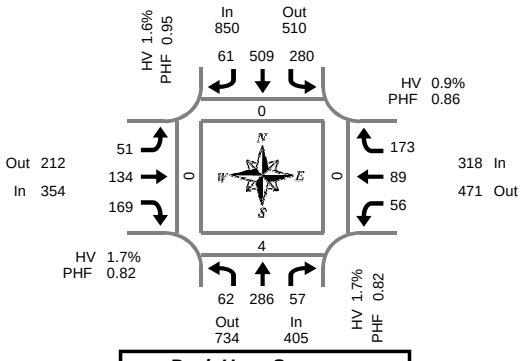


Approach	PHF	HV%	Volume
EB	0.71	9.3%	150
WB	0.94	2.9%	524
NB	0.87	3.3%	674
SB	0.91	3.5%	457
Intersection	0.93	3.7%	1,805

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:40 PM to 5:40 PM

Redland Rd & Holcomb Blvd

Tuesday, January 24, 2017
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	4	24	7	0	28	38	4	0	5	10	3	0	8	6	18	0	155	0	0	0	0
4:05 PM	4	20	7	0	23	34	3	0	5	13	9	0	1	9	17	0	145	0	0	0	0
4:10 PM	3	29	4	0	26	40	5	0	1	10	7	0	6	11	21	0	163	0	0	0	0
4:15 PM	6	19	2	0	27	43	7	0	2	14	10	0	0	10	18	0	158	0	0	0	0
4:20 PM	9	24	4	0	23	39	4	0	2	10	11	0	4	10	20	0	160	0	0	0	0
4:25 PM	8	25	2	0	28	40	6	0	0	7	9	0	0	11	11	0	147	0	0	0	0
4:30 PM	5	22	5	0	15	49	3	0	2	16	14	0	1	9	20	0	161	0	0	0	0
4:35 PM	4	25	4	0	26	43	7	0	3	11	4	0	5	6	21	0	159	0	0	0	0
4:40 PM	4	27	2	0	16	39	6	0	5	11	11	0	7	8	18	0	154	0	0	0	0
4:45 PM	8	27	5	0	30	47	4	0	3	7	11	0	1	5	15	0	163	0	1	0	0
4:50 PM	2	22	3	0	21	46	5	0	6	11	9	0	2	8	13	0	148	0	0	0	0
4:55 PM	8	21	4	0	18	45	6	0	1	9	14	0	8	7	18	0	159	0	0	0	0
5:00 PM	4	25	4	0	29	44	10	0	6	10	9	0	5	5	14	0	165	0	0	0	0
5:05 PM	9	32	5	0	23	43	0	0	8	12	8	0	4	9	22	0	175	0	1	0	0
5:10 PM	5	28	7	0	20	42	2	0	5	18	18	0	5	9	17	0	176	0	0	0	0
5:15 PM	6	26	5	0	22	34	8	0	2	9	21	0	5	9	7	0	154	0	0	0	0
5:20 PM	4	23	4	0	30	39	6	0	0	6	16	0	4	6	11	0	149	0	0	0	0
5:25 PM	3	19	8	0	20	44	2	0	3	11	21	0	3	9	9	0	152	0	0	0	0
5:30 PM	7	17	5	0	19	43	8	0	8	10	18	1	8	9	18	0	170	0	2	0	0
5:35 PM	2	19	5	0	32	43	4	0	4	20	13	0	4	5	11	0	162	0	0	0	0
5:40 PM	5	17	5	0	22	54	1	0	3	11	16	0	1	7	8	0	150	0	0	0	0
5:45 PM	5	25	3	0	27	34	3	0	3	14	18	0	3	5	8	0	148	0	0	0	0
5:50 PM	7	15	2	0	26	45	5	0	2	4	14	0	2	4	8	0	134	0	0	0	0
5:55 PM	5	18	2	0	21	32	1	0	2	18	16	0	2	8	10	0	135	0	0	0	0
Total Survey	127	549	104	0	572	1,000	110	0	81	272	300	1	89	185	353	0	3,742	0	4	0	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	11	73	18	0	77	112	12	0	11	33	19	0	15	26	56	0	463	0	0	0	0
4:15 PM	23	68	8	0	78	122	17	0	4	31	30	0	4	31	49	0	465	0	0	0	0
4:30 PM	13	74	11	0	57	131	16	0	10	38	29	0	13	23	59	0	474	0	0	0	0
4:45 PM	18	70	12	0	69	138	15	0	10	27	34	0	11	20	46	0	470	0	1	0	0
5:00 PM	18	85	16	0	72	129	12	0	19	40	35	0	14	23	53	0	516	0	1	0	0
5:15 PM	13	68	17	0	72	117	16	0	5	26	58	0	12	24	27	0	455	0	0	0	0
5:30 PM	14	53	15	0	73	140	13	0	15	41	47	1	13	21	37	0	482	0	2	0	0
5:45 PM	17	58	7	0	74	111	9	0	7	36	48	0	7	17	26	0	417	0	0	0	0
Total Survey	127	549	104	0	572	1,000	110	0	81	272	300	1	89	185	353	0	3,742	0	4	0	0

Peak Hour Summary
4:40 PM to 5:40 PM

By Approach	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	405	734	1,139	0	850	510	1,360	0	354	212	566	1	318	471	789	0	1,927	0	4	0	0
%HV	1.7%				1.6%				1.7%				0.9%				1.6%				
PHF	0.82				0.95				0.82				0.86				0.93				

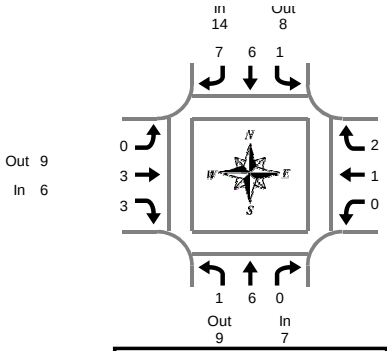
By Movement	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	62	286	57	405	280	509	61	850	51	134	169	354	56	89	173	318	1,927
%HV	1.6%	2.1%	0.0%	1.7%	0.4%	1.2%	11.5%	1.6%	0.0%	2.2%	1.8%	1.7%	0.0%	1.1%	1.2%	0.9%	1.6%
PHF	0.74	0.83	0.79	0.82	0.97	0.92	0.73	0.95	0.67	0.82	0.73	0.82	0.82	0.82	0.80	0.86	0.93

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	65	285	49	0	281	503	60	0	35	129	112	0	43	100	210	0	1,872	0	1	0	0
4:15 PM	72	297	47	0	276	520	60	0	43	136	128	0	42	97	207	0	1,925	0	2	0	0
4:30 PM	62	297	56	0	270	515	59	0	44	131	156	0	50	90	185	0	1,915	0	2	0	0
4:45 PM	63	276	60	0	286	524	56	0	49	134	174	1	50	88	163	0	1,923	0	4	0	0
5:00 PM	62	264	55	0	291	497	50	0	46	143	188	1	46	85	143	0	1,870	0	3	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
4:40 PM to 5:40 PM

Redland Rd & Holcomb Blvd

Tuesday, January 24, 2017
4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	2	0	2	0	0	0	0	1	1	1	3	6
4:05 PM	0	0	0	0	0	0	1	1	3	0	1	4	0	1	2	3	8
4:10 PM	1	1	0	2	1	0	0	1	0	0	0	0	1	0	1	2	5
4:15 PM	0	0	0	0	0	1	0	1	0	1	2	3	0	1	0	1	5
4:20 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:25 PM	0	1	0	1	2	1	0	3	0	0	1	1	0	0	0	0	5
4:30 PM	0	1	0	1	0	1	0	1	0	2	1	3	0	0	0	0	5
4:35 PM	0	1	0	1	0	1	0	1	0	0	0	0	1	0	1	2	4
4:40 PM	0	1	0	1	0	0	2	2	0	0	0	0	0	0	1	1	4
4:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
4:50 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	4
4:55 PM	0	0	0	0	0	0	1	1	0	1	1	2	0	0	0	0	3
5:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
5:05 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	1	1	2	5
5:10 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:25 PM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	2	2	0	0	1	1	0	0	0	0	3
5:35 PM	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
5:40 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	0	0	0	3
5:50 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	3
5:55 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total Survey	2	12	0	14	5	16	9	30	3	7	8	18	3	4	9	16	78

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	2	0	3	1	2	1	4	3	0	1	4	2	2	4	8	19
4:15 PM	0	1	0	1	2	3	0	5	0	1	3	4	0	1	0	1	11
4:30 PM	0	3	0	3	0	2	2	4	0	2	1	3	1	0	2	3	13
4:45 PM	0	1	0	1	0	4	2	6	0	1	1	2	0	0	0	0	9
5:00 PM	1	1	0	2	0	2	0	2	0	2	0	2	0	1	1	2	8
5:15 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
5:30 PM	0	1	0	1	1	1	2	4	0	0	2	2	0	0	0	0	7
5:45 PM	0	1	0	1	1	2	1	4	0	1	0	1	0	0	2	2	8
Total Survey	2	12	0	14	5	16	9	30	3	7	8	18	3	4	9	16	78

Heavy Vehicle Peak Hour Summary
4:40 PM to 5:40 PM

By Approach	Northbound Redland Rd			Southbound Redland Rd			Eastbound Holcomb Blvd			Westbound Holcomb Blvd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	7	9	16	14	8	22	6	9	15	3	4	7	30
PHF	0.88			0.50			0.38			0.38			0.75

By Movement	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	6	0	7	1	6	7	14	0	3	3	6	0	1	2	3	30
PHF	0.25	0.75	0.00	0.88	0.25	0.38	0.58	0.50	0.00	0.25	0.38	0.38	0.00	0.25	0.50	0.38	0.75

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

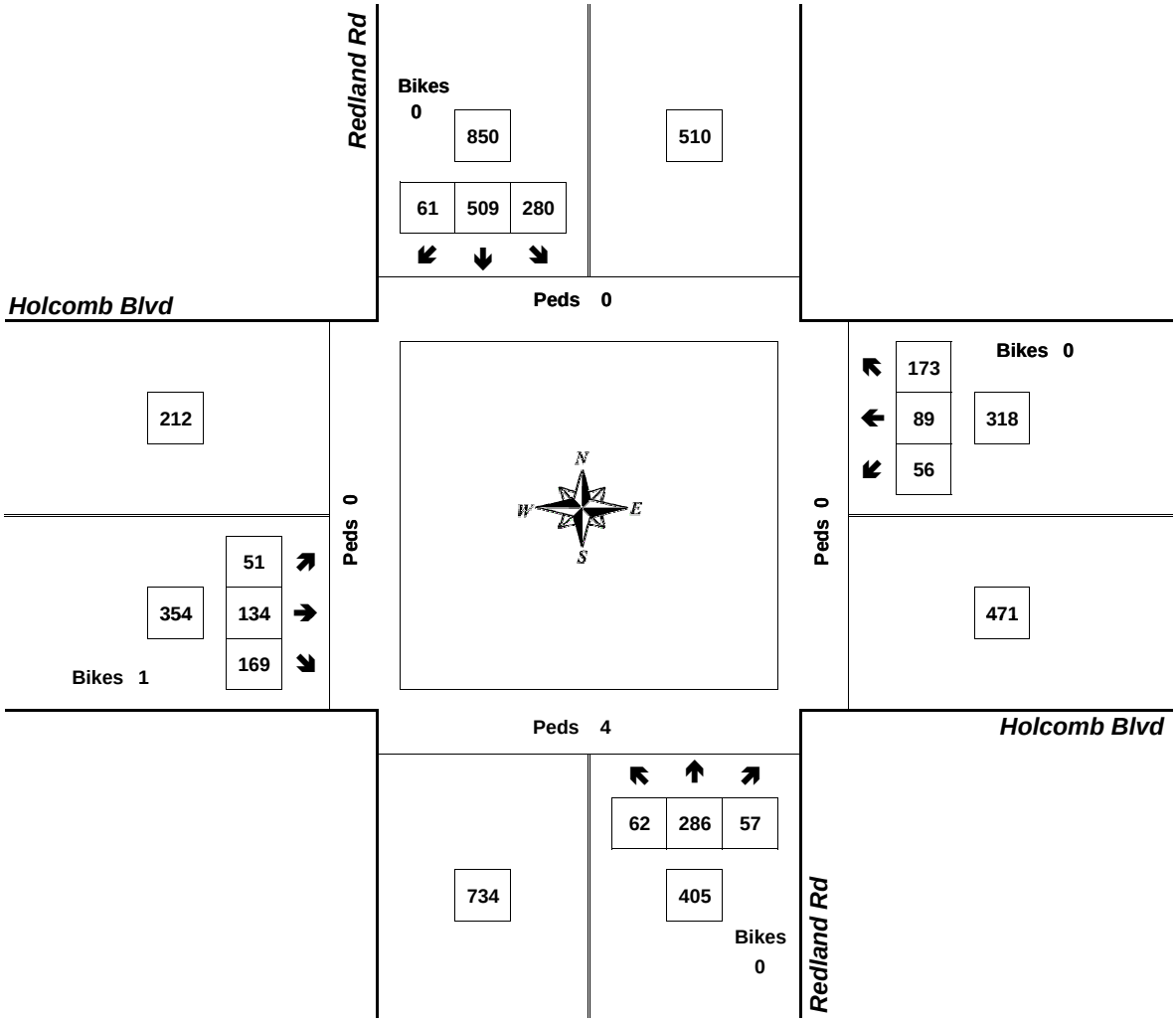
Interval Start Time	Northbound Redland Rd				Southbound Redland Rd				Eastbound Holcomb Blvd				Westbound Holcomb Blvd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	7	0	8	3	11	5	19	3	4	6	13	3	3	6	12	52
4:15 PM	1	6	0	7	2	11	4	17	0	6	5	11	1	2	3	6	41
4:30 PM	1	7	0	8	0	8	5	13	0	5	2	7	1	1	3	5	33
4:45 PM	1	5	0	6	1	7	5	13	0	3	3	6	0	1	1	2	27
5:00 PM	1	5	0	6	2	5	4	11	0	3	2	5	0	1	3	4	26

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Redland Rd & Holcomb Blvd

4:40 PM to 5:40 PM
Tuesday, January 24, 2017

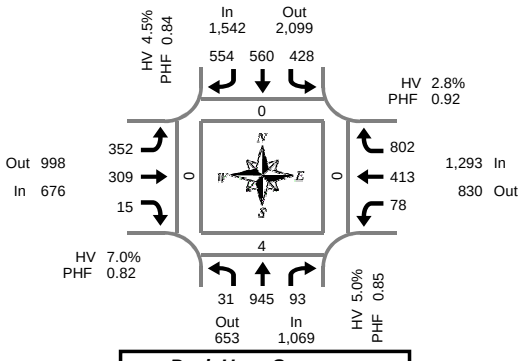


Approach	PHF	HV%	Volume
EB	0.82	1.7%	354
WB	0.86	0.9%	318
NB	0.82	1.7%	405
SB	0.95	1.6%	850
Intersection	0.93	1.6%	1,927

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:00 AM to 8:00 AM

Hwy 213 & Beavercreek Rd

Wednesday, January 25, 2017
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	4	71	11	0	27	28	50	0	26	20	2	0	6	25	67	0	337	0	0	0	0
7:05 AM	2	64	7	0	28	34	46	0	32	27	2	0	3	35	58	0	338	0	0	0	0
7:10 AM	1	80	9	0	33	32	35	0	29	33	2	0	9	32	66	0	361	0	1	0	0
7:15 AM	3	93	10	0	34	32	36	0	24	35	1	0	5	31	73	0	377	0	0	0	0
7:20 AM	4	91	10	0	44	48	54	0	36	31	1	0	10	37	65	0	431	0	0	0	0
7:25 AM	5	90	8	0	38	49	40	0	25	53	1	0	5	39	71	0	424	0	0	0	0
7:30 AM	1	78	8	0	32	49	39	0	31	28	0	0	10	34	69	0	379	0	0	0	0
7:35 AM	2	81	4	0	31	56	53	0	30	23	2	0	6	44	72	0	404	0	1	0	0
7:40 AM	1	83	8	0	37	57	41	0	32	18	2	0	5	28	71	0	383	0	1	0	0
7:45 AM	3	64	6	0	54	64	51	0	26	13	2	0	7	32	68	0	390	0	0	0	0
7:50 AM	3	71	5	0	38	50	52	0	27	12	0	0	8	32	60	0	358	0	1	0	0
7:55 AM	2	79	7	0	32	61	57	0	34	16	0	0	4	44	62	0	398	0	0	0	0
8:00 AM	4	69	7	0	21	45	55	0	24	13	2	0	11	21	54	0	326	0	0	0	0
8:05 AM	4	75	6	0	34	49	63	0	18	15	0	0	9	18	57	0	348	0	0	0	0
8:10 AM	6	73	7	0	15	38	42	0	25	14	5	0	6	24	66	0	321	0	0	0	0
8:15 AM	3	65	14	0	23	38	47	0	38	19	2	0	7	32	38	0	326	1	0	0	0
8:20 AM	4	54	14	0	40	53	66	0	27	18	0	0	3	27	43	0	349	0	2	0	2
8:25 AM	6	75	10	0	23	45	42	0	25	11	2	0	9	20	30	0	298	0	1	0	0
8:30 AM	2	48	3	0	34	51	53	0	27	13	3	0	6	33	65	0	338	0	0	0	0
8:35 AM	3	70	5	0	25	47	48	0	27	20	2	0	6	27	44	0	324	0	0	0	0
8:40 AM	2	51	8	0	39	72	33	0	34	18	4	0	7	27	44	0	339	0	1	0	0
8:45 AM	1	84	6	0	30	58	40	0	23	10	6	0	14	48	45	0	365	0	0	0	0
8:50 AM	3	60	7	0	40	48	51	0	37	32	1	0	4	36	38	0	357	0	0	0	0
8:55 AM	9	56	7	0	33	57	46	0	14	16	1	0	4	31	39	0	313	0	0	0	0
Total Survey	78	1,725	187	0	785	1,161	1,140	0	671	508	43	0	164	757	1,365	0	8,584	1	8	0	2

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	7	215	27	0	88	94	131	0	87	80	6	0	18	92	191	0	1,036	0	1	0	0
7:15 AM	12	274	28	0	116	129	130	0	85	119	3	0	20	107	209	0	1,232	0	0	0	0
7:30 AM	4	242	20	0	100	162	133	0	93	69	4	0	21	106	212	0	1,166	0	2	0	0
7:45 AM	8	214	18	0	124	175	160	0	87	41	2	0	19	108	190	0	1,146	0	1	0	0
8:00 AM	14	217	20	0	70	132	160	0	67	42	7	0	26	63	177	0	995	0	0	0	0
8:15 AM	13	194	38	0	86	136	155	0	90	48	4	0	19	79	111	0	973	1	3	0	2
8:30 AM	7	169	16	0	98	170	134	0	88	51	9	0	19	87	153	0	1,001	0	1	0	0
8:45 AM	13	200	20	0	103	163	137	0	74	58	8	0	22	115	122	0	1,035	0	0	0	0
Total Survey	78	1,725	187	0	785	1,161	1,140	0	671	508	43	0	164	757	1,365	0	8,584	1	8	0	2

Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1,069	653	1,722	0	1,542	2,099	3,641	0	676	998	1,674	0	1,293	830	2,123	0	4,580	0	4	0	0
%HV	5.0%				4.5%				7.0%				2.8%				4.5%				
PHF	0.85				0.84				0.82				0.92				0.93				

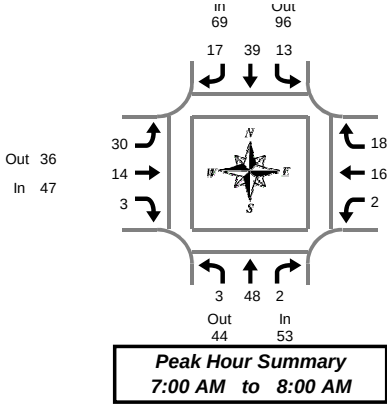
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	31	945	93	1,069	428	560	554	1,542	352	309	15	676	78	413	802	1,293	4,580
%HV	9.7%	5.1%	2.2%	5.0%	3.0%	7.0%	3.1%	4.5%	8.5%	4.5%	20.0%	7.0%	2.6%	3.9%	2.2%	2.8%	4.5%
PHF	0.65	0.86	0.80	0.85	0.83	0.79	0.87	0.84	0.95	0.65	0.63	0.82	0.78	0.88	0.95	0.92	0.93

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	31	945	93	0	428	560	554	0	352	309	15	0	78	413	802	0	4,580	0	4	0	0
7:15 AM	38	947	86	0	410	598	583	0	332	271	16	0	86	384	788	0	4,539	0	3	0	0
7:30 AM	39	867	96	0	380	605	608	0	337	200	17	0	85	356	690	0	4,280	1	6	0	2
7:45 AM	42	794	92	0	378	613	609	0	332	182	22	0	83	337	631	0	4,115	1	5	0	2
8:00 AM	47	780	94	0	357	601	586	0	319	199	28	0	86	344	563	0	4,004	1	4	0	2

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Beavercreek Rd

Wednesday, January 25, 2017
7:00 AM to 9:00 AM

Peak Hour Summary
7:00 AM to 8:00 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	1	1	3	2	1	0	3	0	4	0	4	0	1	1	2	12
7:05 AM	0	5	0	5	2	3	4	9	2	2	0	4	0	5	2	7	25
7:10 AM	0	10	0	10	0	2	0	2	3	1	1	5	1	3	2	6	23
7:15 AM	0	3	0	3	0	4	1	5	2	2	0	4	0	2	0	2	14
7:20 AM	1	2	0	3	1	5	4	10	4	0	1	5	1	4	1	6	24
7:25 AM	0	4	0	4	0	6	1	7	1	2	0	3	0	1	2	3	17
7:30 AM	0	5	1	6	3	2	1	6	0	1	0	1	0	0	0	0	13
7:35 AM	1	1	0	2	0	3	2	5	2	0	0	2	0	0	0	0	9
7:40 AM	0	5	0	5	0	2	0	2	4	0	1	5	0	0	2	2	14
7:45 AM	0	3	0	3	2	4	1	7	6	1	0	7	0	0	2	2	19
7:50 AM	0	5	0	5	3	3	3	9	3	1	0	4	0	0	1	1	19
7:55 AM	0	4	0	4	0	4	0	4	3	0	0	3	0	0	5	5	16
8:00 AM	0	1	1	2	0	2	2	4	1	0	0	1	0	0	2	2	9
8:05 AM	1	6	1	8	2	3	1	6	1	1	0	2	0	1	0	1	17
8:10 AM	0	5	2	7	2	4	1	7	2	0	1	3	2	0	3	5	22
8:15 AM	0	4	0	4	1	6	1	8	1	1	0	2	1	1	0	2	16
8:20 AM	0	3	1	4	1	3	5	9	5	0	0	5	1	1	0	2	20
8:25 AM	0	2	1	3	2	8	1	11	1	0	0	1	0	2	0	2	17
8:30 AM	0	8	0	8	2	7	2	11	3	0	1	4	1	1	4	6	29
8:35 AM	1	8	0	9	0	2	0	2	2	1	0	3	0	0	0	0	14
8:40 AM	0	5	0	5	0	6	3	9	1	2	1	4	0	0	1	1	19
8:45 AM	0	4	0	4	0	4	2	6	0	0	0	0	0	0	2	2	12
8:50 AM	0	3	0	3	0	2	3	5	2	0	0	2	0	2	2	4	14
8:55 AM	0	1	0	1	1	13	3	17	0	0	0	0	0	0	0	0	18
Total Survey	5	98	8	111	24	99	41	164	49	19	6	74	7	24	32	63	412

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	16	1	18	4	6	4	14	5	7	1	13	1	9	5	15	60
7:15 AM	1	9	0	10	1	15	6	22	7	4	1	12	1	7	3	11	55
7:30 AM	1	11	1	13	3	7	3	13	6	1	1	8	0	0	2	2	36
7:45 AM	0	12	0	12	5	11	4	20	12	2	0	14	0	0	8	8	54
8:00 AM	1	12	4	17	4	9	4	17	4	1	1	6	2	1	5	8	48
8:15 AM	0	9	2	11	4	17	7	28	7	1	0	8	2	4	0	6	53
8:30 AM	1	21	0	22	2	15	5	22	6	3	2	11	1	1	5	7	62
8:45 AM	0	8	0	8	1	19	8	28	2	0	0	2	0	2	4	6	44
Total Survey	5	98	8	111	24	99	41	164	49	19	6	74	7	24	32	63	412

Heavy Vehicle Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Beavercreek Rd			Westbound Beavercreek Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	53	44	97	69	96	165	47	36	83	36	29	65	205
PHF	0.74			0.75			0.73			0.60			0.83

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	3	48	2	53	13	39	17	69	30	14	3	47	2	16	18	36	205
PHF	0.75	0.67	0.50	0.74	0.65	0.65	0.71	0.75	0.58	0.50	0.38	0.73	0.25	0.40	0.56	0.60	0.83

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

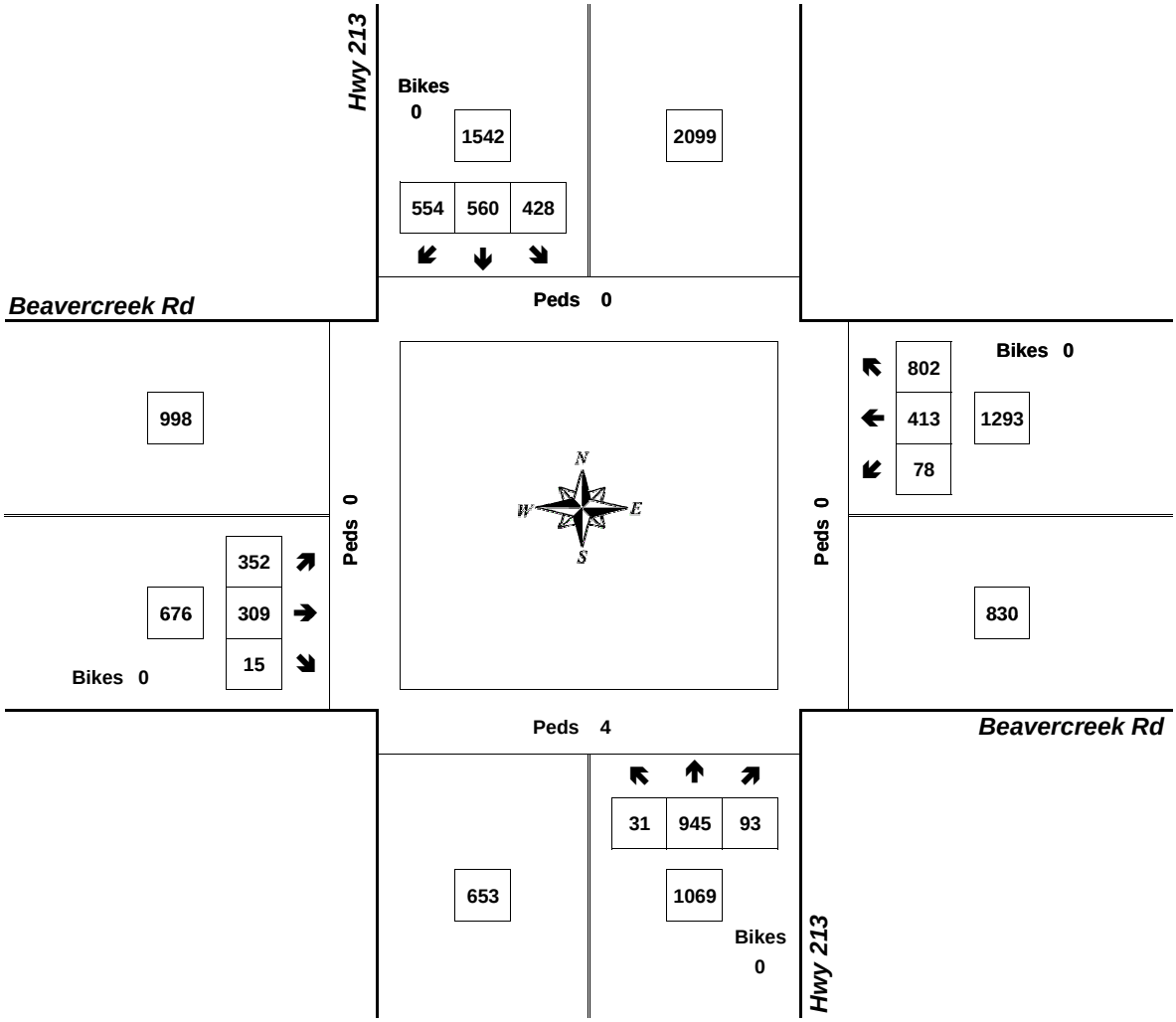
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	3	48	2	53	13	39	17	69	30	14	3	47	2	16	18	36	205
7:15 AM	3	44	5	52	13	42	17	72	29	8	3	40	3	8	18	29	193
7:30 AM	2	44	7	53	16	44	18	78	29	5	2	36	4	5	15	24	191
7:45 AM	2	54	6	62	15	52	20	87	29	7	3	39	5	6	18	29	217
8:00 AM	2	50	6	58	11	60	24	95	19	5	3	27	5	8	14	27	207

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Beavercreek Rd

7:00 AM to 8:00 AM
Wednesday, January 25, 2017

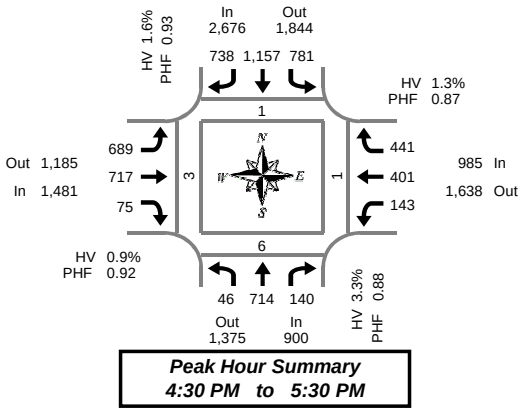


Approach	PHF	HV%	Volume
EB	0.82	7.0%	676
WB	0.92	2.8%	1,293
NB	0.85	5.0%	1,069
SB	0.84	4.5%	1,542
Intersection	0.93	4.5%	4,580

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Hwy 213 & Beavercreek Rd

Tuesday, January 24, 2017
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	6	48	10	0	76	94	49	0	57	69	4	0	9	33	29	0	484	0	0	0	0
4:05 PM	2	69	15	0	56	88	54	0	62	54	4	0	11	37	35	0	487	0	0	0	0
4:10 PM	8	67	7	0	47	90	82	0	55	58	8	0	10	39	38	0	509	0	0	0	0
4:15 PM	4	67	8	0	40	91	78	0	48	36	3	0	7	42	45	0	469	0	0	0	0
4:20 PM	0	46	7	0	61	69	66	0	59	62	4	0	9	36	36	0	455	0	2	0	0
4:25 PM	1	51	21	0	53	91	56	0	26	59	8	0	13	45	29	0	453	3	1	0	2
4:30 PM	5	69	9	0	63	115	66	0	59	39	2	0	15	33	29	0	504	0	0	0	0
4:35 PM	2	68	12	0	60	105	72	0	65	67	4	0	6	20	33	0	514	0	0	0	0
4:40 PM	4	45	10	1	72	101	64	0	63	63	7	0	15	42	39	0	525	1	1	1	0
4:45 PM	3	56	10	0	74	102	58	0	61	60	6	0	17	37	40	0	524	0	0	0	2
4:50 PM	2	53	15	0	46	74	56	0	66	65	12	0	8	38	46	0	481	0	1	0	0
4:55 PM	3	75	18	0	46	86	64	0	59	62	5	0	12	36	42	0	508	0	0	0	0
5:00 PM	6	70	9	0	75	94	64	0	51	47	6	0	14	36	39	0	511	0	1	0	0
5:05 PM	5	61	8	0	59	107	61	0	41	55	7	0	19	33	45	0	501	0	1	0	1
5:10 PM	4	66	14	0	74	103	80	0	56	52	9	0	10	20	33	0	521	0	0	0	0
5:15 PM	2	59	10	0	78	97	47	0	66	68	5	0	8	32	29	0	501	0	1	0	0
5:20 PM	5	38	13	0	70	84	60	0	61	72	5	0	8	41	34	0	491	0	0	0	0
5:25 PM	5	54	12	0	64	89	46	0	41	67	7	0	11	33	32	0	461	0	1	0	0
5:30 PM	1	32	12	0	60	88	55	0	71	58	6	0	10	34	35	0	462	0	0	0	0
5:35 PM	7	48	15	0	78	100	58	0	57	66	4	0	10	29	32	0	504	0	0	0	0
5:40 PM	1	63	10	0	54	64	45	0	64	63	7	0	8	37	33	0	449	0	1	0	0
5:45 PM	0	43	16	0	76	101	46	0	66	54	5	0	9	36	32	0	484	0	2	0	1
5:50 PM	4	48	11	0	93	83	55	0	33	61	8	0	6	32	37	0	471	0	0	0	0
5:55 PM	4	52	6	0	53	78	52	0	47	65	4	0	16	36	35	0	448	0	0	0	0
Total Survey	84	1,348	278	1	1,528	2,194	1,434	0	1,334	1,422	140	0	261	837	857	0	11,717	4	12	1	6

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	16	184	32	0	179	272	185	0	174	181	16	0	30	109	102	0	1,480	0	0	0	0
4:15 PM	5	164	36	0	154	251	200	0	133	157	15	0	29	123	110	0	1,377	3	3	0	2
4:30 PM	11	182	31	1	195	321	202	0	187	169	13	0	36	95	101	0	1,543	1	1	1	0
4:45 PM	8	184	43	0	166	262	178	0	186	187	23	0	37	111	128	0	1,513	0	1	0	2
5:00 PM	15	197	31	0	208	304	205	0	148	154	22	0	43	89	117	0	1,533	0	2	0	1
5:15 PM	12	151	35	0	212	270	153	0	168	207	17	0	27	106	95	0	1,453	0	2	0	0
5:30 PM	9	143	37	0	192	252	158	0	192	187	17	0	28	100	100	0	1,415	0	1	0	0
5:45 PM	8	143	33	0	222	262	153	0	146	180	17	0	31	104	104	0	1,403	0	2	0	1
Total Survey	84	1,348	278	1	1,528	2,194	1,434	0	1,334	1,422	140	0	261	837	857	0	11,717	4	12	1	6

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	900	1,375	2,275	1	2,676	1,844	4,520	0	1,481	1,185	2,666	0	985	1,638	2,623	0	6,042	1	6	1	3
%HV	3.3%				1.6%				0.9%				1.3%				1.7%				
PHF	0.88				0.93				0.92				0.87				0.97				

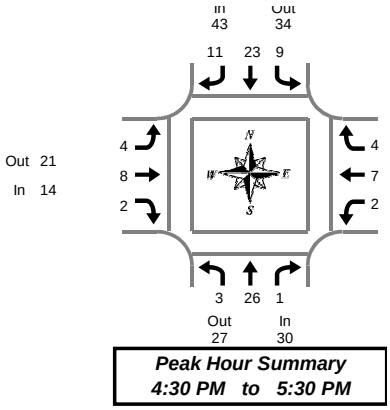
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	46	714	140	900	781	1,157	738	2,676	689	717	75	1,481	143	401	441	985	6,042
%HV	6.5%	3.6%	0.7%	3.3%	1.2%	2.0%	1.5%	1.6%	0.6%	1.1%	2.7%	0.9%	1.4%	1.7%	0.9%	1.3%	1.7%
PHF	0.77	0.87	0.81	0.88	0.88	0.90	0.90	0.93	0.91	0.87	0.75	0.92	0.79	0.86	0.86	0.87	0.97

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	40	714	142	1	694	1,106	765	0	680	694	67	0	132	438	441	0	5,913	4	5	1	4
4:15 PM	39	727	141	1	723	1,138	785	0	654	667	73	0	145	418	456	0	5,966	4	7	1	5
4:30 PM	46	714	140	1	781	1,157	738	0	689	717	75	0	143	401	441	0	6,042	1	6	1	3
4:45 PM	44	675	146	0	778	1,088	694	0	694	735	79	0	135	406	440	0	5,914	0	6	0	3
5:00 PM	44	634	136	0	834	1,088	669	0	654	728	73	0	129	399	416	0	5,804	0	7	0	2

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Beavercreek Rd

Tuesday, January 24, 2017
4:00 PM to 6:00 PM

Peak Hour Summary
4:30 PM to 5:30 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	6	0	7	3	6	0	9	3	0	0	3	0	1	0	1	20
4:05 PM	0	4	0	4	1	2	3	6	0	2	1	3	0	1	1	2	15
4:10 PM	0	1	0	1	3	2	5	10	2	2	0	4	0	0	0	0	15
4:15 PM	1	2	0	3	3	2	1	6	1	1	0	2	0	0	1	1	12
4:20 PM	0	3	0	3	1	4	1	6	3	0	0	3	0	1	1	2	14
4:25 PM	0	1	1	2	3	2	1	6	2	2	2	6	0	0	0	0	14
4:30 PM	0	1	0	1	0	0	2	2	0	0	0	0	0	1	1	2	5
4:35 PM	0	6	0	6	1	3	3	7	1	1	0	2	0	0	0	0	15
4:40 PM	0	0	0	0	3	3	0	6	0	0	0	0	0	0	0	0	6
4:45 PM	1	2	0	3	1	2	0	3	2	0	0	2	0	1	0	1	9
4:50 PM	0	2	0	2	1	1	1	3	0	1	1	2	0	1	0	1	8
4:55 PM	0	3	0	3	0	3	0	3	0	0	1	1	0	1	0	1	8
5:00 PM	0	2	0	2	0	3	0	3	0	1	0	1	0	1	1	2	8
5:05 PM	1	3	0	4	2	1	0	3	0	1	0	1	0	0	1	1	9
5:10 PM	0	1	1	2	0	1	0	1	0	0	0	0	0	0	0	0	3
5:15 PM	0	2	0	2	0	1	2	3	0	1	0	1	1	0	0	1	7
5:20 PM	0	3	0	3	1	3	2	6	1	2	0	3	0	1	1	2	14
5:25 PM	1	1	0	2	0	2	1	3	0	1	0	1	1	1	0	2	8
5:30 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	0	1	1	4
5:35 PM	0	0	0	0	1	3	1	5	1	0	1	2	0	0	0	0	7
5:40 PM	0	2	0	2	1	0	0	1	2	0	0	2	0	0	1	1	6
5:45 PM	0	1	0	1	1	2	1	4	1	0	0	1	0	0	0	0	6
5:50 PM	0	0	0	0	3	0	2	5	0	0	0	0	0	1	1	2	7
5:55 PM	1	2	0	3	1	2	1	4	0	0	0	0	0	0	0	0	7
Total Survey	6	49	2	57	31	49	27	107	19	15	6	40	2	11	10	23	227

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	11	0	12	7	10	8	25	5	4	1	10	0	2	1	3	50
4:15 PM	1	6	1	8	7	8	3	18	6	3	2	11	0	1	2	3	40
4:30 PM	0	7	0	7	4	6	5	15	1	1	0	2	0	1	1	2	26
4:45 PM	1	7	0	8	2	6	1	9	2	1	2	5	0	3	0	3	25
5:00 PM	1	6	1	8	2	5	0	7	0	2	0	2	0	1	2	3	20
5:15 PM	1	6	0	7	1	6	5	12	1	4	0	5	2	2	1	5	29
5:30 PM	0	3	0	3	3	4	1	8	3	0	1	4	0	0	2	2	17
5:45 PM	1	3	0	4	5	4	4	13	1	0	0	1	0	1	1	2	20
Total Survey	6	49	2	57	31	49	27	107	19	15	6	40	2	11	10	23	227

Heavy Vehicle Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Beavercreek Rd			Westbound Beavercreek Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	30	27	57	43	34	77	14	21	35	13	18	31	100
PHF	0.83			0.67			0.70			0.65			0.83

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	3	26	1	30	9	23	11	43	4	8	2	14	2	7	4	13	100
PHF	0.75	0.81	0.25	0.83	0.45	0.72	0.55	0.67	0.33	0.50	0.25	0.70	0.25	0.58	0.50	0.65	0.83

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Beavercreek Rd				Westbound Beavercreek Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	3	31	1	35	20	30	17	67	14	9	5	28	0	7	4	11	141
4:15 PM	3	26	2	31	15	25	9	49	9	7	4	20	0	6	5	11	111
4:30 PM	3	26	1	30	9	23	11	43	4	8	2	14	2	7	4	13	100
4:45 PM	3	22	1	26	8	21	7	36	6	7	3	16	2	6	5	13	91
5:00 PM	3	18	1	22	11	19	10	40	5	6	1	12	2	4	6	12	86

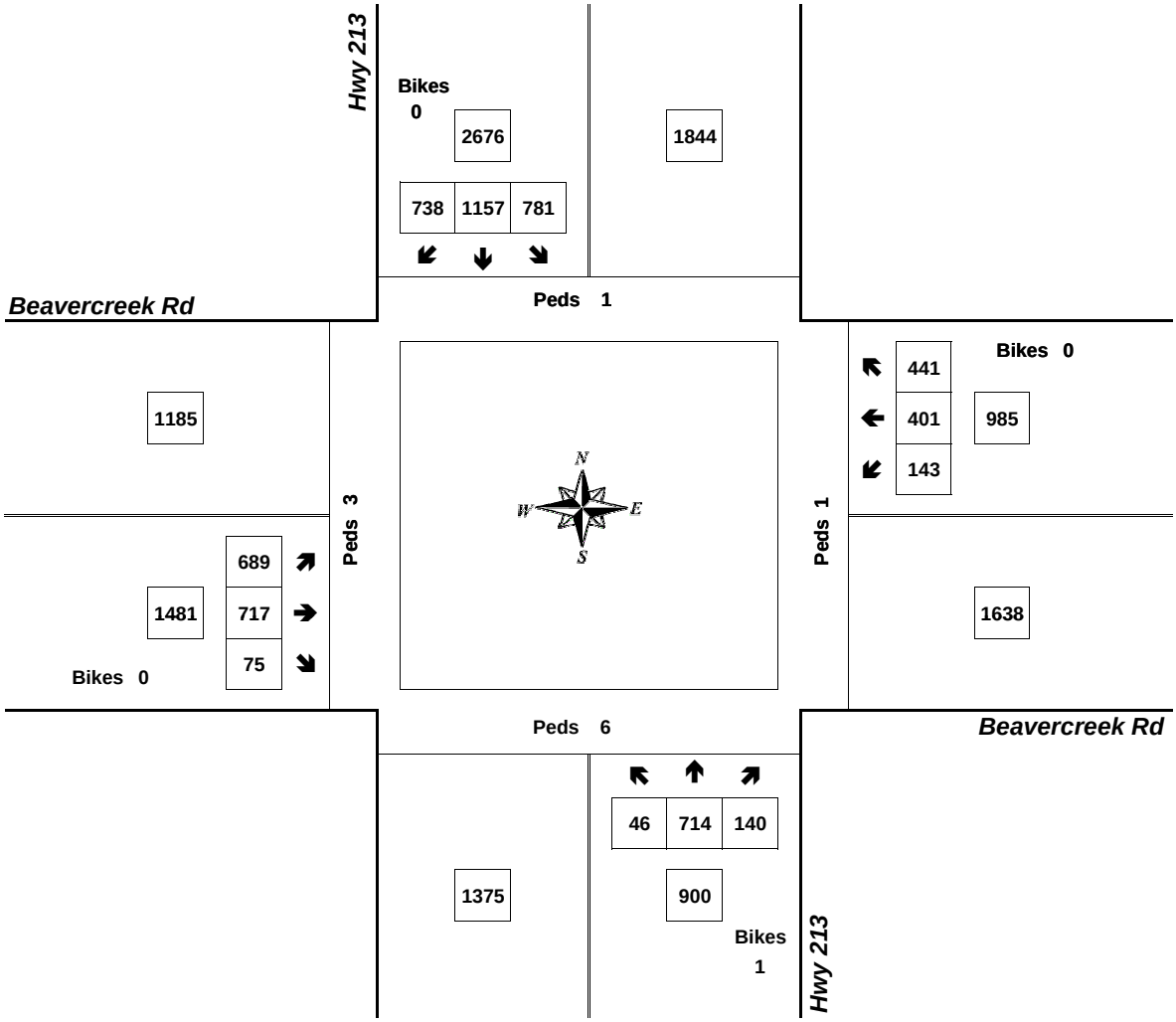
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 213 & Beavercreek Rd

4:30 PM to 5:30 PM
Tuesday, January 24, 2017



Approach	PHF	HV%	Volume
EB	0.92	0.9%	1,481
WB	0.87	1.3%	985
NB	0.88	3.3%	900
SB	0.93	1.6%	2,676
Intersection	0.97	1.7%	6,042

Count Period: 4:00 PM to 6:00 PM

TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 3

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	**1**	**1**	**2**

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**2**	**1**	**3**

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**14**	**14**	**28**

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**15**	**15**	**30**

Source: TRIP GENERATION, Ninth Edition

TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Variable: Dwelling Units
Variable Value: 124

AM PEAK HOUR

Trip Rate: 0.75

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	**23**	**70**	**93**

PM PEAK HOUR

Trip Rate: 1.00

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	**78**	**46**	**124**

WEEKDAY

Trip Rate: 9.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**590**	**590**	**1,180**

SATURDAY

Trip Rate: 9.91

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**614**	**614**	**1,228**

Source: TRIP GENERATION, Ninth Edition

CITY OF OREGON CITY, CLACKAMAS COUNTY **REDLAND RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015**

Total crash records: 27

SER# / INVEST	SPEED	ALCOHOL	DRUGS	SCHL BUS	WORK ZONE	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
01593	N	N	N			05/08/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										27,07
NO RPT						WE		REDLAND RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	27	F	OR-Y OR<25		016,026	000	27,07
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	INJC	63	F	OR-Y OR<25		000	000	00
04034	Y	N	N			10/22/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										01,07
CITY						TU		REDLAND RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						8P			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	57	F	OR-Y OR<25		047,043,026	000	01,07
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	NONE	16	M	OR-Y OR<25		000	000	00
04654	N	N	N			11/17/2014	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE						MO		REDLAND RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	60	M	OTH-Y N-RES		026	000	29
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	NONE	66	F	OR-Y OR>25		000	000	00
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		02	PSNG	INJC	61	F			000	000	00
01056	N	N	N			03/26/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE						TH		REDLAND RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						2P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	53	F	OR-Y OR<25		026	000	29
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	NONE	44	F	OR-Y OR<25		000	000	00
02925	N	N	N			07/20/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE						MO		REDLAND RD	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
						3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	35	F	OR-Y OR<25		026	000	29
															02	NONE 0	STOP										
																PRVTE	N -S									011	00
																PSNGR CAR		01	DRVR	NONE	19	M	OR-Y OR<25		000	000	00
00947	N	N	N			03/19/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										07
NONE						TU		REDLAND RD	S		TRF SIGNAL	N	WET	REAR		UNKN	S -N									000	00
						1P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y UNK		026	000	07
															02	NONE 0	STOP										
																PRVTE	S -N									011	00
																PSNGR CAR		01	DRVR	NONE	18	F	OR-Y		000	000	00

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 27

SER# / INVEST	S P E L D C	A G H D S L	R S W U C O R K	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																					OR<25				
02451	N	N	N N N	07/09/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT									013	27,07
CITY				TU		REDLAND RD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N								000		00
				3P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		016,026	038		27,07
																					OR<25				
													02	NONE 0	STOP										
														PRVTE	S -N								011	013	00
														PSNGR CAR		01	DRVR	NONE	46	F	OR-Y		000	000		00
																					OR<25				
													03	NONE 0	STOP										
														PRVTE	S -N								022		00
														PSNGR CAR		01	DRVR	INJC	35	M	OR-Y		000	000		00
																					OR<25				
													03	NONE 0	STOP										
														PRVTE	S -N								022		00
														PSNGR CAR		02	PSNG	NO<5	04	M			000	000		00
03817	N	N	N	09/29/2014	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29
NO RPT				MO		REDLAND RD	S		TRF SIGNAL	N	WET	REAR		PRVTE	S -N								000		00
				3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	35	M	OR-Y		026	000		29
																					OR<25				
													02	NONE 0	STOP										
														PRVTE	S -N								011		00
														PSNGR CAR		01	DRVR	NONE	19	F	OR-Y		000	000		00
																					OR<25				
04185	N	N	N	10/21/2014	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE				TU		REDLAND RD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N								000		00
				UNK			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	28	M	OTH-Y		026	000		29
																					OR<25				
													02	NONE 0	STOP										
														PRVTE	S -N								011		00
														PSNGR CAR		01	DRVR	INJC	44	M	OR-Y		000	000		00
																					OR<25				
01123	N	N	N	03/31/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	UNK	S-1STOP	01	NONE 0	STRGHT										29
NONE				TU		REDLAND RD	S		TRF SIGNAL	N	WET	REAR		PRVTE	S -N								000		00
				6A			06	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	NONE	44	F	OR-Y		026	000		29
																					OR<25				
													02	NONE 0	STOP										
														PRVTE	S -N								011		00
														PSNGR CAR		01	DRVR	INJC	35	M	OR-Y		000	000		00
																					OR<25				
													02	NONE 0	STOP										
														PRVTE	S -N								011		00
														PSNGR CAR		02	PSNG	INJC	34	F			000	000		00
02150	N	N	N	06/04/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NO RPT				TH		REDLAND RD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N								000		00
				10A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	55	M	OR-Y		026	000		29
																					OR<25				
													02	NONE 0	STOP										
														PRVTE	S -N								011		00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 27

SER# / INVEST	S P E D	A L C	R G S	S H L	W O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																PSNGR CAR		01	DRVR	INJC	62	F	OR-Y OR<25		000	000		00
04080	N	N	N			10/04/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	29
NONE						SU		REDLAND RD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000		00
						1P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	18	F	OR-Y OR<25		026	000		29
															02	NONE 0	STOP									011	013	
																PRVTE	S -N											00
																PSNGR CAR		01	DRVR	NONE	18	F	OR-Y OR<25		000	000		00
															03	NONE 0	STOP											
																PRVTE	S -N									022		00
																PSNGR CAR		01	DRVR	INJC	77	F	OR-Y OR<25		000	000		00
04189	N	N	N			10/11/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE						SU		REDLAND RD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000		00
						7P			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y OR<25		026	000		29
															02	NONE 0	STOP											
																PRVTE	S -N									011		00
																PSNGR CAR		01	DRVR	NONE	19	M	OR-Y OR<25		000	000		00
															02	NONE 0	STOP											
																PRVTE	S -N									011		00
																PSNGR CAR		02	PSNG	INJC	26	F			000	000		00
															02	NONE 0	STOP											
																PRVTE	S -N									011		00
																PSNGR CAR		03	PSNG	INJC	48	M			000	000		00
															02	NONE 0	STOP											
																PRVTE	S -N									011		00
																PSNGR CAR		04	PSNG	INJC	45	F			000	000		00
04343	N	N	N			10/21/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	FOG	S-1STOP	01	NONE 0	STRGHT											29
NONE						WE		REDLAND RD	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									001		00
						7A			06	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y OR<25		026	000		29
															02	NONE 0	STOP											
																PRVTE	S -N									011		00
																PSNGR CAR		01	DRVR	INJC	52	M	OR-Y OR<25		000	000		00
05452	N	N	N			12/18/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											29
NONE						FR		REDLAND RD	S		TRF SIGNAL	N	WET	REAR		PRVTE	S -N									000		00
						6A			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	42	F	OR-Y OR<25		026	000		29
															02	NONE 0	STOP											
																PRVTE	S -N									011		00
																PSNGR CAR		01	DRVR	INJC	51	M	OR-Y OR<25		000	000		00
00828	N	N	N			02/25/2014	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	ANGL-STP	01	NONE 0	TURN-R											08

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CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 27

SER# / INVEST	S P E D	A L C	U G S	C H L	O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
NONE						TU		REDLAND RD	W		TRF SIGNAL	N	DRY	TURN		PRVTE	N -W									000		00
						2P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	32	M	OR-Y		001	000		08
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	W -E									012		00
																PSNGR CAR		01	DRVR	NONE	50	M	OR-Y		000	000		00
																							OR<25					
02177	N	N	N			06/06/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	ANGL-STP	01	NONE 0	TURN-R											08
NO RPT						SA		REDLAND RD	W		TRF SIGNAL	N	DRY	TURN		PRVTE	N -W									000		00
						5P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	32	M	OR-Y		001	000		08
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	W -E									012		00
																TRUCK		01	DRVR	NONE	35	M	OR-Y		000	000		00
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	W -E									012		00
																TRUCK		02	PSNG	INJC	42	M			000	000		00
00301	N	N	N			01/25/2013	16	CASCADE HY SOUTH	INTER	3-LEG	N	N	UNK	S-1STOP	01	NONE 0	TURN-R											08
NONE						FR	0	REDLAND RD	W		R-GRN-SIG	N	WET	REAR		PRVTE	W -S									000		00
						11A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	59	M	OR-Y		006	000		08
																							OR<25					
															02	NONE 0	TURN-R											
																PRVTE	W -S									000		00
																PSNGR CAR		01	DRVR	NONE	40	F	OR-Y		000	000		00
																							OR<25					
00847	N	N	N			03/12/2013	16	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						TU	0	REDLAND RD	W		L-GRN-SIG	N	DRY	REAR		PRVTE	W -E									000		00
						10A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	F	UNK		026	000		07
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	W -E									012		00
																PSNGR CAR		01	DRVR	INJC	74	F	OR-Y		000	000		00
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	W -E									012		00
																PSNGR CAR		02	PSNG	INJC	56	F			000	000		00
02290	N	N	N			06/28/2013	16	CASCADE HY SOUTH	INTER		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
NONE						FR	0	REDLAND RD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000		00
						8A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	74	M	OR-Y		026	000		07
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	W -E									011	013	00
																PSNGR CAR		01	DRVR	INJC	43	M	OR-Y		000	000		00
																							OR<25					
															03	NONE 0	STOP											
																PRVTE	W -E									022		00
																PSNGR CAR		01	DRVR	NONE	46	F	OR-Y		000	000		00
																							OR<25					

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CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 27

SER# / INVEST	SPEED	ALCOHOL	DRUGS	SCHOOL	WORK	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
03843	N	N	N			10/09/2013	16	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						WE	0	REDLAND RD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000	00
						9A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	22	M	OR-Y OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	E -W									012	00
																PSNGR CAR		01	DRVR	NONE	56	F	OR-Y OR<25		000	000	00
04583	N	N	N			11/25/2013	16	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						MO	0	REDLAND RD	W		TRF SIGNAL	N	UNK	REAR		PRVTE	W -E									000	00
						4P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	M	OTH-Y N-RES		026	000	07
															02	NONE 0	STOP										
																PRVTE	W -E									012	00
																PSNGR CAR		01	DRVR	INJC	51	F	OR-Y OR<25		000	000	00
00188	N	N	N			01/14/2014	16	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						TU	0	REDLAND RD	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E									000	00
						4P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	W -E									011	00
																PSNGR CAR		01	DRVR	NONE	37	F	OR-Y OR<25		000	000	00
															02	NONE 0	STOP										
																PRVTE	W -E									011	00
																PSNGR CAR		02	PSNG	NO<5	01	M			000	000	00
04409	N	N	N			11/02/2014	16	CASCADE HY SOUTH	INTER	3-LEG	N	N	UNK	S-1STOP	01	NONE 0	STRGHT										29
NONE						SU	0	REDLAND RD	W		TRF SIGNAL	N	WET	REAR		PRVTE	W -E									000	00
						9A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	61	M	OR-Y OR<25		026	000	29
															02	NONE 0	STOP										
																PRVTE	W -E									011	00
																PSNGR CAR		01	DRVR	INJC	35	M	OR-Y OR<25		000	000	00
															02	NONE 0	STOP										
																PRVTE	W -E									011	00
																PSNGR CAR		02	PSNG	INJC	12	F			000	000	00
04081	Y	N	N	N	Y	10/25/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLD	S-STRGHT	01	NONE 0	STRGHT										13,01,07
STATE						FR		REDLAND RD	CN		TRF SIGNAL	N	WET	SS-O		PRVTE	S -N									007	00
						7A			04	0		N	DAWN	PDO		TRUCK		01	DRVR	NONE	54	M	OR-Y OR<25		045,047,026	000	13,01,07
															02	LOG 0	STRGHT										
																PRVTE	S -N									006	00
																BOBTAIL		01	DRVR	NONE	60	M	OTH-Y N-RES		000	000	00
															03	NONE 0	STOP										
																PRVTE	S -N									011	00
																PSNGR CAR		01	DRVR	NONE	58	F	OR-Y		000	000	00

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 27

SER# / INVEST	S P E D	A L C	U G S	R H L	S O K	W R	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
04321	Y	N	N				11/07/2013	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT						OR<25				124	04,01
NO RPT							TH		REDLAND RD	CN		TRF SIGNAL	N	WET	TURN		PRVTE	N -S						OR-Y		000	000		00
							2P			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	44	M	OR<25			000		00
																02	NONE 0	TURN-L										
																	PRVTE	W -N									001		00
																	PSNGR CAR		01	DRVR	INJC	59	F	OR-Y		047,020	000		04,01
																								OR<25					
05054	N	N	N				11/29/2015	14	CASCADE HY SOUTH	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											04
NO RPT							SU		REDLAND RD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	N -S									000		00
							10A			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	80	F	OR-Y		020	038		04
																								OR<25					
																02	NONE 0	TURN-L										
																	PRVTE	W -N									000		00
																	PSNGR CAR		01	DRVR	NONE	64	F	OR-Y		000	000		00
																								OR<25					

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CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at ABERNATHY RD, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 1

SER# / INVEST	SPEED	ALCHL	DRUGS	SCHL	WORK	DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00995	N	N	N			03/11/2014	16	ABERNATHY RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										04
NONE						TU	0	REDLAND RD	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	SE-NW									000	00
						2P			03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	62	F	OR-Y		020	000	04
																							OR<25				
															02	NONE 0	STRGHT										
																UNKN	SW-NE									000	00
																PSNGR CAR		01	DRVR	NONE	00	F	UNK		000	000	00
																							UNK				

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CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at HOLCOMB BLVD, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 10

SER# / INVEST	SPEED	ALCOHOL	DRUGS	SCHOOL	WORK	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	A/S EX	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
03052	N	N	N			07/30/2013	16	HOLCOMB BLVD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						TU	0	REDLAND RD	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW										000	00
						6A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y OR<25		026	000	07
															02	NONE 0	STOP											
																PRVTE	NE-SW										011	00
																PSNGR CAR		01	DRVR	NONE	42	F	OR-Y OR<25		000	000	00
00207	N	N	N			01/16/2014	16	HOLCOMB BLVD	INTER	CROSS	N	N	FOG	S-1STOP	01	NONE 0	STRGHT											07
NONE						TH	0	REDLAND RD	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE-SW										000	00
						7A			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	16	M	OR-Y OR<25		026	000	07
															02	NONE 0	STOP											
																PRVTE	NE-SW										011	00
																PSNGR CAR		01	DRVR	INJC	41	F	OR-Y OR<25		000	000	00
03773	N	N	N	N	N	09/25/2014	16	HOLCOMB BLVD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	POLCE 0	STRGHT											02
COUNTY						TH	0	REDLAND RD	NE		TRF SIGNAL	N	DRY	TURN		PUBLC	NE-SW										000	00
						6P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	37	M	OR-Y OR<25		000	000	00
															02	NONE 0	TURN-L											
																PRVTE	SW-NW										000	00
																PSNGR CAR		01	DRVR	NONE	16	M	OR-Y OR<25		028,004	000	02
03807	N	N	N			09/18/2015	16	HOLCOMB BLVD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE						FR	0	REDLAND RD	NE		TRF SIGNAL	N	DRY	REAR		UNKN	NE-SW										000	00
						10P			06	0		N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	M	UNK UNK		026	000	29
															02	NONE 0	STOP											
																PRVTE	NE-SW										011	00
																PSNGR CAR		01	DRVR	NONE	17	F	OR-Y OR<25		000	000	00
04246	N	N	N			10/14/2015	16	HOLCOMB BLVD	INTER	CROSS	N	N	CLR	O-OTHER	01	NONE 0	TURN-R											02
NONE						WE	0	REDLAND RD	NE		TRF SIGNAL	N	DRY	TURN		PRVTE	SE-NE										000	00
						9P			05	0		N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK OR<25		000	000	00
															02	NONE 0	TURN-L											
																PRVTE	NW-NE										000	00
																PSNGR CAR		01	DRVR	NONE	17	F	OR-Y OR<25		028	000	02
02001	N	N	N			05/27/2015	16	HOLCOMB BLVD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE						WE	0	REDLAND RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW										000	00
						10A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	45	F	OR-Y OR<25		026	000	29
															02	NONE 0	STOP											
																PRVTE	SE-NW										011	00
																PSNGR CAR		01	DRVR	INJB	65	F	OR-Y OR<25		000	000	00
01653	N	N	N			05/13/2013	16	HOLCOMB BLVD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						MO	0	REDLAND RD	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE										000	00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

REDLAND RD at HOLCOMB BLVD, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 10

SER# / INVEST	S P E D / A L C S	R S W U G L	C O H K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
				3P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y OR<25		026	000	07
													02	NONE 0 PRVTE PSNGR CAR	STOP NW-SE	01	DRVR	NONE	40	F	OR-Y OR<25		000	011 000	00 00
													02	NONE 0 PRVTE PSNGR CAR	STOP NW-SE	02	PSNG	NO<5	03	F			000	011 000	00 00
02812 NONE	N	N N		07/12/2015 SU 5P	16 0	HOLCOMB BLVD REDLAND RD	INTER NW 06	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT NW-SE	01	DRVR	NONE	58	M	OTH-Y N-RES		026	000	29 00 29
													02	NONE 0 PRVTE PSNGR CAR	STOP NW-SE	01	DRVR	NONE	58	M	OR-Y OR<25		000	011 000	00 00
03648 STATE	N	N N N N		09/28/2013 SA 8P	16 0	HOLCOMB BLVD REDLAND RD	INTER CN 01	CROSS L-GRN-SIG 0	N N N	N WET DLIT	RAIN TURN INJ	O-1 L-TURN	01	NONE 0 PRVTE PSNGR CAR	STRGHT NW-SE	01	DRVR	NONE	52	M	OR-Y OR<25		000	000	04 00 00
													01	NONE 0 PRVTE PSNGR CAR	STRGHT NW-SE	02	PSNG	INJB	19	M			000	000 000	00 00
													02	NONE 0 PRVTE PSNGR CAR	TURN-L SE-SW	01	DRVR	NONE	18	F	OR-Y OR<25		028,004,003	000 000	00 04
05202 NONE	N	N N		12/07/2015 MO 7A	16 0	HOLCOMB BLVD REDLAND RD	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	RAIN WET DAY	O-1 L-TURN TURN INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT N -S	01	DRVR	NONE	35	M	OTH-Y OR<25		000	000	02 00 00
													02	NONE 0 PRVTE PSNGR CAR	TURN-L S -W	01	DRVR	INJC	30	M	OR-Y OR<25		028,004	000 000	00 02

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	SPEC	ALC	DRG	SWK	DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
04839	N	N	N		11/29/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 0	STRGHT										29
NO RPT					SA		CASCADE HY SOUTH	UN		TRF SIGNAL	N	UNK	REAR		PRVTE	UN-UN								000	00
					UNK			06	3		N	UNK	PDO		PSNGR CAR		01	DRVR	NONE	39	F	OR-Y OR<25		026	000	29
														02	NONE 0	STOP										
															PRVTE	UN-UN									011	00
															PSNGR CAR		01	DRVR	NONE	27	M	OR-Y OR<25		000	000	00
00662	N	N	N	N	02/25/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	O-1STOP	01	NONE 0	BACK										10
CITY				N	MO		CASCADE HY SOUTH	N		TRF SIGNAL	N	SNO	BACK		PRVTE	S -N								000	00
					6P			06	3		N	UNK	PDO		PSNGR CAR		01	DRVR	NONE	34	F	SUSP OR<25		011	000	10
														02	NONE 0	STOP										
															PRVTE	N -S									011	00
															PSNGR CAR		01	DRVR	NONE	31	F	OR-Y OR<25		000	000	00
02051	N	N	N		06/10/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										10
NONE					MO		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	SS-O		PRVTE	N -S								000	00
					12P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y OR<25		080	000	10
														02	NONE 0	STOP										
															PRVTE	N -S									011	00
															PSNGR CAR		01	DRVR	NONE	87	F	OR-Y OR<25		000	000	00
02085	N	N	N		06/12/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 0	STRGHT										07
NONE					WE		CASCADE HY SOUTH	N		TRF SIGNAL	N	UNK	REAR		PRVTE	N -S								000	00
					10A			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	39	F	OR-Y OR<25		026	000	07
														02	NONE 0	STOP										
															PUBLC	N -S									011	00
															PSNGR CAR		01	DRVR	NONE	00	M	OR-Y UNK		000	000	00
03700	N	N	N		10/01/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE					TU		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	REAR		UNKN	N -S								000	00
					1P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK UNK		026	000	07
														02	NONE 0	STOP										
															PRVTE	N -S									011	00
															PSNGR CAR		01	DRVR	NONE	52	M	OR-Y OR<25		000	000	00
04798	N	Y	N		12/11/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	FOG	S-1STOP	01	NONE 0	STRGHT										07
CITY					WE		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S								000	00
					8P			06	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	64	M	OR-Y OR<25		026	000	07
														02	NONE 0	STOP										
															PRVTE	N -S									011	00
															PSNGR CAR		01	DRVR	INJC	58	M	OR-Y OR<25		000	000	00
01637	N	N	N		04/29/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NO RPT					TU		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S								000	00

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CITY OF OREGON CITY, CLACKAMAS COUNTY **S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015**

Total crash records: 80

SER# / INVEST	S P E D	A L C	R G S	S H L	W C K	O R	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
							2P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y		026	000	07
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	N -S									011	00
																	PSNGR CAR		01	DRVR	NONE	65	F	OR-Y		000	000	00
																								OR<25				
03308	N	N	N				08/25/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE							MO		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
							4P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	22	F	OR-Y		026	000	29
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	S -N									011	00
																	PSNGR CAR		01	DRVR	NONE	28	F	OR-Y		000	000	00
																								OR<25				
04757	N	N	N				11/22/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	UNK	S-STRGHT	01	NONE 0	STRGHT										13
NO RPT							SA		CASCADE HY SOUTH	N		TRF SIGNAL	N	WET	SS-O		UNKN	N -S									000	00
							1P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y		045	000	13
																								UNK				
																02	NONE 0	STRGHT										
																	PRVTE	N -S									000	00
																	PSNGR CAR		01	DRVR	NONE	19	F	OR-Y		000	000	00
																								OR<25				
01497	N	N	N				04/21/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE							TU		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
							10P			06	3		N	DARK	INJ		PSNGR CAR		01	DRVR	INJB	54	M	OR-Y		026	000	29
																								OR<25				
																02	NONE 0	STOP										
																	UNKN	N -S									011	00
																	PSNGR CAR		01	DRVR	NONE	49	M	OR-Y		000	000	00
																								UNK				
01876	N	N	N				05/21/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										10
NO RPT							TH		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	SS-O		PRVTE	N -S									000	00
							4P			06	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	78	F	OR-Y		080	000	10
																								OR<25				
																02	NONE 0	STRGHT										
																	PRVTE	N -S									000	00
																	PSNGR CAR		01	DRVR	NONE	44	M	OR-Y		000	000	00
																								OR<25				
																03	NONE 0	STRGHT										
																	PRVTE	N -S									000	00
																	PSNGR CAR		01	DRVR	INJC	54	F	OR-Y		000	000	00
																								OR<25				
02710	N	N	N				07/04/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										16,29
NO RPT							SA		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
							3P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	63	F	OR-Y		026	025	16,29
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	N -S									011	00
																	PSNGR CAR		01	DRVR	NONE	62	F	OR-Y		000	000	00
																								OR<25				
03650	N	N	N				09/02/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D	A L C	R G S	S H L	W C K	O R	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
NONE							WE		CASCADE HY SOUTH	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N -S									000	00
							2P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	43	F	OR-Y OR<25		026	000	29
																02	NONE 0	STOP										
																	PRVTE	N -S									011	00
																	PSNGR CAR		01	DRVR	NONE	61	F	OR-Y OR<25		000	000	00
00193	N	N	N				01/17/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE							TH		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
							10A			09	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK OR<25		026	000	07
																02	NONE 0	STOP										
																	PRVTE	SE-NW									011	00
																	PSNGR CAR		01	DRVR	NONE	29	F	OR-Y OR<25		000	000	00
00296	N	N	N				01/25/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 0	STRGHT											07
NONE							FR		CASCADE HY SOUTH	NE		YIELD	N	WET	REAR		PRVTE	SE-NW									000	00
							7A			09	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	25	F	OR-Y OR<25		026	000	07
																02	NONE 0	STOP										
																	PRVTE	SE-NW									011	00
																	PSNGR CAR		01	DRVR	INJC	24	F	OR-Y OR<25		000	000	00
																02	NONE 0	STOP										
																	PRVTE	SE-NW									011	00
																	PSNGR CAR		02	PSNG	NO<5	03	M			000	000	00
03686	N	N	N				03/27/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE							WE		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
							9A			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y OR<25		026	000	07
																02	NONE 0	STOP										
																	PRVTE	SE-NW									011	00
																	PSNGR CAR		01	DRVR	INJC	59	M	OR-Y OR<25		000	000	00
01343	N	N	N				04/10/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE							WE		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
							5P			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y OR<25		026	000	07
																02	NONE 0	STOP										
																	PRVTE	SE-NW									011	00
																	PSNGR CAR		01	DRVR	INJC	41	F	OR-Y OR<25		000	000	00
01405	N	N	N	N	N	N	04/24/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,07
CITY							WE		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
							1P			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	23	F	OR-Y OR<25		016,043,026	000	27,07
																02	NONE 0	STOP										
																	PRVTE	SE-NW									011	00
																	PSNGR CAR		01	DRVR	INJC	27	F	OTH-Y OR<25		000	000	00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D	A L C	R U S	S C L	W O H K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
01782	N	N	N			05/21/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						TU		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
						7A			09	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	50	F	OR-Y OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	NONE	62	F	OR-Y OR<25		000	000	00
02276	N	N	N			06/27/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						TH		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
						10A			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	M	UNK OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	63	F	OR-Y OR<25		000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		02	PSNG	NO<5	01	F			000	000	00
03212	N	N	N			08/29/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										07
CITY						TH		CASCADE HY SOUTH	NE		TRF SIGNAL	N	WET	REAR		PRVTE	SE-NW									000	00
						11A			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y OR<25		026	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	24	F	OR-Y OR<25		000	000	00
03276	N	N	N	N	N	09/01/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
CITY						SU		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
						12P			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	62	M	OR-Y OR<25		043,026	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	48	F	OR-Y OR>25		000	000	00
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		02	PSNG	INJC	49	F			000	000	00
03531	N	N	N			09/21/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						SA		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW									000	00
						9A			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	M	UNK N-RES		026	000	07
															02	NONE 0	STOP										
																PRVTE	SE-NW									011	00
																PSNGR CAR		01	DRVR	INJC	44	F	OR-Y OR<25		000	000	00
04072	N	N	N			10/24/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	FOG	S-1STOP	01	NONE 0	STRGHT										07
NONE						TH		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		UNKN	SE-NW									000	00
						7A			09	3		N	DLIT	PDO		UNKNOWN		01	DRVR	NONE	00	Unk	UNK		026	000	07

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CITY OF OREGON CITY, CLACKAMAS COUNTY **S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015**

Total crash records: 80

SER# / INVEST	S P E L D	A	U	C	S	L	D R S W O K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
																	02	NONE 0	STOP						OR<25			
																		PRVTE	SE-NW								011	00
																		PSNGR CAR		01	DRVR	NONE	69	M	OR-Y		000	000	00
																									OR<25				
00987	N	N	N					03/11/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE								TU		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW								000	00
								6P			09	3		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJB	38	F	OR-Y		026	000	07
																									OR<25				
																	02	NONE 0	STOP										
																		PRVTE	SE-NW								011	00
																		PSNGR CAR		01	DRVR	NONE	36	M	OR-Y		000	000	00
																									OR<25				
00273	N	N	N					01/22/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	FOG	S-1STOP	01	NONE 0	STRGHT										29
NONE								TH		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW								000	00
								6A			09	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		026	000	29
																									OR<25				
																	02	NONE 0	STOP										
																		PRVTE	SE-NW								011	00
																		PSNGR CAR		01	DRVR	INJC	25	F	OR-Y		000	000	00
																									OR<25				
																	02	NONE 0	STOP										
																		PRVTE	SE-NW								011	00
																		PSNGR CAR		02	PSNG	INJC	04	F			000	000	00
02876	N	N	N					07/17/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE								FR		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW								000	00
								7A			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	69	M	OR-Y		026	000	29
																									OR<25				
																	02	NONE 0	STOP										
																		PRVTE	SE-NW								011	00
																		PSNGR CAR		01	DRVR	INJC	33	M	OR-Y		000	000	00
																									OR<25				
03849	N	N	N					09/17/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE								TH		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW								000	00
								6P			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	42	M	OR-Y		026	000	29
																									OR<25				
																	02	NONE 0	STOP										
																		PRVTE	SE-NW								011	00
																		PSNGR CAR		01	DRVR	INJC	47	F	OR-Y		000	000	00
																									OR<25				
00553	N	N	N					02/12/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE								TH		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW								000	00
								7P			09	3		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	65	M	OR-Y		026	000	29
																									OR<25				
																	02	NONE 0	STOP										
																		UNKN	SE-NW								011	00
																		UNKNOWN		01	DRVR	NONE	45	F	OR-Y		000	000	00
																									UNK				
01159	N	N	N					04/02/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE								TH		CASCADE HY SOUTH	NE		YIELD	N	DRY	REAR		PRVTE	SE-NW								000	00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D	A L C	R G S	S H L	W C K	O R	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT EVENT	CAUSE
							4P			09	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y OR>25		026	000	29
																02	NONE 0 PRVTE	STOP SE-NW									011	00
																	PSNGR CAR		01	DRVR	NONE	58	F	OR-Y OR<25		000	000	00
04182 NONE	N	N	N				09/14/2015 MO 12A	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER NE 09	CROSS 3	N YIELD	N N	CLR DRY DLIT	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT SE-NW	01	DRVR	NONE	00	F	UNK N-RES		026	000	29
																02	NONE 0 PRVTE	STOP SE-NW									011	00
																	PSNGR CAR		01	DRVR	NONE	27	F	OR-Y OR<25		000	000	00
00577 CITY	N	N	N	N	N		02/19/2013 TU 6A	16 0	S BEAVERCREEK RD CASCADE HY SOUTH	INTER NE 09	CROSS 3	N YIELD	N N	RAIN WET DLIT	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT SE-NW	01	DRVR	NONE	53	M	OR-Y OR<25		043,026	000	07
																02	NONE 0 PRVTE	STOP SE-NW									011	00
																	PSNGR CAR		01	DRVR	INJB	57	M	OR-Y OR<25		000	000	00
01893 CITY	N	N	N				05/30/2013 TH 2P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER E 06	CROSS 3	N TRF SIGNAL	N N	CLD DRY DAY	ANGL-STP TURN INJ	01	NONE 1 PRVTE SEMI TOW	TURN-R S -E	01	DRVR	NONE	29	M	OR-Y OR<25		017	017	00
																02	NONE 0 PRVTE	STOP E -W									012	00
																	PSNGR CAR		01	DRVR	INJC	48	F	OR-Y OR<25		000	000	00
00120 NONE	N	N	N				01/09/2014 TH 5P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER E 03	CROSS 3	N TRF SIGNAL	N N	RAIN WET DUSK	ANGL-OTH TURN PDO	01	NONE 0 PRVTE PSNGR CAR	TURN-R W -S	01	DRVR	NONE	56	F	OR-Y OR<25		028	016 000	02 00
																02	NONE 0 PRVTE	STRGHT N -S									000	00
																	PSNGR CAR		01	DRVR	NONE	63	M	UNK OR>25		000	000	00
01893 NONE	N	N	N				04/20/2015 MO 3P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER E 06	CROSS 3	N TRF SIGNAL	N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	17	F	OR-Y OR<25		026	000	29
																02	NONE 0 PRVTE	STOP E -W									011	00
																	PSNGR CAR		01	DRVR	INJC	47	F	OR-Y OR<25		000	000	00
04437 NONE	N	N	N				10/27/2015 TU 5P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER E 06	4-LEG 3	N TRF SIGNAL	N N	CLR DRY DAY	S-STRGHT REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	17	M	OR-Y OR<25		042	000	29
																02	NONE 0	STRGHT										

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E L D	A	U	C	S	L	O R K	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																		PRVTE	E -W								006		00
																		PSNGR CAR		01	DRVR	NONE	53	F	OR-Y OR<25		000	000		00
05319	N	N	N					12/31/2014	16	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
NONE								WE	0	CASCADE HY SOUTH	E		TRF SIGNAL	N	DRY	REAR		UNKN	UN-UN								000		00
								9P			06	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		026	000		29
																	02	NONE 0	STOP											
																		PRVTE	UN-UN									011		00
																		PSNGR CAR		01	DRVR	INJC	16	F	OR-Y OR<25		000	000		00
																	02	NONE 0	STOP											
																		PRVTE	UN-UN									011		00
																		PSNGR CAR		02	PSNG	INJC	18	F			000	000		00
03287	N	N	N					08/13/2015	16	S BEAVERCREEK RD	INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 0	STRGHT											29
NO RPT								TH	0	CASCADE HY SOUTH	E		TRF SIGNAL	N	UNK	REAR		UNKN	E -W								000		00
								3P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y UNK		026	000		29
																	02	NONE 0	STOP											
																		PRVTE	E -W									011		00
																		PSNGR CAR		01	DRVR	NONE	65	F	OR-Y OR<25		000	000		00
00303	N	N	N					01/25/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										004	07
NONE								FR		CASCADE HY SOUTH	SE		YIELD	N	DRY	REAR		PRVTE	SW-NE								000		00
								11A			09	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y OR<25		026	000		07
																	02	NONE 0	STOP											
																		PRVTE	SW-NE									011	004	00
																		PSNGR CAR		01	DRVR	NONE	73	M	OR-Y OR<25		000	000		00
01066	N	N	N					03/29/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE								FR		CASCADE HY SOUTH	SE		YIELD	N	DRY	REAR		PRVTE	SW-NE								000		00
								5P			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	53	M	OR-Y OR<25		026	000		07
																	02	NONE 0	STOP											
																		PRVTE	SW-NE									011		00
																		PSNGR CAR		01	DRVR	INJC	32	F	OR-Y OR<25		000	000		00
03374	N	N	N					09/11/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE								WE		CASCADE HY SOUTH	SE		YIELD	N	DRY	REAR		PRVTE	SW-NE								000		00
								8A			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	32	F	OR-Y OR<25		026	000		07
																	02	NONE 0	STOP											
																		PRVTE	SW-NE									011		00
																		PSNGR CAR		01	DRVR	INJC	74	M	OR-Y OR<25		000	000		00
04298	N	N	N					11/05/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
NONE								TU		CASCADE HY SOUTH	SE		YIELD	N	WET	REAR		PRVTE	SW-NE								000		00
								5P			09	3		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	22	F	OR-Y OR<25		026	000		07

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	SPE	ALC	DRS	SWC	OHR	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	01	DRVR	NONE	59	F	OR-Y OR<25		000	011 000		00 00
00483 CITY	N	N	N			02/06/2014 TH 10P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER SE 09	CROSS 3	N YIELD	N N N	SNOW SNO DLIT	S-STRGHT REAR PDO	01	NONE 0 UNKN PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	00	M	UNK UNK		042	000	124 124	07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	18	M	OR-Y OR<25		000	006 000		00 00
01591 NONE	N	N	N			04/26/2014 SA 4P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER SE 09	CROSS 3	N YIELD	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	28	M	OR-Y OR<25		026	000		29 00 29
															02	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	01	DRVR	NONE	69	M	OR-Y OR<25		000	011 000		00 00
00664 NONE	N	N	N			02/20/2015 FR 3P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER SE 09	CROSS 3	N YIELD	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	46	M	OR-Y OR<25		026	000		29 00 29
															02	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	01	DRVR	NONE	17	F	OR-Y OR<25		000	011 000		00 00
00930 NONE	N	N	N			03/15/2015 SU 10A	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER SE 09	CROSS 3	N YIELD	N N N	RAIN WET DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT SW-NE	01	DRVR	NONE	20	M	OR-Y OR<25		026	000		29 00 29
															02	NONE 0 PRVTE PSNGR CAR	STOP SW-NE	01	DRVR	NONE	00	M	UNK OR<25		000	011 000		00 00
03411 NONE	N	N	N			09/13/2013 FR 11A	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER S 06	CROSS 3	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT S -N	01	DRVR	NONE	63	F	OR-Y OR<25		026	000		07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STOP S -N	01	DRVR	NONE	00	M	UNK UNK		000	011 000		00 00
03520 NONE	N	N	N			09/20/2013 FR 6A	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER S 06	CROSS 3	N TRF SIGNAL	N N N	CLR DRY DAWN	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT S -N	01	DRVR	NONE	37	M	OR-Y OR<25		026	000		07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STOP S -N	01	DRVR	INJC	29	M	OR-Y		000	011 000		00 00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D	A L C	R G S	S H L	W C O K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
																							OR<25				
03630	N	N	N			09/27/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						FR		CASCADE HY SOUTH	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
						5A			06	3		N	DAWN	PDO		PSNGR CAR		01	DRVR	NONE	34	F	OR-Y		026	000	07
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	S -N									011	00
																PSNGR CAR		01	DRVR	NONE	49	F	OR-Y		000	000	00
																							OR<25				
00463	Y	N	N	N	N	02/05/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07,01
COUNTY						WE		CASCADE HY SOUTH	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
						5A			06	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OTH-Y		026,047	000	07,01
																							N-RES				
															02	NONE 0	STOP										
																PRVTE	S -N									011	00
																PSNGR CAR		01	DRVR	INJC	44	F	OR-Y		000	000	00
																							OR<25				
00709	N	N	N			02/17/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										07
NONE						MO		CASCADE HY SOUTH	S		TRF SIGNAL	N	WET	REAR		UNKN	S -N									000	00
						5A			06	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	00	M	UNK		026	000	07
																							UNK				
															02	NONE 0	STOP										
																PRVTE	S -N									011	00
																PSNGR CAR		01	DRVR	INJC	55	M	OR-Y		000	000	00
																							OR<25				
01295	N	N	N			04/03/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						TH		CASCADE HY SOUTH	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
						9A			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	20	F	OR-Y		026	000	07
																							OR<25				
															02	NONE 0	STOP										
																UNKN	S -N									011	00
																PSNGR CAR		01	DRVR	NONE	00	M	UNK		000	000	00
																							UNK				
02651	N	N	N			06/26/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NO RPT						TH		CASCADE HY SOUTH	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
						2P			06	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK		026	000	29
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	S -N									011	00
																PSNGR CAR		01	DRVR	NONE	22	M	OR-Y		000	000	00
																							OR<25				
02801	N	N	N			07/21/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE						MO		CASCADE HY SOUTH	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000	00
						11A			06	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	25	F	OR-Y		026	000	29
																							OR<25				
															02	NONE 0	STOP										
																PRVTE	S -N									011	00
																PSNGR CAR		01	DRVR	INJC	20	F	OR-Y		000	000	00
																							OR<25				
04596	N	N	N			11/04/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D / A L C	R S W U G H	C O L K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
NONE				WE 5P		CASCADE HY SOUTH	S 06	 3	TRF SIGNAL	N N	DRY DLIT	REAR INJ		PRVTE PSNGR CAR	S -N	01	DRVR	NONE	76	M	OR-Y OR>25		026	000 000	00 29
													02	NONE 0 PRVTE PSNGR CAR	STOP S -N	01	DRVR	INJC	81	M	OR-Y OR<25		000	011 000	00 00
													02	NONE 0 PRVTE PSNGR CAR	STOP S -N	02	PSNG	INJC	60	F			000	011 000	00 00
03959 NONE	N	N N		10/07/2014 TU 7A	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	18	M	OR-Y OR<25		026	000 026	29 00 29
													02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	28	M	OR-Y OR<25		000	011 000	00 00
04748 NONE	N	N N		11/12/2015 TH 1P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	RAIN WET DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	INJC	20	F	OR-Y OR<25		026	000 000	29 00 29
													01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	02	PSNG	INJC	18	F			000	000 000	00 00
													02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	17	M	OR-Y OR<25		000	011 000	00 00
05677 NONE	N	N N		12/29/2015 TU 5P	14	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	RAIN WET DLIT	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	80	M	OR-Y OR<25		026	000 000	29 00 29
													02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	27	M	OR-Y OR<25		000	011 000	00 00
02536 NONE	N	N N		07/15/2013 MO 6P	16 0	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	44	M	OR-Y OR<25		026	000 000	07 00 07
													02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	60	F	OR-Y OR<25		000	011 000	00 00
04147 NONE	N	N N		10/29/2013 TU 3P	16 0	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	20	F	OR-Y OR>25		026	000 000	07 00 07

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D / A L C	R S W U C O H R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
												02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	34	F	OR-Y OR<25		000	011 000	00 00
00273 CITY	N N N N N	01/01/2014 WE 9A	16 0	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	65	F	SUSP OR<25		026	000 000	07 00 07
												02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	21	F	OR-Y OR<25		000	011 000	00 00
00762 NONE	N N N	03/02/2015 MO 2P	16 0	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 2	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	65	M	OR-Y OR<25		026	000 000	29 00 29
												02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	INJC	54	F	OR-Y OR<25		000	011 000	00 00
04147 NONE	N N N	10/08/2015 TH 10A	14 0	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	M	OR-Y OR<25		026	000 000	29 00 29
												02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	59	F	OR-Y OR<25		000	011 000	00 00
												02	NONE 0 PRVTE PSNGR CAR	STOP W -E	02	PSNG	NO<5	03	F			000	011 000	00 00
04684 NONE	N N N	11/08/2015 SU 5P	14 0	S BEAVERCREEK RD CASCADE HY SOUTH	INTER W 06	CROSS 3	N TRF SIGNAL	N N N	RAIN WET DLIT	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	F	OR-Y OR<25		026	000 000	29 00 29
												02	NONE 0 PRVTE PSNGR CAR	STOP W -E	01	DRVR	NONE	64	M	OR-Y OR<25		000	011 000	00 00
02430 NONE	N N N	07/07/2013 SU 12P	14 	S BEAVERCREEK RD CASCADE HY SOUTH	INTER NW 09	CROSS 3	N YIELD	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	01	DRVR	NONE	00	F	UNK OR<25		026	000 000	07 00 07
												02	NONE 0 PRVTE PSNGR CAR	STOP NE-SW	01	DRVR	INJC	36	M	OR-Y OR<25		000	011 000	00 00
03349 CITY	N N N N N	09/10/2013 TU 1P	14 	S BEAVERCREEK RD CASCADE HY SOUTH	INTER NW 09	CROSS 3	N YIELD	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT NE-SW	01	DRVR	NONE	60	F	OR-Y		043,026	000 000	07 00 07

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D	A L C	R G S	S H L	W C K	O R	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJC	30	F	OR-Y		000	000	00
																								OR<25				
04790	N	N	N				12/12/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE							TH		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00
							2P			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	54	M	OR-Y		026	000	07
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJC	56	F	OR-Y		000	000	00
																								OR<25				
00348	N	N	N				01/26/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE							SU		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00
							4P			09	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK		026	000	07
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	18	F	OR-Y		000	000	00
																								OR<25				
00768	N	N	N				02/21/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE							FR		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00
							7A			09	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	61	M	OR-Y		026	000	07
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	49	F	OR-Y		000	000	00
																								OR<25				
01784	N	N	N				05/09/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE							FR		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00
							10A			09	3		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	23	F	OR-Y		026	000	07
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJC	41	M	OR-Y		000	000	00
																								OR<25				
02955	N	N	N				08/01/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE							FR		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00
							9P			09	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y		026	000	29
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJC	34	M	OR-Y		000	000	00
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		02	PSNG	INJC	36	F			000	000	00
04683	N	N	N				11/18/2014	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NO RPT							TU		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00

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CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D	A L C	R G S	S H L	W C K	O R	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
							5P			09	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	50	M	OR-Y OR<25		026	000	29
																02	NONE 0	STOP									
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJB	35	M	OR-Y OR<25		000	000	00
04227	N	N	N				10/13/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NO RPT							TU		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00
							7P			09	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	37	M	OR-Y OR<25		026	000	29
																02	NONE 0	STOP									
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	INJB	77	F	OR-Y OR<25		000	000	00
01216	N	N	N				04/06/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE							MO		CASCADE HY SOUTH	NW		YIELD	N	DRY	REAR		PRVTE	NE-SW									000	00
							3P			09	3		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	57	F	OR-Y OR<25		026	000	29
																02	NONE 0	STOP									
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	60	F	OR-Y OR<25		000	000	00
04738	N	N	N				11/09/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										29
NO RPT							MO		CASCADE HY SOUTH	NW		YIELD	N	WET	REAR		PRVTE	NE-SW									000	00
							6P			09	3		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y OR<25		026	000	29
																02	NONE 0	STOP									
																	PRVTE	NE-SW									011	00
																	PSNGR CAR		01	DRVR	NONE	59	F	OR-Y OR<25		000	000	00
00083	N	N	N				01/08/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	TURN-L										07
NONE							TU		CASCADE HY SOUTH	CN		TRF SIGNAL	N	WET	REAR		PRVTE	W -N									000	00
							7A			02	3		N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	35	F	OR-Y OR<25		026	000	07
																02	NONE 0	STOP									
																	PRVTE	W -N									013	00
																	PSNGR CAR		01	DRVR	NONE	38	M	OR-Y OR<25		000	000	00
03336	N	N	N	N	N		09/09/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										04
CITY							MO		CASCADE HY SOUTH	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S -N									000	00
							11P			04	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	29	M	OR-Y OR<25		000	000	00
																01	NONE 0	STRGHT									
																	PRVTE	S -N									000	00
																	PSNGR CAR		02	PSNG	INJB	21	F			000	000	00
																02	NONE 0	TURN-L									
																	PRVTE	N -E									000	00
																	PSNGR CAR		01	DRVR	NONE	42	F	OR-Y OR<25		003	000	04
05036	N	N	N				12/26/2013	14	S BEAVERCREEK RD	INTER	CROSS	N	N	UNK	ANGL-OTH	01	NONE 0	STRGHT										04

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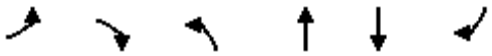
CITY OF OREGON CITY, CLACKAMAS COUNTY

S BEAVERCREEK RD at CASCADE HY SOUTH, City of Oregon City, Clackamas County, 01/01/2013 to 12/31/2015

Total crash records: 80

SER# / INVEST	S P E D	A L C	R U G S	S C H L	W O R K	DATE / DAY / TIME	CLASS / DIST / FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
NONE						TH		CASCADE HY SOUTH	CN		TRF SIGNAL	N	WET	ANGL		PRVTE	S -N									000	00
						7A			02	3		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	30	M	OR-Y OR<25		020	000	04
															02	NONE 0	STRGHT										
																PRVTE	E -W									000	00
																PSNGR CAR		01	DRVR	NONE	57	F	OR-Y OR<25		000	000	00
00292	N	N	N			01/23/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	S-OTHER	01	NONE 0	TURN-L											08
NO RPT						FR		CASCADE HY SOUTH	CN		L-GRN-SIG	N	DRY	TURN		PRVTE	W -N									000	00
						11P			02	3		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	28	F	OR-Y OR<25		007	000	08
															02	NONE 0	TURN-L										
																PRVTE	W -N									000	00
																PSNGR CAR		01	DRVR	INJC	20	M	OR-Y OR<25		000	000	00
04783	N	N	N			11/13/2015	14	S BEAVERCREEK RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT											02
NO RPT						FR		CASCADE HY SOUTH	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	SE-NW									000	00
						11P			01	3		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	16	F	OR-Y OR<25		000	000	00
															02	NONE 0	TURN-L										
																UNKN	NW-NE									000	00
																UNKNOWN		01	DRVR	NONE	00	Unk	UNK UNK		028,004	000	02

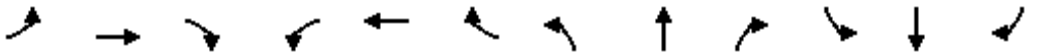
Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	526	126	100	2035	1505	367
Future Volume (vph)	526	126	100	2035	1505	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1736	3471	3471	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1736	3471	3471	1553
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	548	131	104	2120	1568	382
RTOR Reduction (vph)	0	18	0	0	0	61
Lane Group Flow (vph)	548	113	104	2120	1568	321
Confl. Peds. (#/hr)			2			
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	23.6	34.7	11.1	87.4	71.8	95.4
Effective Green, g (s)	23.6	34.7	11.1	87.4	71.8	95.4
Actuated g/C Ratio	0.20	0.29	0.09	0.73	0.60	0.80
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	668	512	160	2528	2076	1292
v/s Ratio Prot	c0.16	0.02	0.06	c0.61	0.45	0.05
v/s Ratio Perm		0.05				0.16
v/c Ratio	0.82	0.22	0.65	0.84	0.76	0.25
Uniform Delay, d1	46.2	32.4	52.6	11.4	17.7	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.0	0.2	9.1	3.5	2.6	0.1
Delay (s)	54.1	32.6	61.7	14.9	20.3	3.2
Level of Service	D	C	E	B	C	A
Approach Delay (s)	50.0			17.1	16.9	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

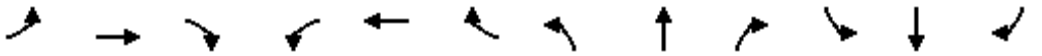
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	83	44	90	167	267	195	393	86	128	278	51
Future Volume (vph)	23	83	44	90	167	267	195	393	86	128	278	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	1640		1752	1845	1568	1736	1778		1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	1640		1752	1845	1568	1736	1778		1752	1845	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	25	89	47	97	180	287	210	423	92	138	299	55
RTOR Reduction (vph)	0	27	0	0	0	192	0	11	0	0	0	37
Lane Group Flow (vph)	25	109	0	97	180	95	210	504	0	138	299	18
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	2.9	12.1		4.1	13.3	21.1	11.3	21.6		7.8	18.1	21.0
Effective Green, g (s)	2.9	12.1		4.1	13.3	21.1	11.3	21.6		7.8	18.1	21.0
Actuated g/C Ratio	0.05	0.19		0.06	0.21	0.33	0.18	0.34		0.12	0.28	0.33
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	75	312		112	385	631	308	603		214	525	628
v/s Ratio Prot	0.02	0.07		c0.06	c0.10	0.02	c0.12	c0.28		0.08	0.16	0.00
v/s Ratio Perm						0.04						0.01
v/c Ratio	0.33	0.35		0.87	0.47	0.15	0.68	0.84		0.64	0.57	0.03
Uniform Delay, d1	29.4	22.3		29.5	22.0	14.9	24.5	19.4		26.6	19.4	14.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.6	0.7		45.8	0.9	0.1	6.1	9.8		6.5	1.4	0.0
Delay (s)	32.0	23.0		75.3	22.9	15.1	30.6	29.2		33.1	20.8	14.4
Level of Service	C	C		E	C	B	C	C		C	C	B
Approach Delay (s)		24.4			27.9			29.6			23.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	63.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

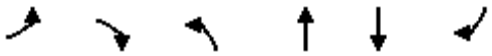
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	352	309	15	78	413	0	31	945	93	428	560	554
Future Volume (vph)	352	309	15	78	413	0	31	945	93	428	560	554
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3273	3348		3400	3505		1719	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3273	3348		3400	3505		1719	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	378	332	16	84	444	0	33	1016	100	460	602	596
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	62	0	0	235
Lane Group Flow (vph)	378	345	0	84	444	0	33	1016	38	460	602	361
Confl. Peds. (#/hr)			4									
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	17.5	31.2		5.8	19.5		4.0	45.4	45.4	19.6	61.0	61.0
Effective Green, g (s)	17.5	31.2		5.8	19.5		4.0	45.4	45.4	19.6	61.0	61.0
Actuated g/C Ratio	0.15	0.26		0.05	0.16		0.03	0.38	0.38	0.16	0.51	0.51
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	477	870		164	569		57	1300	581	544	1747	781
v/s Ratio Prot	c0.12	0.10		0.02	c0.13		0.02	c0.30		c0.14	0.18	
v/s Ratio Perm									0.02			0.24
v/c Ratio	0.79	0.40		0.51	0.78		0.58	0.78	0.07	0.85	0.34	0.46
Uniform Delay, d1	49.5	36.6		55.7	48.2		57.2	32.9	23.8	48.7	17.6	19.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.8	0.3		2.7	6.9		13.5	4.7	0.2	11.6	0.5	2.0
Delay (s)	58.3	36.9		58.4	55.0		70.6	37.6	24.0	60.3	18.1	20.9
Level of Service	E	D		E	E		E	D	C	E	B	C
Approach Delay (s)		48.0			55.6			37.4			30.8	
Approach LOS		D			E			D			C	

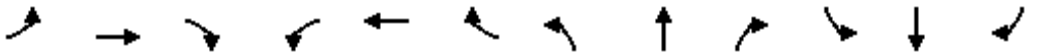
Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	379	166	113	1763	2491	745
Future Volume (vph)	379	166	113	1763	2491	745
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1770	3539	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	387	169	115	1799	2542	760
RTOR Reduction (vph)	0	5	0	0	0	20
Lane Group Flow (vph)	387	164	115	1799	2542	740
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	17.6	26.4	8.8	93.4	80.1	97.7
Effective Green, g (s)	17.6	26.4	8.8	93.4	80.1	97.7
Actuated g/C Ratio	0.15	0.22	0.07	0.78	0.67	0.81
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	498	403	129	2754	2362	1348
v/s Ratio Prot	c0.11	0.03	c0.06	0.51	c0.72	0.08
v/s Ratio Perm		0.07				0.39
v/c Ratio	0.78	0.41	0.89	0.65	1.08	0.55
Uniform Delay, d1	49.3	40.1	55.1	6.0	20.0	3.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5	0.7	47.8	1.2	42.9	0.5
Delay (s)	56.8	40.8	102.9	7.2	62.8	4.2
Level of Service	E	D	F	A	E	A
Approach Delay (s)	51.9			13.0	49.4	
Approach LOS	D			B	D	

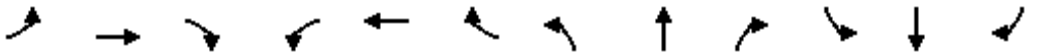
Intersection Summary			
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	134	169	56	89	173	62	286	57	280	509	61
Future Volume (vph)	51	134	169	56	89	173	62	286	57	280	509	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1681		1787	1881	1599	1770	1817		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1681		1787	1881	1599	1770	1817		1770	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	55	144	182	60	96	186	67	308	61	301	547	66
RTOR Reduction (vph)	0	62	0	0	0	109	0	10	0	0	0	35
Lane Group Flow (vph)	55	264	0	60	96	77	67	359	0	301	547	31
Confl. Peds. (#/hr)			4									
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	3.7	15.3		2.6	14.2	28.3	3.8	18.1		14.1	28.4	32.1
Effective Green, g (s)	3.7	15.3		2.6	14.2	28.3	3.8	18.1		14.1	28.4	32.1
Actuated g/C Ratio	0.05	0.22		0.04	0.21	0.42	0.06	0.27		0.21	0.42	0.47
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	96	377		68	392	770	98	482		366	776	850
v/s Ratio Prot	0.03	c0.16		c0.03	0.05	0.02	0.04	0.20		c0.17	c0.29	0.00
v/s Ratio Perm						0.03						0.02
v/c Ratio	0.57	0.70		0.88	0.24	0.10	0.68	0.75		0.82	0.70	0.04
Uniform Delay, d1	31.4	24.3		32.6	22.5	12.1	31.6	22.9		25.8	16.4	9.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.0	5.8		69.4	0.3	0.1	17.9	6.2		13.8	2.9	0.0
Delay (s)	39.4	30.1		102.0	22.8	12.2	49.5	29.1		39.6	19.3	9.7
Level of Service	D	C		F	C	B	D	C		D	B	A
Approach Delay (s)		31.4			30.9			32.2			25.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

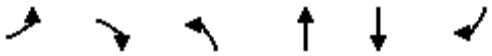
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	689	717	75	143	401	441	46	714	140	781	1157	738
Future Volume (vph)	689	717	75	143	401	441	46	714	140	781	1157	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3516		3467	3574	1577	1752	3505	1546	3433	3539	1555
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3516		3467	3574	1577	1752	3505	1546	3433	3539	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	710	739	77	147	413	455	47	736	144	805	1193	761
RTOR Reduction (vph)	0	6	0	0	0	319	0	0	109	0	0	308
Lane Group Flow (vph)	710	810	0	147	413	136	47	736	35	805	1193	453
Confl. Peds. (#/hr)			6			1			1			3
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	25.7	35.9		7.7	17.9	17.9	4.7	29.0	29.0	29.4	53.7	53.7
Effective Green, g (s)	25.7	35.9		7.7	17.9	17.9	4.7	29.0	29.0	29.4	53.7	53.7
Actuated g/C Ratio	0.21	0.30		0.06	0.15	0.15	0.04	0.24	0.24	0.24	0.45	0.45
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	742	1051		222	533	235	68	847	373	841	1583	695
v/s Ratio Prot	c0.20	c0.23		0.04	0.12		0.03	c0.21		c0.23	0.34	
v/s Ratio Perm						0.09			0.02			0.29
v/c Ratio	0.96	0.77		0.66	0.77	0.58	0.69	0.87	0.09	0.96	0.75	0.65
Uniform Delay, d1	46.6	38.3		54.9	49.1	47.5	56.9	43.7	35.3	44.7	27.6	25.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.8	3.5		7.2	6.9	3.4	26.1	11.7	0.5	21.0	3.4	4.7
Delay (s)	69.4	41.8		62.1	56.1	51.0	83.1	55.4	35.8	65.7	31.0	30.5
Level of Service	E	D		E	E	D	F	E	D	E	C	C
Approach Delay (s)		54.7			54.6			53.8			41.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	48.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

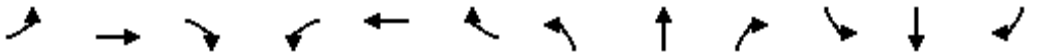
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	754	181	143	2302	1703	526
Future Volume (vph)	754	181	143	2302	1703	526
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1736	3471	3471	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1736	3471	3471	1553
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	785	189	149	2398	1774	548
RTOR Reduction (vph)	0	9	0	0	0	28
Lane Group Flow (vph)	785	180	149	2398	1774	520
Confl. Peds. (#/hr)			2			
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	28.5	39.9	11.4	82.5	66.6	95.1
Effective Green, g (s)	28.5	39.9	11.4	82.5	66.6	95.1
Actuated g/C Ratio	0.24	0.33	0.10	0.69	0.55	0.79
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	807	580	164	2386	1926	1288
v/s Ratio Prot	c0.23	0.03	0.09	c0.69	0.51	0.10
v/s Ratio Perm		0.09				0.24
v/c Ratio	0.97	0.31	0.91	1.01	0.92	0.40
Uniform Delay, d1	45.4	29.8	53.8	18.8	24.3	3.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.0	0.3	44.2	19.6	8.8	0.2
Delay (s)	70.3	30.1	98.0	38.4	33.1	4.0
Level of Service	E	C	F	D	C	A
Approach Delay (s)	62.5			41.9	26.2	
Approach LOS	E			D	C	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

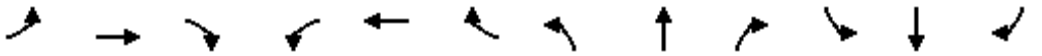
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	119	63	43	239	383	279	563	41	183	398	73
Future Volume (vph)	33	119	63	43	239	383	279	563	41	183	398	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	1640		1752	1845	1568	1736	1808		1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	1640		1752	1845	1568	1736	1808		1752	1845	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	35	128	68	46	257	412	300	605	44	197	428	78
RTOR Reduction (vph)	0	26	0	0	0	126	0	3	0	0	0	51
Lane Group Flow (vph)	35	170	0	46	257	286	300	646	0	197	428	27
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	3.8	16.1		2.8	15.1	23.9	13.9	25.6		8.8	20.5	24.3
Effective Green, g (s)	3.8	16.1		2.8	15.1	23.9	13.9	25.6		8.8	20.5	24.3
Actuated g/C Ratio	0.05	0.23		0.04	0.21	0.34	0.19	0.36		0.12	0.29	0.34
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	88	370		68	390	624	338	649		216	530	633
v/s Ratio Prot	0.02	0.10		c0.03	c0.14	0.06	c0.17	c0.36		0.11	0.23	0.00
v/s Ratio Perm						0.13						0.01
v/c Ratio	0.40	0.46		0.68	0.66	0.46	0.89	1.00		0.91	0.81	0.04
Uniform Delay, d1	32.6	23.8		33.8	25.7	18.6	27.9	22.8		30.9	23.6	15.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	0.9		23.5	4.0	0.5	23.3	33.9		37.8	8.8	0.0
Delay (s)	35.6	24.7		57.3	29.7	19.2	51.2	56.7		68.7	32.4	15.7
Level of Service	D	C		E	C	B	D	E		E	C	B
Approach Delay (s)		26.4			25.4			54.9			40.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	71.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

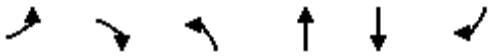
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	505	443	21	112	592	0	44	1069	133	613	634	794
Future Volume (vph)	505	443	21	112	592	0	44	1069	133	613	634	794
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3273	3347		3335	3438		1719	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3273	3347		3335	3438		1719	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	543	476	23	120	637	0	47	1149	143	659	682	854
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	95	0	0	220
Lane Group Flow (vph)	543	496	0	120	637	0	47	1149	48	659	682	634
Confl. Peds. (#/hr)			4									
Heavy Vehicles (%)	7%	7%	7%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	18.9	31.2		8.3	20.6		4.2	40.0	40.0	22.5	58.3	58.3
Effective Green, g (s)	18.9	31.2		8.3	20.6		4.2	40.0	40.0	22.5	58.3	58.3
Actuated g/C Ratio	0.16	0.26		0.07	0.17		0.04	0.33	0.33	0.19	0.49	0.49
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	515	870		230	590		60	1146	512	625	1670	747
v/s Ratio Prot	c0.17	0.15		0.04	c0.19		0.03	c0.33		c0.20	0.20	
v/s Ratio Perm									0.03			0.41
v/c Ratio	1.05	0.57		0.52	1.08		0.78	1.00	0.09	1.05	0.41	0.85
Uniform Delay, d1	50.6	38.6		53.9	49.7		57.4	40.0	27.5	48.8	19.8	27.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.8	0.9		2.1	60.4		47.5	27.2	0.4	51.2	0.7	11.6
Delay (s)	105.3	39.5		56.1	110.1		105.0	67.2	27.9	99.9	20.5	38.5
Level of Service	F	D		E	F		F	E	C	F	C	D
Approach Delay (s)		73.8			101.5			64.3			51.4	
Approach LOS		E			F			E			D	

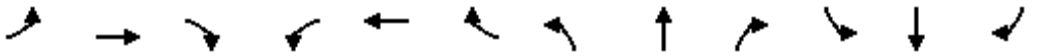
Intersection Summary			
HCM 2000 Control Delay	66.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	543	238	162	1595	2890	1068
Future Volume (vph)	543	238	162	1595	2890	1068
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1770	3539	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	554	243	165	1628	2949	1090
RTOR Reduction (vph)	0	2	0	0	0	9
Lane Group Flow (vph)	554	241	165	1628	2949	1081
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	19.5	28.0	8.5	91.5	78.5	98.0
Effective Green, g (s)	19.5	28.0	8.5	91.5	78.5	98.0
Actuated g/C Ratio	0.16	0.23	0.07	0.76	0.65	0.82
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	424	125	2698	2315	1352
v/s Ratio Prot	c0.16	0.04	c0.09	0.46	c0.83	0.13
v/s Ratio Perm		0.11				0.55
v/c Ratio	1.00	0.57	1.32	0.60	1.27	0.80
Uniform Delay, d1	50.2	40.7	55.8	6.3	20.8	5.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	39.2	1.8	189.2	1.0	126.8	3.4
Delay (s)	89.4	42.4	245.0	7.3	147.5	9.2
Level of Service	F	D	F	A	F	A
Approach Delay (s)	75.1			29.2	110.2	
Approach LOS	E			C	F	

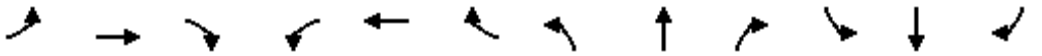
Intersection Summary			
HCM 2000 Control Delay	84.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	115.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	192	242	27	128	248	89	410	27	401	730	87
Future Volume (vph)	73	192	242	27	128	248	89	410	27	401	730	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1680		1787	1881	1599	1770	1846		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1680		1787	1881	1599	1770	1846		1770	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	202	255	28	135	261	94	432	28	422	768	92
RTOR Reduction (vph)	0	60	0	0	0	77	0	3	0	0	0	48
Lane Group Flow (vph)	77	397	0	28	135	184	94	457	0	422	768	44
Confl. Peds. (#/hr)			4									
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	4.0	18.4		1.9	16.3	31.9	4.0	19.5		15.6	31.1	35.1
Effective Green, g (s)	4.0	18.4		1.9	16.3	31.9	4.0	19.5		15.6	31.1	35.1
Actuated g/C Ratio	0.05	0.25		0.03	0.22	0.43	0.05	0.27		0.21	0.42	0.48
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	96	421		46	417	792	96	490		376	789	854
v/s Ratio Prot	c0.04	c0.24		0.02	0.07	0.05	0.05	0.25		c0.24	c0.41	0.00
v/s Ratio Perm						0.07						0.02
v/c Ratio	0.80	0.94		0.61	0.32	0.23	0.98	0.93		1.12	0.97	0.05
Uniform Delay, d1	34.3	27.0		35.4	23.9	13.1	34.7	26.3		28.9	20.7	10.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	36.6	29.7		20.7	0.5	0.2	84.1	24.9		83.9	25.4	0.0
Delay (s)	70.9	56.7		56.1	24.4	13.2	118.8	51.2		112.8	46.2	10.3
Level of Service	E	E		E	C	B	F	D		F	D	B
Approach Delay (s)		58.7			19.6			62.6			65.5	
Approach LOS		E			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	56.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	73.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

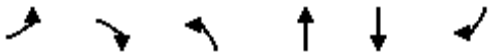
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	489	945	70	90	700	559	55	709	130	1044	1424	660
Future Volume (vph)	489	945	70	90	700	559	55	709	130	1044	1424	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3532		3467	3574	1577	1752	3505	1546	3433	3539	1555
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3532		3467	3574	1577	1752	3505	1546	3433	3539	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	504	974	72	93	722	576	57	731	134	1076	1468	680
RTOR Reduction (vph)	0	4	0	0	0	396	0	0	105	0	0	184
Lane Group Flow (vph)	504	1042	0	93	722	180	57	731	29	1076	1468	496
Confl. Peds. (#/hr)			6			1			1			3
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	16.8	35.2		5.1	23.5	23.5	4.0	26.2	26.2	35.5	57.7	57.7
Effective Green, g (s)	16.8	35.2		5.1	23.5	23.5	4.0	26.2	26.2	35.5	57.7	57.7
Actuated g/C Ratio	0.14	0.29		0.04	0.20	0.20	0.03	0.22	0.22	0.30	0.48	0.48
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	485	1036		147	699	308	58	765	337	1015	1701	747
v/s Ratio Prot	c0.15	c0.29		0.03	0.20		0.03	c0.21		c0.31	0.41	
v/s Ratio Perm						0.11			0.02			0.32
v/c Ratio	1.04	1.01		0.63	1.03	0.59	0.98	0.96	0.09	1.06	0.86	0.66
Uniform Delay, d1	51.6	42.4		56.5	48.2	43.8	58.0	46.3	37.4	42.2	27.6	23.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	51.4	29.3		8.6	42.8	2.8	111.4	23.3	0.5	45.6	6.1	4.6
Delay (s)	103.0	71.7		65.1	91.0	46.7	169.4	69.7	37.9	87.8	33.7	28.4
Level of Service	F	E		E	F	D	F	E	D	F	C	C
Approach Delay (s)		81.9			70.9			71.2			50.7	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	64.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

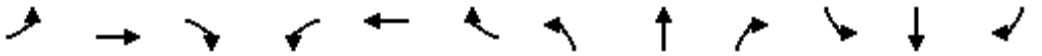
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	782	184	144	2302	1703	535
Future Volume (vph)	782	184	144	2302	1703	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1736	3471	3471	1553
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1736	3471	3471	1553
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	815	192	150	2398	1774	557
RTOR Reduction (vph)	0	9	0	0	0	28
Lane Group Flow (vph)	815	183	150	2398	1774	529
Confl. Peds. (#/hr)			2			
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	28.5	39.9	11.4	82.5	66.6	95.1
Effective Green, g (s)	28.5	39.9	11.4	82.5	66.6	95.1
Actuated g/C Ratio	0.24	0.33	0.10	0.69	0.55	0.79
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	807	580	164	2386	1926	1288
v/s Ratio Prot	c0.24	0.03	0.09	c0.69	0.51	0.10
v/s Ratio Perm		0.09				0.24
v/c Ratio	1.01	0.31	0.91	1.01	0.92	0.41
Uniform Delay, d1	45.8	29.9	53.8	18.8	24.3	3.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	34.1	0.3	45.9	19.6	8.8	0.2
Delay (s)	79.9	30.2	99.7	38.4	33.1	4.0
Level of Service	E	C	F	D	C	A
Approach Delay (s)	70.4			42.0	26.1	
Approach LOS	E			D	C	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		

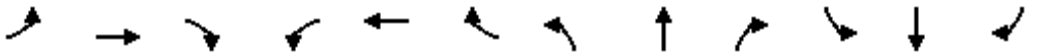
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	124	63	54	256	414	279	563	45	193	398	73
Future Volume (vph)	33	124	63	54	256	414	279	563	45	193	398	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	1642		1752	1845	1568	1736	1807		1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	1642		1752	1845	1568	1736	1807		1752	1845	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	35	133	68	58	275	445	300	605	48	208	428	78
RTOR Reduction (vph)	0	25	0	0	0	125	0	4	0	0	0	52
Lane Group Flow (vph)	35	176	0	58	275	320	300	649	0	208	428	26
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	3.8	16.6		2.8	15.6	24.4	13.9	25.6		8.8	20.5	24.3
Effective Green, g (s)	3.8	16.6		2.8	15.6	24.4	13.9	25.6		8.8	20.5	24.3
Actuated g/C Ratio	0.05	0.23		0.04	0.22	0.34	0.19	0.36		0.12	0.29	0.34
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	87	379		68	400	631	336	644		214	526	628
v/s Ratio Prot	0.02	0.11		c0.03	c0.15	0.06	c0.17	c0.36		0.12	0.23	0.00
v/s Ratio Perm						0.14						0.01
v/c Ratio	0.40	0.47		0.85	0.69	0.51	0.89	1.01		0.97	0.81	0.04
Uniform Delay, d1	32.9	23.8		34.3	25.9	18.9	28.2	23.1		31.4	23.9	15.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.0	0.9		60.8	4.9	0.6	24.4	37.4		53.2	9.4	0.0
Delay (s)	35.9	24.7		95.1	30.7	19.6	52.6	60.5		84.6	33.2	16.0
Level of Service	D	C		F	C	B	D	E		F	C	B
Approach Delay (s)		26.4			29.1			58.1			46.3	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	43.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

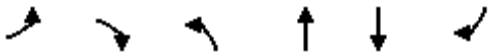
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	505	443	21	112	592	0	44	1070	133	614	635	795
Future Volume (vph)	505	443	21	112	592	0	44	1070	133	614	635	795
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3273	3347		3400	3505		1719	3438	1538	3335	3438	1538
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3273	3347		3400	3505		1719	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	543	476	23	120	637	0	47	1151	143	660	683	855
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	95	0	0	220
Lane Group Flow (vph)	543	496	0	120	637	0	47	1151	48	660	683	635
Confl. Peds. (#/hr)			4									
Heavy Vehicles (%)	7%	7%	7%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	18.9	31.3		8.2	20.6		4.2	40.0	40.0	22.5	58.3	58.3
Effective Green, g (s)	18.9	31.3		8.2	20.6		4.2	40.0	40.0	22.5	58.3	58.3
Actuated g/C Ratio	0.16	0.26		0.07	0.17		0.04	0.33	0.33	0.19	0.49	0.49
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	515	873		232	601		60	1146	512	625	1670	747
v/s Ratio Prot	c0.17	0.15		0.04	c0.18		0.03	c0.33		c0.20	0.20	
v/s Ratio Perm									0.03			0.41
v/c Ratio	1.05	0.57		0.52	1.06		0.78	1.00	0.09	1.06	0.41	0.85
Uniform Delay, d1	50.6	38.5		54.0	49.7		57.4	40.0	27.5	48.8	19.8	27.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.8	0.9		1.9	53.6		47.5	27.6	0.4	51.7	0.7	11.6
Delay (s)	105.3	39.3		55.9	103.3		105.0	67.6	27.9	100.4	20.5	38.7
Level of Service	F	D		E	F		F	E	C	F	C	D
Approach Delay (s)		73.7			95.8			64.7			51.6	
Approach LOS		E			F			E			D	

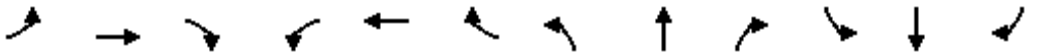
Intersection Summary			
HCM 2000 Control Delay	65.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	561	240	165	1595	2890	1099
Future Volume (vph)	561	240	165	1595	2890	1099
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3400	1568	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3400	1568	1770	3539	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	572	245	168	1628	2949	1121
RTOR Reduction (vph)	0	2	0	0	0	8
Lane Group Flow (vph)	572	243	168	1628	2949	1113
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6
Actuated Green, G (s)	19.5	28.0	8.5	91.5	78.5	98.0
Effective Green, g (s)	19.5	28.0	8.5	91.5	78.5	98.0
Actuated g/C Ratio	0.16	0.23	0.07	0.76	0.65	0.82
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	424	125	2698	2315	1352
v/s Ratio Prot	c0.17	0.04	c0.09	0.46	c0.83	0.13
v/s Ratio Perm		0.11				0.57
v/c Ratio	1.04	0.57	1.34	0.60	1.27	0.82
Uniform Delay, d1	50.2	40.7	55.8	6.3	20.8	6.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	48.0	1.9	198.6	1.0	126.8	4.2
Delay (s)	98.2	42.6	254.4	7.3	147.5	10.3
Level of Service	F	D	F	A	F	B
Approach Delay (s)	81.6			30.4	109.7	
Approach LOS	F			C	F	

Intersection Summary			
HCM 2000 Control Delay	85.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	116.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	211	242	34	139	268	89	410	39	435	730	87
Future Volume (vph)	73	211	242	34	139	268	89	410	39	435	730	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1688		1787	1881	1599	1770	1839		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1688		1787	1881	1599	1770	1839		1770	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	222	255	36	146	282	94	432	41	458	768	92
RTOR Reduction (vph)	0	55	0	0	0	76	0	4	0	0	0	48
Lane Group Flow (vph)	77	422	0	36	146	206	94	469	0	458	768	44
Confl. Peds. (#/hr)			4									
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	3.9	18.2		2.9	17.2	32.8	3.9	19.5		15.6	31.2	35.1
Effective Green, g (s)	3.9	18.2		2.9	17.2	32.8	3.9	19.5		15.6	31.2	35.1
Actuated g/C Ratio	0.05	0.25		0.04	0.23	0.44	0.05	0.26		0.21	0.42	0.47
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	93	414		69	436	803	93	483		372	783	844
v/s Ratio Prot	c0.04	c0.25		0.02	0.08	0.05	0.05	0.25		c0.26	c0.41	0.00
v/s Ratio Perm						0.07						0.02
v/c Ratio	0.83	1.02		0.52	0.33	0.26	1.01	0.97		1.23	0.98	0.05
Uniform Delay, d1	34.8	28.0		35.0	23.7	13.0	35.1	27.1		29.3	21.2	10.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	42.7	49.2		6.9	0.5	0.2	96.3	33.2		125.4	27.3	0.0
Delay (s)	77.6	77.2		41.9	24.2	13.2	131.4	60.3		154.7	48.5	10.6
Level of Service	E	E		D	C	B	F	E		F	D	B
Approach Delay (s)		77.2			18.9			72.1			82.8	
Approach LOS		E			B			E			F	

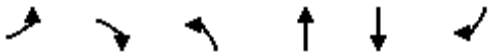
Intersection Summary			
HCM 2000 Control Delay	69.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	74.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	490	945	70	90	700	560	55	710	130	1045	1425	660
Future Volume (vph)	490	945	70	90	700	560	55	710	130	1045	1425	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3532		3467	3574	1577	1752	3505	1546	3433	3539	1555
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3467	3532		3467	3574	1577	1752	3505	1546	3433	3539	1555
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	505	974	72	93	722	577	57	732	134	1077	1469	680
RTOR Reduction (vph)	0	4	0	0	0	396	0	0	105	0	0	183
Lane Group Flow (vph)	505	1042	0	93	722	181	57	732	29	1077	1469	497
Confl. Peds. (#/hr)			6			1			1			3
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	16.7	35.1		5.1	23.5	23.5	4.0	26.3	26.3	35.5	57.8	57.8
Effective Green, g (s)	16.7	35.1		5.1	23.5	23.5	4.0	26.3	26.3	35.5	57.8	57.8
Actuated g/C Ratio	0.14	0.29		0.04	0.20	0.20	0.03	0.22	0.22	0.30	0.48	0.48
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	482	1033		147	699	308	58	768	338	1015	1704	748
v/s Ratio Prot	c0.15	c0.29		0.03	0.20		0.03	c0.21		c0.31	0.42	
v/s Ratio Perm						0.12			0.02			0.32
v/c Ratio	1.05	1.01		0.63	1.03	0.59	0.98	0.95	0.09	1.06	0.86	0.66
Uniform Delay, d1	51.6	42.5		56.5	48.2	43.9	58.0	46.2	37.3	42.2	27.6	23.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.0	30.1		8.6	42.8	2.9	111.4	22.9	0.5	45.9	6.0	4.6
Delay (s)	105.7	72.5		65.1	91.0	46.7	169.4	69.1	37.8	88.2	33.6	28.3
Level of Service	F	E		E	F	D	F	E	D	F	C	C
Approach Delay (s)		83.3			70.9			70.8			50.7	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	64.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		

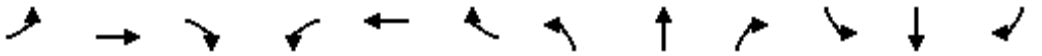
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	782	184	144	2302	1703	535
Future Volume (vph)	782	184	144	2302	1703	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.94		1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	4857		1736	3471	3471	1553
Flt Permitted	0.96		0.95	1.00	1.00	1.00
Satd. Flow (perm)	4857		1736	3471	3471	1553
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	815	192	150	2398	1774	557
RTOR Reduction (vph)	35	0	0	0	0	29
Lane Group Flow (vph)	972	0	150	2398	1774	528
Confl. Peds. (#/hr)			2			
Heavy Vehicles (%)	3%	3%	4%	4%	4%	4%
Turn Type	Prot		Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases						6
Actuated Green, G (s)	25.0		11.5	86.0	70.0	95.0
Effective Green, g (s)	25.0		11.5	86.0	70.0	95.0
Actuated g/C Ratio	0.21		0.10	0.72	0.58	0.79
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1011		166	2487	2024	1287
v/s Ratio Prot	c0.20		0.09	c0.69	0.51	0.09
v/s Ratio Perm						0.25
v/c Ratio	0.96		0.90	0.96	0.88	0.41
Uniform Delay, d1	47.0		53.7	15.6	21.3	3.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	19.6		42.9	11.4	5.7	0.2
Delay (s)	66.6		96.6	27.0	27.0	4.1
Level of Service	E		F	C	C	A
Approach Delay (s)	66.6			31.1	21.5	
Approach LOS	E			C	C	

Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

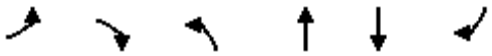
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	124	63	54	256	414	279	563	45	193	398	73
Future Volume (vph)	33	124	63	54	256	414	279	563	45	193	398	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	1743	1449	1752	1845	1568	1736	1807		1752	1845	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	1743	1449	1752	1845	1568	1736	1807		1752	1845	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	35	133	68	58	275	445	300	605	48	208	428	78
RTOR Reduction (vph)	0	0	52	0	0	125	0	4	0	0	0	52
Lane Group Flow (vph)	35	133	16	58	275	320	300	649	0	208	428	26
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases			4			8						6
Actuated Green, G (s)	3.8	16.6	16.6	2.8	15.6	24.4	13.9	25.6		8.8	20.5	24.3
Effective Green, g (s)	3.8	16.6	16.6	2.8	15.6	24.4	13.9	25.6		8.8	20.5	24.3
Actuated g/C Ratio	0.05	0.23	0.23	0.04	0.22	0.34	0.19	0.36		0.12	0.29	0.34
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	87	402	335	68	400	631	336	644		214	526	628
v/s Ratio Prot	0.02	0.08		c0.03	c0.15	0.06	c0.17	c0.36		0.12	0.23	0.00
v/s Ratio Perm			0.01			0.14						0.01
v/c Ratio	0.40	0.33	0.05	0.85	0.69	0.51	0.89	1.01		0.97	0.81	0.04
Uniform Delay, d1	32.9	23.0	21.5	34.3	25.9	18.9	28.2	23.1		31.4	23.9	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.0	0.5	0.1	60.8	4.9	0.6	24.4	37.4		53.2	9.4	0.0
Delay (s)	35.9	23.5	21.5	95.1	30.7	19.6	52.6	60.5		84.6	33.2	16.0
Level of Service	D	C	C	F	C	B	D	E		F	C	B
Approach Delay (s)		24.7			29.1			58.1			46.3	
Approach LOS		C			C			E			D	

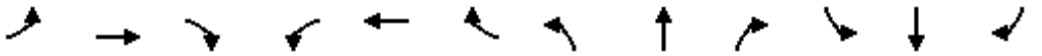
Intersection Summary					
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.90				
Actuated Cycle Length (s)	71.8	Sum of lost time (s)	18.0		
Intersection Capacity Utilization	75.7%	ICU Level of Service	D		
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	561	240	165	1595	2890	1099
Future Volume (vph)	561	240	165	1595	2890	1099
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.94		1.00	0.95	0.95	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	4800		1770	3539	3539	1583
Flt Permitted	0.97		0.95	1.00	1.00	1.00
Satd. Flow (perm)	4800		1770	3539	3539	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	572	245	168	1628	2949	1121
RTOR Reduction (vph)	64	0	0	0	0	8
Lane Group Flow (vph)	753	0	168	1628	2949	1113
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type	Prot		Prot	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases						6
Actuated Green, G (s)	18.5		8.5	92.5	79.5	98.0
Effective Green, g (s)	18.5		8.5	92.5	79.5	98.0
Actuated g/C Ratio	0.15		0.07	0.77	0.66	0.82
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	740		125	2727	2344	1352
v/s Ratio Prot	c0.16		c0.09	0.46	c0.83	0.13
v/s Ratio Perm						0.58
v/c Ratio	1.02		1.34	0.60	1.26	0.82
Uniform Delay, d1	50.8		55.8	5.8	20.2	6.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	37.5		198.6	1.0	119.8	4.2
Delay (s)	88.2		254.4	6.8	140.0	10.3
Level of Service	F		F	A	F	B
Approach Delay (s)	88.2			30.0	104.3	
Approach LOS	F			C	F	

Intersection Summary			
HCM 2000 Control Delay	82.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	211	242	34	139	268	89	410	39	435	730	87
Future Volume (vph)	73	211	242	34	139	268	89	410	39	435	730	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1539	1787	1881	1599	1770	1839		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1539	1787	1881	1599	1770	1839		1770	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	222	255	36	146	282	94	432	41	458	768	92
RTOR Reduction (vph)	0	0	198	0	0	79	0	4	0	0	0	46
Lane Group Flow (vph)	77	222	57	36	146	203	94	469	0	458	768	46
Confl. Peds. (#/hr)			4									
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases			4			8						6
Actuated Green, G (s)	3.8	16.0	16.0	1.8	14.0	29.7	3.8	19.7		15.7	31.6	35.4
Effective Green, g (s)	3.8	16.0	16.0	1.8	14.0	29.7	3.8	19.7		15.7	31.6	35.4
Actuated g/C Ratio	0.05	0.22	0.22	0.03	0.20	0.42	0.05	0.28		0.22	0.44	0.50
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	94	418	345	45	369	768	94	508		390	826	887
v/s Ratio Prot	c0.04	c0.12		0.02	0.08	0.06	0.05	0.25		c0.26	c0.41	0.00
v/s Ratio Perm			0.04			0.07						0.03
v/c Ratio	0.82	0.53	0.17	0.80	0.40	0.26	1.00	0.92		1.17	0.93	0.05
Uniform Delay, d1	33.4	24.3	22.2	34.5	24.9	13.6	33.7	25.0		27.8	18.7	9.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	40.4	1.3	0.2	63.7	0.7	0.2	92.8	22.4		102.3	16.5	0.0
Delay (s)	73.7	25.6	22.5	98.2	25.6	13.8	126.5	47.4		130.1	35.3	9.3
Level of Service	E	C	C	F	C	B	F	D		F	D	A
Approach Delay (s)		30.8			24.1			60.5			66.4	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	71.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

REPLINGER & ASSOCIATES LLC
TRANSPORTATION ENGINEERING

February 16, 2017

Mr. Pete Walter
City of Oregon City
PO Box 3040
Oregon City, OR 97045

SUBJECT: REVIEW OF TRAFFIC IMPACT STUDY – SERRES FARM ANNEXATION – AN16-04

Dear Mr. Walter:

In response to your request, I have reviewed the materials submitted in support of the proposed annexation of the Serres Farm to the city. The relevant materials consisted of the Traffic Impact Study (TIS), dated February 13, 2017. It was prepared under the direction of Michael T. Ard, PE of Lancaster Engineering.

The proposed annexation is for 35.65 acres located to the north of Holcomb Boulevard between S Oak Tree Terrace and S Winston Drive. No specific development proposal is proposed at this time. The TIS is confined to the analysis of the annexation and rezoning on specific intersections to provide a basis for assessing compliance with the Transportation Planning Rule and help identify future planning requirements and possible mitigation measures that will be needed to allow a specific development to proceed at a later date.

The TIS provides a basis upon which the annexation and rezoning proposal can be evaluated for the specific purposes described above.

Comments

1. ***Study Area.*** The study addresses the appropriate intersections. The engineer evaluated traffic patterns and traffic volumes and evaluated three locations. The key intersections were:

    - Highway 213/Beavercreek Road
    - Highway 213/Redland Road
    - Redland Road/Holcomb Boulevard/Abernethy Road

    These three intersections were identified for the study in consultation with city staff and the Oregon Department of Transportation (ODOT). A new study area will be established when a specific development proposal is brought forward at a later date. It will include additional intersections, such as the site access points along Holcomb Boulevard, not

addressed in this TIS. A new TIS undertaken for a specific development will need to address all requirements of the city's *Guidelines for Transportation Impact Analyses*.

2. ***Traffic Counts.*** The traffic counts were conducted in January 2017 at the intersections in #1, above. Traffic counts were conducted during the AM and PM peak periods. The base year traffic volumes appear reasonable.

3. ***Trip Generation.*** The TIS presents information on trip generation from the construction of 121 new single-family dwellings. This estimate is based on the increase in the number of homes under the assumed R-10 zoning. The trip generation rates were taken from the Institute of Transportation Engineers' *Trip Generation Manual – 9th Edition.* The engineer calculated that this number of houses would produce 91 new AM peak hour trips; 121 new PM peak hour trips; and 1152 new total weekday trips.

4. ***Trip Distribution.*** The engineer's trip distribution shows 85 percent of traffic going to and from the west on Holcomb Boulevard through the intersection of Redland/Holcomb/Abernethy. From this point, 16 percent of site trips are projected to travel to and from the south along Redland Road, 25 percent of site trips are projected to travel to and from the west along Abernethy Road, 40 percent of site trips are projected to travel to and from the north along Highway 213, and 4 percent of site trips are projected to travel to and from the south other roads. The engineer also accounts for a small percentage of trips that will be in the local area and may use Holly Lane and its extension. The trip distribution seems reasonable.

   The trip distribution assumptions result in the proposal having an insignificant traffic impact on the intersection of Highway 213 and Beavercreek Road.

5. ***Traffic Growth.*** The engineer calculated 2035 traffic volumes using several factors. The predicted increase in total peak hour trips specified in the Transportation System Plan (TSP) were used to develop an annual traffic volume increase applicable to local streets. ODOT's Future Volume Tables were used to calculate increases in traffic on Highway 213. Finally, predicted volumes at the Highway 213/Redland Road and Highway 213/Beavercreek Road intersections were balanced to be consistent between them. This methodology is likely to produce somewhat different future year volumes than those developed from a regional transportation model, as used in the TSP, for example, but the methodology does allow a good assessment of the impact of the proposed zone change with assumed development of the Serres Farm property. It is worth noting that transportation analysis zone (TAZ) 725, which includes the Serres Farm property, is predicted in the TSP to experience an increase of 593 dwelling units prior to 2035. The development of the Serres Farm property and the amount of residential development assumed in the TSP for TAZ 725 appear consistent.

6. Analysis. Traffic volumes were calculated for the intersections described in #1, above. At each location, the level of service (LOS), delay calculations, and the volume-to-capacity ratio (v/c) were provided to assess operations relative to the ODOT and city's operational standards. The analysis was undertaken for the AM and PM peak hours and included year 2017 existing conditions, 2035 background conditions, and year 2035 total traffic conditions.

According to the analysis, the impact of the zone change and development of the Serres Farm property has virtually no effect on the intersection of Highway 213/Beavercreek Road. The predicted increase in traffic volumes from a potential Serres Farm development is only 4 trips during the AM peak hour and 5 trips during the PM peak hour. These volume changes are insignificant in comparison to the current volumes – over 4500 during the AM peak hour and over 6000 during the PM peak hour. The calculated v/c for the 2035 background condition and the 2035 total traffic condition with the Serres Farm development is the same using the standard level of precision of calculating the v/c to two decimal points, which is the customary approach. Since the city's *Guidelines for Transportation Impact Analyses* specify a threshold value of 20 peak hour trips to trigger analysis of an intersection, the low traffic volumes calculated from residential development of the Serres Farm property will not require any further analysis of the Highway 213/Beavercreek Road intersection.

Under current conditions, the intersection of Highway 213/Redland Road is calculated to operate at a v/c of 0.87 during the AM peak hour and 1.01 during the PM peak hour. With growth in the region, the performance of the intersection is predicted to degrade. The TIS predicts that the v/c would degrade to 1.04 during the AM peak hour and 1.23 during the PM peak hour with background growth. Adding potential development of the Serres Farm property would cause slight additional degradation to v/c of 1.05 during the AM peak hour and 1.24 during the PM peak hour.

The TSP proposed a solution for the predicted failure to achieve operational standards at the intersection of Highway 213/Redland Road, but this improvement, identified as project D79 was listed among the "not likely to be funded" category. The principal capacity-increasing feature of this project was increasing the number of through lanes on Highway 213 in both the northbound and southbound directions. The engineer did not analyze this potential solution for improving the operations of this intersection, but did analyze another potential concept to improve the intersection's performance and mitigate for the traffic impacts of the potential development of Serres Farm at the R-10 density. The engineer's mitigation concept would involve converting the westbound Redland Road approach to allow left turns from three lanes and provide for a third receiving lane on Highway 213 north of Redland Road. This concept does not "solve" the predicted failure to achieve adopted v/c standards, but would improve the intersection's performance. Using this conceptual mitigation measure is predicted to improve the performance with the potential Serres Farm development to better than that

predicted using the existing intersection configuration with 2035 background traffic conditions. This concept has some operational difficulties and would require additional analysis and approvals by ODOT before implementation. This concept does represent a possible mitigation measure to improve the performance of the Highway 213/Redland Road intersection.

Under current conditions, the intersection of Redland Road/Holcomb Boulevard/Abernethy Road is calculated to operate at a v/c of 0.76 during the AM peak hour and 0.78 during the PM peak hour. With growth in the region, the performance of the intersection is predicted to degrade. The TIS predicts that the v/c would degrade to 0.88 during the AM peak hour and 1.07 during the PM peak hour with background growth. Adding potential development of the Serres Farm property would cause slight additional degradation to v/c of 0.90 during the AM peak hour and 1.11 during the PM peak hour.

The TSP did not specify a project at this intersection to increase capacity, though two projects indicate this intersection as a terminus – project D79, discussed above, and D91, the proposed upgrading of Redland Road from Holcomb Boulevard to Holly Lane. Like project D79, D91 was included in the TSP's "not likely to be funded" category.

In the TIS, the engineer explored mitigation concepts that could be used to improve the performance of the Redland Road/Holcomb Boulevard/Abernethy Road intersection. He concludes that adding an eastbound right turn lane to the Abernethy Road approach would improve the intersection's performance to a v/c of 0.95 during the PM peak hour. This offers a feasible, potential solution that would allow the intersection to meet adopted performance standards.

As the engineer notes, development is not being proposed at this time. He suggests that the mitigation measures discussed in the TIS be subject to additional study. They do appear to offer the opportunity to avoid further degradation in performance that might reasonably be expected with development of the Serres Farm property under R-10 zoning. I concur with his conclusions.

7. ***Crash Information.*** The TIS provides crash information for the three-year period from 2013 through 2015. The crash history at the intersection of Highway 213/Beavercreek Road puts it in the top ten percent of high crash locations in the state. The engineer summarizes the crash history. Rear-end crashes are the most common type. The engineer recommended installation of a queue warning system and notes that the TSP includes a project (D14) that would involve a queue warning system. This project is in the likely to be funded category. The very few numbers of vehicles added to the intersection from the potential development of Serres Farm have no measurable effect on the need for implementation of this project or any other safety mitigation measures at the Highway 213/Beavercreek Road intersection.

The intersection of Highway 213/Redland Road and the intersection of Redland Road/Holcomb Boulevard/Abernethy Road experienced moderate crash rates. Both fell below the 90th percentile of crash rates for their respective intersection types. The engineer does not recommend any safety mitigation measures for these intersections. I think that additional safety analyses, including the potential for specific safety mitigation measures will need to be explored during future, comprehensive analyses of potential mitigation measures to enhance the capacity of these two intersections. The absence of definitive safety mitigation measures, however, is not something that is needed to assess the ability of the transportation system to act on the proposed annexation and rezoning.

8. ***Transportation Planning Rule Analysis.*** Because the proposed annexation also involves rezoning of the property to R-10, a TPR analysis is also included. The analysis is predicated on the development of the land at a density that would allow 121 additional single-family dwellings. The engineer states that the proposal does not change the functional classification of any existing or planned transportation facility and does not alter the standards for implementing the functional classification system. As discussed in #6, above, the development of the Serres Farm property is predicted to degrade the performance of the transportation system such that it would not meet applicable performance standards. Two specific intersections were identified: Highway 213/Redland Road and Redland Road/Holcomb Boulevard/Abernethy Road. Further action will be required before development can undertaken.

9. ***Conclusions and Recommendations.*** As stated in the TIS, no development is proposed at this time. Because the impact of development would cause key intersections to fail to meet applicable performance standards, the engineer recognizes that conditions may be necessary to limit development until a refinement plan is adopted that provides for projects to accommodate predicted traffic or that adopts different performance standards.

Conclusion and Recommendations

I find that the TIS provides an adequate basis upon which to assess the impacts of the proposed annexation and rezoning. I agree that the proposal does not cause the need for change in the functional classification of any existing or planned facility. I concur with the engineer's analysis concluding that key intersections will fail to meet adopted performance standards at the intersections of Highway 213/Redland Road and Redland Road/Holcomb Boulevard/Abernethy Road.

Since development is not proposed at this time, I remind the applicant that at such time as a development is proposed, a transportation analysis will need to be prepared that

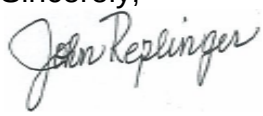
addresses the requirements outlined in the city's *Guidelines for Transportation Impact Analyses*.

With regard to the proposed annexation and zone change, I recommend that as a condition of approval the following be included:

> No development, except that permitted under the County's Future Urban FU-10 zoning designation, in effect as of the date of this application's submittal, shall be allowed until the following occurs and the Applicant demonstrates compliance with these requirements:
>
> a. Highway 213 at Redland Road intersection (an Oregon Highway intersection) is forecasted to fall below adopted performance standards prior to year 2035. As a result, a new Refinement Plan, including elements such as financially constrained projects and alternative mobility standards, and amendments to OCMC Chapter 12.04 implementing the new Refinement Plan, shall be adopted and acknowledged.
>
> b. Redland Road at Holcomb Boulevard/Abernethy Road (a non-Oregon Highway intersection) is forecasted to fall below adopted performance standards prior to year 2035. As a result, the City must do one of the following:
>
> (1) Adopt amendments to the City's Transportation System Plan and OCMC Chapter 12.04 to include projects that satisfy the then-applicable performance standards and these standards must be acknowledged; or
>
> (2) Condition the Approval of a land division application that satisfies then-applicable OCMC Chapter 12.04 by including proportional mitigation of the application's impacts on that intersection, or such other mitigation measure(s) as may be approved which assure(s) that the intersection will either meet, or perform no worse than, the then-applicable performance standards.

If you have any questions or need any further information concerning this review, please contact me at replinger-associates@comcast.net.

Sincerely,



John Replinger, PE
Principal

Oregon City\2016\AN16-04v2

OREGON CITY
Community Development – Planning
221 Molalla Ave. Suite 200 | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)
- ☐ Compatibility Review
- ☐ Lot Line Adjustment
- ☐ Non-Conforming Use Review
- ☐ Natural Resource (NROD) Verification

Type II (OCMC 17.50.030.B)
- ☐ Extension
- ☐ Detailed Development Review
- ☐ Geotechnical Hazards
- ☐ Minor Partition (<4 lots)
- ☐ Minor Site Plan & Design Review
- ☐ Non-Conforming Use Review
- ☐ Site Plan and Design Review
- ☐ Subdivision (4+ lots)
- ☐ Minor Variance
- ☐ Natural Resource (NROD) Review

Type III / IV (OCMC 17.50.030.C)
- ☒ Annexation
- ☐ Code Interpretation / Similar Use
- ☐ Concept Development Plan
- ☐ Conditional Use
- ☐ Comprehensive Plan Amendment (Text/Map)
- ☐ Detailed Development Plan
- ☐ Historic Review
- ☐ Municipal Code Amendment
- ☐ Variance
- ☒ Zone Change

File Number(s): ZC-16-0001 (w/ AN-16-0004)

Proposed Land Use or Activity: Annexation of approximately 35.65 acres of land on the north side of Holcomb Blvd. to the City of Oregon City. Zone change from County FU-10 to R-10.

Project Name: Not applicable. Number of Lots Proposed (If Applicable): N/A

Physical Address of Site: No site address.

Clackamas County Map and Tax Lot Number(s): 2-2E-28A 00500, 00580, & 00590 2-2E-21D 02100, 02190 & 02200

Applicant(s):

Applicant(s) Signature:

Applicant(s) Name Printed: Mark Handris for Iron Construction & Development LLC Date: 11/3/2016

Mailing Address: 1980 Willamette Falls Drive, Suite 200, West Linn, OR 97068

Phone: (503) 657-0406 Fax: (503) 655-5991 Email: handris@aol.com

Property Owner(s):

Property Owner(s) Signature: William E. Serres, Owen S. Serres, Edward J. Serres

Property Owner(s) Name Printed: Serres Family H, LLC Date:

Mailing Address: 15207 Forsythe Rd., Oregon City, OR 97045

Phone: 503 320 4196 Fax: 5036570340 Email: dsserres@aol.com

Representative(s):

Representative(s) Signature:

Representative (s) Name Printed: Rick Givens, Planning Consultant Date:

Mailing Address: 18680 Sunblaze Dr., Oregon City, OR 97045

Phone: 503-479-0097 Fax: 503-479-0097 Email: rickgivens@gmail.com

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

Rick Givens
Planning Consultant
18680 Sunblaze Dr.
Oregon City, Oregon 97045

November 30, 2016

Mr. Pete Walter
221 Molalla Avenue, Ste. 200
Oregon City, Oregon 97045

RE: Serres Property Zone Change/Annexation

Dear Pete:

As discussed at the pre-application conference yesterday regarding the zone change for the Serres property, we are submitting the zone change application today. We have revised the narrative (attached) so that it now discusses the zone change as well as the annexation approval criteria. Please note that the materials currently contained in the prior annexation submittal include the site plan and other supporting information required for the zone change application.

We request that, pursuant to ORS 227.178(2)c, you deem the application complete immediately upon receipt so that the notice for the application can be sent in time to maintain the scheduled hearing date of January 9, 2017. We do not waive the applicant's right to submit additional information and argument in support of this application.

Please let me know if you have any questions or require additional information.

Sincerely yours,

Rick Givens

Rick Givens

cc: Mark Handris
Mike Robinson

phone: 503-479-0097 | fax: 503-479-0097 | e-mail: rickgivens@gmail.com

Annexation & Zone Change Narrative

35.65 Acres, Holcomb Blvd.

Introduction:

This application requests approval of an application to annex approximately 35.65 acres of land to the City of Oregon City. Also requested is a concurrent zone change from Clackamas County Future Urbanizable-10 (FU-10) to City of Oregon City R-10 Single-Family Dwelling District, which is required by OCMC 17.68.025A.

The subject property is located on the north side of Holcomb Blvd., west of Winston Drive, east of Holcomb Elementary School, and south of the Urban Growth Boundary.

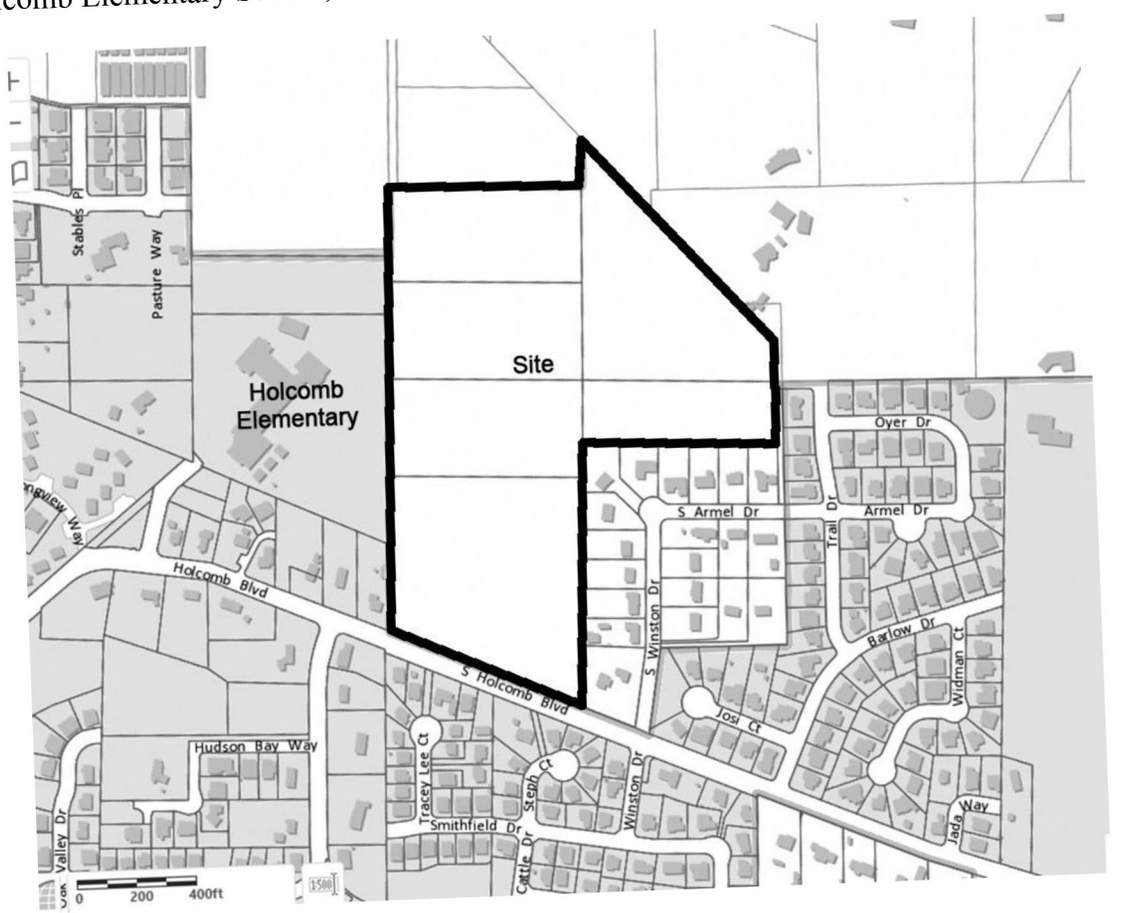


Figure 1: Vicinity Map

The subject property is described as Tax Lots 2100, 2190 and 2200 of Clackamas County Assessor's Map 22E21D, and Tax Lots 500, 580 and 590 on Map 22E 28A. The property is vacant and parts of it have been in use for production of row crops.

There is no proposal to develop this site at the present time. When issues regarding transportation planning impacting the Hwy. 213 corridor are resolved, the City will be able to approve

development that would allow for increased traffic in this area. When a development application is submitted, the application must demonstrate compliance with OCMC Title 12, “Streets, Sidewalks, and Public Places”, and provide a Traffic Impact Analysis at the time of land division. (OCMC 12.04.003.A)

Compliance with Approval Criteria:

1. Concurrent Zoning Map Amendment from (FU-10) to (R-10).

The Site has an acknowledged Oregon City Comprehensive Plan map designation of Low Density Residential, (see Appendix A, “Oregon City’s Comprehensive Plan Land Use Map” in the Oregon City Comprehensive Plan). Oregon City Municipal Code ("OCMC") 17.68.025.A.provides that "notwithstanding any other section of this code", a concurrent zoning map application under OCMC Chapter 17.50 is required. Further, this section requires that the zoning map designation correlate to the corresponding Comprehensive Plan map designation for the site as shown in OCMC 17.68.025.A. The section is mandatory; it provides that "the property *shall* be rezoned upon annexation to the corresponding zoning designation as follows..."(emphasis added). In other words, there is no discretion to be applied to the zoning map amendment and not only is a concurrent zoning map amendment required, the outcome is automatic based on the acknowledged OCMC.

Further, compliance with OCMC Chapter 17.50 requires a zoning map amendment application but does not require compliance with the discretionary zoning map amendment application in OCMC 17.68.020.

The Planning Commission can find that the Application satisfies the approval criteria in OCMC 17.68.025.A. and B. and the zoning map amendment shall be approved.

2. Transportation a Planning Rule ("TPR") Compliance.

OAR 660-012-0060(1) and (2) require land use regulation amendments, including amendments to zoning maps, to determine if the amendment will have a "significant affect" on transportation facilities and, if so, can it be mitigated. However, OAR 660-012-0060(9) provides that a zoning map amendment does not need to include this analysis, and the City can make a finding of no "significant affect", if:

a. A zoning map amendment is consistent with the existing comprehensive plan designation and does not change the map designation;

b. The City has an acknowledged Transportation System Plan ("TSP"); and

c. The area of the zoning map amendment was not exempted from the TPR at the time of the UGB amendment. OAR 660-012-0060(9)(a)-(c).

The subject property complies with these criteria as follows:

a. Oregon City's Comprehensive Plan Land Use Map within the acknowledged Oregon City Comprehensive Plan designates the subject property Low Density Residential. The proposed zoning amendment would not change the map designation and the R-10 zoning is an implementing zone for that designation.

b. An updated Transportation System Plan (TSP) and associated amendments to the Oregon City Municipal Code (OCMC) was approved by the City Commission and became effective August 16, 2013. Information provided by City staff at the pre-application conference on November 29, 2016 indicate that this TSP is based upon the application of the default zoning consistent with the adopted Comprehensive Plan designations for this area.

c. The subject property has been in the City's UGB since the time of the adoption of the Comprehensive Plan and was not exempted from the Transportation Planning Rule.

The City can find that all three (3) of these requirements are met. Therefore, the City can find that the zoning map amendment does not "significantly affect" a transportation facility.

Finally, OCMC Title 12 does not apply to the concurrent annexation and zoning map amendments as they do not constitute "development" as that term is defined in the OCMC and ORS 227.160(2). The City will apply OCMC Title 12 when "development" is proposed for this site.

3. Compliance with Title 14 – Annexations:

OCMC 14.04.050 Annexation Procedures

This section lists the submittal requirements and procedures to be followed in annexing property to the City of Oregon City.

A. Application Filing Deadlines. Annexation elections shall be scheduled for March, May, September and November of each year. Each application shall first be approved by the city commission, which shall provide a valid ballot title in sufficient time for the matter to be submitted to the voters as provided by the election laws of the state of Oregon.

Comment: Senate Bill 1573, which went into effect March 15, 2017, eliminates the requirement for elections for annexations when specified criteria are met. Specifically, the petition for annexation must:

- Be submitted by all owners of land in the annexation territory;
- The annexation territory must be included within the urban growth boundary of the city or Metro and is, or will be, subject to acknowledged comprehensive plan of city;
- At least one parcel in the annexation territory must be contiguous to the existing city limits; and
- The proposal must conform to all other requirements of the city's ordinances.

The subject property meets all of these criteria. The petition for annexation is signed by all owners of record. The property is within the urban growth boundary and is subject to the acknowledged City of Oregon City Comprehensive Plan. The property is contiguous to the existing city limits along its western and southern borders. The proposal complies with all other requirements of the city's ordinances, as demonstrated in this narrative.

B. *Preapplication Review. Prior to submitting an annexation application, the applicant shall confer in the manner provided by Section 17.50.050(A) with the representative of the planning division appointed by the city manager.*

Comment: A pre-application conference was initially held on September 3, 2014 to discuss the annexation of the subject property to the City of Oregon City. Because the application was not filed within six months of that date, a second pre-application conference (PA 16-20) regarding the annexation was held on May 10, 2016. A pre-application conference regarding the zone change proposal was held on November 29, 2016.

C. *Neighborhood Contact. Prior to filing an annexation application, the applicant is encouraged to meet with the city-recognized neighborhood association or associations within which the property proposed to be annexed is located. If the city manager deems that more than one such association is affected, the applicant is encouraged to meet with each such association, as identified by the city manager. Unwillingness or unreasonable unavailability of a neighborhood association to meet shall not be deemed a negative factor in the evaluation of the annexation application.*

Comment: The subject property is within the Park Place Neighborhood Association boundaries. The applicant contacted the Park Place Neighborhood Association, as required by city standards, and a meeting was held on June 7, 2016 at Alliance Charter Academy. A second Neighborhood Meeting on December 6, 2016 was conducted in order to address the need to include a concurrent zone change application.

D. *Signatures on Consent Form and Application. The applicant shall sign the consent form and the application for annexation. If the applicant is not the owner of the property proposed for annexation, the owner shall sign the consent form and application in writing before the city manager may accept the same for review.*

Comment: The consent form and the application for annexation are signed by the owners of record for the subject property.

E. *Contents of Application. An applicant seeking to annex land to the city shall file with the city the appropriate application form approved by the city manager. The application shall include the following:*

1. *Written consent form to the annexation signed by the requisite number of affected property owners, electors or both, provided by ORS 222, if applicable;*
2. *A legal description of the territory to be annexed, meeting the relevant requirements of the Metro Code and ORS Ch. 308. If such a description is not submitted, a boundary survey may be required. A lot and block description may be substituted for the metes and bounds description if the area is platted. If the legal description contains any deed or book and page references, legible copies of these shall be submitted with the legal description;*
3. *A list of property owners within three hundred feet of the subject property and, if applicable, those property owners that will be "islanded" by the annexation proposal, on mailing labels acceptable to the city manager;*
4. *Two full quarter-section county tax assessor's maps, with the subject property(ies) outlined;*
5. *A site plan, drawn to scale (not greater than one inch = fifty feet), indicating:*
6. *If applicable, a double-majority worksheet, certification of ownership and voters. Certification of legal description and map, and boundary change data sheet on forms provided by the city.*

Comment: The materials required in items 1 through 6 are included in our application submittal.

7. *A narrative statement explaining the conditions surrounding the proposal and addressing the factors contained in the ordinance codified in this chapter, as relevant, including:*
    a. *Statement of availability, capacity and status of existing water, sewer, drainage, transportation, park and school facilities;*
    b. *Statement of increased demand for such facilities to be generated by the proposed development, if any, at this time;*
    c. *Statement of additional facilities, if any, required to meet the increased demand and any proposed phasing of such facilities in accordance with projected demand;*

Comment: Although the subject property will not be developed at this time and will remain undeveloped for the immediate future, services are available to allow for the future development of this site. The following information describes the existing availability, estimate of increased demand, and notes improvements that may be required to provide these services:

Water: There are existing City of Oregon City water lines in Holcomb Blvd., along the subject property's frontage on that street, and Ames Street. Water service in this area is also provided by Clackamas River Water District. According to the pre-application conference notes:

1. *The City of Oregon City and Clackamas River Water have an active agreement in place for water service within the proposed annexation area, titled the Holcomb-Overlook-Park Place (HOPP) Agreement. The HOPP Agreement will guide how the proposed annexation area is served domestic water.*

2. *The proposed annexation area is within two water system pressure zones: Park Place Intermediate and Park Place Upper.*

The exact details of water service for the subject property will be worked out at the time of future development, but there is an adequate water supply available in the area to service this site.

Sanitary Sewer: Sanitary sewer to service the future development of this site will come from two existing sewer lines: the line in Holcomb Blvd. and the line in Ames Street. Based on the existing topography of the area, the southern portion of the proposed annexation area can discharge sanitary sewer flows to the existing sanitary sewer system within Holcomb Boulevard. The northern portion of the proposed annexation area will discharge to the existing sanitary sewer system located within Ames Street. The applicants also own the intervening property separating this site from the sewer in Ames Street and will grant the required easement needed for the future extension to service the subject property.

Storm Drainage: Based upon natural topography, storm water run-off generated from future development will generally flow in a northwesterly direction and will need to be conveyed to a natural drainage channel located north of Forsythe Road and east of Highland Road. The existing storm sewer system within Ames Street has experienced capacity issues and will not be suitable to service the subject property. The downstream (offsite) system will need to be upgraded to accommodate flows from the subject property and these improvements would be made at the developer's expense concurrent with site development. Two existing storm water lines outfall onto the subject property from the Winston Acres development. The storm drainage system developed on the property will provide for the conveyance of the flows from these lines. The City has recently adopted updated Stormwater and Grading Design Standards. Any future development will comply with the requirements of these updated Stormwater and Grading Design Standards, including provisions for treatment and detention of storm water.

Transportation: No development of this property is being proposed at this time. No development may occur until such time as the requirements of OCMC Title 12 can be met. This will not be feasible until Alternative Mobility standards are adopted by the City and approved by the ODOT. It is understood by the applicant that there are on-going regional transportation discussions between the City, Metro and ODOT affecting the larger Park Place Neighborhood area that will need to be resolved before development may be approved. Because no development will occur as a direct result of this annexation, the transportation analysis will be deferred until the time of a future development application.

Parks: The closest developed City park to the subject property is Park Place Park, which is a bit more than one-half mile from the site. The playground for Holcomb Elementary School is located immediately to the west of the site and would provide for recreational amenities. Additionally, the Park Place Neighborhood Plan calls for a new community park to the south of Holcomb Blvd. when development takes place in the future. No parks are called for by City planning on the subject property.

Schools: The subject property is served by Oregon City Public Schools. The schools serving this site are Holcomb Elementary School, Ogden Middle School, and Holcomb Elementary School. Although there will be no immediate development of this site that would impact the school system, discussions with School District staff indicate that there are no capacity problems with these schools.

d. Statement outlining method and source of financing required to provide additional facilities, if any;

Comment: The required improvements to public services will be made by the developer concurrently with the future development of this property.

e. Statement of overall development concept and methods by which the physical and related social environment of the site, surrounding area and community will be enhanced;

Comment: The adopted City of Oregon City Comprehensive Plan calls for the subject property to be developed with Low Density single-family homes. The implementing zones for this plan designation are R-6, R-8 and R-10. The appropriate zoning will be determined at the time of the future zone change application and the property will be developed at the corresponding density. The development of this site in a manner consistent with the adopted Comprehensive Plan will serve to provide needed housing to accommodate the projected population growth of the City of Oregon City. The site is well suited from a physical standpoint to be developed in this manner as it is free of any significant development constraints, other than a very small area of moderately steep slopes. Providing for future development of needed housing within walking distance of Holcomb Elementary School for school and recreational services will assist in providing for a beneficial social environment in this neighborhood.

f. Statement of potential physical, aesthetic, and related social effects of the proposed, or potential development on the community as a whole and on the small subcommunity or neighborhood of which it will become a part; and proposed actions to mitigate such negative effects, if any;

Comment: There will be no immediate physical, aesthetic, or related social effects from the annexation of this property because there will be no development at this time. Future development of the property will result in typical Low Density Residential impacts on traffic, schools, and public infrastructure, but these impacts have been anticipated by the City's Comprehensive Plan. No mitigation measures are anticipated to be needed.

g. Statement indicating the type and nature of any comprehensive plan text or map amendments, or zoning text or map amendments that may be required to complete the proposed development;

Comment: No change to the comprehensive plan text or map designation is proposed for this site. A zone change from Clackamas County FU-10 to Oregon City R-10 is required per the provisions of OCMC 17.68.025.A. This zone change is in conformance with the acknowledged Low Density Residential land use designation for the property. Please refer to the discussion of the zone change proposal on page 2 of this report.

8. *The application fee for annexations established by resolution of the city commission and any fees required by metro. In addition to the application fees, the city manager shall require a deposit, which is adequate to cover any and all costs related to the election;*
9. *Paper and electronic copies of the complete application as required by the community development director.*

Comment: The required application fee and paper and digital copies of the application are included in the application submittal.

OCMC 14.04.060 - Annexation factors.

A. *When reviewing a proposed annexation, the commission shall consider the following factors, as relevant:*
   1. *Adequacy of access to the site;*

   Comment: The site has direct access onto Holcomb Blvd., an arterial street. This street would serve as the primary access for the future development of the property. A secondary access to the site is available via S. Umber View Lane, but would possibly be restricted to emergency vehicle access as it is only a one-half street connection. Future extension of Ames St. would be provided for with the provision of a street stub, but would be dependent upon future expansion of the Urban Growth Boundary for completion.

   2. *Conformity of the proposal with the city's comprehensive plan;*

   Comment: The proposed annexation is consistent with the comprehensive plan in that the property is within the UGB, is designated Low Density Residential, and is intended to be served by the City of Oregon City. Compliance with specific plan policies is discussed below in this report.

   3. *Adequacy and availability of public facilities and services to service potential development;*

   Comment: The adequacy and availability of public facilities and services is discussed in the preceding section of this report. Please refer to our comments there.

   4. *Compliance with applicable sections of ORS Ch. 222, and Metro Code Section 3.09;*

ORS Ch. 222 was amended in 2016 with the adoption of Senate Bill 1573 as follows:

SECTION 1. Section 2 of this 2016 Act is added to and made a part of ORS 222.111 to 222.180.

SECTION 2. (1) This section applies to a city whose laws require a petition proposing annexation of territory to be submitted to the electors of the city.

(2) Notwithstanding a contrary provision of the city charter or a city ordinance, upon receipt of a petition proposing annexation of territory submitted by all owners of land in the territory, the legislative body of the city shall annex the territory without submitting the proposal to the electors of the city if:

(a) The territory is included within an urban growth boundary adopted by the city or Metro, as defined in ORS 197.015;

(b) The territory is, or upon annexation of the territory into the city will be, subject to the acknowledged comprehensive plan of the city;

(c) At least one lot or parcel within the territory is contiguous to the city limits or is separated from the city limits only by a public right of way or a body of water; and

(d) The proposal conforms to all other requirements of the city's ordinances.

Comment: The Oregon City Municipal Code requires annexations to be approved through an election. However, in this instance, the proposed annexation meets the requirements of the new State law in that it includes a petition that is signed by all owners of land in the territory, the area is within the adopted urban growth boundary, is within an area subject to the adopted and acknowledged Oregon City Comprehensive Plan, and the property is contiguous to the existing city limits. As demonstrated in this narrative, this proposal conforms to all other requirements of the city's ordinances.

(3) The territory to be annexed under this section includes any additional territory described in ORS 222.111 (1) that must be annexed in order to locate infrastructure and right of way access for services necessary for development of the territory described in subsection (2) of this section at a density equal to the average residential density within the annexing city.

Comment: No such additional territory is required for this property.

(4) When the legislative body of the city determines that the criteria described in subsection (2) of this section apply to territory proposed for annexation, the legislative body may declare that the territory described in subsections (2) and (3) of this section is annexed to the city by an ordinance that contains a description of the territory annexed.

Comment: The required ordinance will be adopted by the City upon approval of this annexation proposal.

5. *Natural hazards identified by the city, such as wetlands, floodplains and steep slopes;*

Comment: The only natural hazards mapped on the City's GIS system for the subject property is an NROD buffer along the north boundary of the site and a minor area of slopes exceeding 25% grade. These areas are shown on the site map submitted with this annexation. The future development plan for this property will include the required information to address these constraints. The constraints are, however, minor in nature and can be accommodated through typical development practices.

6. *Any significant adverse effects on specially designated open space, scenic, historic or natural resource areas by urbanization of the subject property at time of annexation;*

Comment: The only specially designated open space, scenic, historic or natural resource applicable to the subject area is the alignment of the Oregon Trail-Barlow Road Historic Corridor across a portion of the property. This will require compliance with OCMC 17.40.060-H by the future development plan.

7. *Lack of any significant adverse effects on the economic, social and physical environment of the community by the overall impact of the annexation.*

Comment: Because there will be no development on this site until such time as the criteria of Title 12 can be met and a future development application is submitted for approval, there will be no immediate impact upon the economic, social and physical environment of the community by the overall impact of the annexation. At such time as the site is developed, it will be in a manner consistent with the planned Low Density Residential designation for the property. This land use is consistent with the surrounding land use pattern. Required public utilities and services are available or will be made available concurrently with the development of the site. The site has no significant development constraints and is not designated for protection as open space. As such, the future development of the property will not have any significant impact upon the economic, social and physical environment of the community.

Metro Code 3.09.045.A-D (Boundary Change Criteria)

The applicable approval criteria under the Metro Code are:

- *Whether the proposed boundary change will promote the timely, orderly and economic provision of public facilities and services.*

  Comment: As discussed above, all required public facilities and services will be available at the time of development. No development will occur until such time as Alternative Mobility standards are adopted, thereby allowing compliance with the provisions of Title 12. A future development application will need to be filed and approved by the City of

Oregon City prior to any development occuring. Upon approval of a development plan, the developer will provide for the installation of needed public facilities and services.

- *Whether the proposed boundary change will affect the quality and quantity of urban services*

  Comment: The annexation of this property will have no immediate impact upon the quality or quantity of urban services since no development is proposed. At such time as the site is developed in the future, it will be in a manner consistent with the Low Density Residential designation of the property. The City has planned for the provision of necessary public facilities and services in this area in its Public Facilities Plan and Transportation Systems Plan. Since the future development will conform to the anticipated level of development, it will not have a negative impact upon the quality or quantity of urban services.

- *Whether the proposed boundary change would eliminate or avoid unnecessary duplication of facilities or services.*

  Comment: With the exception of water, all services in this area will be provided by the City of Oregon City so there will be no unnecessary duplication of facilities and services. Water services in this area are provided by the City and Clackamas River Water District. These agencies have a plan and agreement that governs the provision of water services so as to avoid unnecessary duplication of facilities and services.

Oregon City Comprehensive Plan – Applicable Goals and Policies

Goal 14.3 Orderly Provision of Services to Growth Areas

Plan for public services to lands within the Urban Growth Boundary through adoption of a concept plan and related Capital Improvement Program, as amendments to the Comprehensive Plan.

Policy 14.3.1
Maximize new public facilities and services by encouraging new development within the Urban Growth Boundary at maximum densities allowed by the Comprehensive Plan.

Comment: The subject property is designated Low Density Residential by the Oregon City Comprehensive Plan. The proposed R-10 zoning implements the Low Density Residential designation applicable to this property. The R-8 and R-6 zones also implement the Low Density Residential plan designation, but the table in OCMC 17.68.025.A. requires the application of R-10 in LDR areas upon annexation. A zone change to a higher density may be included in a future application for development of the property. The future development will be reviewed for compliance with maximum and minimum density standards at the time of application for subdivision approval.

Policy 14.3.2

Ensure that the extension of new services does not diminish the delivery of those same services to existing areas and residents in the city.

Comment: As discussed above in this report, all required urban services will be available to serve this property concurrently with its future development. The City's Public Facilities Plan and Transportation Systems Plan will ensure that there are adequate supplies of services so that services to existing areas and residents in the city are not diminished.

Policy 14.3.3
Oppose the formation of new urban services districts and oppose the formation of new utility districts that may conflict with efficient delivery of city utilities within the Urban Growth Boundary.

Comment: Not applicable. No new urban services or utility districts are proposed. Services will be provided by the City of Oregon City, with the exception of any water services that may be appropriate to be provided by Clackamas River Water District pursuant to an agreement between the City and Water District.

Policy 14.3.4
Ensure the cost of providing new public services and improvements to existing public services resulting from new development are borne by the entity responsible for the new development to the maximum extent allowed under state law for Systems Development Charges.

Comment: All utilities that will be provided to serve the future development of this site will be the responsibility of the developer. The future homes to be built on this property will pay required Systems Development Charges at the time of application for building permits.

Goal 14.4 – Annexation of Lands to the city

Annex lands to the city through a process that considers the effects on public services and the benefits to the city as a whole and ensures that development within the annexed area is consistent with the Oregon City Comprehensive Plan, City ordinances, and the City Charter.

Policy 14.4.1
Promote compact urban form and support efficient delivery of public services by ensuring that lands to be annexed are within the City's Urban Growth Boundary, and contiguous with the city limits. Do not consider long linear extensions, such as cherry stems and flag lots, to be contiguous with the city limits.

Comment: The subject property is entirely within the City's Urban Growth Boundary and is contiguous with the existing city limits along its entire western border and its frontage on Holcomb Blvd.

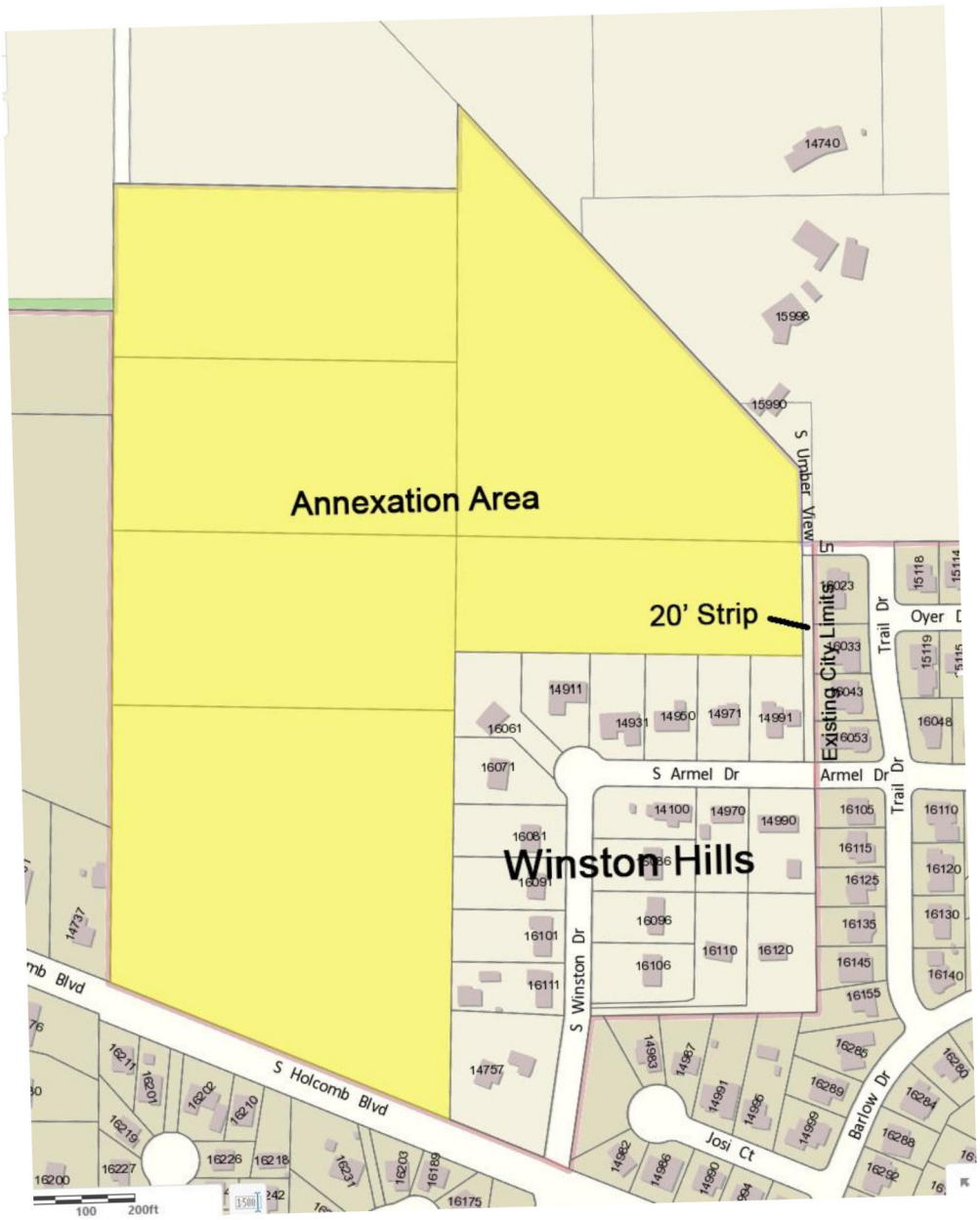
Policy 14.4.2
Include an assessment of the fiscal impacts of providing public services to unincorporated areas upon annexation, including the costs and benefits to the city as a whole as a requirement for concept plans.

Comment: The proposed annexation will have no fiscal impacts upon the cost of providing public services because no development will be allowed until such time as Title 12 requirements can be met and a development application is approved. The City's Public Facilities Plan and Transportation System Plan anticipate the future development of the subject property at Low Density Residential densities and provide an analysis of the costs of providing adequate levels of services in the Holcomb Blvd. area. The future development of this property will contribute to these costs by providing on-site infrastructure, as well as off-site storm drainage improvements, at the cost of the developer. Each home will be assessed appropriate System Development Charges to cover the proportionate impact of the future development of this site.

Policy 14.4.3
Evaluate and in some instances require that parcels adjacent to proposed annexations be included to:

- *avoid creating unincorporated islands within the city;*
- *enable public services to be efficiently and cost-effectively extended to the entire area; or*
- *implement a concept plan or sub-area master plan that has been approved by the Planning and City Commissions.*

Comment: The proposed annexation will not create an unincorporated island within the city so this policy recommendation is met. That said, the Winston Hills subdivision in unincorporated Clackamas County that abuts the subject property along its eastern border will only remain connected to the unincorporated area by a 20-foot wide strip of land, as shown on the map below:



The fact that Winston Hills will only be connected to the unincorporated area by a strip of land will have no impact upon the efficiency of provision of public facilities and services. Sewer, water and storm drainage all are provided from either Holcomb Blvd. or to the northwest. At such time as the Winston Hills neighborhood wishes to annex to the City, the future development of the subject property will aid in providing needed services. The annexation of the Winston Hills neighborhood at this time is not needed in order to implement a sub-area master plan.

Policy 14.4.4
Expedite the annexation of property as provided by state law in order to provide sewer service to adjacent unincorporated properties when a public health hazard is created by a failing septic tank sewage system.

Comment: Not applicable. The subject property is not subject to a public health hazard associated with a failing septic system.

Rick Givens
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February 15, 2017

Mr. Pete Walter
City of Oregon City
Planning Division
221 Molalla Avenue, Ste. 200
Oregon City, Oregon 97045

RE: Serres Property Annexation & Zone Change - Files AN-16-0004, ZC-16-0001

Dear Pete:

This letter is in response to your email today to Mike Robinson noting issues relating to parks, open space and trail resources in the vicinity of the Serres property. In your email you note:

"The parks and trails master plans do not indicate a park for the annexation area, however both the Barlow Road historic corridor which is a Goal 5 historic resource, and the Holcomb Ridge Loop Trail L2 are indicated on the Trails Plan."

Regarding the Barlow Road historic corridor, we commented on page 10 of our application narrative that the future development plan would be subject to compliance with OCMC 17.40.060-H and would need the requirements of that section regarding the alignment of the trail. This section requires the following:

1. *Within the Oregon Trail-Barlow Road historic corridor, a minimum of a thirty-foot wide-open visual corridor shall be maintained and shall follow the actual route of the Oregon Trail, if known. If the actual route is unknown, the open visual corridor shall connect within the open visual corridor on adjacent property.*
2. *No new building or sign construction shall be permitted within required open visual corridors. Landscaping, parking, streets, driveways are permitted within required open visual corridors*.

The applicant understands these requirements and will design the future subdivision plan accordingly. Compliance with these provisions will be reviewed at the time of the future subdivision application.

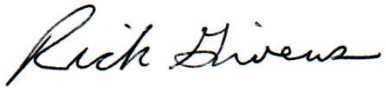
With respect to the Holcomb Ridge Loop Trail L2, the Oregon City Conceptual Trails Map in the Oregon City Trails Master Plan indicates a conceptual alignment for a future trail across the subject property. The Trails Master Plan describes this trail system as, "A series of trails that would follow the perimeter of Holcomb Elementary school and the UGB to the future Park Place development. The trails would then connect through the Holcomb Ridge development on existing roadways and trails and connect back to the elementary school on Holcomb Blvd." Regarding acquisition of land for the trail system, the Trails Master Plan states that it would rely upon, "Easements as part of new development, easements if some parcels are not developed".

Thus, it is clearly intended that the alignment and dedication of the easements for the portion of the trail system across the subject property would be reviewed in conjunction with the future subdivision application and that the approval of the subdivision would be conditioned to require the dedication of the required trail easement.

In your email you also notes that the City has not updated its Parks SDC "to reflect the three concept plan areas, so funding park acquisition to serve the Park Place neighborhood remains a challenge." We would note that the proposed annexation and zone change do not in and of themselves generate any immediate need for park resources. The need for park lands in this area would come with future development of this and other properties. Since this application will be conditioned to restrict development until such time as the alternative mobility standards are adopted by the City, there is ample time for the City to amend its Parks SDC to include the Park Place neighborhood so that future homes to be built on this and other properties in this neighborhood would contribute to the costs of park acquisitions.

Thank you for consideration of this additional testimony. Please include it in the record of our application.

Sincerely yours,



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February 13, 2017

Mr. Pete Walter
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Planning Division
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Oregon City, Oregon 97045

RE: Serres Property Annexation & Zone Change - Files AN-16-0004, ZC-16-0001

Dear Pete:

This letter will provide additional analysis and suggested findings regarding the impact of the proposed annexation and zone change for the Serres property on Holcomb Blvd. As you know, this application proposes to change the zoning of this site from Clackamas County Future Urbanizable-10 (FU-10) to City of Oregon City R-10 Single-Family Dwelling District. The property can presently be developed with three homes under County zoning. With the annexation and zone change to City R-10 zoning, the development potential would increase to approximately 124 units. This assumes a deduction of 20 percent of the 35.65 acre site for streets and infrastructure. The proposed re-zoning would, therefore, add potential future development of 121 lots over the existing condition. It should be noted that the actual development of the site cannot occur until some point in the future when the City adopts alternative mobility standards. The proposed annexation and zone change will have following impacts on the public services:

Water: There are existing City of Oregon City water lines in Holcomb Blvd., along the subject property's frontage on that street, and in Ames Street. Water service in this area is also provided by Clackamas River Water District. According to the pre-application conference notes:

1. *The City of Oregon City and Clackamas River Water have an active agreement in place for water service within the proposed annexation area, titled the Holcomb-Overlook-Park Place (HOPP) Agreement. The HOPP Agreement will guide how the proposed annexation area is served domestic water.*

2. *The proposed annexation area is within two water system pressure zones: Park Place Intermediate and Park Place Upper.*

According to the City's Water Distribution Master Plan on page ES-3 states, "Water demands were projected through buildout of the City's Urban Growth Boundary (UGB) using a unit demand methodology based on land uses in the City's Comprehensive Plan." The proposed zone change would simply adopt the default R-10 zoning applicable to the Low Density Residential comprehensive plan designation applied to the subject property. Thus, the Water Distribution Master Plan has accounted for the increased demand that would be generated in the future by this zone change. The lower portion of the property would be served from existing City lines and existing water storage reservoirs. The upper portion would be served by

Clackamas River Water District. The Water Distribution Master Plan notes that additional storage will be needed in this area. Discussions with City staff indicate that the reservoir is planned to be installed as a condition of approval of a recent subdivision in this area.

Sanitary Sewer: Sanitary sewer to service the future development of this site will come from two existing sewer lines: the line in Holcomb Blvd. and the line in Ames Street. Based on the existing topography of the area, the southern portion of the proposed annexation area can discharge sanitary sewer flows to the existing sanitary sewer system within Holcomb Boulevard. The northern portion of the proposed annexation area will discharge to the existing sanitary sewer system located within Ames Street. The applicants also own the intervening property separating this site from the sewer in Ames Street and will grant the required easement needed for the future extension to service the subject property.

The City of Oregon City Sanitary Sewer Master Plan states on page 2-4 that land use information was the basis for the forecasting of future sewer demands in the study:
"Information on current and future land use was obtained from geographic information system (GIS) data provided by the City. The existing land use classifications are shown in Figure 2-3. The existing land use was compared to future zoning to estimate development in the future, which is shown in Figure 2-4." The proposed R-10 zoning is the default zoning for the Low Density Residential land use designation applied to the subject property by the Oregon City Comprehensive Plan. This zone change simply implements zoning that was anticipated in the development of the Oregon City Sanitary Sewer Master Plan. Figure ES-2 in that plan shows recommended future capital improvements that include proposed gravity sewer extensions across the subject property. These gravity sewer lines would be made with the development of this site consistent with this plan.

Storm Drainage: Based upon natural topography, storm water run-off generated from future development will generally flow in a northwesterly direction and will need to be conveyed to a natural drainage channel located north of Forsythe Road and east of Highland Road. The existing storm sewer system within Ames Street has experienced capacity issues and will not be suitable to service the subject property. The downstream (offsite) system will need to be upgraded to accommodate flows from the subject property and these improvements would be made at the developer's expense concurrent with site development. This system will not make use of any existing City storm sewer facilities. Two existing storm water lines outfall onto the subject property from the Winston Acres development. The storm drainage system developed on the property will provide for the conveyance of the flows from these lines. The City has recently adopted updated Stormwater and Grading Design Standards. Any future development will comply with the requirements of these updated Stormwater and Grading Design Standards, including provisions for treatment and detention of storm water.

Please refer to the Lancaster Engineering report for comments on transportation impacts associated with this annexation and zone change.

Sincerely yours,

Rick Givens

Rick Givens

From: Rick Givens
To: Pete Walter
Cc: Mark Handris
Subject: 20 foot strip
Date: Thursday, December 22, 2016 2:00:22 PM
Attachments: Winston Acres Plat 0332.pdf
TitlePlantRecordsReport.pdf
Deed Copies.pdf

Hi Pete,

I'm attaching the title information provided by Fidelity National Title that you requested for the 20 foot private roadway (Clackamas County Assessor's Map 22E28AA Tax Lot 2000). The strip was created by deed on June 27, 1903 and is shown as a private roadway on the attached copy of the 1912 Winston Acres Plat. It appears that at some point the strip came under the ownership of Clackamas County, most likely foreclosure for unpaid taxes). It was sold to Mary P. Serres in November of 1995. It was subsequently sold to Pacific Land Development and Acquisition Company, LLC in April of 1997 to allow for the connection of Armel Dr. between the Barlow Crest and Winston Hills subdivisions. The remainder was sold back to Edward, William, and Daniel Serres in June of 1998 and has since been transferred two times between Serres family trusts.

I hope that this is sufficient for you to determine that the property was created legally as a private road. Please let me know if you have any questions or need additional information.

Rick

OREGON CITY

Community Development – Planning

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

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)
- ☐ Compatibility Review
- ☐ Lot Line Adjustment
- ☐ Non-Conforming Use Review
- ☐ Natural Resource (NROD) Verification

Type II (OCMC 17.50.030.B)
- ☐ Extension
- ☐ Detailed Development Review
- ☐ Geotechnical Hazards
- ☐ Minor Partition (<4 lots)
- ☐ Minor Site Plan & Design Review
- ☐ Non-Conforming Use Review
- ☐ Site Plan and Design Review
- ☐ Subdivision (4+ lots)
- ☐ Minor Variance
- ☐ Natural Resource (NROD) Review

Type III / IV (OCMC 17.50.030.C)
- ☒ Annexation
- ☐ Code Interpretation / Similar Use
- ☐ Concept Development Plan
- ☐ Conditional Use
- ☐ Comprehensive Plan Amendment (Text/Map)
- ☐ Detailed Development Plan
- ☐ Historic Review
- ☐ Municipal Code Amendment
- ☐ Variance
- ☐ Zone Change

File Number(s): AN-16-0004

Proposed Land Use or Activity: Annexation of approximately 35.65 acres of land on the north side of Holcomb Blvd. to the City of Oregon City.

Project Name: Not applicable. Number of Lots Proposed (If Applicable): N/A

Physical Address of Site:

Clackamas County Map and Tax Lot Number(s): 2-2E-28A 00500, 00580, & 00590 2-2E-21D 02100, 02190 & 02200

Applicant(s):

Applicant(s) Signature: Edward J. Serres, Donald Serres, Wm Flynn

Applicant(s) Name Printed: Serres Family H, LLC Date: 6/26/16

Mailing Address: 15207 Forsythe Rd., Oregon City, OR 97045

Phone: (503) 655-7730 Fax: lseight2@aol.com Email: dsserres@aol.com

Property Owner(s):

Property Owner(s) Signature: Edward J. Serres, Donald Serres, Wm Flynn

Property Owner(s) Name Printed: Serres Family H, LLC Date: 6/26/16

Mailing Address: 15207 Forsythe Rd., Oregon City, OR 97045

Phone: (503) 655-7730 Fax: lseight2@aol.com Email: dsserres@aol.com

Representative(s):

Representative(s) Signature:

Representative (s) Name Printed: Rick Givens, Planning Consultant Date:

Mailing Address: 18680 Sunblaze Dr., Oregon City, OR 97045

Phone: 503-479-0097 Fax: 503-479-0097 Email: rickgivens@gmail.com

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the parties willingness to comply with all code requirements.

CERTIFICATION OF PROPERTY OWNERSHIP OF

100% OF LAND AREA

(City 100% Ownership Method)

I hereby certify that the attached petition for a proposed boundary change involving the territory described in the petition contains the names of the owners* of 100% of the land area within the annexation area described in the petition, as shown on the last available complete assessment roll.

NAME Mary Neigel

TITLE Cartographer II

DEPARTMENT Assessment & Tax

COUNTY OF Clackamas

DATE 08.29.2016

* "Owner" means the legal owner of record or, where there is a recorded land contract which is in force, the purchaser thereunder. If there is a multiple ownership in a parcel of land each consenting owner shall be counted as a fraction to the same extent as the interest of the owner in the land bears in relation to the interest of the other owners and the same fraction shall be applied to the parcel's land mass and assessed value for purposes of the consent petition. If a corporation owns land in territory proposed to be annexed, the corporation shall be considered the individual owner of that land.

CITY OF OREGON CITY

ANNEXATION PETITION

By signing below I indicate my consent to and support of being annexed into the City of Oregon City, and my consent for having my signature (below) used for any application form required for the annexation, including but not limited to the City of Oregon City's Land Use Application Form.

NOTE: This petition may be signed by qualified persons even though they may not know their property description or precinct number.

SIGNATURE	PRINTED NAME	I AM A *			ADDRESS	PROPERTY DESCRIPTION				PRECINCT #	DATE
		PO	RV	OV		LOT #	1/4 SEC	TWNSHP	RANGE		
	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	500	28A	2S	2E	NA	6/27/16
	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	580	28A	2S	2E	NA	6/27/16
	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	590	28A	2S	2E	NA	6/27/16
	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2100	21D	2S	2E	NA	6/27/16
	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2190	21D	2S	2E	NA	6/27/16
	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2200	21D	2S	2E	NA	6/27/16

* PO = Property Owner
RV = Registered Voter
OV = Owner and Registered Voter

CITY OF OREGON CITY

ANNEXATION PETITION

By signing below I indicate my consent to and support of being annexed into the City of Oregon City, and my consent for having my signature (below) used for any application form required for the annexation, including but not limited to the City of Oregon City's Land Use Application Form.

NOTE: This petition may be signed by qualified persons even though they may not know their property description or precinct number.

SIGNATURE	PRINTED NAME	I AM A *			ADDRESS	PROPERTY DESCRIPTION				PRECINCT #	DATE
		PO	RV	OV		LOT #	1/4 SEC	TWNSHP	RANGE		
Edward J Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	500	28A	2S	2E	NA	6/22/16
Edward J Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	580	28A	2S	2E	NA	6/22/16
Edward J Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	590	28A	2S	2E	NA	6/22/16
Edward J Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2100	21D	2S	2E	NA	6/22/16
Edward J Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2190	21D	2S	2E	NA	6/22/16
Edward J Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2200	21D	2S	2E	NA	6/22/16

* PO = Property Owner
RV = Registered Voter
OV = Owner and Registered Voter

CITY OF OREGON CITY

ANNEXATION PETITION

By signing below I indicate my consent to and support of being annexed into the City of Oregon City, and my consent for having my signature (below) used for any application form required for the annexation, including but not limited to the City of Oregon City's Land Use Application Form.

NOTE: This petition may be signed by qualified persons even though they may not know their property description or precinct number.

SIGNATURE	PRINTED NAME	I AM A *			ADDRESS	PROPERTY DESCRIPTION				PRECINCT #	DATE
		PO	RV	OV		LOT #	1/4 SEC	TWNSHP	RANGE		
William E Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	500	28A	2S	2E	NA	6/27/16
William E Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	580	28A	2S	2E	NA	6/27/16
William E Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	590	28A	2S	2E	NA	6/27/16
William E Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2100	21D	2S	2E	NA	6/27/16
William E Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2190	21D	2S	2E	NA	6/27/16
William E Serres	Serres Family H, LLC	X			15207 Forsythe Rd., Oregon City, OR 97045	2200	21D	2S	2E	NA	6/27/16

* PO = Property Owner
RV = Registered Voter
OV = Owner and Registered Voter

CERTIFICATION OF LEGAL DESCRIPTION AND MAP

I hereby certify that the description of the property included within the attached petition (located on Assessor's Map 22E21D & 22E 28A) 2100, 2190, 2200 500, 580, 590 has been checked by me and it is a true and exact description of the property under consideration, and the description corresponds to the attached map indicating the property under consideration.

NAME Mary Neigel

TITLE Cartographer II

DEPARTMENT Assessment & Tax

COUNTY OF Clackamas

DATE 08.29.16

CENTERLINE CONCEPTS
LAND SURVEYING, INC.

19376 Molalla Avenue Ste. 120, Oregon City, OR 97045
P. 503-650-0188 F. 503-650-0189

AUG 2016
RECEIVED
CLACKAMAS COUNTY
ASSESSOR

MN

Exhibit "A"
Annexation
Legal Description

A Tract of land being Parcel 1 of that property described in Deed Document Number 2006-119698, Clackamas County Deed records, being Lots 4, 5, 6, 7, 8, 12, 13, and the North 216.75 feet per the Plat of "Winston Acres", Plat records of Clackamas County, Located partially in the Northeast 1/4 of Section 28, and partially in the Southeast 1/4 of Section 21, Township 2 South, Range 2 East of the Willamette Meridian, County of Clackamas, State of Oregon, being more particularly described as follows:

BEGINNING at the Southwest corner of the Plat of "Winston Acres", Plat records of Clackamas County, being the Southwest corner of Parcel 1 of that property described in Deed Document Number 2006-119698, Clackamas County Deed records; thence along the West line of said Plat and Deed the following courses: N01°00'00"E, 328.30 to an angle point; thence N00°21'30"W, 556.70 feet to an angle point; thence N00°44'00"E, 660.00 feet to the Northwest corner of Lot 4 of said Plat, being coincident with the Northwest corner of said Deed; thence along the North line of said Lot 4, S89°25'00"E, 658.27 feet to the Northeast corner thereof, being coincident with the West line of Lot 13 of said Plat; thence along said West line of said Lot 13, N00°35'00"E, 158.10 feet to the North corner thereof; thence along the Northeast line of said Lot 13, and continuing along the Northeast line of Lot 12 of said Plat, S43°15'00"E, 945.41 feet to an angle point in the East line of said Lot 12; thence along the East line of said Lot 12, and continuing along the East line of Lot 11 of said Plat, S00°33'00"E, 353.96 feet to a point being 216.75 feet South of the North line of said Lot 11, being coincident with the Northeast corner per the Plat of "Winston Hills", Plat records of Clackamas County; thence along the North line of said Plat of "Winston Hills", N89°25'00"W, 661.76 feet to the Northwest corner thereof; thence along the West line of said Plat, and continuing along the Southerly extension thereof, S00°35'00"W, 920.08 feet to the Southeast corner of Lot 8 of said Plat of "Winston Acres"; thence along the South line of said Lot 8, N68°15'00"W, 700.50 feet to the ***POINT OF BEGINNING***

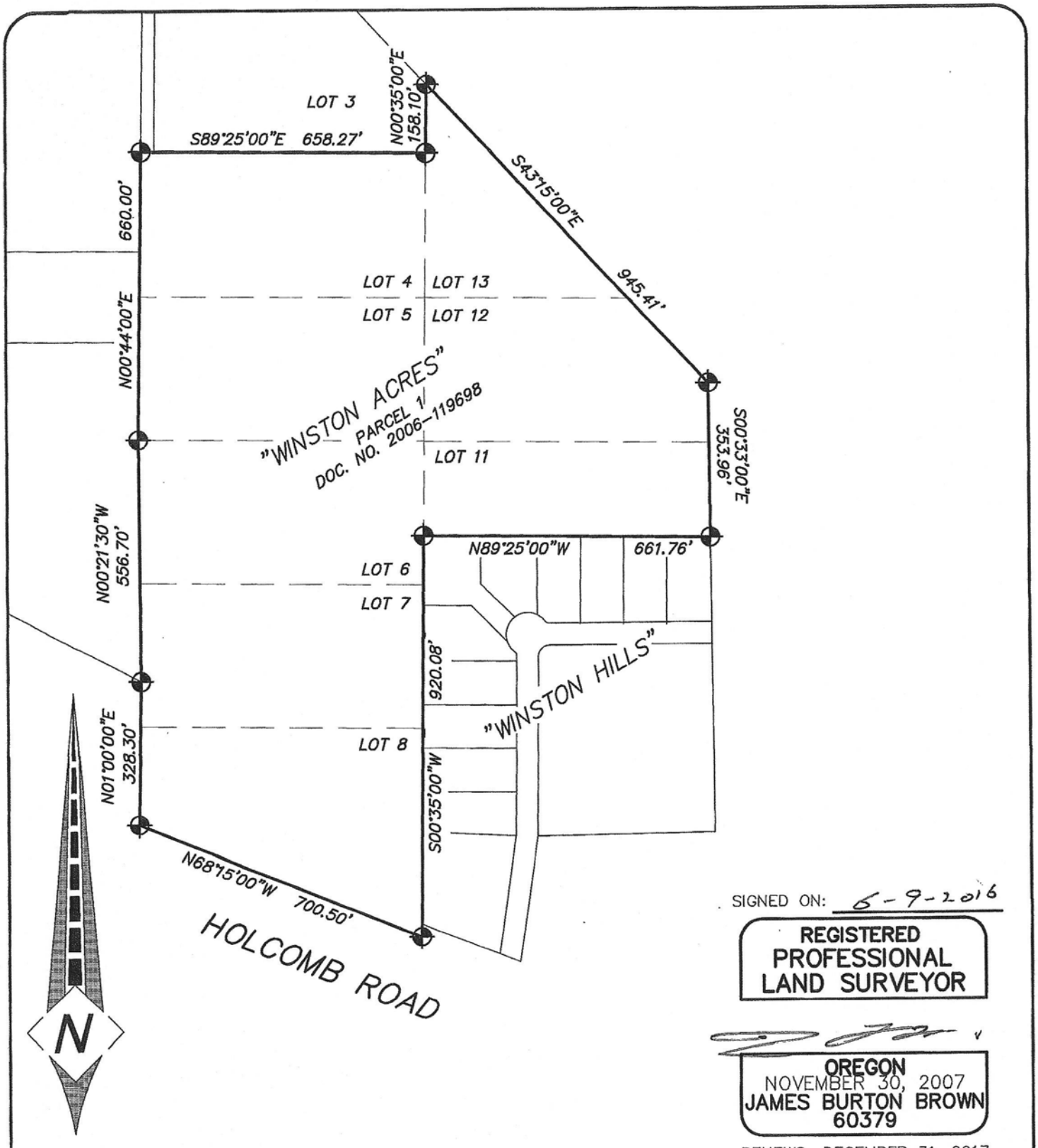
Contains 35.65 Acres +/-

SIGNED ON: 6-9-2016

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
NOVEMBER 30, 2007
JAMES BURTON BROWN
60379

VALID THROUGH DECEMBER 31, 2017



SIGNED ON: 6-9-2016

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
NOVEMBER 30, 2007
JAMES BURTON BROWN
60379

RENEWS: DECEMBER 31, 2017

CLIENT:	ICON
ORIG. DATE:	6-9-2016
DRAWN BY:	JBB
SHEET No.	1 OF 1

EXHIBIT "B"

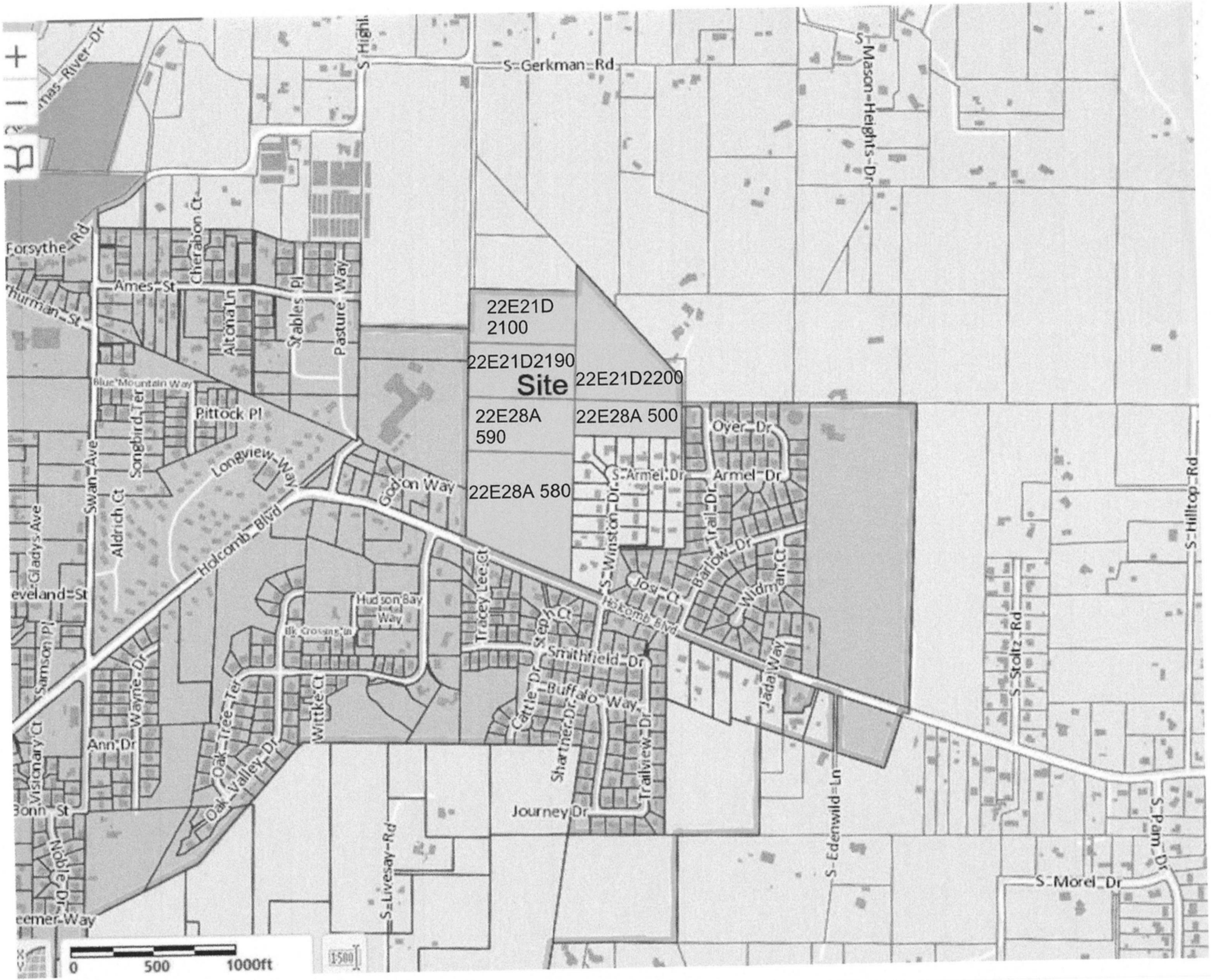
ANNEXATION SKETCH

CLACKAMAS COUNTY, OR

SCALE: 1"=300'

CENTERLINE CONCEPTS
LAND SURVEYING, INC.
19376 MOLALLA AVE., SUITE 120
OREGON CITY, OREGON 97045
PHONE 503.650.0188 FAX 503.650.0189

Plotted: 6/09/2016 – 2:27pm, M:\PROJECTS\Icon Annexation Holcomb\dwg\Annexation Sketch.dwg, Layout: Model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22E21D2190
Site
22E21D2200
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22E28A 580
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S Mason Heights Dr
Forsythe Rd
Ames St
Cherabon Ct
Altana Ln
Stables Pl
Pasture Way
Blue Mountain Way
Pittock Pl
Songbird Ter
Swan Ave
Aldrich Ct
Longview Way
Godson Way
Holcomb Blvd
Gladys Ave
Samson Pl
Visionary Ct
Ann Dr
Wayne Dr
Oak Tree Ter
Oak Valley Dr
Wittke Ct
Hudson Bay Way
Tracey Lee Ct
Stephen Ct
Smithfield Dr
Cattle Dr
Buffalo Way
Shartner Dr
Trailview Dr
Journey Dr
Jade Way
S Livesay Rd
S Edenwild Ln
S Stoltz Rd
S Hilltop Rd
S Morel Dr
S Winston Dr
S Armel Dr
Armel Dr
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Barlow Trail Dr
Widman Ct
Joy Ct
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CERTIFICATION OF REGISTERED VOTERS

I hereby certify that the attached petition for annexation of territory described herein to the City of Oregon City contains the names of at least a majority of the electors registered in the territory to be annexed.

NAME Rebekah Stern Doll

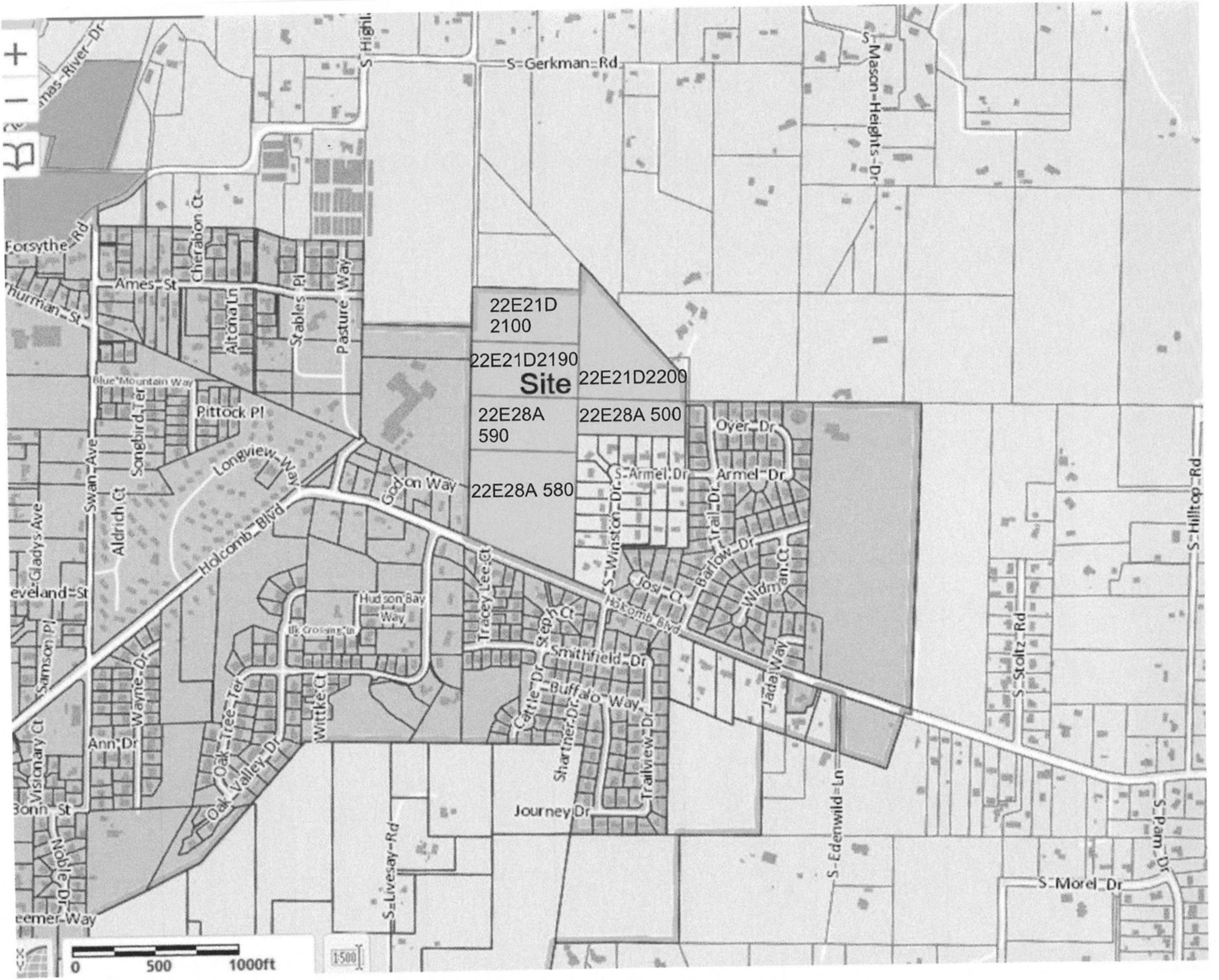
TITLE Deputy Clerk

DEPARTMENT Clackamas County Elections

COUNTY OF Clackamas County

DATE 8/29/16

No electors on property.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Forsythe Rd
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Cherabon Ct
Altana Ln
Stables Pl
Pasture Way
Thurman St
Blue Mountain Way
Pittock Pl
Songbird Ter
Swan Ave
Aldrich Ct
Gladys Ave
Longview Way
Holcomb Blvd
Gordon Way
Oyer Dr
S Armel Dr
Armel Dr
S Winston Dr
Trail Dr
Barlow Dr
Wildman Ct
Josi Ct
Tracey Lee Ct
Stephen Ct
Smithfield Dr
Hudson Bay Way
Elk Crossing Ln
Samson Pl
Wayne Dr
Wittke Ct
Oak Tree Ter
Oak Valley Dr
Ann Dr
Visionary Ct
Bonn St
Noble Dr
Cattle Dr
Buffalo Way
Shartner Dr
Trailview Dr
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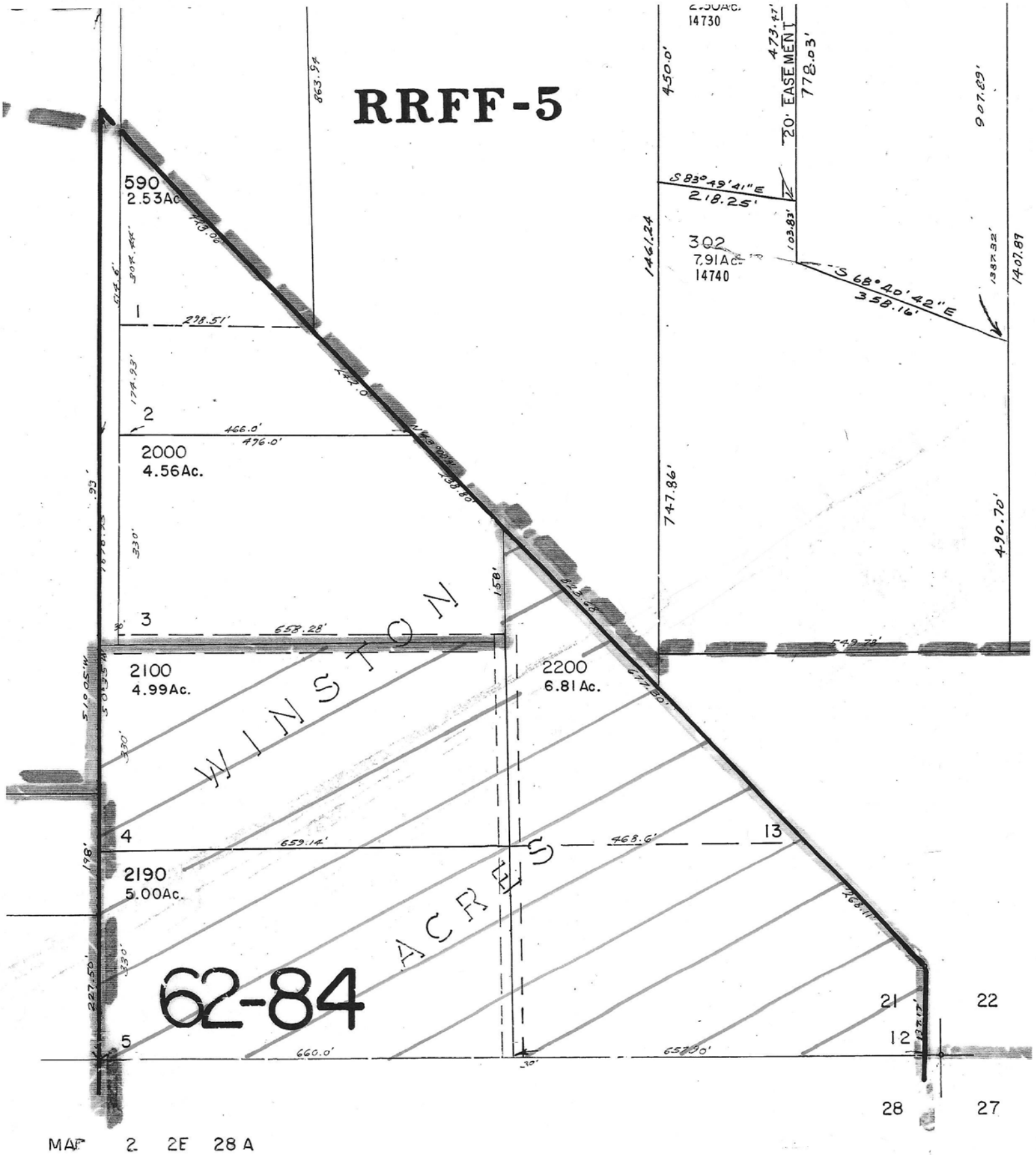
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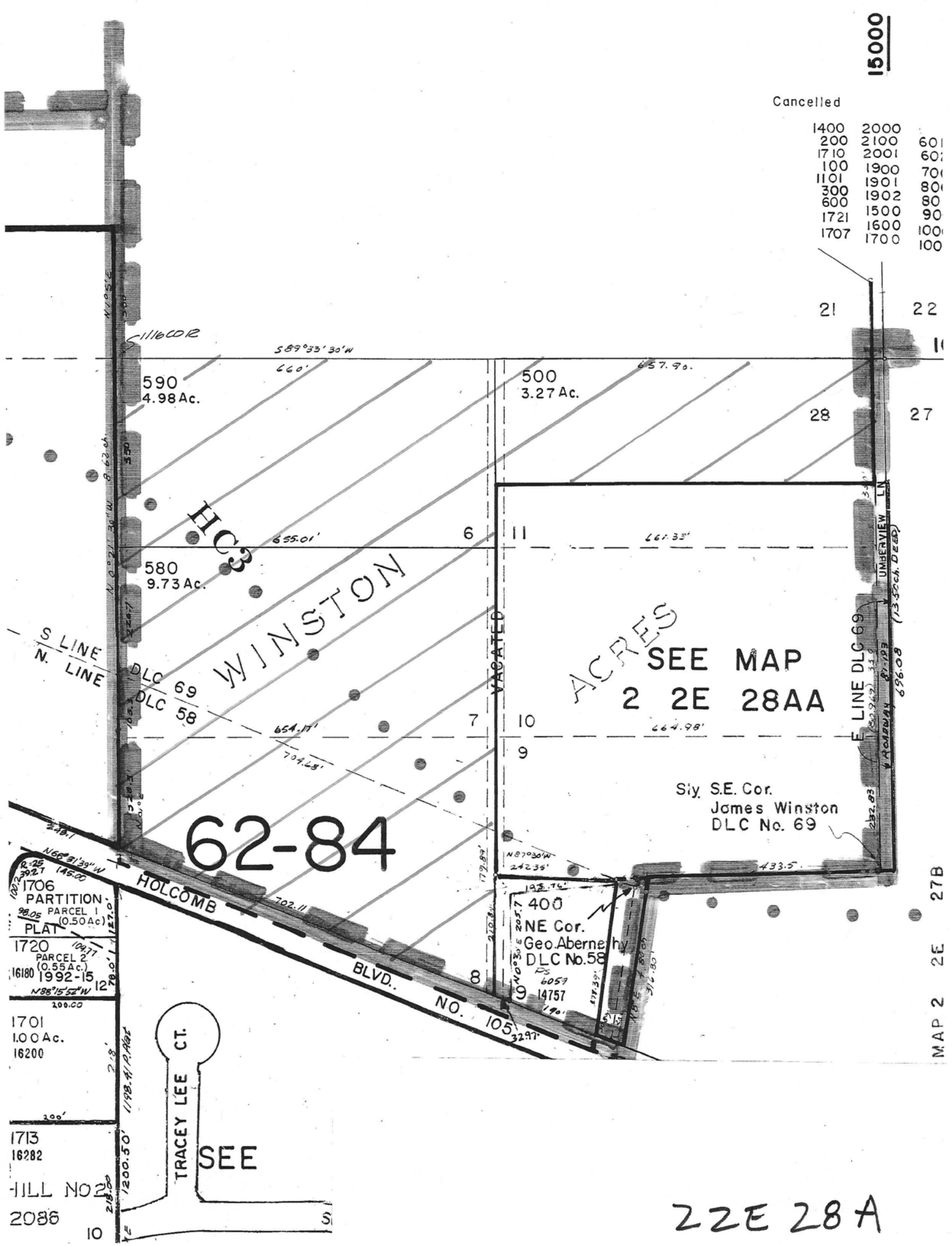
4.99Ac.
2200
6.81 Ac.
2190
5.00Ac.
302
7.91Ac.
14740
14730
2.50Ac.
20' EASEMENT
778.03'
473.47'
450.0'
S 83° 49' 41" E
218.25'
103.83'
146.24
S 68° 40' 42" E
358.16'
387.32'
907.89'
1407.89
747.86'
490.70'
549.73'
WINSTON
ACRES
62-84
MAP 2 2E 28 A
2
80

22E 21D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1721 1600
1707 1700
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500
3.27 Ac.
580
9.73 Ac.
HC3
WINSTON
ACRES
SEE MAP
2 2E 28AA
VACATED
N. LINE
S LINE
DLC 69
DLC 58
E LINE DLC 69
SLy S.E. Cor.
James Winston
DLC No. 69
62-84
HOLCOMB BLVD. NO.
1706
PARTITION
PARCEL 1
(0.50 Ac.)
PLAT
1720
PARCEL 2
(0.55 Ac.)
16180 1992-15
1701
1.00 Ac.
16200
1713
16282
HILL NO 2
2086
TRACEY LEE CT.
SEE
400
NE Cor.
Geo. Abernethy
DLC No. 58
6059
14757
MAP 2 2E 27B
22E 28A

Annexation Narrative

35.65 Acres, Holcomb Blvd.

Introduction:

This application requests approval of an application to annex approximately 35.65 acres of land to the City of Oregon City. The subject property is located on the north side of Holcomb Blvd., west of Winston Drive, east of Holcomb Elementary School, and south of the Urban Growth Boundary.

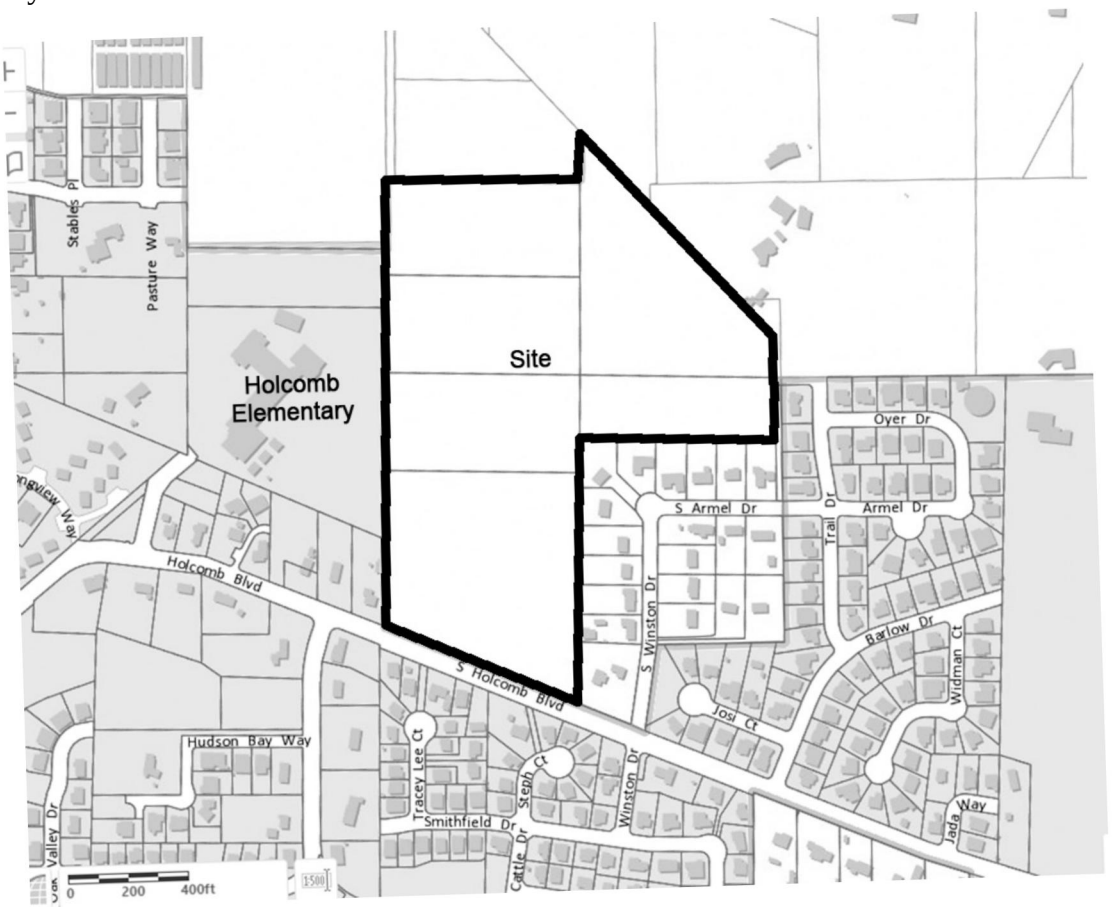


Figure 1: Vicinity Map

The subject property is described as Tax Lots 2100, 2190 and 2200 of Clackamas County Assessor's Map 22E21D, and Tax Lots 500, 580 and 590 on Map 22E 28A. The property is vacant and parts of it have been in use for production of row crops.

There is not proposal to develop this site at the present time. Until issues regarding transportation planning impacting the Hwy. 213 corridor are resolved, the City is unable to approve zone changes that would allow for increased traffic in this area. For this reason, the proposed annexation will bring the subject property into the city limits, but will leave the property with Clackamas County's Future Urbanizable 10 acre zoning. This is a holding zone that precludes

creating parcels smaller than 10 acres. At such time as the traffic issues are resolved, a separate application to rezone the property to an appropriate Oregon City low density residential will be filed. An application for approval of a subdivision would also need to be filed prior to any development of this property.

Compliance with Title 14 – Annexations:

OCMC 14.04.050 Annexation Procedures

This section lists the submittal requirements and procedures to be followed in annexing property to the City of Oregon City.

A. Application Filing Deadlines. Annexation elections shall be scheduled for March, May, September and November of each year. Each application shall first be approved by the city commission, which shall provide a valid ballot title in sufficient time for the matter to be submitted to the voters as provided by the election laws of the state of Oregon.

Comment: Senate Bill 1573, which went into effect March 15, 2017, eliminates the requirement for elections for annexations when specified criteria are met. Specifically, the petition for annexation must:

- Be submitted by all owners of land in the annexation territory;
- The annexation territory must be included within the urban growth boundary of the city or Metro and is, or will be, subject to acknowledged comprehensive plan of city;
- At least one parcel in the annexation territory must be contiguous to the existing city limits; and
- The proposal must conform to all other requirements of the city's ordinances.

The subject property meets all of these criteria. The petition for annexation is signed by all owners of record. The property is within the urban growth boundary and is subject to the acknowledged City of Oregon City Comprehensive Plan. The property is contiguous to the existing city limits along its western and southern borders. The proposal complies with all other requirements of the city’s ordinances, as demonstrated in this narrative.

B. Preapplication Review. Prior to submitting an annexation application, the applicant shall confer in the manner provided by Section 17.50.050(A) with the representative of the planning division appointed by the city manager.

Comment: A pre-application conference was initially held on September 3, 2014 to discuss the annexation of the subject property to the City of Oregon City. Because the application was not filed within six months of that date, a second pre-application conference (PA 16-20) was held on May 10, 2016.

C. *Neighborhood Contact. Prior to filing an annexation application, the applicant is encouraged to meet with the city-recognized neighborhood association or associations within which the property proposed to be annexed is located. If the city manager deems that more than one such association is affected, the applicant is encouraged to meet with each such association, as identified by the city manager. Unwillingness or unreasonable unavailability of a neighborhood association to meet shall not be deemed a negative factor in the evaluation of the annexation application.*

Comment: The subject property is within the Park Place Neighborhood Association boundaries. The applicant contacted the Park Place Neighborhood Association, as required by city standards, and a meeting was held on June 7, 2016 at Alliance Charter Academy.

D. *Signatures on Consent Form and Application. The applicant shall sign the consent form and the application for annexation. If the applicant is not the owner of the property proposed for annexation, the owner shall sign the consent form and application in writing before the city manager may accept the same for review.*

Comment: The consent form and the application for annexation are signed by the owners of record for the subject property.

E. *Contents of Application. An applicant seeking to annex land to the city shall file with the city the appropriate application form approved by the city manager. The application shall include the following:*
   1. *Written consent form to the annexation signed by the requisite number of affected property owners, electors or both, provided by ORS 222, if applicable;*
   2. *A legal description of the territory to be annexed, meeting the relevant requirements of the Metro Code and ORS Ch. 308. If such a description is not submitted, a boundary survey may be required. A lot and block description may be substituted for the metes and bounds description if the area is platted. If the legal description contains any deed or book and page references, legible copies of these shall be submitted with the legal description;*
   3. *A list of property owners within three hundred feet of the subject property and, if applicable, those property owners that will be "islanded" by the annexation proposal, on mailing labels acceptable to the city manager;*
   4. *Two full quarter-section county tax assessor's maps, with the subject property(ies) outlined;*
   5. *A site plan, drawn to scale (not greater than one inch = fifty feet), indicating:*
   6. *If applicable, a double-majority worksheet, certification of ownership and voters. Certification of legal description and map, and boundary change data sheet on forms provided by the city.*

Comment: The materials required in items 1 through 6 are included in our application submittal.

7. *A narrative statement explaining the conditions surrounding the proposal and addressing the factors contained in the ordinance codified in this chapter, as relevant, including:*
    a. *Statement of availability, capacity and status of existing water, sewer, drainage, transportation, park and school facilities;*
    b. *Statement of increased demand for such facilities to be generated by the proposed development, if any, at this time;*
    c. *Statement of additional facilities, if any, required to meet the increased demand and any proposed phasing of such facilities in accordance with projected demand;*

Comment: Although the subject property will not be developed at this time and will remain zoned FU-10 for the immediate future, services are available to allow for the future development of this site. The following information describes the existing availability, estimate of increased demand, and notes improvements that may be required to provide these services:

Water: There are existing City of Oregon City water lines in Holcomb Blvd., along the subject property's frontage on that street, and Ames Street. Water service in this area is also provided by Clackamas River Water District. According to the pre-application conference notes:

1. *The City of Oregon City and Clackamas River Water have an active agreement in place for water service within the proposed annexation area, titled the Holcomb-Overlook-Park Place (HOPP) Agreement. The HOPP Agreement will guide how the proposed annexation area is served domestic water.*

2. *The proposed annexation area is within two water system pressure zones: Park Place Intermediate and Park Place Upper.*

The exact details of water service for the subject property will be worked out at the time of future development, but there is an adequate water supply available in the area to service this site.

Sanitary Sewer: Sanitary sewer to service the future development of this site will come from two existing sewer lines: the line in Holcomb Blvd. and the line in Ames Street. Based on the existing topography of the area, the southern portion of the proposed annexation area can discharge sanitary sewer flows to the existing sanitary sewer system within Holcomb Boulevard. The northern portion of the proposed annexation area will discharge to the existing sanitary sewer system located within Ames Street. The applicants also own the intervening property separating this site from the sewer in Ames Street and will grant the required easement needed for the future extension to service the subject property.

Storm Drainage: Based upon natural topography, storm water run-off generated from future development will generally flow in a northwesterly direction and will need to be conveyed to a natural drainage channel located north of Forsythe Road and east of Highland Road. The existing storm sewer system within Ames Street has experienced capacity issues and will not be suitable to service the subject property. The downstream (offsite) system will need to be

upgraded to accommodate flows from the subject property and these improvements would be made at the developer's expense concurrent with site development. Two existing storm water lines outfall onto the subject property from the Winston Acres development. The storm drainage system developed on the property will provide for the conveyance of the flows from these lines. The City has recently adopted updated Stormwater and Grading Design Standards. Any future development will comply with the requirements of these updated Stormwater and Grading Design Standards, including provisions for treatment and detention of storm water.

Transportation: No development of this property is being proposed at this time. By maintaining the existing Clackamas County FU-10 zoning designation, there is assurance that no further land development may occur until such time as a future zone change is approved by the City. It is understood by the applicant that there are on-going regional transportation discussions between the City, Metro and ODOT affecting the larger Park Place Neighborhood area that will need to be resolved before it is appropriate for a zone change to be considered. Because no development will occur as a direct result of this annexation, the transportation analysis will be deferred until the time of the zone change application.

Parks: The closest developed City park to the subject property is Park Place Park, which is a bit more than one-half mile from the site. The playground for Holcomb Elementary School is located immediately to the west of the site and would provide for recreational amenities. Additionally, the Park Place Neighborhood Plan calls for a new community park to the south of Holcomb Blvd. when development takes place in the future. No parks are called for by City planning on the subject property.

Schools: The subject property is served by Oregon City Public Schools. The schools serving this site are Holcomb Elementary School, Ogden Middle School, and Holcomb Elementary School. Although there will be no immediate development of this site that would impact the school system, discussions with School District staff indicate that there are no capacity problems with these schools.

d. Statement outlining method and source of financing required to provide additional facilities, if any;

Comment: The required improvements to public services will be made by the developer concurrently with the future development of this property.

e. Statement of overall development concept and methods by which the physical and related social environment of the site, surrounding area and community will be enhanced;

Comment: The adopted City of Oregon City Comprehensive Plan calls for the subject property to be developed with Low Density single-family homes. The implementing zones for this plan designation are R-6, R-8 and R-10. The appropriate zoning will be determined at the time of the future zone change application and the property will be developed at the corresponding density. The development of this site in a manner consistent with the adopted

Comprehensive Plan will serve to provide needed housing to accommodate the projected population growth of the City of Oregon City. The site is well suited from a physical standpoint to be developed in this manner as it is free of any significant development constraints, other than a very small area of moderately steep slopes. Providing for future development of needed housing within walking distance of Holcomb Elementary School for school and recreational services will assist in providing for a beneficial social environment in this neighborhood.

f. Statement of potential physical, aesthetic, and related social effects of the proposed, or potential development on the community as a whole and on the small subcommunity or neighborhood of which it will become a part; and proposed actions to mitigate such negative effects, if any;

Comment: There will be no immediate physical, aesthetic, or related social effects from the annexation of this property because there will be no development at this time. Future development of the property will result in typical Low Density Residential impacts on traffic, schools, and public infrastructure, but these impacts have been anticipated by the City's Comprehensive Plan. No mitigation measures are anticipated to be needed.

g. Statement indicating the type and nature of any comprehensive plan text or map amendments, or zoning text or map amendments that may be required to complete the proposed development;

Comment: No change to the comprehensive plan text or map designation is proposed for this site. No zone change is proposed at this time, but a future application will be required to apply City zoning to the subject property at such time as the regional transportation issues are resolved.

8. The application fee for annexations established by resolution of the city commission and any fees required by metro. In addition to the application fees, the city manager shall require a deposit, which is adequate to cover any and all costs related to the election;

9. Paper and electronic copies of the complete application as required by the community development director.

Comment: The required application fee and paper and digital copies of the application are included in the application submittal.

OCMC 14.04.060 - Annexation factors.

A. When reviewing a proposed annexation, the commission shall consider the following factors, as relevant:

1. Adequacy of access to the site;

Comment: The site has direct access onto Holcomb Blvd., an arterial street. This street would serve as the primary access for the future development of the property. A secondary access to the site is available via S. Umber View Lane, but would possibly be restricted to emergency vehicle access as it is only a one-half street connection. Future extension of Ames St. would be provided for with the provision of a street stub, but would be dependent upon future expansion of the Urban Growth Boundary for completion.

2. *Conformity of the proposal with the city's comprehensive plan;*

Comment: The proposed annexation is consistent with the comprehensive plan in that the property is within the UGB, is designated Low Density Residential, and is intended to be served by the City of Oregon City. Compliance with specific plan policies is discussed below in this report.

3. *Adequacy and availability of public facilities and services to service potential development;*

Comment: The adequacy and availability of public facilities and services is discussed in the preceding section of this report. Please refer to our comments there.

4. *Compliance with applicable sections of ORS Ch. 222, and Metro Code Section 3.09;*

ORS Ch. 222 was amended in 2016 with the adoption of Senate Bill 1573 as follows:

SECTION 1. Section 2 of this 2016 Act is added to and made a part of ORS 222.111 to 222.180.

SECTION 2. (1) This section applies to a city whose laws require a petition proposing annexation of territory to be submitted to the electors of the city.

(2) Notwithstanding a contrary provision of the city charter or a city ordinance, upon receipt of a petition proposing annexation of territory submitted by all owners of land in the territory, the legislative body of the city shall annex the territory without submitting the proposal to the electors of the city if:

(a) The territory is included within an urban growth boundary adopted by the city or Metro, as defined in ORS 197.015;

(b) The territory is, or upon annexation of the territory into the city will be, subject to the acknowledged comprehensive plan of the city;

(c) At least one lot or parcel within the territory is contiguous to the city limits or is separated from the city limits only by a public right of way or a body of water; and

(d) The proposal conforms to all other requirements of the city's ordinances.

Comment: The Oregon City Municipal Code requires annexations to be approved through an election. However, in this instance, the proposed annexation meets the requirements of

the new State law in that it includes a petition that is signed by all owners of land in the territory, the area is within the adopted urban growth boundary, is within an area subject to the adopted and acknowledged Oregon City Comprehensive Plan, and the property is contiguous to the existing city limits. As demonstrated in this narrative, this proposal conforms to all other requirements of the city's ordinances.

(3) The territory to be annexed under this section includes any additional territory described in ORS 222.111 (1) that must be annexed in order to locate infrastructure and right of way access for services necessary for development of the territory described in subsection (2) of this section at a density equal to the average residential density within the annexing city.

Comment: No such additional territory is required for this property.

(4) When the legislative body of the city determines that the criteria described in subsection (2) of this section apply to territory proposed for annexation, the legislative body may declare that the territory described in subsections (2) and (3) of this section is annexed to the city by an ordinance that contains a description of the territory annexed.

Comment: The required ordinance will be adopted by the City upon approval of this annexation proposal.

5. Natural hazards identified by the city, such as wetlands, floodplains and steep slopes;

Comment: The only natural hazards mapped on the City's GIS system for the subject property is an NROD buffer along the north boundary of the site and a minor area of slopes exceeding 25% grade. These areas are shown on the site map submitted with this annexation. The future development plan for this property will include the required information to address these constraints. The constraints are, however, minor in nature and can be accommodated through typical development practices.

6. Any significant adverse effects on specially designated open space, scenic, historic or natural resource areas by urbanization of the subject property at time of annexation;

Comment: The only specially designated open space, scenic, historic or natural resource applicable to the subject area is the alignment of the Oregon Trail-Barlow Road Historic Corridor across a portion of the property. This will require compliance with OCMC 17.40.060-H by the future development plan.

7. Lack of any significant adverse effects on the economic, social and physical environment of the community by the overall impact of the annexation.

Comment: Because there will be no development on this site until such time as a future zone change is improved, there will be no immediate impact upon the economic, social and physical environment of the community by the overall impact of the annexation. At such time as the site is developed, it will be in a manner consistent with the planned Low Density Residential designation for the property. This land use is consistent with the surrounding land use pattern. Required public utilities and services are available or will be made available concurrently with the development of the site. The site has no significant development constraints and is not designated for protection as open space. As such, the future development of the property will not have any significant impact upon the economic, social and physical environment of the community.

Metro Code 3.09.045.A-D (Boundary Change Criteria)

The applicable approval criteria under the Metro Code are:

- *Whether the proposed boundary change will promote the timely, orderly and economic provision of public facilities and services.*

  Comment: As discussed above, all required public facilities and services will be available at the time of development. No development will occur until such time as a future zone change is requested and approved by the City of Oregon City. Upon approval of a development plan, the developer will provide for the installation of needed public facilities and services.

- *Whether the proposed boundary change will affect the quality and quantity of urban services*

Comment: The annexation of this property will have no immediate impact upon the quality or quantity of urban services since the property will remain zoned FU-10. At such time as the site is developed in the future, it will be in a manner consistent with the Low Density Residential designation of the property. The City has planned for the provision of necessary public facilities and services in this area in its Public Facilities Plan and Transportation Systems Plan. Since the future development will conform to the anticipated level of development, it will not have a negative impact upon the quality or quantity of urban services.

- *Whether the proposed boundary change would eliminate or avoid unnecessary duplication of facilities or services.*

Comment: With the exception of water, all services in this area will be provided by the City of Oregon City so there will be no unnecessary duplication of facilities and services. Water services in this area are provided by the City and Clackamas River Water District. These agencies have a plan and agreement that governs the provision of water services so as to avoid unnecessary duplication of facilities and services.

Oregon City Comprehensive Plan – Applicable Goals and Policies

Goal 14.3 Orderly Provision of Services to Growth Areas

Plan for public services to lands within the Urban Growth Boundary through adoption of a concept plan and related Capital Improvement Program, as amendments to the Comprehensive Plan.

Policy 14.3.1
Maximize new public facilities and services by encouraging new development within the Urban Growth Boundary at maximum densities allowed by the Comprehensive Plan.

Comment: The subject property is designated Low Density Residential by the Oregon City Comprehensive Plan. Although County FU-10 zoning is being retained at this time due to on-going traffic policy considerations, development will take place under an appropriate zoning (R-10, R-8, or R-6) that implements the Low Density Residential designation. The proposed development will be reviewed for compliance with maximum and minimum density standards at the time of application for subdivision approval.

Policy 14.3.2
Ensure that the extension of new services does not diminish the delivery of those same services to existing areas and residents in the city.

Comment: As discussed above in this report, all required urban services will be available to serve this property concurrently with its future development. The City's Public Facilities Plan and Transportation Systems Plan will ensure that there are adequate supplies of services so that services to existing areas and residents in the city are not diminished.

Policy 14.3.3
Oppose the formation of new urban services districts and oppose the formation of new utility districts that may conflict with efficient delivery of city utilities within the Urban Growth Boundary.

Comment: Not applicable. No new urban services or utility districts are proposed. Services will be provided by the City of Oregon City, with the exception of any water services that may be appropriate to be provided by Clackamas River Water District pursuant to an agreement between the City and Water District.

Policy 14.3.4
Ensure the cost of providing new public services and improvements to existing public services resulting from new development are borne by the entity responsible for the new development to the maximum extent allowed under state law for Systems Development Charges.

Comment: All utilities that will be provided to serve the future development of this site will be the responsibility of the developer. The future homes to be built on this property will pay required Systems Development Charges at the time of application for building permits.

Goal 14.4 – Annexation of Lands to the city

Annex lands to the city through a process that considers the effects on public services and the benefits to the city as a whole and ensures that development within the annexed area is consistent with the Oregon City Comprehensive Plan, City ordinances, and the City Charter.

Policy 14.4.1
Promote compact urban form and support efficient delivery of public services by ensuring that lands to be annexed are within the City's Urban Growth Boundary, and contiguous with the city limits. Do not consider long linear extensions, such as cherry stems and flag lots, to be contiguous with the city limits.

Comment: The subject property is entirely within the City's Urban Growth Boundary and is contiguous with the existing city limits along its entire western border and its frontage on Holcomb Blvd.

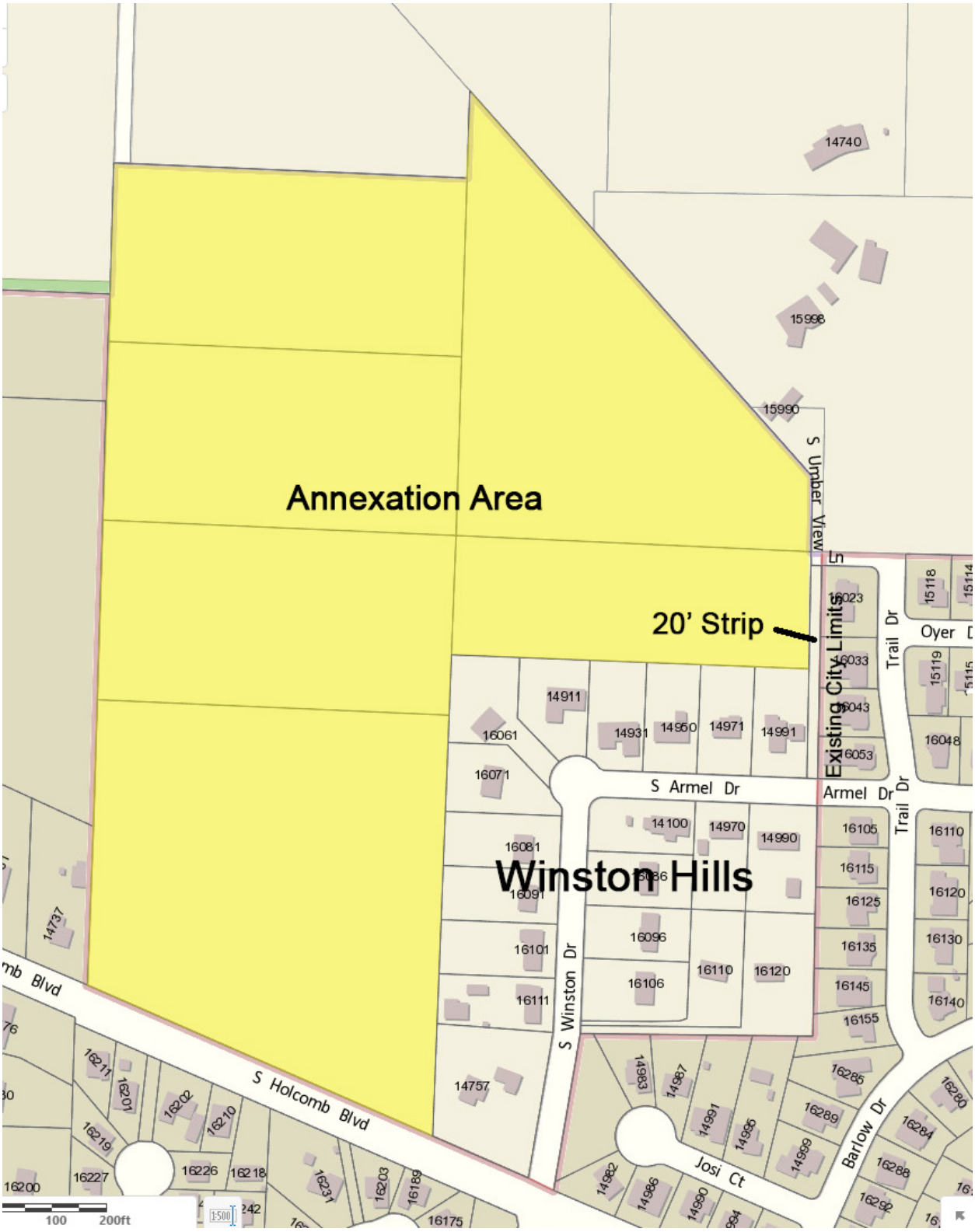
Policy 14.4.2
Include an assessment of the fiscal impacts of providing public services to unincorporated areas upon annexation, including the costs and benefits to the city as a whole as a requirement for concept plans.

Comment: The proposed annexation will have no fiscal impacts upon the cost of providing public services because no development will be allowed until such time as zoning is changed to a City of Oregon City Low Density Residential zone. The City's Public Facilities Plan and Transportation System Plan anticipate the future development of the subject property at Low Density Residential densities and provide an analysis of the costs of providing adequate levels of services in the Holcomb Blvd. area. The future development of this property will contribute to these costs by providing on-site infrastructure, as well as off-site storm drainage improvements, at the cost of the developer. Each home will be assessed appropriate System Development Charges to cover the proportionate impact of the future development of this site.

Policy 14.4.3
Evaluate and in some instances require that parcels adjacent to proposed annexations be included to:

- *avoid creating unincorporated islands within the city;*
- *enable public services to be efficiently and cost-effectively extended to the entire area; or*
- *implement a concept plan or sub-area master plan that has been approved by the Planning and City Commissions.*

Comment: The proposed annexation will not create an unincorporated island within the city so this policy recommendation is met. That said, the Winston Hills subdivision in unincorporated Clackamas County that abuts the subject property along its eastern border will only remain connected to the unincorporated area by a 20-foot wide strip of land, as shown on the map below:

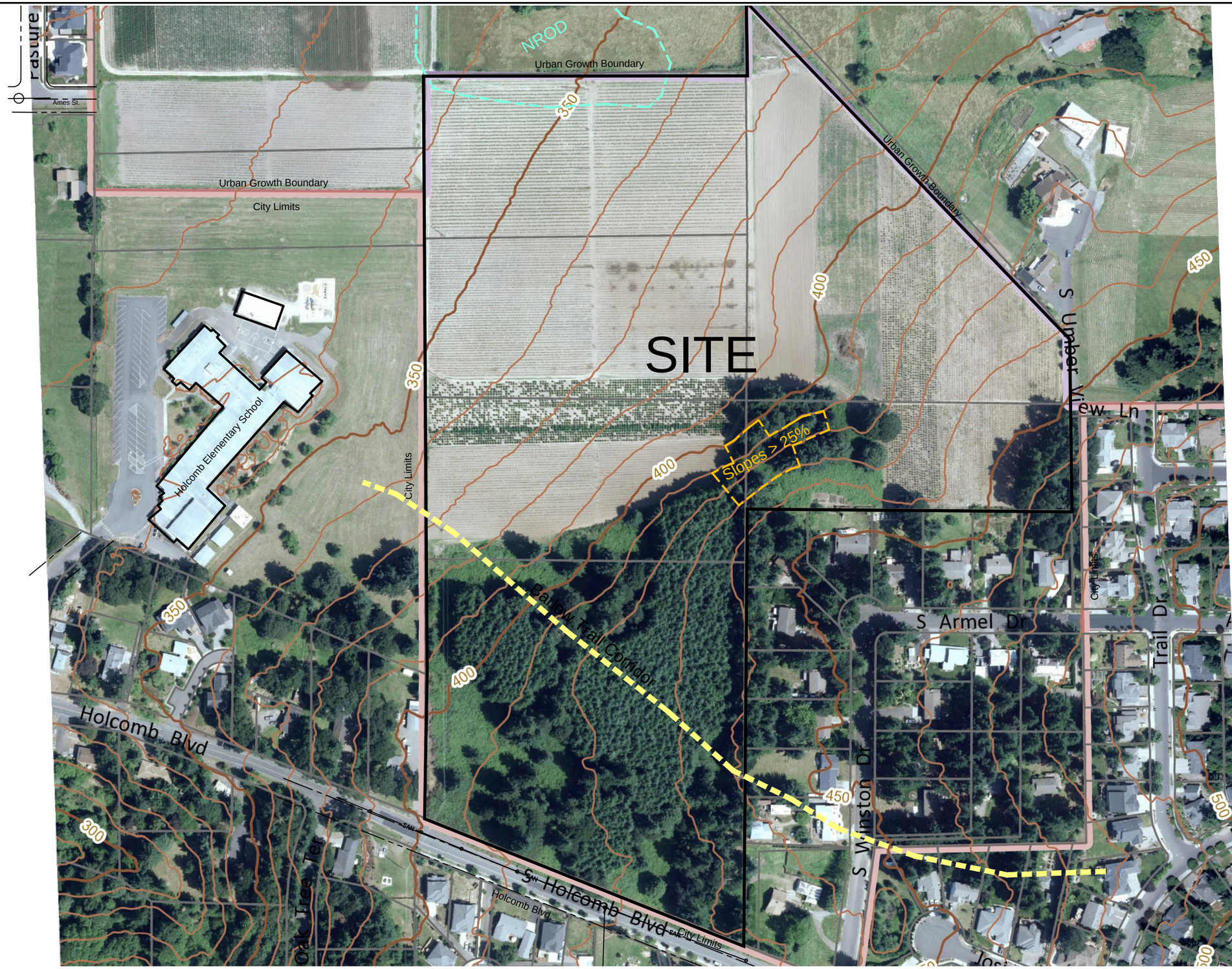


The fact that Winston Hills will only be connected to the unincorporated area by a strip of land will have no impact upon the efficiency of provision of public facilities and services. Sewer, water and storm drainage all are provided from either Holcomb Blvd. or to the northwest. At

such time as the Winston Hills neighborhood wishes to annex to the City, the future development of the subject property will aid in providing needed services. The annexation of the Winston Hills neighborhood at this time is not needed in order to implement a sub-area master plan.

Policy 14.4.4
Expedite the annexation of property as provided by state law in order to provide sewer service to adjacent unincorporated properties when a public health hazard is created by a failing septic tank sewage system.

Comment: Not applicable. The subject property is not subject to a public health hazard associated with a failing septic system.



NORTH

Scale: 1" = 200'

DESIGNED:	R.E.G.			
DRAWN:	R.E.G.			
SCALE:	1" = 200'			
DATE:	September 2016			
FILE:	13-ICN-104	DATE	NO.	REVISION

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Serres Property
Annexation Site Plan

SHEET: 1/1

This map was prepared for assessment purpose only.

NE 1/4 SECTION 28 T.2S. R.2E. W.M.
CLACKAMAS COUNTY

1"=200'

D.L.C.
JAMES WINSTON NO. 69
GEORGE ABERNETHY NO. 58

2 2E 28A

14500 | 14700 | 15000

Cancelled
1400 2000 600 1100
200 2100 601 1200
1710 2001 602 1300
100 1900 700 1301
1101 1901 800 1724
300 1902 801 1718
600 1500 900
1721 1600 1000
1707 1700 1001

SEE MAP 2 2E 21D

SEE MAP 2 2E 21DC

S1/4 COR

S1/16 COR

S89°35'30"W 660'

657.90'

SEE MAP 2 2E 28BA

62-88

SEE MAP

2 2E 28AB

P.S. 3997.

590 4.98Ac.

500 3.27Ac.

28

27

21

22

16000

HC3 WINSTON ACRES

580 9.73Ac.

655.01'

6

11

661.33'

DLC 69

DLC 58

654.11'

7

10

664.98'

9

SEE MAP 2 2E 28AA

E LINE DLC 69

UMBERVIEW LN. (33' Prd. Deed)

S LINE

N. LINE

GOLDEN WAY

N85°13'W 411.5' tot.

HOLCOMB (HARDING MILL) BLVD. NO. 354

1702 14570 HOLCOMB

1703 14590

1704 14630

1800 0.89Ac. 14666

1705 HILL 1902 14862

1706 PARTITION PLAT 1992-15 PARCEL I (0.50Ac.) PARCEL II (0.55Ac.) 16180

1720 16180

1716 2.55 Ac. P.S. 4748

62-02

1715 1.11Ac.

1719 1.69 Ac. 16231

HUDSON BAY WAY

THUNDEREGG WY

ELK CROSSING LN

1723 0.39Ac. 16263

1711 HOLCOMB HILL NO2 2086 16267

1712 16313

1717 0.08Ac.

1722 1.37Ac.

1714 0.58Ac. 16312

1709 1.59 Ac. 16306

1708 0.75 Ac. 16298

1713 16282

1701 1.00 Ac. 16200

OAK TREE TERRACE

TRACEY LEE CT.

HOLCOMB BLVD. NO. 105

Sly S.E. Cor. James Winston DLC No. 69

N87°30'W 242.36'

493.5'

400 NE Cor. Geo. Abernethy DLC No. 58 16059 14757

62-84

SEE MAP 2 2E 27B 16200

SEE MAP 2 2E 28BD

SEE MAP

DRIVE

TREE TERRACE

OAK VALLEY DRIVE

WITTKE CT

2 2E 28AC

SEE MAP 2 2E 28D

N 88°46'09" E 705' FROM NW COR BK 269 PG 392

626.75

33.05'

SMITHFIELD DRIVE

STEPH COURT

WINSTON DRIVE

2 2E 28AD

BUFFALO WAY

CATTLE DR.

SHARTNER DR.

E LINE DLC 58

WILLAMETTE VALLEY DRIVE

TRAILVIEW DRIVE

JOURNEY DRIVE

2 2E 28A 10500 BOOK 18

This map was prepared for assessment purpose only.

SE 1/4 SEC. 21 T.2S. R.2E. W.M.
CLACKAMAS COUNTY

1" = 200'

D.L.C.
JAMES WINSTON NO. 69

2 2E 21D

14500 | 14700 | 15000

CANCELLED TL'S
1800
1201
1403
1402
1404
1500
1600
1700
1701
1702
1703

15500

SEE MAP 2 2E 21A

BRUNNER RD.

CO. RD. 204.98' NO. ⊥ 374 WEST

HIGHLAND RD.

SUNNYLAND HIGHLANDS

CLACKAMAS ROAD

GERKMAN RD. ⊥ (pvt)

FORSYTHE

STABLES PL.

PASTURE WY.

AMES ST.

SEE MAP 62-02

2 2E 21DC 62-88

62-14

RRFF-5

FU-10

WINSTON ACRES

62-84

20' EASEMENT

30' EASEMENT

RE-ENT COR DLC NO. 69

800 4.41 Ac. 15579

20 700 4.51 Ac. 14667

600 4.71 Ac. 14703

21 1900 25.44 Ac.

200 4.55 Ac. 14720

202 4.22 Ac. 14890 14892

201 3.72 Ac. 14940

100 2.90 Ac. 14988

901 0.92 Ac. 14501

900 1.88 Ac. 14545

1000 1.00 Ac. 14643

1100 2.02 Ac. 14635

500 4.46 Ac.

400 15.00 Ac. 14712

300 1.00 Ac. 14728

303 6.44 Ac. 14744

301 2.30 Ac. 14730

302 7.91 Ac. 14740

1202 2.70 Ac.

1300 5.11 Ac. 14620

1200 2.01 Ac. 14550

590 2.53 Ac.

1401 0.91 Ac. 15842

1400 0.12 Ac.

2000 4.56 Ac.

1901 3.00 Ac.

2100 4.99 Ac.

2200 6.81 Ac.

2190 5.00 Ac.

15700

SEE MAP 2 2E 22C

SEE MAP 2 2E 21C

SEE MAP 2 2E 21CD

SEE MAP 2 2E 28 A

16000

DWG. 5-18-69

2 2E 21D
BOOK 18

CITY OF OREGON CITY, OREGON

PARKS AND RECREATION MASTER PLAN UPDATE
FIVE-YEAR VISION IMPLEMENTATION PLAN

MAY 2008

Acknowledgements

CITY OF OREGON CITY, CITY COMMISSION

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Trent Tidwell, Commissioner
Damon Mabee, Commissioner
Doug Neeley, Commissioner

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GREENPLAY LLC
The Leading Edge In Parks, Recreation And Open Space Consulting

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I. Executive Summary

Purpose of this Plan

The Oregon City Parks and Recreation Master Plan Update is intended to help meet the needs of current and future residents by positioning Oregon City to build on the community's unique parks and recreation assets and identify new opportunities. The citizen driven five-year Implementation Plan establishes a clear direction to guide city staff, advisory committees, and elected officials in their efforts to enhance the community's parks and recreation programs, services and facilities.

Although the Community Services Department is also responsible for the library and the cemetery, the Master Plan Update specifically does not address this portion of department operations and is focused strictly on parks and recreation issues.

Mission Statement

The benefits of parks and recreation are necessary to develop healthy individuals and communities when the economy is strong, and are even more important when we face economic and social challenges. The mission of parks and recreation was crafted from feedback obtained throughout the Master Plan Update. Oregon Recreation and Parks Association's (ORPA) mission describes the primary purpose or "business" of parks and recreation in Oregon:

Strengthen community
Parks, recreation facilities, programs, and community events are key factors in strengthening community image and creating a sense of place.

Protect natural resources
By acquiring, managing, and restoring valuable resources as open space such as: rivers, streams, greenways, view sheds, forests and other habitat areas, natural resources are protected and habitat required for the survival of diverse species is preserved.

Foster human development
Parks and recreation services foster social, intellectual, physical, and emotional development.

Strengthen safety and security
Park and recreation professionals provide safe environments for recreation and design programs and services specifically to reduce criminal activity.

Support economic development
Recreation programs and facilities attract and retain businesses and residents, as well as attract tourists. Parks and recreation provides jobs and generates income for the community and for local businesses.

Preserve cultural resources
Parks and recreation professionals preserve our historical and cultural heritage for the enjoyment of citizens and future generations.

Provide recreational and educational experiences
Through programmed and self-facilitated recreation, a variety of benefits to individuals and society are achieved. Recreational and educational experiences can enhance ones current career and help inspire future career aspirations.

Increase cultural unity
Parks and recreation increases cultural unity through experiences that promote cultural understanding and celebrate diversity.

Promote health and wellbeing
Participation in recreation improves physical and emotional health.

Facilitate community problem solving
Park and recreation professionals have skills in facilitation and leadership that can be applied to resolve community problems and issues.

Be good stewards of public resources
Park and recreation professionals use resources effectively to ensure best use of public funds. Park maintenance staff preserves parks and community facilities to protect public investments.

Recent History of Oregon City Parks and Recreation

Prior to 1999, the parks and recreation functions were fragmented under different city departments. The Community Activities Department included the Oregon City Pool, Pioneer Center, Carnegie Center (after it became an arts and community center in 1995), and recreation programs and activities. Parks and cemetery functions were under the management of the Public Works Department. Following the recommendations of the 1999 Parks and Recreation Master Plan (J.C. Dragoo & Associates), the various functions of parks and recreation services were consolidated into the Parks and Recreation Department in 2000. This created a more cohesive and coordinated approach to their operations and services, as well as being the catalyst for launching an emphasis on parks acquisition and development growth, which continues today. In spring 2002, following the retirement of the long-time City Library Director, library operations were folded in with the Parks and Recreation Department to create the current Community Services Department.

Community Services Department Overview

The City of Oregon City Community Services Department is responsible for the direction, operations, and maintenance of a wide variety of services, programs, and facilities, including:

- Mt. View Cemetery
- Carnegie Center
- Pioneer Adult Community Center
- Oregon City Pool
- Ermatinger House
- Oregon City Public Library
- Parks acquisition, planning, and development
- Trail and park maintenance
- Recreation programs, classes, and activities

Department Inventory Overview

- Total properties maintained by Park staff = 47 properties
- Total acreage of properties = approximately 250 acres
- Total acreage mowed = approximately 120 acres

Department Staffing Levels

The most significant challenge faced by the Parks Maintenance division is the ability to provide adequate system maintenance at current staffing and funding levels. This issue is magnified by the addition of new parks and facilities to meet the needs of the growing community. Throughout the public input process, information gathering, park and facility inventory and assessment, the common issue that continued to surface was the Department's constant challenge resulting from extremely low staffing levels. The staffing levels are the product of severe funding source limitations, which have hindered the Department. Historically, the Department has been extremely dependent on volunteer efforts.

All parks and cemetery operations and maintenance are accomplished with current parks and cemetery staff consisting of one manager, one part-time office specialist, two full-time parks maintenance specialists, and two full-time cemetery staff. During the spring and summer there is funding for seasonal maintenance workers who split their time between cemetery and parks. As more parks and facilities are added to the maintenance inventory, service levels will reduce unless staff and resources are increased. In addition, the lack of specialized staff has restricted the number and variety of recreation programs and special events that the Department can provide for the community.

Community Profile

Service Area and Population

Oregon City also has a unique topography, which includes three terraces above the Willamette River. The City's quality of life and recreation opportunities are highly valued by the community. This is evident by the City's 21 parks, a historic cemetery, six indoor facilities, and 258.2 acres of parkland and open space located throughout Oregon City. Most residents can find a neighborhood or community park within easy walking distance of their home. For this study, several sources were examined to determine current and future population projections for the City of Oregon City:

- US Census (2000)
- ESRI Business Information Solutions (demographic studies)
- Portland State University – Population Research Center

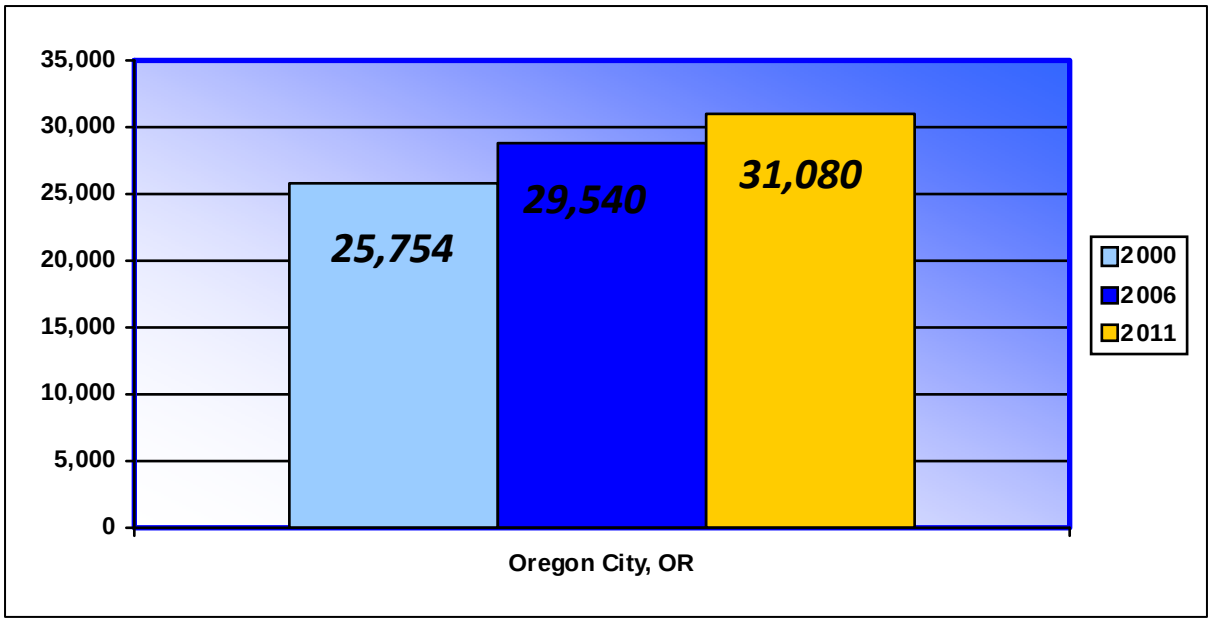
The estimated population for the City of Oregon City in 2006 is 29,540 people, according to Portland State University's Population Research Center estimates, as compared to ESRI Business Solutions' estimate of 28,795. Although slight, it is important for the City to consider the difference in population estimates, so as to have a complete knowledge of the community profile, demographics, and recreation needs.

Population Forecasts

Although we can never know the future with complete certainty, it is helpful to make assumptions about it for economic reasons. According to ESRI Business Solutions, the population of Oregon City is

forecast to experience steady growth from 28,975 in 2006 to 31,080 in 2011, at a rate of 2.02% annually, which is significantly higher than the national average of 1.3%.

Figure 1: Population Projections 2006 to 2011



Source: ESRI Business Information Solutions 2006

Related Planning Efforts and Integration

The City of Oregon City has undertaken several planning efforts in recent years that have helped inform the planning process for this Parks and Recreation Master Plan. These plans and studies include:

- City of Oregon City Park and Recreation Master Plan (1999)
- Oregon City Trails Master Plan (2004)
- Oregon City Waterfront Master Plan (2002)
- Park Place Concept Plan (2007 – in progress at time of writing this report)
- Beavercreek Road Concept Plan (2007 – in progress at the time of writing this report)
- Oregon Parks and Recreation Association Benchmarking (2006)

Methodology of this Planning Process

This project has been guided by a project team, made up of city staff and the Parks and Recreation Advisory Committee. This team met with consultants from the GreenPlay team and provided input throughout the planning process. This collaborative effort creates a plan that fully utilizes the consultant's expertise and incorporates the local knowledge and institutional history that only community members can provide. The project consisted of the following tasks:

Needs Assessment and Public Involvement:

- Review of previous planning efforts and city historical information
- Consideration of the profile of the community and demographics, including anticipated population growth
- Extensive community involvement effort, including focus groups, meetings with key stakeholders, communitywide public meetings, and a statistically valid community interest and opinion survey
- Identification of alternative providers of recreation services to provide insight regarding the market opportunities in the area for potential new facilities and services
- Research of trends and statistics related to American lifestyles to help guide the efforts of programming staff

Level of Service Analysis:

- Interviews with staff to provide information about parks and recreations facilities and services, along with insight into the current practices and experiences of the City in serving its residents and visitors
- Analysis addressing recreation, parks, and related services

Inventory:

- Inventory of parks and facilities using existing mapping, staff interviews, and onsite visits to verify amenities and assess the condition of the facilities and surrounding areas

Assessment and Analysis:

- Review and assess relevant plans
- Organizational Analysis
- Measurement of the current delivery of service using the GRASP® Level of Service Analysis and allowing for a target level of service to be determined that is both feasible and aligned with the desires of citizens as expressed through the citizen survey. This analysis is also represented graphically through Perspectives.
- Exploration of finance and funding mechanisms to support development and sustainability of the system

Recommendations: Goals, Objectives, and Action Plan:

- Identification and categorization of recommendations into themes with goals, objectives, and an action plan for implementation
- Development of an action plan for capital improvements including cost, funding source potentials, and timeframe to support the implementation of the plan

Timeline for Completing the Master Plan Update

Start-up	July 2006
Community Process	September 2006 – January 2007
Demographic and Trends Analysis and Projections	October - December 2006
Community Needs Assessment Survey	November 2006 - February 2007
Inventory and assessment of existing facilities	September - December 2006
Organizational SWOT Analysis	October - December 2006
Financial Analysis	October 2006 – April 2007
Findings Compilation Report and Presentation	March 2007
Development of Draft Master Plan	March - April 2007
Presentation of Draft Master Plan	July 2007
Presentation of Final Master Plan	August 2007 – final adoption of Plan

Community Outreach

As part of this planning effort, a complete parks, recreation, open space and trails needs assessment was conducted. Activities included obtaining community input through focus groups, stakeholders meetings, community wide public meetings, and the random distribution of a comprehensive statistically valid community survey; creating an in-depth profile of demographics of the Oregon City area; and examining national and local recreational trends.

A total of 40 citizens participated in two-hour focus groups and an open public meeting the week of September 11, 2006. Participants represented a wide variety of community interests including park and recreation users, parents of children that participate in city programs, concerned residents, business representatives, and partnering organizations. The consultants facilitated the discussion and led the participants through a series of 20 questions to gain input on a broad range of issues about or affecting the City.

The City of Oregon City conducted a Community Attitude and Interest Survey during December of 2006 and January of 2007 to help establish priorities for the future improvement of parks and recreation facilities, programs, and services within the community. The survey was designed to obtain statistically valid results from households throughout the City of Oregon City. The survey was administered by a combination of mail and phone.

A survey firm, Leisure Vision, worked extensively with the City of Oregon City officials and members of the GreenPlay, LLC consultant team in the development of the survey questionnaire. This work allowed the survey to be tailored to issues of strategic importance to effectively plan the future system.

In December 2006, surveys were mailed to a random sample of 1,500 households in Oregon City. Approximately three days after the surveys were mailed each household that received a survey also received an electronic voice message encouraging them to complete the survey. In addition, about two weeks after the surveys were mailed Leisure Vision began contacting households by phone either to encourage completion of the mailed survey or to administer the survey by phone.

The goal was to obtain a total of at least 300 completed surveys. This goal was far exceeded, with a total of 400 surveys completed. The results of the random sample of 400 households have a 95% level of confidence with a precision of at least +/- 5%.

Key Findings of the Community Attitude and Interest Survey

Overall Importance

- Sixty-eight percent of respondents indicated that parks and recreation services were very, or somewhat, important.

Funding & Pricing

- Fifty-eight percent of respondents indicated they would/or might vote in favor of the bond election.
- Sixty-eight percent of respondents indicated they would pay some additional property taxes per month.
- Seventy-six percent of respondents indicated they would pay some additional maintenance utility fee per month.

High need and interest in parks and recreation programs include:

- Adult fitness and wellness programs
- Citywide special events
- Water fitness programs
- Youth sports
- Local history programs
- Youth learn to swim programs

High need and desire for parks and recreation facilities include:

- Walking and biking trails
- New parks
- Open space and natural areas
- Large picnic areas and shelters
- Swimming pool
- Playgrounds
- Indoor Program Space

*More detailed information can be found in **Section III D**.*

Summary of Key Finance and Funding Findings

Organizational Management

The Oregon City Community Services Department resources are below standards for staffing resources. If Oregon City considers expanding recreation services and/or facilities in the future, staffing resources and allocations may need to be reevaluated.

Finance and Cost Recovery

The City of Oregon City has an average cost recovery for parks and recreation services. Current funding for park capital improvements is extremely limited. Ongoing operational and maintenance funding is very low and the level of service to the community is minimal.

Partnerships

Oregon City has no overall partnership policy or plan. There is substantial opportunity for additional partnerships and alternative funding, but no allocated staff or resources to procure these functions.

Recommendations and Action Plans

Goal 1: Maximize the Planning Effort

First Steps

Objective: **Incorporate the action items of this plan into the City's annual work plans to achieve the recommendations of this plan and to enhance effectiveness of staff effort.**

Strategy:

- Assign responsibility and time frame, and allocate resources necessary to complete each action identified in annual work plans.

Objective: **Assure that all levels of staff are informed of and are set up to work together to implement the recommendations and strategies of the plan.**

Strategies:

- Inform all levels of staff of the direction of the Plan, allow for staff input, encourage buy-in, and encourage input from all staff members.
- Provide cross-departmental staff teams/team members, as appropriate, with education development opportunities, necessary equipment, and supplies.

Goal 2: Increase Level of Service in Parks and Facilities

Objective: **Increase level of maintenance throughout the parks system to increase the level of service**.

National averages show that park systems that have an average of one full-time employee (FTE) per 7 to 10 developed acres are able to adequately maintain parks to a safe and publicly acceptable level. Oregon City has approximately one FTE for every 16 acres which shows a staffing level much below the national average. In order to meet the low end of national staffing averages Oregon City

would need to almost double maintenance staff by adding eight positions. Although the City's financial situation may not allow the Department to add eight staff members, it is imperative that the maintenance staff increase not only to keep up with current parks, but also to be able to adequately maintain the parks that are planned for developments such as the Park Place, Beaver Creek, and the Cove. Without additional maintenance staff the Department will struggle to complete improvements listed as recommendations in this plan.

Strategies:

- Increase staffing for parks maintenance.
- Increase funding for parks maintenance by increasing the city maintenance utility fee referenced in Goal 5, as well as Section V- C.
- Provide consistent levels of maintenance throughout the parks system by implementing standard maintenance procedures and developing budget-planning tools where possible.
- Develop a playground replacement schedule for all playground equipment.
- Develop a maintenance equipment replacement schedule to plan for major expenditures.

Objective: **Use available resources and partners to aid in park maintenance.**

Strategies:

- Continue the park host program, ballfield maintenance agreements with leagues, and partnerships with high school classes, and evaluate their effectiveness on an annual basis.
- Continue to look for opportunities to partner with community groups and volunteers to increase the quality of maintenance in parks.

***Objective*: As resources and opportunities exist, repair and renovate existing facilities to bring existing parks up to the level of community expectations.**

Strategies:

- Renovate the Oregon City Swimming Pool per the survey results, and as recommended in the Oregon City Pool Study (***Appendix II***).
- Improve the basketball court at Barclay Hills Park.
- Replace the playground at Canemah Park.
- Add a commercial caterer's kitchen to Carnegie Center.
- Evaluate the need for and possibly renovate the fitness course at Chapin Park.

Table 1: Cost Estimates of Renovations and Additions

Park/Facility	Improvement	CIP cost estimates	O&M cost estimates
Oregon City Pool	Renovate existing pool and add leisure components and program space	$3,000,000	additional $200,000 / year
Barclay Hills Park	Upgrade basketball court	varies	minimal
Canemah Park	Replace playground	$100,000	$2,000
Carnegie Center	Add commercial caterer's kitchen	$150,000	N/A (additional rental revenues)

Objective: **Increase the comfort and convenience of parks.**

Strategies:

- Add dog waste pickup stations and trashcans to all parks prioritizing those with high dog activity.
- Add bike racks to all parks, especially along bike routes and trails.
- Provide single picnic tables in parks to increase picnic opportunities and support passive use of parks.

Table 2: Cost Estimates of Improvements

Park	Improvement	CIP cost estimates	O&M cost estimates
All developed parks and open spaces	Install dog waste stations ($1,100 per property), including bag dispenser and trash receptacle	$35,200	$2,000
All developed parks and open spaces	Install bike racks ($600 per park), including rack and concrete pad	$19,200	minimal
10 parks throughout the system	Add single picnic tables ($1000 per table), 3 tables per park	$30,000	$2,000

Objective: **Increase diversity of components in parks.**

***Strategies*:**

- Increase the LOS provided to the community by adding new facilities like those found in other Oregon parks such as: leisure aquatic amenities, an off-leash dog park, a nature center, and an amphitheater. Explore the idea of adding an adventure or destination playground, farmer's market area, and outdoor performing arts space.
- Solicit public input in the development or renovation of all parks.

Objective: **Determine the best uses for neighborhood parks.**

This planning process recognizes that neighborhood parks are valued by the residents of Oregon City. Seventy percent of the survey respondents stated that they have a need for neighborhood parks. This facility was second only to walking and biking trails in terms of need. In addition, 34% of the respondents list neighborhood parks in the top four most important facilities to have in their parks system. Because neighborhood parks are so important to residents, it will be important to use these parcels to keep up with the needs of the community. However, it is recommended that the City should focus its efforts towards neighborhood parks of at least three acres in size. It is important that plans for these parks be developed with neighborhood input. These plans may call for some development or may call for the parks to be left undeveloped, depending on the feedback from the neighborhoods. Each existing or future neighborhood park should be considered on an individual basis for its current or potential recreational value.

Strategies:

- Hold public meetings or visit with neighborhood groups to gain input about future of neighborhood parks.
- Create master plans for each park based on public input.
- Implement master plans after funding has increased to keep up with maintenance.

Objective: **Determine the most efficient action to reduce the number of mini-parks or pocket parks owned and maintained by the City.**

Respondents to the survey also list their need for small neighborhood parks as being met. Currently the Oregon Community Services Department has several very small neighborhood (mini or pocket) parks that are either undeveloped or have a very low level of development. These parks, less than three acres, known as "mini-parks" or "pocket parks," should be discouraged because of their limited recreational value and high cost to maintain. There are a few cases of specialized park sites that are smaller than three acres, such as Jon Storm Park or Richard Bloom Tots' Park, where the parks should be developed and maintained because of other considerations. Each existing or future mini or pocket park should be considered on an individual basis for its current or potential recreational value. For these same reasons, the City should not assume the ownership or operations of any privately developed/owned parks which do not meet these same thresholds: at least three acres in size and built to City parks standards.

Strategies:

- Explore opportunities for agreements with HOA's and neighborhood groups to maintain small neighborhood parks in exchange for development of the park.

- Hold public meetings or visit with neighborhood groups to gain input about future of neighborhood parks.
- The City should consider surplusing/disposing of existing mini-parks/pocket parks where feasible, after the local neighborhood has been given the opportunity to assume maintenance and operation responsibilities for the site.

Objective: **Continue to plan for parkland acquisition.**
Future park acquisition should be considered on an individual basis for its current or potential recreational value.

Strategies:

- Purchase the Glen Oaks Road/high school acquisition area
- Investigate and maximize opportunities presented by the Park Place, Beaver Creek, South End, The Rivers, and Cove Developments to increase city park acres from 258.2 to meet the ORPA median of 422 park acres.
- Pursue the acquisition of Saunders property.
- Look for land acquisition opportunities that are more than three acre parcels in the southern part of the Hilltop east of Hwy 213, in the "South End" area near the edge of the current city boundary or in the Urban Growth Boundary (roughly between Central Pt. and S. End Roads), in the Hilltop area east of Clackamas Community College and Beavercreek Rd. (UGB/future growth areas), and in the eastern portion of the Middle Level.
- The City should not acquire or develop additional mini-parks or pocket parks that are less than three acres in size. Mini/pocket parks may be developed within single-family subdivisions as long as they are owned and maintained by homeowners associations.

See GRASP® Recommendation Perspective located in ***Appendix V****.*

Goal 3: Increase access to parks by implementing trails plan

Objective: **Use the 2004 Oregon City Trails Master Plan to seek out opportunities to increase miles of trails within Oregon City (currently six) to meet, if not greatly exceed, the ORPA median of nine miles of developed trail.**

Strategies:

- Work to fund Tier 1 local trails as identified in the 2004 Trails Master Plan. Place emphasis on constructing trails that connect parks to other parks, trails, or neighborhoods. For example: Park Place Development Trails (L4), Barclay Park Connection (L11), Parks Trail (L21), and Wesley Lynn – Chapin Trail (L23).
- Continue to fund planning and construction for Tier 1 Regional Trails as identified in the 2004 Trails Master Plan. Use the Trails Master Plan for priorities and specifics about implementation costs.
- As funding permits, determine the existing condition and location of the Oregon Trail-Barlow Road Historic Corridor and review the existing standards within the Oregon City Municipal Code to determine if modifications to the development standards and/or City master plans are necessary to protect the corridor. If modifications to the existing code language are proposed, they should include methods to encourage property owners to preserve the historic corridor in the original condition while allowing the property to be

used in an economically viable manner. This strategy recommendation shall utilize/reference the ***Barlow Road Historic Corridor Westernmost Segment of the Oregon Trail Background Report & Management Plan (Clackamas County, 1993)***, or most current adopted report.

Table 3: Estimated Trail Costs for 2007

Trail number	Trail name	2004 estimated cost	2007 estimated cost (assumed 3% inflation)
L4	Park Place Trails	$92,286	$100,843
L11	Barclay Park Connection	$30,181	$32,980
L21	Parks Trail	$492,217	$538,623
L23	Wesley Lynn – Chapin Trail	$300,413	$328,270

Objective: **Make parks accessible and inviting for cyclists and other trail users.**

Strategies:

- Add bike racks to all parks, prioritizing parks near trails or bikeways.
- Provide drinking fountains and resting areas in parks that contain trails.
- Maintain internal park trails for safe bicycle use.
- Work with the Planning and Public Work Department to provide safe bikeways to parks.

Goal 4: Strategically Increase Programming and Partnerships

Objective: **Establish and promote more special events and local history programs in Oregon City.**

Strategies:

- Collaborate with local historical organizations to cross-market and promote existing history programs through website links, program guides, newsletters, and fliers.
- As additional funding is obtaining, establish dedicated city staffing for planning and marketing programming and special events.
- Evaluate the special event, rental, and programming opportunities available at the Carnegie Center when renegotiating lease agreement with current contracted manager in 2009. The City should be aware of not directly competing with existing private businesses or agencies which offer similar services in the community.
- Dedicated staffing and minor renovations to the facility may enable the City to host a wide variety of revenue-producing special events, concerts, programs, and rentals at this facility.
- Establish a streamlined community special events plan through collaborative efforts between the Oregon City and community partners and organizations, anchored to common goals.
- Investigate the community interest, agency budget capacity, and partnership opportunities for creating new community special events, such as:
    - Historical (i.e. -pioneer days festival, wagon rides, walking history tours, etc.)

- Arts and Culture (i.e. -movies and concerts in the park, art festivals, children's storytelling, etc.)
- Holiday related (i.e. -Halloween haunted forest, egg scrambles, holiday market, etc.)
- Health and Wellness (i.e. -fun runs and walks, community bike rides, dance contests, health fairs, etc.)

Objective: **Strategically Meet the Community's Demand for New Programs and Services**

Provide a variety of recreational programming and opportunities to meet the various needs of the community.

Strategies:

- Allocate resources to provide *quality* recreation programming, based on community input.
- Gain input from recreation participants through post-program or event evaluations.
- Continue to gain information from the community as to what programs are desired and popular through a statistically valid survey, at minimum every five years.
- Initiate collaborations to provide a greater *quantity* of diverse, cost effective recreation programs and activities.
- Expand the number of community-wide and regional special events which should be located in parks and/or facilities best suited to accommodate the activity/event (i.e. –historical festivals, concerts, etc.)
- Expand fitness and wellness programs for the entire community, with a focus on aquatics and adult programs.
    - Consider marketing the cardio and weight facilities at the Pioneer Center to all ages, to better serve the needs of the entire community.
    - Provide additional health and wellness programs like yoga, Pilates, and aerobics.
- Continue and expand youth learn-to-swim programs to meet the interests and safety needs of the community.
- Create additional opportunities for adult and youth "recreational" sports activities (soccer, basketball, softball, baseball, and swimming programs).

Objective: **Collaborate to attract more residents and visitors to utilize and participate in Oregon City's parks and recreation services and facilities**

Strategies:

- Work with local tourism organizations to attract private recreation companies to the Oregon City area to provide activities such as environmental and wildlife education, tours to nearby attractions, historical tours, guided hiking, and ecotourism.
- Partner with Fine Arts Starts to provide drop-in single-session activities such as: art workshops, culinary instruction, gallery tours, instructional dance classes, drama classes, and theatre/film viewings at the Carnegie Center.
- Continue and establish relationships with the following partner organizations to implement the recommendations of this master plan and to provide an increased number of and high quality recreation programs, activities, and services that will attract both residents and visitors:
    - Local volunteers
    - Youth sports associations

- Clackamas Community College
- Clackamas County Department of Aging
- End of the Oregon Trail Interpretive Center
- School District
- John Inskeep Environmental Learning Center
- National Park Service – McLoughlin House National Historic Site
- Stevens-Crawford Museum
- Home Orchard Society Arboretum

Objective: **Increase Partnerships and Collaborative Efforts**

Build partnerships within the community to take advantage of existing facilities, share new facilities, and provide additional programming and services to the community.

Strategies:

- Continue dialogue between the Parks and Recreation Department and Public Works about the potential for staff sharing for responsibilities such as medians, landscaping, and grounds maintenance.
- Investigate partnerships with local medical and health organizations to increase fitness and health programming for the aging population within the community.
- Create new and formalize existing partnerships (*see Sample Partnership Policy in* ***Appendix VIII***) with equity agreements that are reviewed annually.
- Strengthen and expand Intergovernmental Agreements (IGA's) with schools for use of fields, gyms, and multipurpose spaces.
- Explore the possibilities of revising and promoting an adopt-a-park program to help with park maintenance, beautification, and civic pride.
- Create a "Park Ambassador" program where residents living adjacent to parks are trained to inspect parks and then file a weekly report in exchange for a nominal fee or pass.

Goal 5: Increase Cost Recovery and Funding

Objective: **Research potential traditional funding opportunities.**

The City has the ability to use these mechanisms to enhance the quality of life in Oregon City and expand recreation, park, open space, trails, programs, and services to the community. The survey indicated initial support for additional fees and taxes to support current City operations and maintenance needs and to provide desired facilities, parks, trails, programs, and services.

Strategies:

- Based on strong positive support from the community survey, work with the City Commission to establish an additional five-dollar maintenance utility fee (per household/per month) to build and operate City parks, recreation, and aquatic facilities. This maintenance utility fee is established for all households for the purpose of assisting in funding the operational and maintenance costs for facilities to enhance the level of service to the community. It is not considered a user fee for services.
- Work with residents and partners to establish additional revenue through a combination of the following sources to implement the recommendations of the Master Plan:

    - City maintenance utility fees increase
    - System development charge increase
    - City sales tax increase
    - Bond referendum / city property tax
    - Redirection of existing City funds
    - Alternative funding (*see* ***Section V- C.*****)**
    - Strategic partnerships
    - Fees and charges (particularly with athletic associations)
    - Program grants (*see* ***Appendix VII***)
- Further investigate support for an education campaign for a ballot initiative to pass a tax increase or bond referendum for future capital improvements.
- Utilize additional funding gained to adequately staff the Department; increasing staffing levels from 11 FTE's and 40 PTE's (2007) by 100% over the next five years.

Objective: **Pursue alternative funding to implement the Master Plan.**

Many departments within Oregon City have experienced challenging times in the recent past, with limited funding and staffing levels, and the Department should explore the best means of achieving its funding goals. Alternative funding methods may be instrumental to the operations of the City's recreation programs and facilities on an ongoing basis. Allocating resources (assigning staff time, matching funds, etc.) to pursue alternative funding should be considered an investment in the future, with an outlined and expected positive rate of return.

Strategies:

- Identify opportunities to increase community support and revenue opportunities such as grants, partnerships, sponsorships, volunteers and earned income (*see* ***Section V-C***. for Alternative Funding Resources).
- Assign staff resources and/or investigate the possibility of utilizing volunteer efforts to apply for such funding.
- Develop a "Wish List" to identify philanthropic opportunities that align with these needs. Once identified, aggressively apply for grant funding.
- Expand and formalize a volunteer program to include standards, recruiting, training, retaining, and rewarding volunteers in all program areas.
- Create new and formalize existing Sponsorships (*see* **Sample Sponsorship Policy** in ***Appendix IX***) with equity agreements that are reviewed annually.
- Create an annual "Sponsorship Manual" listing all the opportunities for the year and distribute within the community in a menu format that creates a sense of urgency within the business community.
- Establish a 501 (c) (3) Parks and Recreation Foundation to facilitate the receipt of grant funds and other fundraising activities.
- Seek collaborations with developers for the Park Place, Beaver Creek, and Cove development projects to include recommended parks and recreation facilities and standards as outlined in the Improve Level of Service Section (Goal 2).

***Objective*: Create a cost recovery philosophy and policy.**

It is important for the City to develop a pricing and cost recovery philosophy that reflects the values of the community and the responsibility it has to the community. This philosophy will be especially important if the City moves forward in the development of new programs and additional and/or expanded facilities; and as it strives for sustainability and determines how much it is willing to subsidize operations.

One means of accomplishing this goal is applying the Pyramid Methodology. This methodology develops and implements a refined cost recovery philosophy and pricing policy based on current "best practices" as determined by the mission of the agency and the program's benefit to the community and/or individual.

Critical to this philosophical undertaking is the support and understanding of elected officials and ultimately, its citizens. Whether or not significant changes are called for, the agency wants to be certain that it is philosophically aligned with its residents. The development of the core services and cost recovery philosophy and policy is built on a very logical foundation, using the understanding of who is benefiting from parks, recreation, and natural resources services to determine how the costs for that service should be paid. For an overview of the Pyramid Methodology, please review the contents in ***Appendix VI***.

Strategies:
Develop ongoing systems that help measure cost recovery goals and anticipate potential pitfalls utilizing the following points:

- Understand current revenue systems and their sustainability.
- Track all expenses and revenues for all programs, facilities, and services to understand their contribution to overall department cost recovery.
- Analyze who is benefiting from programs, facilities, and services, and to what degree they should be subsidized.
- Fees for programs should acknowledge the full cost of each program (those direct and indirect costs associated with program delivery) and where the program fits on the scale of who benefits from the program of service to determine appropriate cost recovery target. Current cost recovery is at an average level and creating a cost recovery philosophy could enhance revenues to an above average level for operations and maintenance.
- Define direct costs as those that typically exist purely because of the program and change with the program.
- Define indirect costs as those that would exist anyway (like full time staff, utilities, administration, debt service, etc.)
- Define ability to pay as an implementation concern to be addressed through a fee reduction or scholarship program.
- Continue to encourage the pursuit of alternative funding for the Department.

Objective: **Increase participation and revenue from current services.**

Strategies:

- Utilize the marketing strategies in the Marketing, Communications, and Credibility section (Goal 6), to work to increase participation numbers and user fee revenue.
- Evaluate participation numbers of current programming so as to increase marketing and participation in programs that are not currently at capacity.
- Establish user fees for adult athletic associations using city recreation facilities that cover all direct costs of the field or facility use. Seek means with youth athletic associations using city facilities that minimally cover the costs of their use.

Goal 6: Marketing, Communications, and Credibility

Objective: **Generate awareness and credibility about Community Service offerings and needs as expressed by the public.**

Strategies:

- Formalize an evaluation and annual in-house benchmarking program to solicit participant feedback and drive programming efforts.
- Collect feedback data that supports the expressed desire for improvements to programs and activities.
- Create a "Mystery Shopper" program where secret shoppers evaluate services anonymously and results are tracked.
- Prepare an annual report providing information to the public about parks and recreation funding, stewardship of tax dollars and fees and charges, and distribute the report as widely as possible.
- Work with the Chamber of Commerce and the local Welcome Wagon to develop information packets that promote city services to tourists and new residents.
- Create an annual marketing plan for the Community Services Department.
- Develop an evaluation process for marketing media such as newspaper, seasonal brochures, website, direct mail, targeted e-mails, radio, and television advertising to continuously determine effectiveness of marketing dollars.
- Create seamless product delivery for park and recreation services that delivers from a consumer vantage.

Objective: **Create a seamless and cohesive customer service delivery system for the provision of all community services programs and services regardless of the location.**

Strategies:

- Continue expanding current registration system to a fully integrated fax, on-line, and phone registration system.
- Network the registration system into all Community Services facilities for ease of registration for patrons.
- Develop a comprehensive cross training program for all staff and instructors including knowledge of all program areas as well as customer service.

- Use program tracking and evaluation tools to capacity by designing reports to readily identify life cycles of programs, identify programs not meeting minimum capacity (review all program minimums for cost effectiveness), identify waiting lists, etc.

Goal 7: Track Performance Measures

Objective: **Create standards for all community services activities and services.**

Strategies:
Establish service standards for all community services activities. Suggested criteria for service standards include:

- Programs:
  - Participation levels
  - Revenue
  - Instructors
  - Customer satisfaction
  - Cost per experience (or per hour, per class)
  - Customer retention
- Instructors:
  - Experience
  - Knowledge
  - Friendliness
  - Recruiting
  - Rewarding
  - Training
  - Standards
- Volunteers:
  - Experience
  - Knowledge
  - Friendliness
  - Recruiting
  - Rewarding
  - Training
  - Standards
- Facilities:
  - Cleanliness
  - Aesthetics
  - Comfort
- Staff:
  - Experience
  - Knowledge
  - Friendliness
  - Rewarding
  - Training
  - Trends

Strategies:

- Identify all major maintenance tasks including such things as:
  - Turf /Mowing
  - Plantings
  - Restrooms

    - Sidewalks and paths
    - Irrigation
    - Weed and insect control
    - Curb appeal
    - Playground and picnic equipment
    - Courts and fields
    - Litter control
- Evaluate and develop a scoring system for each task to meet desired and consistent service levels.
- Involve staff in the development of the standards and scoring system.
- Conduct maintenance standards training for all staff.
- Establish and monitor recordkeeping procedures to document the actual hours and materials costs for each maintenance operation.
- Apply appropriate maintenance standards and define set up/tear down requirements for all special events, tournaments, or other activities that currently stress resources. Assure adequate staffing and funding to take on the task, prior to making a commitment.

Goal 8: Sustainability

Objective: **Follow the defined goals and adopted policies for sustainability set forth by the City Commission as this five-year Plan is implemented.**

A sustainability effort within all city departments is a top priority of the City Commission. The City of Oregon City defines sustainability as "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This entire Plan Update is founded in sustainability in that it has a realistic five-year implementation plan and strongly addresses the need to take care of that which we already have (e.g. deferred maintenance, and having a plan to maintain that in which we build). See recommendations for additional maintenance staff and resources (Goal 2).

Strategies:

- Refer to and implement "The U. S. Mayors' Climate Protection Agreement" adopted by the City of Oregon City Commission in January of 2007 wherever possible.
- Implement the Oregon Recreation and Parks VIP Strategic Plan (Vision) that has goals which address natural resource protection, public resource stewardship, cultural resources, economic development, and other sustainability related practices.
- Continue current sustainability practices in progress including:
    - Using alternative energy sources when possible
    - Minimize vehicle use
    - Recycle wherever possible
    - Minimize printing, utilize efficient printing practices
    - Use file sharing practices
    - Turn off all unnecessary electrical uses such as calculators, radios, etc.
    - Unplug chargers when not in use
    - Utilize Energy Saver features on machines when possible
    - Utilize biodegradable or recycled products where possible
    - Install motion sensor light switches in all buildings
    - Replace non-energy efficient lights with fluorescent lights

Recommendation Cost Estimates

The following table includes capital projects and additional items that significantly impact the annual operational and maintenance budgets. All cost estimates are in 2007 figures. Funding sources listed are suggested methods of funding and can be enhanced with additional methods of funding. Overall staffing cost projections are included in the annual operational and maintenance cost estimates.

Table 4: Cost Estimates and Funding Sources for 2008-2012 Recommended Priorities

Recommendation 2008-2010 Priorities	Capital Cost Estimate	Capital Funding Sources	Annual O/M Cost Estimate (incl. staffing)	O/M Funding Sources
Replace playground at Canemah Park	$100,000	General Fund, Grant, Partnerships, Parks System Development Charges (SDC's)	$2,000	Maintenance Utility Fees
Renovate City swimming pool	$3,000,000	Bond Referendum, Property Tax, Sales Tax	$150,000	User Fees, Maintenance Utility Fees, General Fund
Construct Barclay Park Connection Trail	$32,980	Grants, General Fund, Partnerships, Sales Tax, Property Tax, Parks SDC's	$900	Maintenance Utility Fees
Construct Wesley Lynn-Chapin Trail	$328,270	Grants, General Fund, Partnerships, Sales Tax, Property Tax, Parks SDC's	$8,900	Maintenance Utility Fees
Upgrade existing parks per Goal 2	$84,400	CIP Fund, General Fund, Partnerships, Sales Tax, Property Tax, Parks SDC's	$8,000	Maintenance Utility Fees, General Fund
Add two full-time park maintenance staff	N/A	N/A	$70,000	Maintenance Utility Fees, General Fund, User Fees
Glen Oak Road/high school acquisition area	$3,000,000	Park's SDC's, Metro Parks Local Share Funds, Grants	N/A	N/A
Add one recreation programmer	N/A	N/A	$40,000	Maintenance Utility Fees, General Fund, User Fees
Total 2008-2010 CIP (in 2007 dollars)	**$6,545,650**		**$279,800 per year**	

Recommendation 2011-2012 Priorities	Capital Cost Estimate	Capital Funding Sources	Annual Operational & Maintenance Cost Estimate (incl. staffing)	O/M Funding Sources
The Cove Development	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Park Place Concept Plan	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Construct Park Place Trails	$100,843	SDC, Grants, General Fund, Partnerships, Sales Tax, Property Tax	$2,700	Maintenance Utility Fees
Construct Parks Trail	$538,623	Grants, General Fund, Partnerships, Sales Tax, Property Tax	$14,600	Maintenance Utility Fees
Add six full-time park maintenance staff	N/A	N/A	$210,000	Maintenance Utility Fees, General Fund, User Fees
Beaver Creek Concept Plan	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Add one recreation programmer	N/A	N/A	$40,000	Maintenance Utility Fees, General Fund, User Fees
South End Concept Plan	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
The Rivers Development	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Add commercial kitchen to Carnegie Center	$150,000	User Fees, SDC, Sales Tax, Partnerships	N/A	N/A
Total 2011-2012 CIP (in 2007 dollars) (+ Cove, Park Place, Beaver Creek, South End, The Rivers)	**$789,466**		**$267,300 / year**	
Total Five Year CIP (in 2007 dollars) (+ Cove, Park Place, Beaver Creek, South End, The Rivers)	**$7,335,116**		**$547,100 / year**	

II. Past, Present, and Future – The Planning Context

A. Vision and Mission

The Oregon Parks and Recreation Association VIP Strategic Plan utilizes a vision statement that describes the preferred future of parks and recreation in Oregon. Oregon City Parks and Recreation wishes to adopt this vision statement. Oregon City has a rich society that can benefit immensely by increased attention to the interconnectedness of its parks and recreation programs and facilities and its people. From historic homes like Ermatinger House to the Oregon City Swimming Pool, from senior programs like those offered at Pioneer Center, to the Daddy Daughter Dinner Dance, the Parks and Recreation Department of Oregon City is committed to creating a sense of community. The Department strives to adopt a vision statement that reflects that strong commitment. This vision will be the cornerstone of the future strategic planning efforts for the City of Oregon City:

The VIP Plan is more than an action plan for ORPA and its members - it is a plan to reposition the diverse profession of parks and recreation. As such, the plan must reflect the values and beliefs of our diverse profession. We, the parks and recreation profession, include commercial and for-profit organizations, such as health clubs and equipment vendors; nonprofit organizations, such as the YMCA and Boys and Girls Club; natural resource agencies, such as the U.S. Forest Service, National Park Service and county/state parks; therapeutic recreation agencies, such as hospitals, rehabilitation centers and long-term care facilities; community colleges and universities which prepare our future professionals; adult education providers who offer lifelong learning opportunities; park professionals who preserve the natural environment, enhance safety and protect our valuable resource investment; special districts and local recreation agencies that provide parks and recreation opportunities to local residents; students who are the professionals of the future; citizen volunteers who provide many direct services; and others. All are part of the vision for the future of Oregon's parks and recreation.

To create is to cause or bring into being. This word emphasizes the active role of parks and recreation in the task of creating community.

Community is a sense of belonging, ownership, and common purpose that develops among people who live or work together as a social unit. Within parks and recreation, a community may be a city, a hospital ward, a park and recreation district, a senior center, a national park, a neighborhood for a for profit business or nonprofit agency. It includes both your co-workers and the clients you serve.

Parks and recreation often delivers services through people - our staff and volunteers make connections with our clients and residents to improve lives. It is this person-to-person contact that

relieves the loneliness of senior citizens, reduces the stress and isolation of working adults, and inspires and teaches youth to become productive community members.
Parks and recreation professionals mobilize people to solve community problems - from building trails to coaching sports leagues to tutoring at-risk youth. We are the essential connection to people and their needs in the communities and settings that we serve.

As a profession, we are known for our parks and open space. They create a green infrastructure that is essential to Oregon's economy - from the peaks of Mount Hood to a neighborhood park in the midst of our largest city. We provide relief from urban development, preserve the environment, and provide opportunities for recreation through our facilities. In addition to parks, we provide many types of facilities today to meet the needs of our customers - water parks, health clubs, wilderness areas, skate parks, community centers, etc. In the vision statement, the word "parks" can be interpreted as any facility provided by parks and recreation to meet needs.

Programs can be recreation activities, services or organizational structures designed to produce specific outcomes or benefits to our clients. Historically, our programs have also been an important means of connecting with clients and creating community. As such, these programs must be acknowledged in our vision statement.

Personal expenditures on recreation and leisure in the United States exceed $700 billion annually (NRPA, 1998). In addition, more than $10 billion is spent annually by local, state, and federal agencies on parks and recreation facilities, programs and services. A monumental difference is made in individuals, communities, the environment, and the economy through parks and recreation.

The following mission statement describes why parks and recreation services exist - the benefits provided by parks and recreation. This ORPA mission statement should also be adopted by Oregon City Parks and Recreation and customized to meet the unique needs of the local community.

Mission Statement

The benefits of parks and recreation are necessary to develop healthy individuals and communities when the economy is strong - and are even more important when we face economic and social challenges. The mission of parks and recreation was crafted from feedback obtained throughout the Master Plan Update. ORPA's mission describes the primary purpose or "business" of parks and recreation in Oregon:

Strengthen community
Parks, recreation facilities, programs, and community events are key factors in strengthening community image and creating a sense of place.

Protect natural resources
By acquiring, managing, and restoring valuable resources as open space such as: rivers, streams, greenways, view sheds, forests and other habitat areas, natural resources are protected and habitat required for the survival of diverse species is preserved.

Foster human development
Parks and recreation services foster social, intellectual, physical, and emotional development.

Strengthen safety and security
Park and recreation professionals provide safe environments for recreation and design programs and services specifically to reduce criminal activity.

Support economic development
Recreation programs and facilities attract and retain businesses and residents, as well as attract tourists. Parks and recreation provides jobs and generates income for the community and for local businesses.

Preserve cultural resources
Parks and recreation professionals preserve our historical and cultural heritage for the enjoyment of citizens and future generations.

Provide recreational and educational experiences
Through programmed and self-facilitated recreation, a variety of benefits to individuals and society are achieved. Recreational and educational experiences can enhance ones current career and help inspire future career aspirations.

Increase cultural unity
Parks and recreation increases cultural unity through experiences that promote cultural understanding and celebrate diversity.

Promote health and wellbeing
Participation in recreation improves physical and emotional health.

Facilitate community problem solving
Park and recreation professionals have skills in facilitation and leadership that can be applied to resolve community problems and issues.

Be good stewards of public resources
Park and recreation professionals use resources effectively to ensure best use of public funds. Park maintenance staff preserves parks and community facilities to protect public investments.

B. Purpose of this Plan

The Oregon City Parks and Recreation Master Plan Update is intended to help meet the needs of current and future residents by positioning Oregon City to build on the community's unique parks and recreation assets and identify new opportunities. The citizen driven five-year Implementation Plan establishes a clear direction to guide city staff, advisory committees, and elected officials in their efforts to enhance the community's parks and recreation programs, services and facilities.

Although the Community Services Department is also responsible for the library and the cemetery, the Master Plan Update specifically does not address this portion of department operations and is focused strictly on parks and recreation issues.

C. History of Oregon City Parks and Recreation

Oregon City has a long history of providing parks for its citizens, dating back to the City's incorporation in the mid 1800's. Oregon City, sometimes referred to as the "First City," was granted

a charter in 1844 making it the first and oldest city in the Pacific Northwest. Dr. John McLoughlin founded Oregon City and is often called the "father of Oregon" for his role in the State's early history. He donated land for parks on the "bluff" and "mid-level" areas of town in the early history of the City. These have been protected as parkland in the city charter since this time. These early charter park sites are some of the oldest public parks in the region.

In its earliest history, as the Oregon City community grew, new organized sports, recreation, and leisure opportunities were created. In fact, Oregon City can claim a number of firsts for many of these activities in the State of Oregon and Pacific Northwest. The first baseball game between two organized teams was held in Oregon City at Kelly Green (now the site of The End of Oregon Trail Interpretive Center) on October 13, 1866. The football rivalry between Oregon City High School and West Linn High School (originally known as West Oregon City High) is considered to be the oldest in the state dating to the 19th century. In the era of rail cars (interurban trains), the train carrying passengers from Portland, and other areas, would pass through Oregon City. Many passengers departed at a stop where they could traverse a series of steps to the grounds of (old) Canemah Park, which was the site of the first amusement park in Oregon. Canemah Park had a dance hall, bandstand, ballfields, play areas, and thrill rides including one of the original Ferris wheels. Old Canemah Park still exists, though all that remains today are trails, passive uses, and picnic areas.

Prior to 1999, the parks and recreation functions were fragmented under different city departments. The Community Activities Department included the Oregon City Pool, Pioneer Center, Carnegie Center (after it became an arts and community center in 1995), and recreation programs and activities. Parks and cemetery functions were under the management of the Public Works Department. Following the recommendations of the 1999 Parks and Recreation Master Plan (J.C. Dragoo & Associates), the various functions of parks and recreation services were consolidated into the Parks and Recreation Department in 2000. This created a more cohesive and coordinated approach to their operations and services, as well as being the catalyst for launching an emphasis on parks acquisition and development growth, which continues today. In spring 2002, following the retirement of the long-time City Library Director, library operations were folded in with the Parks and Recreation Department to create the current Community Services Department.

D. Community Services Department Overview

The City of Oregon City Community Services Department is responsible for the direction, operations, and maintenance of a wide variety of services, programs, and facilities, including:

- Mt. View Cemetery
- Carnegie Center
- Pioneer Adult Community Center
- Oregon City Pool
- Ermatinger House
- Oregon City Public Library
- Parks acquisition, planning, and development
- Trail and park maintenance
- Recreation programs, classes, and activities

Park Acquisition, Planning, and Development

The Department is responsible for the citywide planning and implementation of new parks and trails, acquisition of parklands, and improvements, additions, and expansion to existing parks and trails. A few examples of recently completed accomplishments or currently active projects include:

- Master planning and development of Jon Storm Park, including transient dock and restroom
- Development of Wesley Lynn Park first phase – continue next phase of development
- Rivercrest Park improvements, including new spray park and refurbished tennis and basketball courts
- Parks and Recreation Master Plan Update (this document)
- Exploring property acquisitions in the High School Area, South End/Central Point Road Area, Park Place, Holcomb and Maple Lane Areas.
- Administering a 2006 Metro Parks Natural Spaces Bond

The majority of Oregon City's parks acquisition, planning, and development efforts are funded primarily through Parks System Development Charges (SDC's) on new residential and commercial construction. State, federal, and other grants also supplement this funding.

State law and Oregon City Municipal code govern the City's implementation and use of Parks SDC's. The Capital Improvement Program and the adopted Parks and Recreation Master Plan identify priority projects for acquisition, planning, and development. The Parks and Recreation Master Plan is the Department's comprehensive community planning document, developed with extensive study and community input. The Master Plan was most recently revised in 1999, prior to this update.

Though the Department manages to have success in the park acquisition, planning, and development area of responsibility, lack of staff creates challenges in carrying out this department function. In most cases, the Department Director acts as the planner, project and construction supervisor, land acquisition specialist, and grant writer. Other staff members are assigned some of these responsibilities on top of their regular duties, to share the workload distribution. Additionally, the lack of administrative staff support compounds the challenges in carrying out the goals and mission of the Department and City.

Parks and Mountain View Cemetery Operations

Ongoing maintenance of parks facilities includes: mowing, litter pickup, restroom cleaning, pruning, spraying, painting, carpentry, irrigation repair, and playground inspections.

The inventory of areas maintained includes:

- Parks and Cemetery Inventory*
- 36 park properties maintained
- Five city-owned properties maintained (islands, right of ways)
- Six Public Works properties maintained (reservoir grounds, utility right of ways)

*Note: The following properties are included in the above inventory

- One rental club house (Buena Vista Club House)
- One cemetery (Mountain View Cemetery)
- Three floating docks

Department Inventory Overview

- Total properties maintained by Park staff = 47 properties
- Total acreage of properties = approximately 250 acres
- Total acreage mowed = approximately 120 acres

Operations of the Mountain View Cemetery include full body burials, the cremations garden, the mausoleum, mowing grounds, pruning, spraying weeds, repairing headstones, painting, and landscaping, watering grounds, cleaning restrooms, and maintaining equipment. This also includes maintaining the Historic Pioneer section of the cemetery.

The most significant challenge faced by the Parks Maintenance division is the ability to provide adequate system maintenance at current staffing and funding levels. This issue is magnified by the addition of new parks and facilities to meet the needs of the growing community. Recent or anticipated additional maintenance responsibilities include Jon Storm Park (including new transient dock and restroom), Clackamas River Trail, Wesley Lynn Park, Rivercrest Park improvements, and others.

All parks and cemetery operations and maintenance are accomplished with current parks and cemetery staff consisting of one manager, one part-time office specialist, two full-time parks maintenance specialists, and two full-time cemetery staff. During the spring and summer there is funding for seasonal maintenance workers who split their time between cemetery and parks. As more parks and facilities are added to the maintenance inventory, service levels will reduce unless staff and resources are increased.

E. Related Planning Efforts and Integration

The City of Oregon City has undertaken several planning efforts in recent years that have helped inform the planning process for this Parks and Recreation Master Plan. These plans and studies include:

- City of Oregon City Park and Recreation Master Plan (1999)
- Oregon City Trails Master Plan (2004)
- Oregon City Waterfront Master Plan (2002)
- Park Place Concept Plan (2007 – in progress at time of writing this report)
- Beavercreek Road Concept Plan (2007 – in progress at time of writing this report)
- Oregon Parks and Recreation Association Benchmarking (2006)

F. Methodology of this Planning Process

A project team, made up of city staff and the Parks and Recreation Advisory Committee, has guided this project. This team met with consultants from the GreenPlay team and provided input throughout the planning process. This collaborative effort creates a plan that fully utilizes the consultant's expertise and incorporates the local knowledge and institutional history that only community members can provide. The project consisted of the following tasks:

Needs Assessment and Public Involvement:

- Review of previous planning efforts and city historical information
- Consideration of the profile of the community and demographics, including anticipated population growth

- Extensive community involvement effort, including focus groups, meetings with key stakeholders, community-wide public meetings, and a statistically-valid community interest and opinion survey
- Identification of alternative providers of recreation services to provide insight regarding the market opportunities in the area for potential new facilities and services
- Research of trends and statistics related to American lifestyles to help guide the efforts of programming staff

Level of Service Analysis:

- Interviews with staff to provide information about parks and recreations facilities and services, along with insight into the current practices and experiences of the City in serving its residents and visitors
- Analysis addressing recreation, parks, and related services

Inventory:

- Inventory of parks and facilities using existing mapping, staff interviews, and on-site visits to verify amenities and assess the condition of the facilities and surrounding areas

Assessment and Analysis:

- Review and assess relevant plans
- Organizational Analysis
- Measurement of the current delivery of service using the GRASP® Level of Service Analysis and allowing for a target level of service to be determined that is both feasible and aligned with the desires of citizens as expressed through the citizen survey. This analysis is also represented graphically through perspectives
- Exploration of finance and funding mechanisms to support development and sustainability of the system

Recommendations: Goals, Objectives, and Action Plan:

- Identification and categorization of recommendations into themes with goals, objectives, and an action plan for implementation; and
- Development of an action plan for capital improvements including cost, funding source potentials, and timeframe to support the implementation of the plan.

G. Timeline for Completing the Master Plan

Start-up	July 2006
Community Process	September 2006 – January 2007
Demographic and Trends Analysis and Projections	October - December 2006
Community Needs Assessment Survey	November 2006 - February 2007
Inventory and assessment of existing facilities	September - December 2006
Organizational SWOT Analysis	October - December 2006
Financial Analysis	October 2006 – April 2007
Findings Compilation Report and Presentation	March 2007
Development of Draft Master Plan	March - April 2007
Presentation of Draft Master Plan	July 2007
Presentation of Final Master Plan	August 2007 – final adoption date

III. What We Want - Our Community and Identified Needs

Identification of current park resources, as well as recreation trends, community demographics, and needs help us better understand future recreational opportunities and identify the unique niche of the City of Oregon City. The community's history, along with the park and recreation trends, creates a unique opportunity for Oregon City to plan and implement for the future.

The following is an overview of the Oregon City community and a needs assessment of parks and recreation facilities and services. This section first describes the key demographic information and national and statewide trends in parks and recreation services. Additionally, community input from stakeholder interviews, focus groups and a community meeting is described and identifies strengths, weaknesses, and opportunities of Oregon City's parks and recreation facilities and services. Next, results from a statistically valid community survey are highlighted to further clarify recreation needs and interests. Additionally the GRASP® inventory of current parks and recreation facilities is reviewed. All of this information provides a framework to understand Oregon City's context, community needs, and future direction.

A. Community Profile and Demographic Information

Market Analysis

Service Area and Population

The primary service area for this analysis is the City of Oregon City, Oregon. Oregon City, located at the confluence of the Willamette and Clackamas Rivers in NW Oregon, is the oldest incorporated city west of the Rockies. According to the City's website (http://www.orcity.org/), Oregon City was established in 1829, officially incorporated in 1844, and became the capitol of the Oregon Territory in 1849. The City is rich in historical homes and buildings, and hosts several interpretive centers and museums dedicated to celebrating the pioneer spirit.

Oregon City also has a unique topography, which includes three terraces above the Willamette River. The City's quality of life and recreation opportunities are highly valued by the community. This is evident by the City's 21 parks, a historic cemetery, 6 indoor facilities, and 258.2 acres of parkland and open space located throughout Oregon City. Most residents can find a neighborhood or community park within easy walking distance of their home. For this study, several sources were examined to determine current and future population projections for the City of Oregon City:

- US Census (2000)
- ESRI Business Information Solutions (demographic studies)
- Portland State University – Population Research Center

It was concluded that for consistency this study would utilize current and future population as provided by ESRI Business Solutions, with limited comparisons to the Portland State University Population Research Center. The use of ESRI instead of information provided by Portland State University is due to the fact that all population projections provided by the State are by county

rather than city. Furthermore, it is also important to note that these population numbers do not include the future expansion of city boundaries and the growth in housing, as they were not able to be provided by any of the available sources.

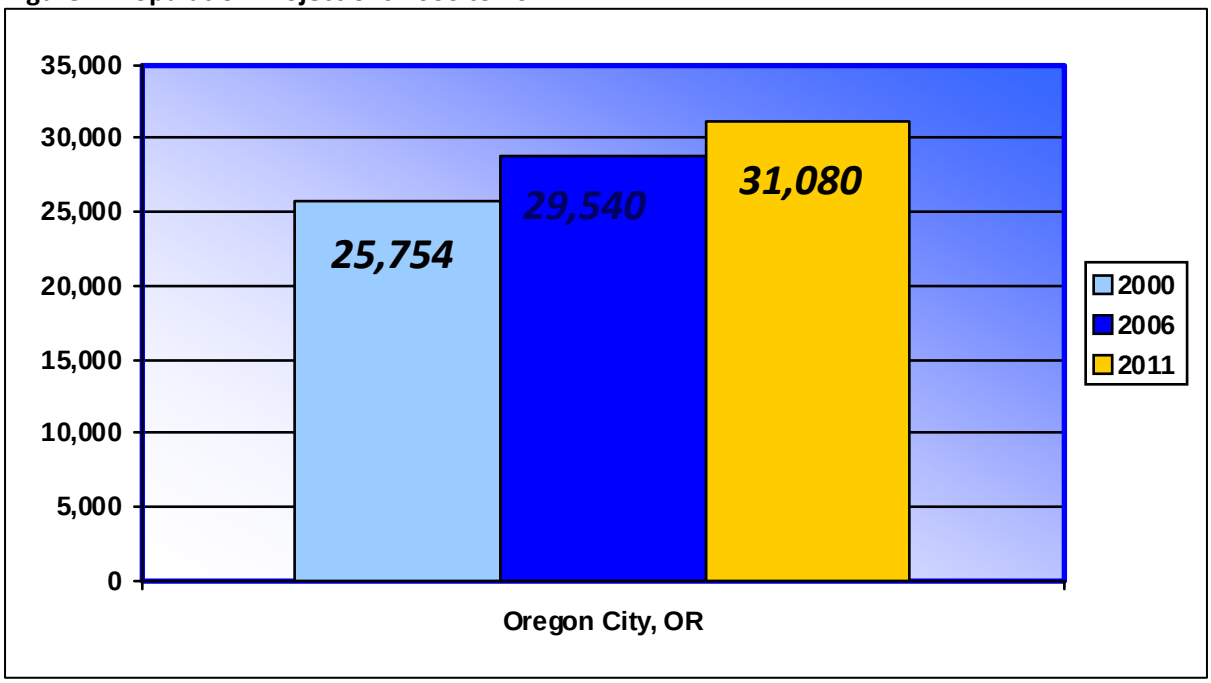
The estimated population for the City of Oregon City in 2006 is 29,540 people, according to Portland State University's Population Research Center estimates, as compared to ESRI Business Solutions' estimate of 28,795. Although slight, it is important for the City to consider the difference in population estimates, so as to have a complete knowledge of the community profile, demographics, and recreation needs.

Auxiliary data such as age, gender and race distribution along with household income, household size, and educational attainment was derived from ESRI Business Information Solutions.

Population Forecasts

Although we can never know the future with complete certainty, it is helpful to make assumptions about it for economic reasons. According to ESRI Business Solutions, the population of Oregon City is forecasted to experience steady growth from 28,975 in 2006 to 31,080 in 2011, at a rate of 2.02% annually, which is significantly higher than the national average of 1.3%.

Figure 2: Population Projections 2006 to 2011



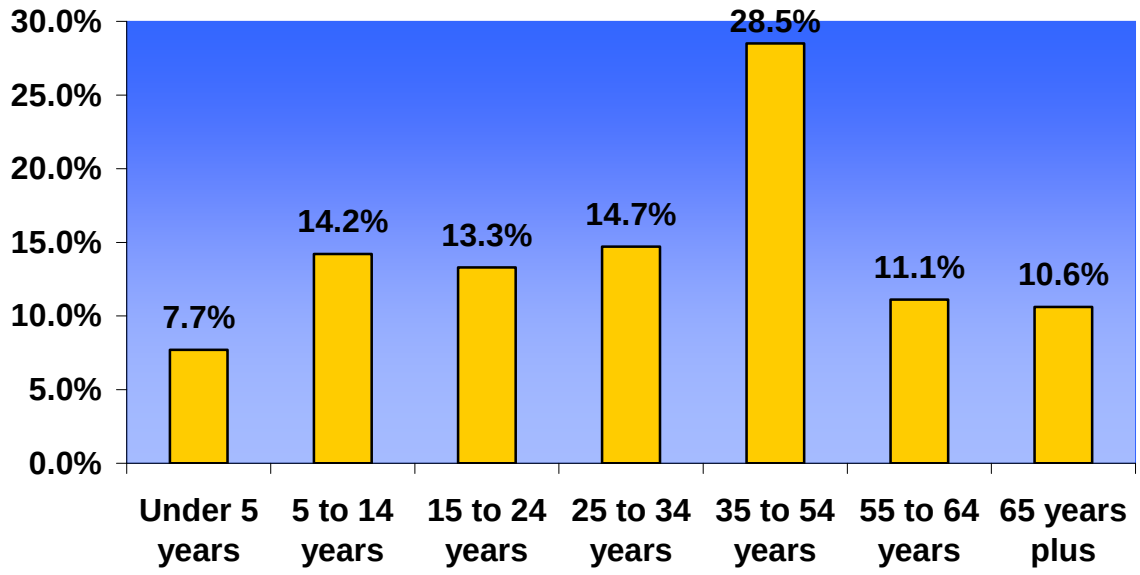
Source: ESRI Business Information Solutions 2006

Age Distribution

The following age breakdown is used to separate the population into age-sensitive user groups and to retain the ability to adjust to future age-sensitive trends. Population distribution by age for the City of Oregon City is demonstrated in ***Figure 3***.

- **Under 5 years:** This group represents users of preschool and tot programs and facilities, and as trails and open space users, are often in strollers. These individuals are the future participants in youth activities.
- **5 to 14 years:** This group represents current youth program participants.
- **15 to 24 years:** This group represents teen and young adult program participants moving out of the youth programs and into adult programs. Members of this age group are often seasonal employment seekers.
- **25 to 34 years:** This group represents involvement in adult programming with characteristics of beginning long-term relationships and establishing families.
- **35 to 54 years:** This group represents users of a wide range of adult programming and park facilities. Their characteristics extend from having children enrolled in preschool and youth programs to becoming empty nesters.
- **55 to 64 years:** This group represents users of older adult programming exhibiting the characteristics of approaching retirement or already retired and typically enjoying grandchildren.
- **65 years plus:** This group will double in 14 years. Programming for this group should positively impact the health of older adults through networking, training and technical assistance, and fundraising. Recreation centers, senior centers and other senior programs can be a significant link in the health care system. This group generally ranges from very healthy, active seniors to less physically active seniors.

Figure 3: Population Age Distribution – Oregon City, Oregon (2006)



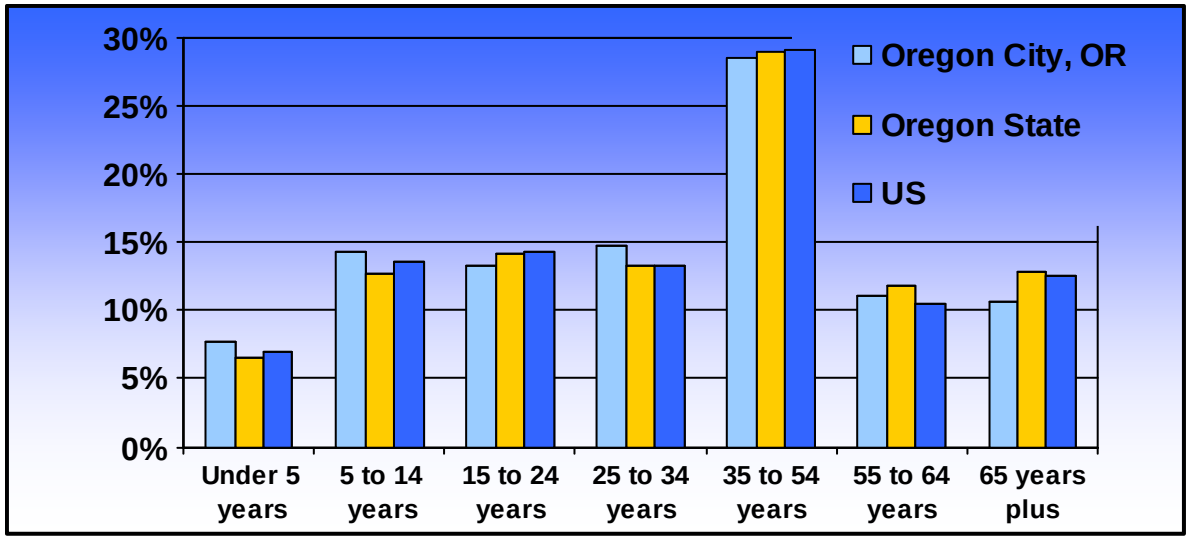
Source: ESRI Business Information Solutions

Population Comparisons

According to ESRI Business Information Solutions, the State of Oregon is within two percentage points of national population percentages in all categories. The population of Oregon City nearly mirrors the national averages in most age categories, except for the 65 and older age group which is 1.9% higher than the US. It is consistently within .7% of national averages in the younger age group categories (under 5, 5-14, and 15-24). Oregon City's heaviest weighted age group is 35-54 (28.5%) compared to the State of Oregon (28.9%) and the United States (29.1%).

These statistics illustrate that Oregon City currently has a larger number of older residents, which will only continue to grow as the Baby Boomers age. Additionally, it is important to note that the population is projected to increase slightly in the 25-34 age group, as well as under the age of 5, which indicates that more young families may be moving to Oregon City. These trends should be considered in providing recreation programming and services for older active adults and young adults with small children.

Figure 4: **Population Comparisons: Oregon City, State of Oregon, and US (2006)**



Source: ESRI Business Information Solutions

Gender

The 2006 population estimate for Oregon City consists of 49.1% male and 50.9% female. The State of Oregon consists of 49.6% male and 50.4% female, and the United States consists of 49.2% male and 50.8% female. Oregon City's population very closely replicates the State and the US.

Race

Statistics gathered from ESRI Business Solutions provide the race breakdown for Oregon City. As shown in ***Table 5***, the race with the largest population is white (91.8%). Those of any race identifying themselves as Hispanic make up 6.1% of the total population. The increasing percentage of Oregon City and the State of Oregon's population of Hispanic origin are important to recognize because it is projected to increase an additional 1.4% by 2011. Providing recreation opportunities and amenities that celebrate Latino heritage, recreation, and culture may become increasingly important to serving this portion of the population. For additional information on recreation trends in the Hispanic community please review the Outdoor Industry Foundation's *The Hispanic Community and Outdoor Recreation* report.

Source: "The Hispanic Community and Outdoor Recreation." Outdoor Industry Foundation Resources. Outdoor Industry Foundation. June, 2006. [http://www.outdoorindustryfoundation.org/resources.research.hispanics.html].

Table 5: Race Comparisons for 2006

Race	Oregon City	State of Oregon	United States
White Alone	91.8%	84.6%	73.0%
Black Alone	0.6%	1.7%	12.6%
American Indian Alone	1.0%	1.3%	0.9%
Asian or Pacific Islander Alone	1.3%	3.8%	4.4%
Some Other Race (alone)	2.7%	5.3%	6.4%
Two or More Races	2.6%	3.3%	2.8%
Hispanic Origin (Any Race)	6.1%	10.2%	14.8%

Source: ESRI Business Information Solutions

Education

According to ESRI Business Information Solutions, 18.4% of the City's population has either a bachelor's or a master's degree. 25.1% of the population in the State of Oregon and 24.4% of the population in the United States has a bachelor's or a master's degree. The educational attainment breakdown is shown in ***Table 6***. Oregon City has a slightly lower proportion of population with higher education degrees than the State of Oregon and the United States, which is interesting to note considering the area's high median income earnings.

Table 6: Educational Attainment – 25 Years and Older (2000)

Degree	Oregon City	State of Oregon	United States
Less than 9th Grade	4.0	5.0%	7.5%
9th-12th Grade, No Diploma	9.8%	9.9%	12.1%
High School Graduate	27.6%	26.3%	28.6%
Some College, No Diploma	33.0%	27.1%	21.0%
Associate's	7.1%	6.6%	6.3%
Bachelor's	13.1%	16.4%	15.5%
Master's/Prof/Doctorate	5.3%	8.7%	8.9%

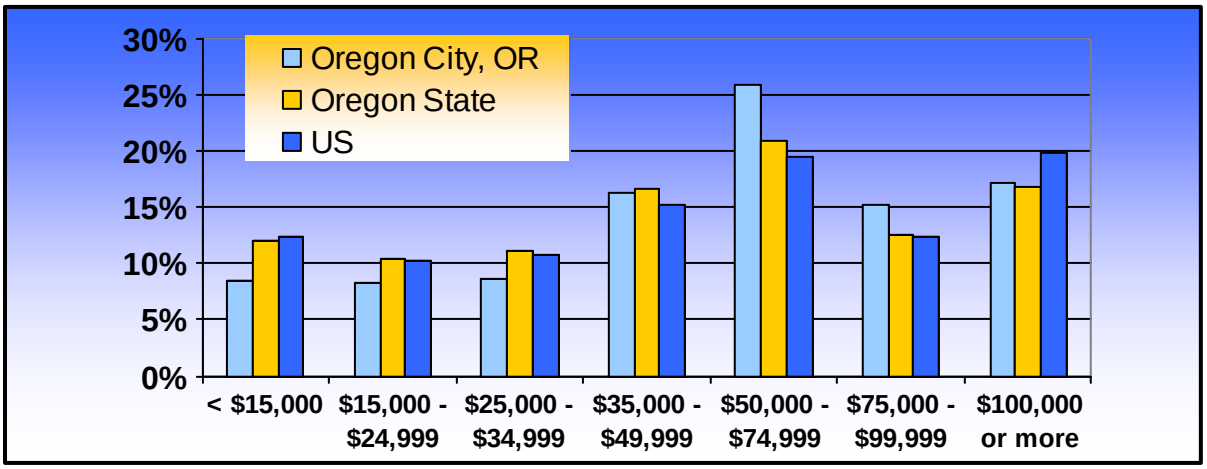
Source: ESRI Business Information Solutions

Household Income

According to ESRI Business Information Solutions, the estimated 2006 median household income for Oregon City was $57,168. Per capita income was $24,843. The median household income for the State of Oregon was $50,051 and the United States was $51,546. The per capita income for the State of Oregon was $30,394 and the United States was $27,084. As you can see from ***Figure 5,***

Oregon City has notably larger household incomes than both the State of Oregon and the nation. This could have a positive impact on the available disposable and investment income, which could translate into a higher ability pay for recreation activities and willingness to financially support (through fees or taxes) additional recreation infrastructure and services.

Figure 5: Household Income– Oregon City compared to Oregon State and the US (2006)



The largest share of households (25.9%) earns $50,000-$74,999, followed next by those earning $100,000 or more (17.1%). The smallest percentage of the population (8.2%) earns between $15,000 and $24,999.

Household Size and Units

The 2006 average household size in Oregon City area is 2.65 people. Nationally, the average size is 2.59 and in the State of Oregon it is 2.52. ***Table 7*** shows that the majority of housing units (62.5%) are owner-occupied in Oregon City, which reflects the fact that the City is a "bedroom" community. Therefore, almost all of Oregon City's and the State of Oregon's public funding are provided through property tax, rather than sales tax.

Table 7: Housing Units (2006)

Degree	Oregon City	State of Oregon	United States
Owner Occupied Housing Units	61.5%	60.2%	61.6%
Renter Occupied Housing Units	31.7%	30.6%	28.9%
Vacant Housing Units	6.8%	9.2%	9.0%

Source: ESRI Business Information Solutions

Health and Obesity

The United Health Foundation ranked Oregon 18th in its 2005 State Health Rankings. It was 21st in 2004. The State's biggest strengths include:

- Low occupational fatalities rate at 3.7 deaths per 100,000 workers
- Low rate of cardiovascular deaths at 296.1 deaths per 100,000 population
- Low prevalence of obesity at 21.2% of the population
- Low prevalence of smoking at 20.0% of the population
- Low rate of motor vehicle deaths at 1.3 deaths per 100,000,000 miles driven
- High per capita public health spending at $174 per person

Some of the challenges the State faces include:

- High number of limited activity days per month at 2.5 days in the previous 30 days
- Low immunization coverage with 78.9% of children ages 19 to 35 months receiving complete immunizations
- A high rate of uninsured population at 16.5%

Source: http://www.unitedhealthfoundation.org/shr2005/states/Oregon.html

B. Current Park and Recreation Trends

Recreation and Leisure Trends

In this fast paced, modern society it has become essential to stay on top of current trends impacting the field of recreation. Recreational providers are faced with the challenge of meeting and exceeding user expectations. Part of this task involves an analysis of recreation participants' current, historical, and future needs and desires for programming and activities. The most recently available statistical data on sports participation is presented in the National Sporting Goods Association 2003 Survey and is a primary tool for understanding user trends.

The following information was gathered by a mail panel resource of more than 20,000 pre-recruited households. Through a self-administered questionnaire, male and female heads of household and up to two other household members who were at least seven years of age were asked to indicate the sports they participated in 2003, along with the frequency of participation in 2003.

For this study, a participant is defined as, an individual seven years of age or older who participates in a sport more than once a year. There are seven sports that required participation to be defined as six times or more a year: aerobic exercise, bicycle riding, exercise walking, exercising with equipment, running and jogging, step aerobics, swimming, and weightlifting. The following tables illustrate the results of this study; activities are listed in descending order by total participation.

Table 8: Top 10 Activities Ranked by 2004 National Participation Levels

Sport	Total Participation (in Millions)	Percent Change From 2003
Exercise walking	84.7	3.8%
Camping (vacation/overnight)	55.3	3.5%
Swimming	53.4	2.2%
Exercising with equipment	52.2	3.9%
Bowling	43.8	4.6%
Fishing	41.2	-3.6%
Bicycle riding	40.3	5.3%
Billiards/pool	34.2	3.7%
Workout at club	31.8	8.0%
Aerobic exercising	29.5	5.1%

Source: National Sporting Goods Association 2004

These national trends are important to the Oregon City District because increased participation in activities such as swimming, exercising with equipment, working out at a club, and aerobic exercise may increase demand for aquatics, fitness, and wellness programming.

Table 9: Selected Sports Ranked by Percent Change from 1999 to 2004

Sport	Total Participation (in Millions) 2004	Total Participation (in Millions) 1999	Percent Change 1999 to 2004
Skateboarding	10.3	7.0	48.6%
Workout at club	31.8	24.1	32.0%
Ice Hockey	2.4	1.9	28.9%
Mountain biking	8.0	6.8	18.2%
Exercising with equipment	52.2	45.2	15.4%
Aerobic exercising	29.5	26.2	12.2%
Running/jogging	24.7	22.4	10.3%
Exercise walking	84.7	80.8	4.9%
Hiking	28.3	28.1	0.9%
Soccer	13.3	13.2	0.9%
Baseball	15.9	16.3	-2.9%
Bicycle riding	40.3	42.4	-4.9%
Basketball	27.8	29.6	-6.0%

Swimming	53.4	57.9	-7.7%
Volleyball	10.8	11.7	-7.9%
Martial Arts	4.7	5.1	-8.7%
Golf	24.5	27.0	-9.4%
Tennis	9.6	10.9	-11.9%
Football (touch)	9.6	11.1	-14.1%
Softball	12.5	14.7	-15.0%
In-Line roller skating	11.7	24.1	-51.5%

Source: National Sporting Goods Association

Once again, these national trends indicate that swimming and aerobics are near the top of the list in overall participation. However, while swimming is immensely popular, it appears that participation numbers have been decreasing significantly since 1998. On the other hand, it appears that aerobic exercise and exercise walking have generally increased during this same time period. Exercise walking continues to be the number one sport in American participation, with 79.5 million participants. This national trend is supported by the citizens' survey respondents, who placed a high need on trails and fitness and wellness programming.

Table 10: 2004 vs. 1994 Selected Sports National Participation by Age Group

Sport	Total Percent Change 1994 – 2004 (Ages 7-17)	Total Percent Change 1994 – 2004 (Ages 7-11)	Total Percent Change 1994 – 2004 (Ages 12-17)
Baseball	11.0	4.7	15.8
Basketball	-1.2	5.6	-9.8
Bicycle riding	19.1	-19.4	-17.0
Golf	0.3	53.3	31.9
Ice hockey	26.6	-24.7	33.3
In-line skating	29.0	-52.7	-25.8
Skateboarding	111.0	82.4	111.8
Soccer	6.2	-1.5	1.2

Source: National Sporting Goods Association

In regard to youth programming, it is important to note that golf, ice hockey, and soccer have generally been increasing by large numbers, since 1993 (except for ages 12-17 in ice hockey). Given Oregon City's potential for future athletic facilities and the increasing demand for these sports, it may be beneficial to analyze the revenue potential and community economic impact that could be gained by sponsoring tournaments, inviting teams from across the country.

Some additional statistics that are significant to youth recreation trends are that ice hockey has had an overall increase of 9.4% since 1993, and participation by children ages 7- 11 years old has increased 59.7% in the last 10 years. As well, skateboarding continues a steady increase in popularity, and now includes 9 million participants. Lastly, martial arts had the largest percent change from 2002 to 2003, with a 15% increase and 4.8 million participants.

Table 11: **2004 vs. 1999 National Recreation Participation of Women in Selected Sports**

Sport	Total Participation (in Millions) 2004	Total Female Participation (in Millions) 2004	Total Female Participation (in Millions) 1999	Percent Change 1999 to 2004
Aerobic exercising	29.5	21.7	19.6	-0.7
Baseball	15.9	3.5	3.5	0.5
Basketball	27.8	8.7	8.6	2.1
Bicycle riding	40.3	18.7	18.9	2.0
Exercise walking	84.7	52.4	50.0	-0.1
Sport	**Total Participation (in Millions) 2004**	**Total Female Participation (in Millions) 2004**	**Total Female Participation (in Millions) 1999**	**Percent Change 1999 to 2004**
Exercising with equipment	52.2	28.0	23.1	2.6
Football (touch)	9.6	2.2	2.0	4.8
Golf	24.5	5.7	5.6	2.4
Hiking	28.3	13.7	12.8	2.8
Ice hockey	2.4	0.6	0.5	0.0
In-line roller skating	11.7	5.9	12.2	-0.4
Martial arts	4.7	1.6	2.0	-4.8
Mountain biking	8.0	2.7	2.1	3.0
Running/jogging	24.7	11.5	10.1	1.4
Skateboarding	10.3	2.6	1.2	7.5
Soccer	13.3	5.5	4.8	5.0
Softball	12.5	6.5	6.9	5.0
Swimming	53.4	28.6	30.8	0.4
Tennis	9.6	5.1	5.0	6.8
Volleyball	10.8	6.3	6.4	4.0
Workout at club	31.8	17.8	12.9	2.3

Source: National Sporting Goods Association

Outside the home, more women than men participate in fitness programs. According to IHRSA, women accounted for 53% of all health club memberships in 2003, an increase of 130.8% from 1987. Yoga and Tai Chi were introduced to the survey in 2002 and included in the 2003 survey. Total participation was 5.6 million, with women comprising 83.3% of the total. Oregon City may consider women's increasing participation in exercising with equipment, swimming, aerobic exercise, and working out at a club, as potential to market some fitness programming specifically to women.

Older Americans' Recreation and Leisure Activities - Trends and Influences

Leisure Trends' "Retirement in America"[1] (2004) indicates that older Americans' leisure time is increasingly being spent doing physical activities, reading, in educational classes, turning hobbies into investments, utilizing online retail and education websites, partaking in adventure travel, playing electronic games, and attending sporting events.

Table 12: Recreation Activities for Adults 55 and Older (2002)

Activity	Days Per Year	Participants
Fitness walking	100 +	6,515,000
Stretching	100 +	4,107,000
Treadmill exercise	100 +	3,887, 000
Golf	25 +	3,646,000
Freshwater fishing	15 +	1,903,000
R.V. camping	15 +	1,736,000
Lifting free weights	100 +	1,735,000
Bowling	25 +	1,725,000
Day hiking	15 +	1,545,000
Weight/resistance machines	100 +	1,513,000
Stationary cycling	100 +	1,298,000
Running/jogging	100 +	870,000

Source: American Sports Data, Inc.

The information in ***Table 12*** is reported from the Superstudy of Sports Participation conducted by American Sports Data, Inc. in January 2002. Information was gathered by a mail panel resource of 25,000 households with a 58.7% response rate and reprinted by the Sporting Goods Manufacturers Association. This research indicates that adults over the age of 55 are increasingly utilizing fitness equipment for strength and cardio exercise.

These trends may be the result of the fact that for many, retirement is starting earlier than it has in the past. Approximately 70% of the current retired population entered retirement before the age of 65. These new retirees are younger, healthier, and have more money to spend for the services they

[1] Leisure Trends Group, 2004. *Retirement in America.* LeisureTRAK Report. Boulder, CO.

want. Current retirees are more active and mobile; they enjoy dining out, foreign travel, and exercise. This is a trend which will only increase with Baby Boomer retirement. The oldest Boomers have turned 60 years old in 2006, and are about to retire in record numbers. Current retirees' leisure interests are diverse and they are interested in purchasing experiences rather than material things.[2]

Although retired Americans are more active, they are also aging in place. Currently, 65% of retirees still live in the house they did prior to retirement, especially those with high household incomes. 79% of those with incomes over $80,000 a year stay in their current homes when retiring and 56% of those who earn less than $40,000 a year stay in their pre-retirement home. Those who do relocate are looking for smaller homes in high quality communities, often resort communities.
These trends are important to recognize and may explain the changing demands, nationally, from traditional low-cost social services to more active programming for which older residents are willing to pay.[3] It is important to point out that Oregon City needs to recognize this trend and offer additional active programs, rather than social programs. Furthermore, given that this age group does have more disposable income than older retirees, it is going to be increasingly important for the City to continually gauge the varying demands and trends in adult programming.

Declining Participation in Senior Centers

In 1990, Krout, Cutler, and Coward estimated that there were more than 10,000 senior centers serving at least five million older people.[4] Participation in the activities at senior centers has declined in recent years. Approximately 15% of older persons use senior centers (Atchley, 1997). These participants are primarily in the 65-85 age groups with low to middle incomes. According to Hooyman and Kiyak (2002) the reduction in participation is due in part to:

- Lack of interest in the center's activities
- Desire to be with people other than "old" people
- Low proportion of male participants
- Poor health
- Inadequate transportation

Another study by Walker et al. indicated that the most significant predictor of participation in senior center activities was participation in faith-based activities, the next was correlated preference for group size, the third was awareness about how many activities are provided, and lastly was the number of transportation types that were available.[5]

Relevance to Oregon City

These participation findings support the input gained through the Master Plan focus groups, where participants indicated the need for additional programming for active older adults. It was expressed that there is a stigma associated with participating in "Senior Center" activities. Therefore, Oregon City may consider ways of providing active programs and marketing these to the older Baby Boomers.

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[2] Ibid.
[3] Ibid.
[4] Krout, Cutler, Coward. 1990. *Correlates of Senior Center Participation: a national analysis.* The Gerontologist 30: 72-79.
[5] Walker, J. et al. 2004. *Increasing Practitioners' Knowledge of Participation Among Elderly Adults in Senior Activities*. Educational Gerontology 30: 353-366.

Oregon Park and Recreation Agency Trends

It is beneficial for municipal agencies to evaluate the level of service that they are providing to their community by comparing their services to similar and nearby communities. The Oregon Recreation and Park Association, in conjunction with Leisure Vision, conducted a "Parks, Facilities, Staffing, and Budgeting Benchmarking" survey of parks and recreation organizations in the State of Oregon during calendar year 2006. The information from this survey provides the Department with a picture of Oregon City's recreation needs in comparison to other communities.

Methodology and Response

ORPA mailed surveys to over 116 park and recreation organizations throughout the State of Oregon, with a stamped envelope for return and three email reminders to the recipient. A total of 39 organizations completed the survey. The overall response rate was 34%. The survey was intended to gather information about park types and acreage, trail types and mileage, outdoor and indoor recreation facilities, budgeting, cooperative agreements, and funding sources.

Key Findings

Parks

Oregon City is almost exactly in the middle of the range of the population size of those communities that participated in the survey. It appears that Oregon City (258.2) is quite a bit lower than the average (1,006) and median (422) park acres within a single agency or organization's system, which also results in lower than average park numbers per 1000 residents. Yet, of those park acres approximately 60% are developed, which is slightly higher than the average of the other 38 communities.

Trails

In regard to trails, Oregon City is again notably lower in the range of communities that participated. Oregon City manages and maintains approximately six miles of trails, compared the survey average of 19.7 and median of 9.05. However, it may be important to consider that residents are also served by a large number of regional trails that are accessible from the City. Furthermore, Oregon City more closely matches up with the median for the survey for the miles of trail per 1000 residents, which indicates that the City is comparably serving the City's needs, based on the population.

For a summary of the results of benchmarking parks and trails, as provided by the ORPA Parks, Facilities, Staffing, and Budgeting Benchmarking survey, please review the information in Table 13.

Table 13: Benchmarking – Parks and Trails

Parks	Most	Average	Median	Least	Oregon City
Acres in System	10,163	1,006	422	7.08	258.2
Acres Developed	98%	58%	57%	10%	60%
Acres Per 1000 Residents	113.71	16.17	NA	0.55	8.9
Trails (Ranking)	**Most**	**Average**	**Median**	**Least**	**Oregon City**
Total Miles of Trail	157.5	19.7	9.05	0	6
Miles of Trail Per 1000 Residents	4.07	0.62	0.25	0	0.21

Outdoor Facilities

In regard to outdoor facilities, Oregon City has a high number of ball fields per 1000 residents (0.31) compared to the average of those communities with each facility (0.12). The City also provides a significantly higher level of service than the average of those communities with each facility for picnic shelters and playgrounds.

However, the City has opportunities to increase the level of services that it is providing to the community by adding new facilities, such as a leisure swimming pool, an off-leash dog park, a nature center, and an amphitheater.

For a summary of the results of benchmarking outdoor facilities, as provided by the ORPA "Parks, Facilities, Staffing, and Budgeting Benchmarking" survey, please review the information in ***Table 14***.

Table 14: Benchmarking – Outdoor Facilities

Outdoor Facility	Oregon City # of Facilities	Per 1000 Residents (all 39 communities)	Per 1000 Residents (communities with each facility)	Best Practices Communities	Per 1000 Residents Average Oregon City
Baseball fields (60 ft. bases)	1.0	0.2	0.32	1.21	0.03
Baseball fields (90 ft. bases)	9.0	0.05	0.12	0.4	0.31
Basketball courts/ multi-use	4.5	0.16	0.21	0.67	0.16
Soccer fields (standalone)	2.0	0.12	0.21	1	0.07
Soccer fields (overlay)	4.0	0.08	0.18	0.5	0.14
Golf courses (18 hole)	0.0	0.003	0.07	0.13	0.00

Golf courses (9 hole)	0.0	0.0002	0.01	0.01	0.00
Lacrosse fields (standalone)	0.0	0.005	0.15	0.14	0.00
Lacrosse fields (overlay)	0.0	0.02	0.08	0.19	0.00
Equestrian facilities	0.0	0.0004	0.01	0.01	0.00
Miniature golf courses	0.0	0.00	0.00	0.00	0.00
Football fields (standalone)	0.0	0.01	0.08	0.14	0.00
Football fields (overlay)	0.0	0.03	0.08	0.14	0.00
Competitive swimming pools	1.0	0.02	0.07	0.2	0.03
Swimming pools/water parks	1.0	0.04	0.07	0.2	0.03
Beach areas for swimming	1.0	0.05	0.17	0.67	0.03
Access areas for lakes/rivers	4.0	0.08	0.13	0.4	0.14
Volleyball courts (sand)	0.0	0.08	0.12	0.8	0.00
Softball fields (adult fast)	0.0	0.01	0.05	0.1	0.00
Softball fields (adult slow)	0.0	0.11	0.21	1.2	0.00
Softball fields (girls)	0.0	0.07	0.16	0.67	0.00
Tennis courts	7.0	0.15	0.22	0.49	0.24
Picnic shelters	7.0	0.26	0.31	1.67	0.24
Playground	16.0	0.36	0.39	1.03	0.55

Skateboard, roller, In-line	1.0	0.07	0.08	0.49	0.03
Off-leash dog parks	0.0	0.01	0.04	0.09	0.00
Lake/ marinas	1.0	0.01	0.04	0.09	0.00
Nature centers	0.0	0.01	0.04	0.09	0.00
Amphi-theater	0.0	0.01	0.02	0.06	0.00
Disc golf	0.0	0.02	0.04	0.17	0.00

**Highlighted cells indicate types of facilities currently managed by Oregon City*

Indoor Facilities

Based on the survey, Oregon City is quite comparable to the other 38 communities in regard to the types and number of indoor facilities that it provides. It is slightly lower than the average of all the communities for the provision of community/recreation centers, multi-purpose sports complexes, nature centers, equestrian facilities, and teen centers. However, the City is providing a notably higher level of service by the provision of museum/historic facilities and cultural facilities.

Please note that the Pioneer Center was fully counted as a senior center and discounted to count as 0.5 of a recreation center, due to the fact that the primary use of the building is for senior programming.

Table 15: Benchmarking - Indoor Facilities

Indoor Facility	Oregon City # of Facilities	Per 1000 Residents Average (all 39 communities)	Average (Communities with each facility)Per 1000 Residents	Best Practices Communities	Oregon City Averages Per 1000 Residents
Community recreation centers	**0.50**	**0.05**	**0.1**	**0.49**	**0.02**
Aquatic complexes	**1.00**	**0.04**	**0.07**	**0.2**	**0.03**
Museums/ historic facilities	**2.00**	**0.023**	**0.08**	**0.2**	**0.07**
Ice-rink	0.00	0	0	0	0.00

Indoor Facility	Oregon City # of Facilities	Per 1000 Residents Average (all 39 communities)	Average (Communities with each facility)Per 1000 Residents	Best Practices Communities	Oregon City Averages Per 1000 Residents
Multi-purpose sports complex	0.00	0.002	0.02	0.04	0.00
Soccer complexes	0.00	0.01	0.07	0.17	0.00
Senior centers-standalone	**1.00**	**0.03**	**0.06**	**0.17**	**0.03**
Cultural arts facilities	**1.00**	**0.002**	**0.01**	**0.03**	**0.03**
Nature centers	0.00	0.01	0.07	0.2	0.00
Equestrian centers	0.00	0.002	0.03	0.03	0.00
Teen centers	0.00	0.01	0.09	0.2	0.00

**Highlighted cells indicate types of facilities currently managed by Oregon City*

Operating Budgets

Oregon City Parks and Recreation has an operating budget that is somewhat below the average of the 38 communities that participated, but slightly higher than the median. The median budgets may be a more accurate representation of the communities surveyed, as the average may be skewed by any community that has an extremely high or low budget.

Given the fact that Oregon City fell at almost exactly the median for the size of the population that it is serving, this indicates that the budget is quite comparable. Although Oregon City's revenue gained from taxes is slightly lower than the median, this may increase with the development of Beaver Creek, Park Place, and the Cove development. Furthermore, the City may consider seeking out strategies to decrease the budget spent on material costs, which is slightly higher than the median.

Table 16: Benchmarking – Operating Budget

Operating Budgets (Ranking)	Most	Average	Median	Least	Oregon City
Operating Budgets	$55,536,024	$5,477,474	$1,550,000	$3,500	$3,313,892
Staffing Costs	$32,887,720	$3,110,113	$759,656	$42,000	$1,557,119
Materials Costs	$22,456,486	$1,679,015	$472,326	$3,700	$568,465
Operating Budgets (Ranking)	**Most**	**Average**	**Median**	**Least**	**Oregon City**
Annual Revenues (fees and charges)	$9,926,726	$1,126,634	$406,055	$500	$585,800
Annual Revenues (taxes)	$33,856,864	$3,509,816	$959,500	$0	$831,600

C. Community and Stakeholder Input

Findings from Focus Groups

In response to invitations sent to a wide variety of Oregon City residents, organizations, and partners, a total of 40 citizens participated in 2-hour focus groups and an open public meeting the week of September 11, 2006. Participants represented a wide variety of community interests including park and recreation users, parents of children that participate in City programs, concerned residents, business representatives, and partnering organizations. The consultants facilitated the discussion and led the participants through a series of 20 questions to gain input on a broad range of issues about or affecting the City. The following are summaries of participant responses.

Length of residency

It is evident that Oregon City has a high number of long-term residents and these residents have a vested interest and truly care about their community. Nearly 50% of those who participated in the focus groups have lived in Oregon City for over 20 years. Another 13% have lived in the community between 10 and 20 years. However, it appears as though demographics might be changing, with 27% having lived in Oregon City for less than 9 years. Participants included a number of seniors who had raised their families in Oregon City and are now retired there, as well as young adults who were born and raised in Oregon City, who have now brought their families back to the community. The following is the breakdown of the length of residency of the focus group participants:

- 7% <5 years
- 20% 5-9 years
- 13% 10-19 years
- 47% 20+ years
- 13% Not a resident but use programs / facilities

Strengths of Oregon City

The residents of Oregon City feel that recent upgrades, a high number, and well-maintained parks are a very strong aspect of the quality of life provided by the City. Some of the other strengths that

were identified were the dedicated staff members, who work extremely hard to provide quality programs and parks with very limited funding and staffing resources. This dedication is recognized by the public, who describe the City staff as "friendly," "helpful," and state that they "provide great customer service." These limited resources are also stretched by partnering and using volunteers. Without this community support, the Department would not be able to provide the quality services that it is known for.

Oregon City is a community that values its history and natural resources- as it was established as the end of the Oregon Trail and its unique terrace topography. These attributes and the quality of life provided make Oregon City a desirable place to live. It is recognized that change and growth are coming, which leaves the City in a position to address how to best serve its growing population.

Weaknesses of Oregon City that need to be addressed through the Master Plan

Oregon City residents recognize the budgetary limitations of the City, but if resources are to become available they would like to take action to increase the quality and amenities of current facilities. In addition, residents also recognize that limited funding has placed strict limitations on the City to adequately staff the Department.

Participants also feel that some recreation facilities are currently underutilized because they are in need of upgrades such as parking and picnic tables. Participants stated that the City should partner and have more shared-use facilities to more efficiently use resources and provide services. The most commonly mentioned weakness was not in respect to the City, but to the culture of the residents. It was expressed that Oregon City has historically been strongly politically influenced by the "old guard" and that some residents are very adverse to change. This has led to a distrust of the government, which has at times hindered progressive planning.

Satisfaction with current Programs

Participants were asked how satisfied they are with current programs, the rating system was on a scale of 1 through 5, with 1= "Poor," 3= "Good," and 5= "Excellent." Nearly 100% of those in the focus groups responded that their rating of the City's programs were "Good" to "Excellent," with the average rating being 2.6. Many of the participants stated their high level of satisfaction with specific programs and facilities.

Additional Programs

Participants are fairly pleased with the programming that is provided, given the limited resources to provide them. Yet, some suggestions for new programs that would benefit the community include:

- Competitive youth sports (soccer, baseball, football, softball, lacrosse, basketball/volleyball, and swimming programs)
- Youth sports tournaments
- Teen activities (social activities like the Jr. High dances)
- Health, fitness, and wellness programs (yoga, Pilates, aerobics, etc.)
- Active older adult programs (fitness, dancing, etc.)
- Adult continuing education (computer, language, etc.)

One major concern with providing additional programs and activities was the limitations and lack of capacity of current facilities, such as the aging swimming pool and lack of health and fitness resources.

Overall Quality of Existing Parks and Recreation Facilities

It is evident that Oregon City residents feel that there are changes and upgrades that could be made to many of the older recreation buildings to increase the quality and maintenance of current facilities. The average rating was 2.6, with 1 - "Poor," 3 - "Good," and 5 -"Excellent." Some of the general comments about the existing facilities included:

- Many of the older indoor facilities, such as the pool, are not meeting the needs of the community
- Recently, the upgrades to park amenities and maintenance are noticeable and appreciated
- Parking at facilities is an issue of concern

Overall Maintenance of the Department's facilities

Participants were asked how they would rate the overall level of maintenance of the Department's facilities. Survey results show that Oregon City residents recognize the budgetary limitations of the City, yet feel that there are a few changes that could be made to increase the quality of current facilities. For example, residents are very pleased with recent upgrades and maintenance of parks, but feel that some of the indoor facilities are not kept in adequate condition. It was interesting that some members of the focus group were knowledgeable enough about the City to bring up the fact that there is no dedicated funding source for preventative maintenance. Participants' ratings of the existing facilities were still quite high, averaging 2.6.

Municipal Swimming Pool

Participants were strongly in support of building a new aquatic center at a different location, possibly one near a future recreation center and/or the public high school. It was suggested that the City partner with a community organization or the Oregon City School District in order to build and run an aquatic facility. Those who attended the focus groups had specific amenities that they would like to see as part of a new facility, including:

- 25 yard competitive pool
- Therapeutic pool
- Slides, spray pads, wading pool
- Zero depth entry
- New showers and lockers
- Solar heating

Improvements to Existing Facilities

Focus group participants' major concerns, in regard to improvements for facilities, were largely about aging facilities, preventative maintenance, and parking. Examples were provided about past issues with maintenance, need for lighting and security, need for upgrades to park, facility infrastructure, and irrigation or artificial turf for athletic fields.

One of the most prevalent issues discussed was the lack of parking at facilities and parks and the problems that this causes for general access, athletic competitions, and programming capacity. Some of the specific issues discussed for infrastructure replacement included:

- Park restrooms
- Resurfaced pathways

- Increased parking
- New playgrounds
- Addition of picnic tables
- Renovated tennis courts
- New elevator at the Pioneer Center

Underserved Populations in Oregon City

Those who participated in the focus groups felt that there are some areas and groups within the Oregon City community that are underserved. The groups and areas that were identified as such include:

- Teens –teen programs and teen events (high school kids need something like "Teen Scene")
- Toddlers – need will increase with young families entering the community
- Active older adults- lack programming for physical fitness and there is a stigma associated with senior centers
- Adults- have a need for more cultural, fitness, and education programming
- Newly developing areas
    - Singer Creek
    - Caufield
    - Park Place
    - Beaver Creek

New Facilities

Focus group participants feel that a new aquatic center should be the highest priority for the development of new recreation facilities for the City. However, it was also mentioned that the City is lacking indoor facility space, such as a multi-purpose recreation center that could contain components like a gymnasium, fitness area, indoor track, multi-purpose space, and indoor playground.

It was also stated that there is a need for community sports complex with multi-purpose athletic fields to provide for regional tournaments and competitions. Some additional suggestions for outdoor recreation amenities included trails, an off-leash dog park, outdoor amphitheater, more natural areas, an outdoor covered basketball court, and a disc golf course.

Aquatic and Recreation Center Owned and Operated by YMCA

Those who participated in the focus groups feel that there is a strong need for a multi-purpose recreation center. However, they expressed some concern about the public's perception of YMCA's as a faith-based organization. It was suggested that the City potentially use a similar structure, with another organization such as the community college, school district, private fitness organization, or the Boys and Girls Club of America to operate a facility built and owned by the city. Some other suggested models to use included the City of Astoria and the North Clackamas Recreation District as partners in building a facility in exchange for resident usage.

No matter who the partnering organization may be, it was strongly stated that a new aquatic and recreation center would need to be priced like a public facility, so that it was accessible to everyone. A few participants expressed concern about the possibility of this facility competing with current providers, as well as the City potentially losing out on revenue opportunities by allowing another organization to run the facility.

Programs to Be Eliminated

When participants were asked what programs should be eliminated, the respondents consistently answered "none." It is evident that residents are pleased with the programs and activities that are being provided, and would like to see these expanded. The only mention of programs and facilities to eliminate were in regard to the pool, but it was expressed that most community members would want the current facility replaced with a new one.

Overall Quality of Customer Service

When questioned about the opinion of the customer service provided by the City, attendees expressed that they are very pleased and think highly of the staff and the jobs that they are doing. Again, nearly 100% of those participating rated customer service as "Good" to "Excellent," with the average rating being 2.5. Some of the specific input provided was that the City and staff:

- Are very helpful and responsive
- Are doing a great job with limited resources
- Need to increase collaborative efforts with other government and community organizations

Effectiveness of the City in Seeking Feedback

The focus group participants provided a positive response about the effectiveness of the City in seeking feedback. They stated that these efforts have greatly improved in recent years and that staff has been very good about seeking input from program and facility users. The average rating was very high at 2.8, utilizing the same rating scale as previous questions.

Community Support for Tax Increase or Bond

When posed with the question about community support for a tax increase, there was a mixed response with a high amount of concern. The majority of participants said that they would NOT support a bond referendum. This was largely due to a distrust of the government, based on historical events with the firehouse. Accountability is very important to the community and the City needs to gain public support and credibility before a tax increase or bond issue would pass.

Yet, some participants said that they would support a bond issue if it was done in the "right way," with a positive message and if the community would be involved in the specifics of where the money was being allocated, the amount, timeframe for the project, and if it had universal appeal for the community. This process would need to include a lot of public information and involvement to gain support. It was recommended that in the future the City work to mobilize younger new residents to provide support for parks and recreation development and maintenance.

Key Partners and Stakeholders

Participants of the focus groups were quite cognizant of the budgetary constraints of the City. Therefore, they were very supportive of collaborative efforts to provide park and recreation services to the community. Some of consistently mentioned groups and organizations for partnerships included:

- YMCA
- Boys and Girls Club of America
- School districts
- Clackamas Community College
- Private sports and fitness groups

- Local arts commission
- Clackamas County Tourism Development Council
- Local businesses and corporate sponsors

Key Issues and Values
When posed with the question about the key or "sensitive" issues that should be considered in this master plan, there were very few mentioned that had not been brought up from previous questions. This may illustrate that Oregon City is a fairly small community, where issues are widely known and discussed. Some of these included the City's changing demographics, where it's apparent that recently and in the future younger residents have and will move to Oregon City. This is a trend that many want to promote, in order to increase development and the tax base.

However, there is concern that there are discrepancies about what new and old residents want to support and fund through the City. The historically conservative resident base, as well as restrictions on funding sources (SDC's and urban growth areas) has resulted in difficulties in getting funding and support for park and recreation facilities, operations, and maintenance. This tied with a high percentage of non-taxable land has been very limiting for the Department. This Master Plan needs to address identifying and educating the public about park and recreation funding sources.

Priorities for the Next 10 Years
Although many of the focus group participants were there to voice their concern about specific issues and programs, some common issues were identified to be taken into consideration or addressed in the Master Plan. Some of these include the following issues:

- Addressing the needs of the young families to attract and keep residents
- Funding additional staff, operations, and maintenance
    - Implementing maintenance utility fees
- Establishing more partnerships to stretch funding
- Addressing development land requirements
    - Changing SDC use requirements
- Taking action to renovate or build a pool
- Upgrading infrastructures of parks and facilities
- Providing for accessibility and walkability of the community;
- Providing a broad range of facilities and activities
- Building a multipurpose sports complex
- Creating or joining a special recreation district

D. Statistically Valid Survey

Introduction/Methodology
The City of Oregon City conducted a Community Attitude and Interest Survey during December of 2006 and January of 2007 to help establish priorities for the future improvement of parks and recreation facilities, programs and services within the community. The survey was designed to obtain statistically valid results from households throughout the City of Oregon City. The survey was administered by a combination of mail and phone.

A survey firm, Leisure Vision, worked extensively with the City of Oregon City officials and members of the GreenPlay, LLC consultant team in the development of the survey questionnaire. This work allowed the survey to be tailored to issues of strategic importance to effectively plan the future system.

In December 2006, surveys were mailed to a random sample of 1,500 households in Oregon City. Approximately three days after the surveys were mailed each household that received a survey also received an electronic voice message encouraging them to complete the survey. In addition, about two weeks after the surveys were mailed Leisure Vision began contacting households by phone either to encourage completion of the mailed survey or to administer the survey by phone.

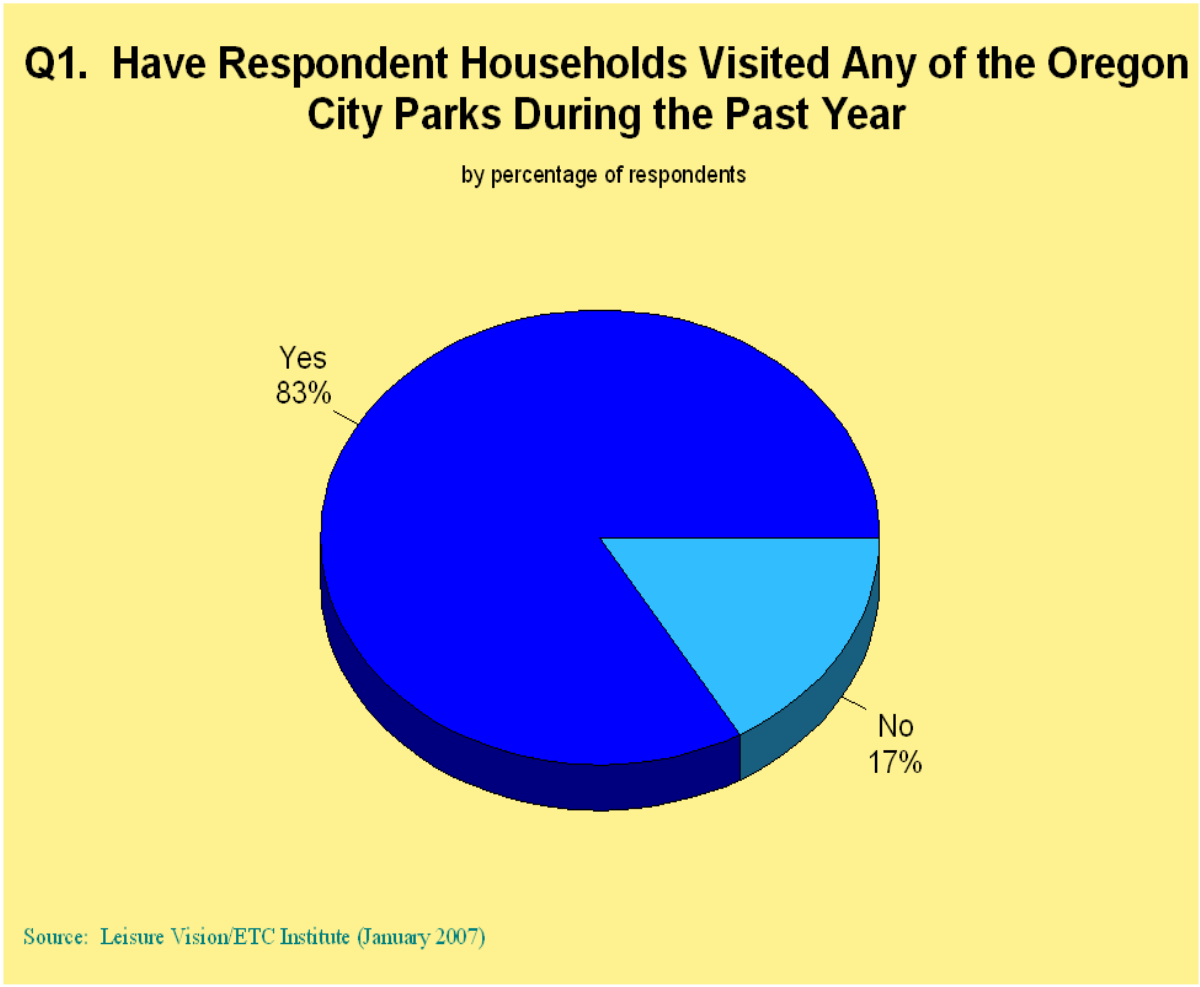
The goal was to obtain a total of at least 300 completed surveys. This goal was far exceeded, with a total of 400 surveys completed. The results of the random sample of 400 households have a 95% level of confidence with a precision of at least +/- 5%.

The following pages summarize major survey findings.

Visitation of Parks during the Past Year

Respondents were asked to indicate if they or members of their household have visited any parks in Oregon City during the past year. The following summarizes key findings:

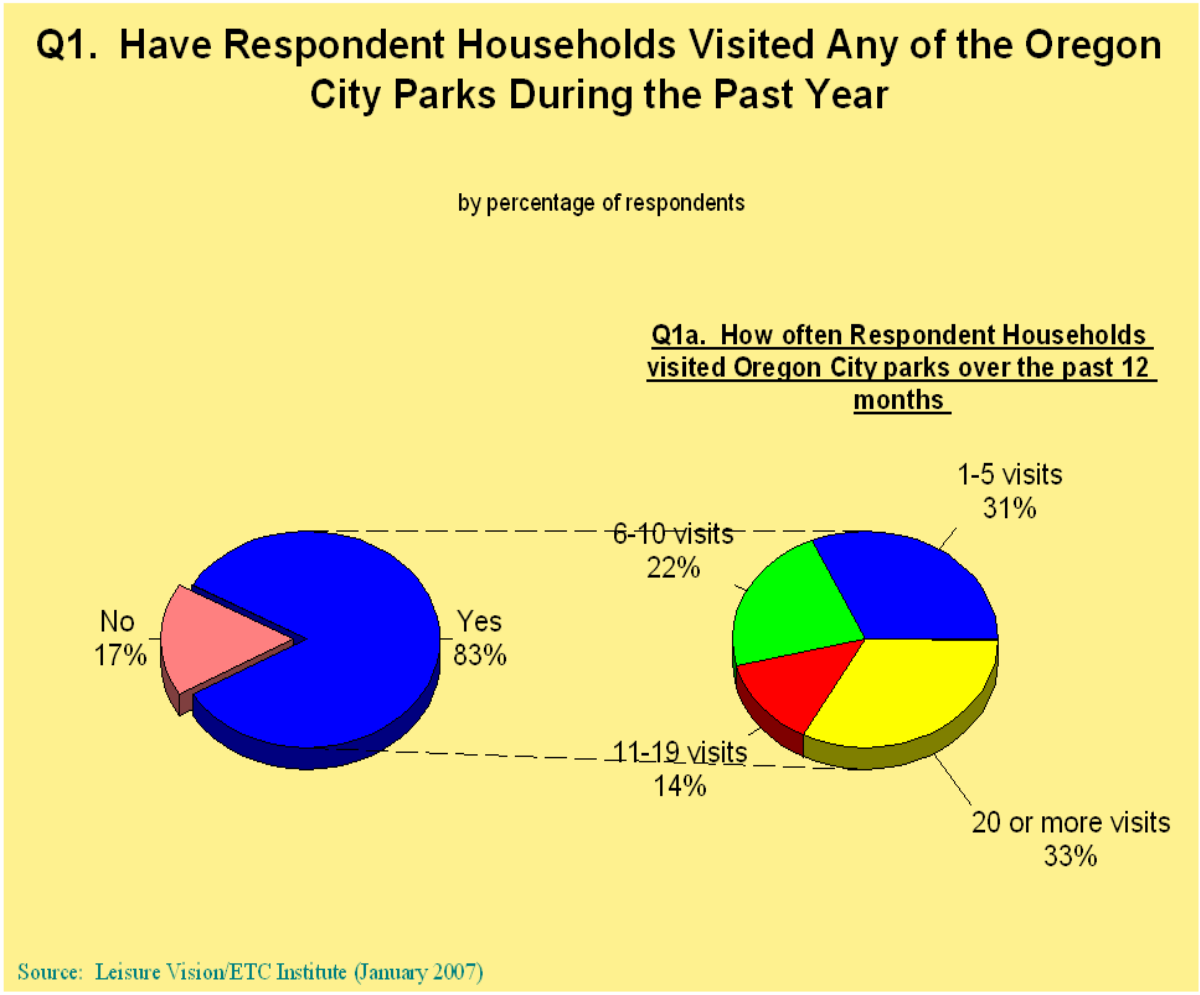
Eighty-three percent of respondent households have visited Oregon City parks during the past year.



Frequency of Parks Visited During the Past Year

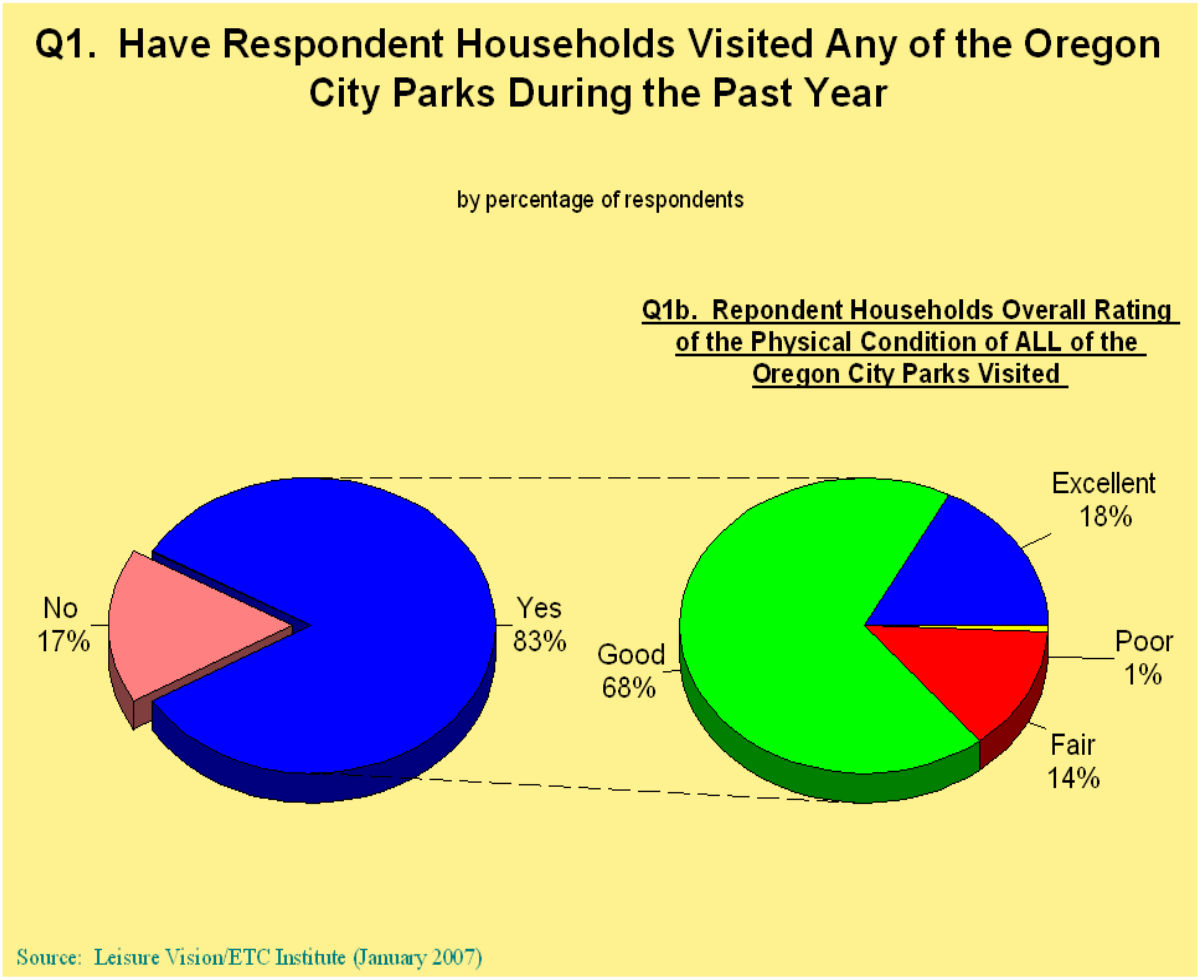
Respondents were asked to indicate approximately how often they, or members of their household, have visited any Oregon City parks during the past year. The following summarizes key findings:

Thirty-three percent of respondent households have visited Oregon City parks 20 or more times during the past year. Thirty-one percent have made one to five visits and 22% have made six to 10 visits to Oregon City parks. Fourteen percent have made 11-19 visits.



Overall Rating of the Conditions of Oregon City Parks
Respondents who visited Oregon City parks were asked to rate the conditions of the parks. The following summarizes key findings:

Eighteen percent of respondent households rated the conditions of the parks as excellent and an additional 68% rated the conditions as good. Only 14% rated the conditions as fair and 1% rated the conditions as poor.



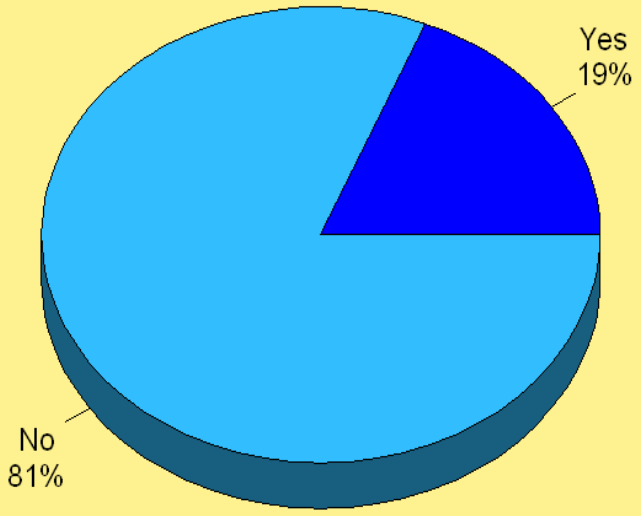
Participation in Oregon City Programs

Respondents were asked if they or members of their household have participated in any recreation programs offered by the City of Oregon City during the past 12 months. The following summarizes key findings:

Nineteen percent of respondent households have participated in programs offered by the City of Oregon City during the past 12 months.

Q2. If Respondent Households Have Participated in Any Recreation Programs Offered by the Oregon City Parks and Recreation Department During the Past 12 Months

by percentage of respondents



Source: Leisure Vision/ETC Institute (January 2007)

Participation in Different Recreation Programs

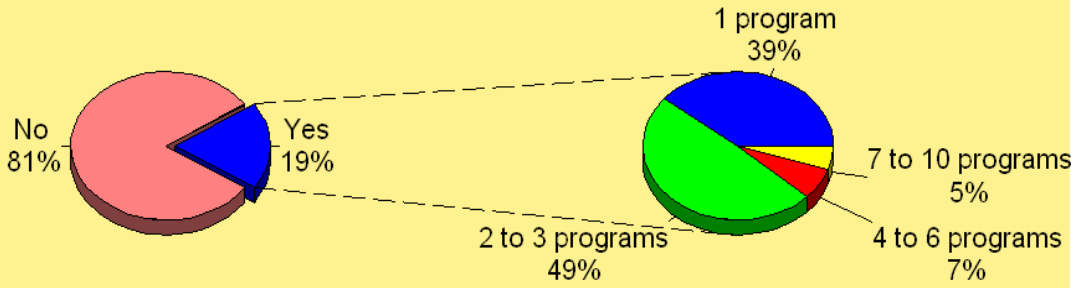
Respondent households that have participated in City of Oregon City recreation programs during the past 12 months were asked to indicate how many different programs they have participated in during that time. The following summarizes key findings:

Of the 19% of respondent households that have participated in Oregon City programs during the past 12 months, 61% have participated in at least two or more programs. Forty-nine percent of households have participated in two to three programs, with seven percent participating in four to six programs and five percent participating in seven to ten programs.

Q2. Have Respondent Households Participate in Any Recreation Programs Offered by Oregon City During the Past 12 Months

by percentage of respondents

Q4a. Number of Different City of Oregon City Recreation Programs Respondents Have Participated in Over the Past 12 Months

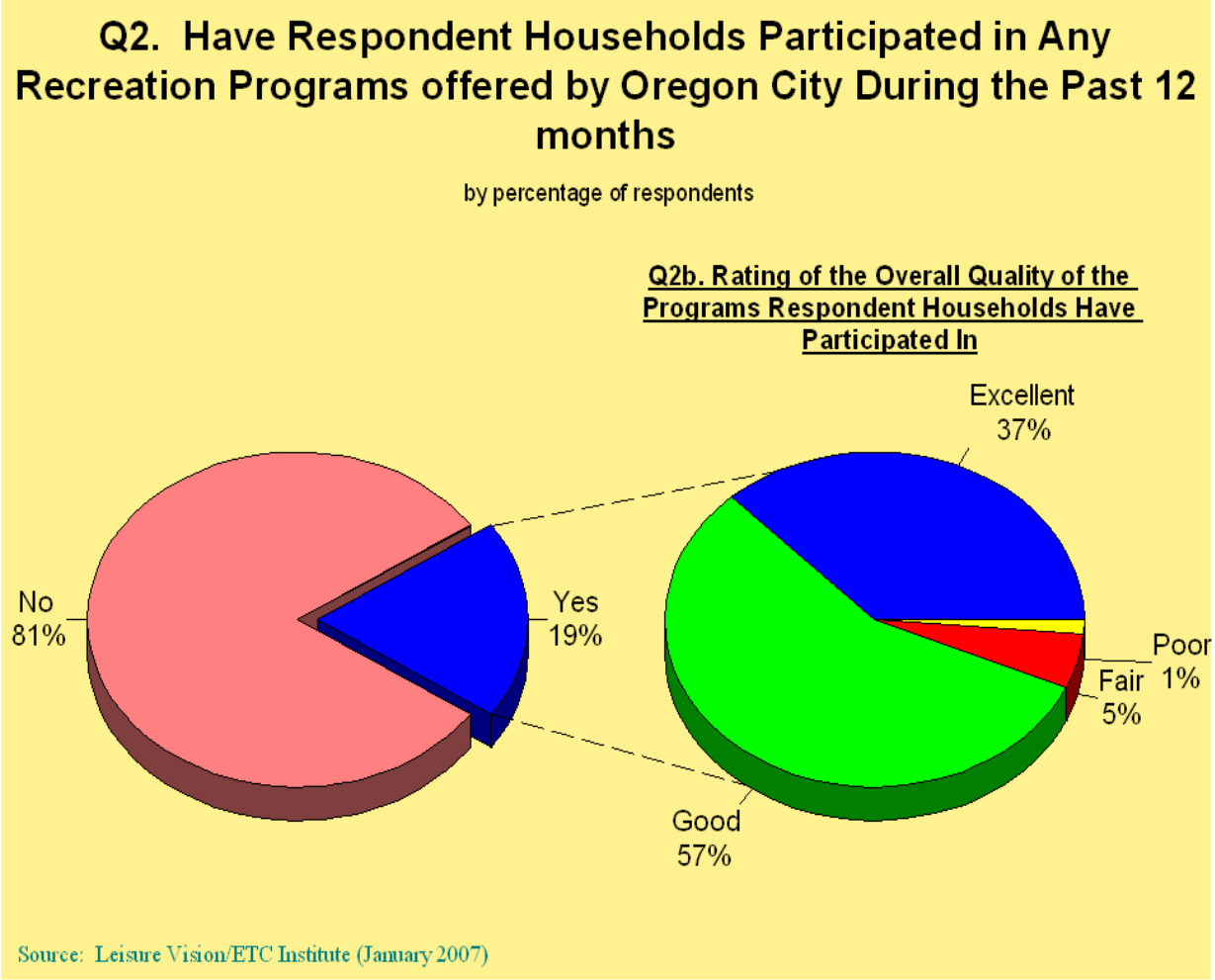


Source: Leisure Vision/ETC Institute (January 2007)

Quality of Recreation Programs

Respondent households that have participated in City of Oregon City recreation programs during the past 12 months were asked to rate the quality of the programs they have participated in. The following summarizes key findings:

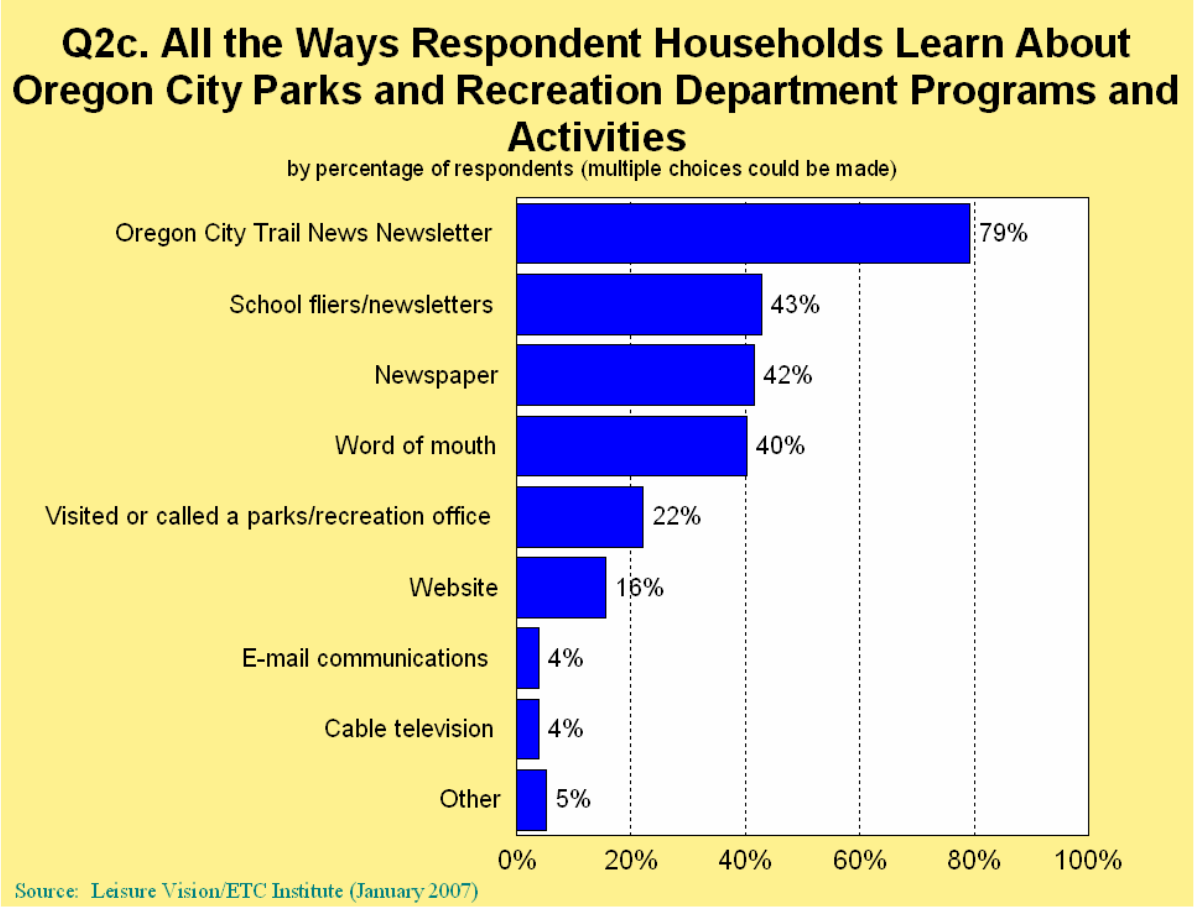
Of the 19% of respondent households that have participated in City of Oregon City programs during the past 12 months, 94% rated the programs as excellent (37%) and good (57%). In addition, 5% of respondents rated the programs as fair, and 1% rated them as poor.



Ways Respondents Learn About Programs and Activities

From a list of eight options, respondents were asked to indicate all of the ways they learn about City of Oregon City programs and activities. The following summarizes key findings:

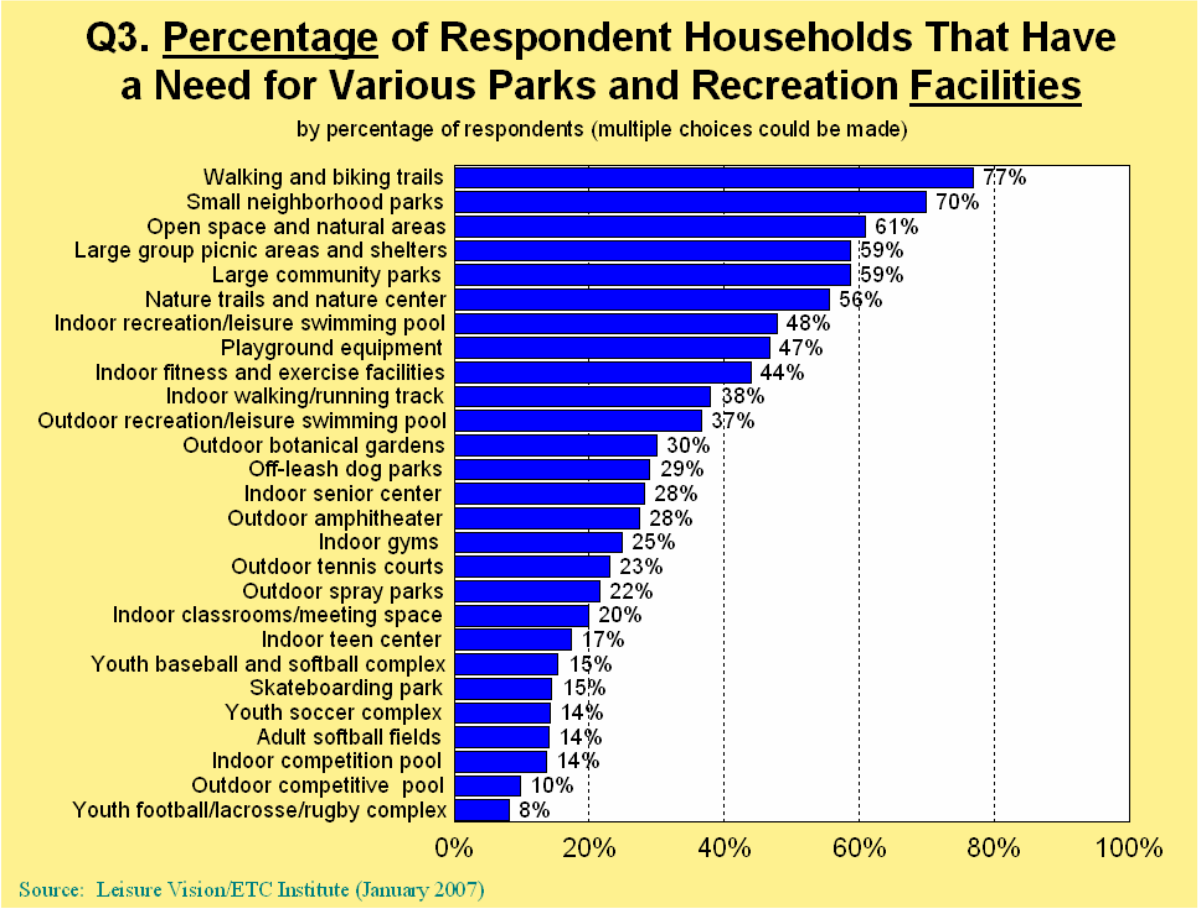
The Oregon City Trail Newsletter (79%) is the most frequently mentioned way that respondents learn about City of Oregon City programs and activities. The other most frequently mentioned ways that respondents learn about City of Oregon City programs and activities include: school fliers and newsletters (43%), newspaper (42%), and word of mouth (40%).



Need for Parks and Recreation Facilities

From a list of 27 various parks and recreation facilities, respondents were asked to indicate all of the ones that they and members of their household have a need for. The following summarizes key findings:

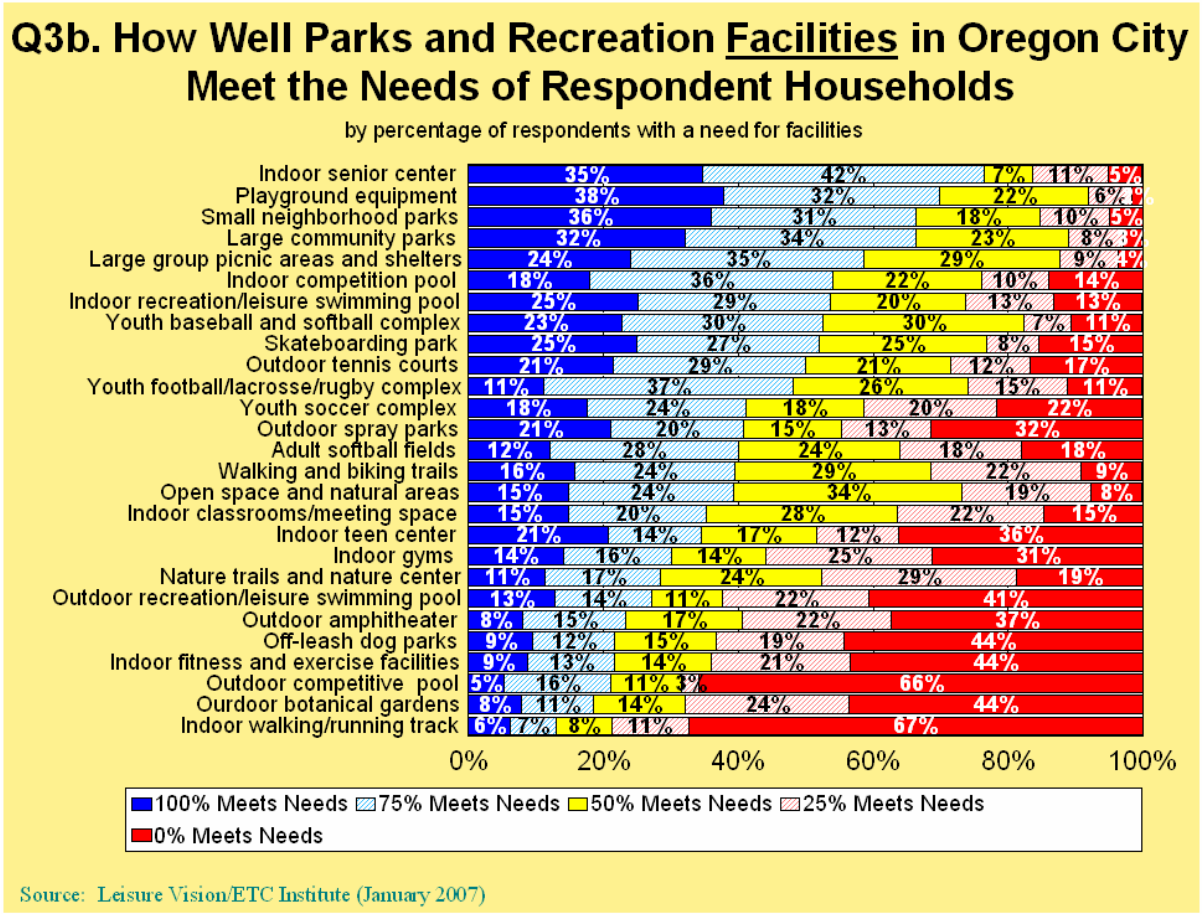
There are six parks and recreation facilities that at least 50% of respondent households have a need for: walking and biking trails (77%), small neighborhood parks (70%), open space and natural areas (61%), large group picnic areas and shelters (59%), large community parks (59%), and nature trails and nature center (56%).



How Well Parks and Recreation Facilities Meet Needs

From the list of 27 parks and recreation facilities, respondent households that have a need for facilities were asked to indicate how well these types of facilities in the City of Oregon City meet their needs. The following summarizes key findings:

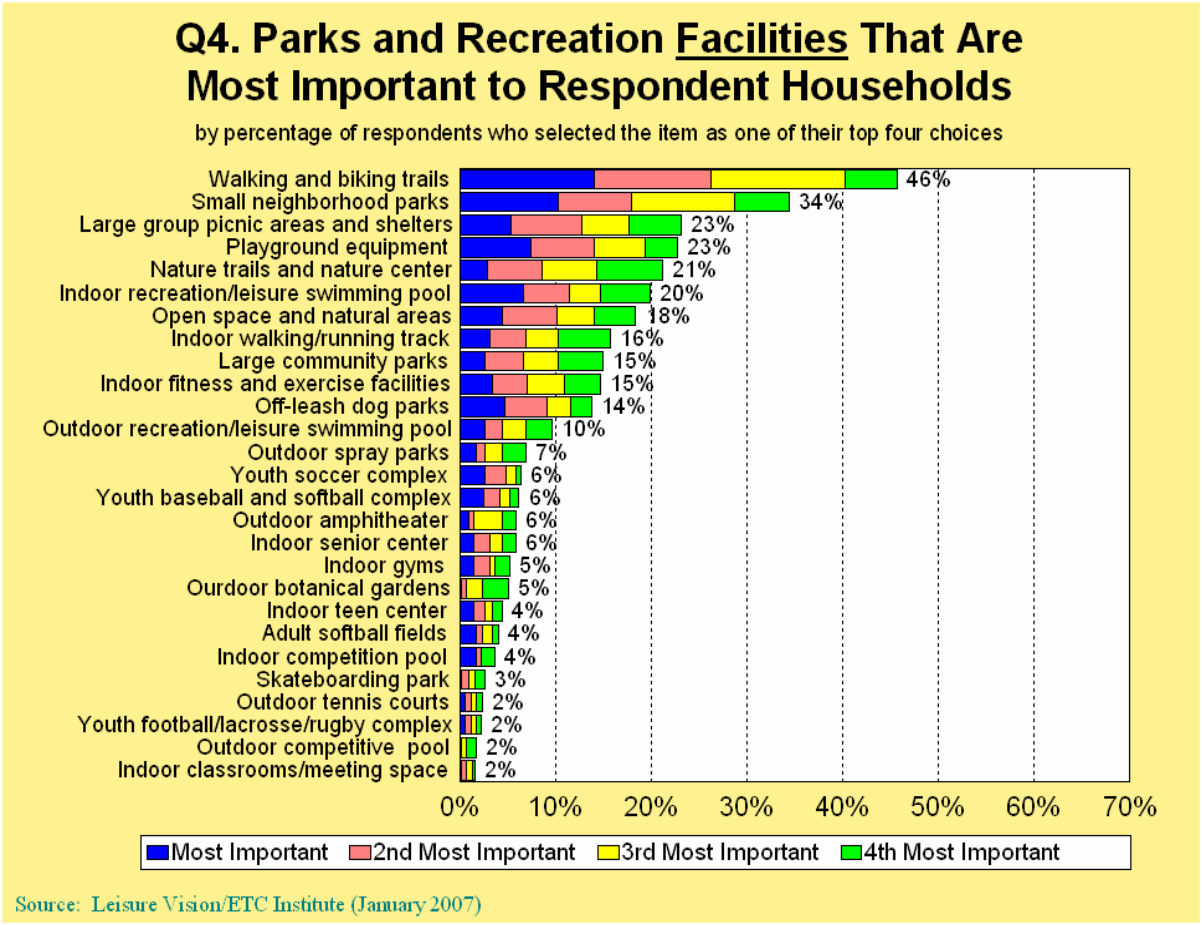
Of the facilities that respondent households have a need for, there are only four that completely meet the need of over 30% of respondent households: indoor senior center (35%), playground equipment (38%), small neighborhood parks (36%), and large community parks (32%).



Most Important Parks and Recreation Facilities

From the list of 27 parks and recreation facilities, respondents were asked to select the four facilities that are most important to their household. The following summarizes key findings:

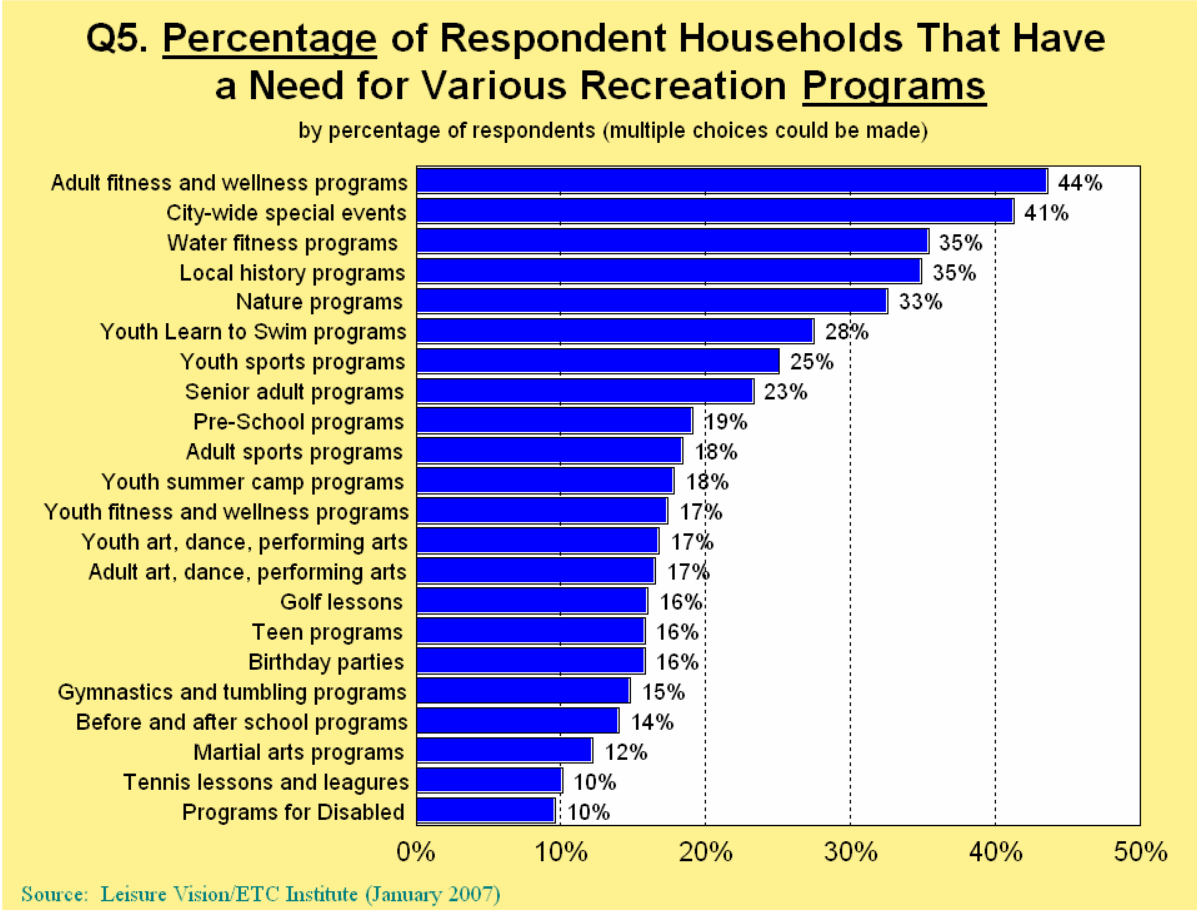
Based on the sum of their top four choices, the facilities that respondents rated as the most important are: walking and biking trails (46%), small neighborhood parks (34%), large group picnic areas and shelters (23%), and playground equipment (23%). It should also be noted that walking and biking trails had the highest percentage of respondents select it as the most important facility.



Need for Recreation Programs

From a list of 22 recreation programs, respondents were asked to indicate all of the ones that they and members of their household have a need for. The following summarizes key findings:

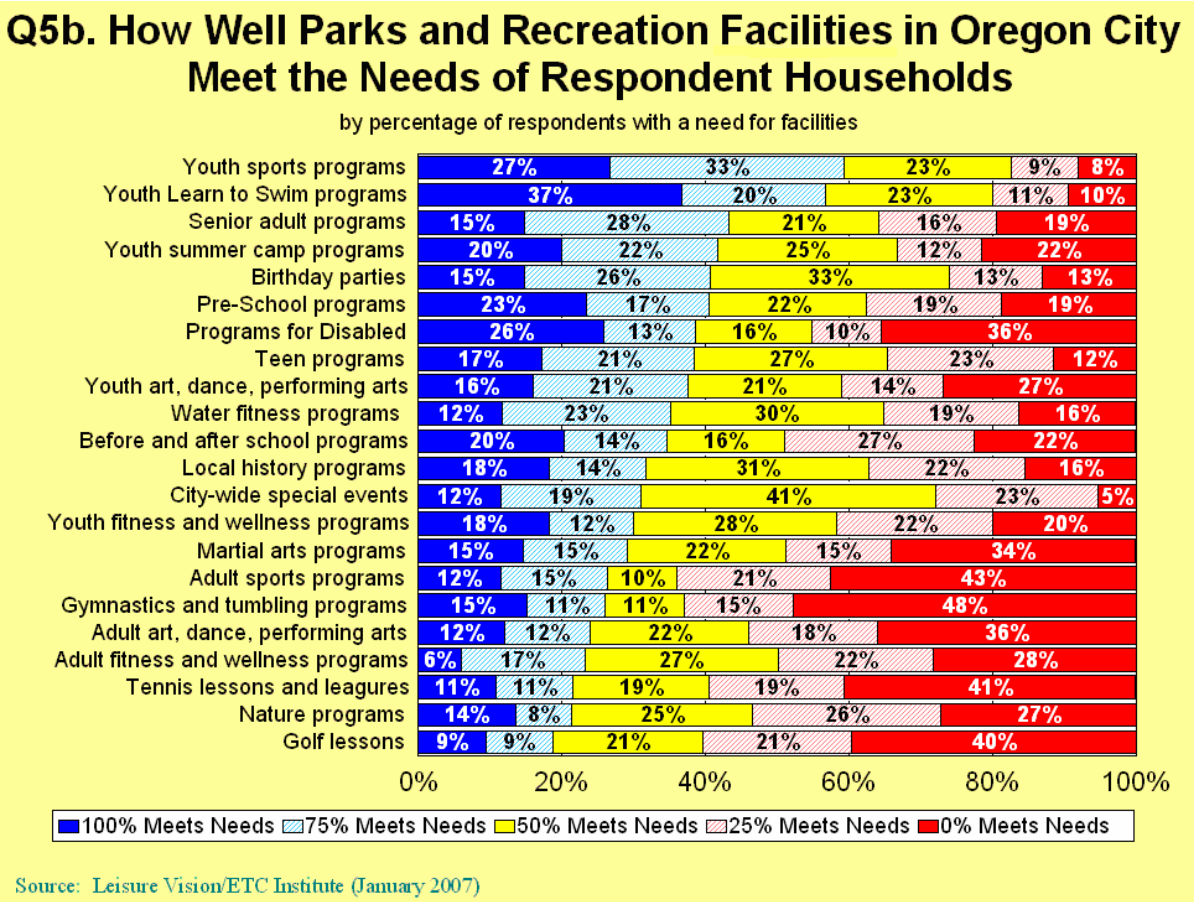
There are two recreation programs that over 40% of respondent households have a need for: adult fitness and wellness programs (44%) and citywide special events (41%).



How Well Recreation Programs Meet Needs

From the list of 22 recreation program, respondent households that have a need for programs were asked to indicate how well those programs meet their needs. The following summarizes key findings:

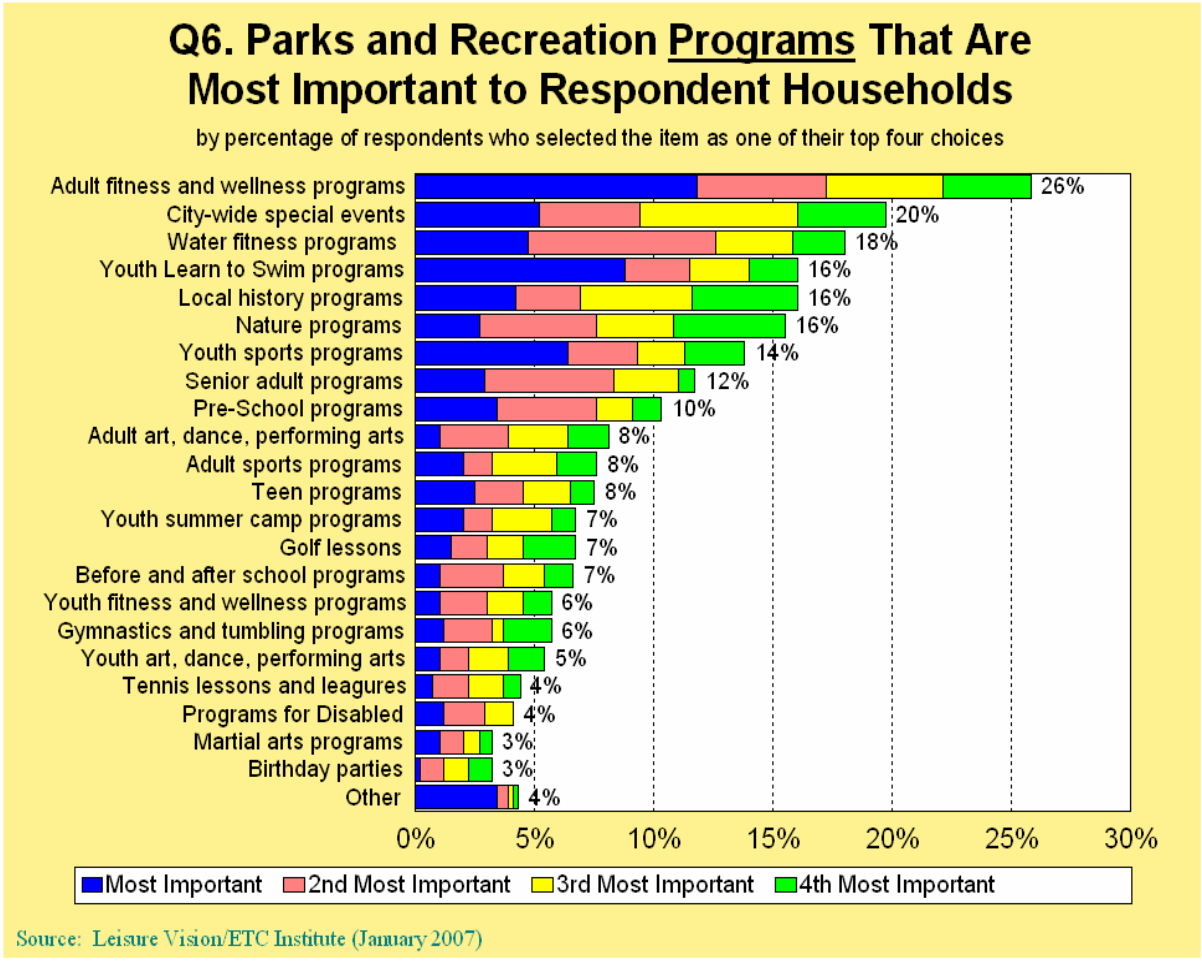
Of the programs that respondent households have a need for, there is only one that completely meets the needs of over 30% of respondent households: youth learn to swim programs (37%).



Most Important Recreation Programs

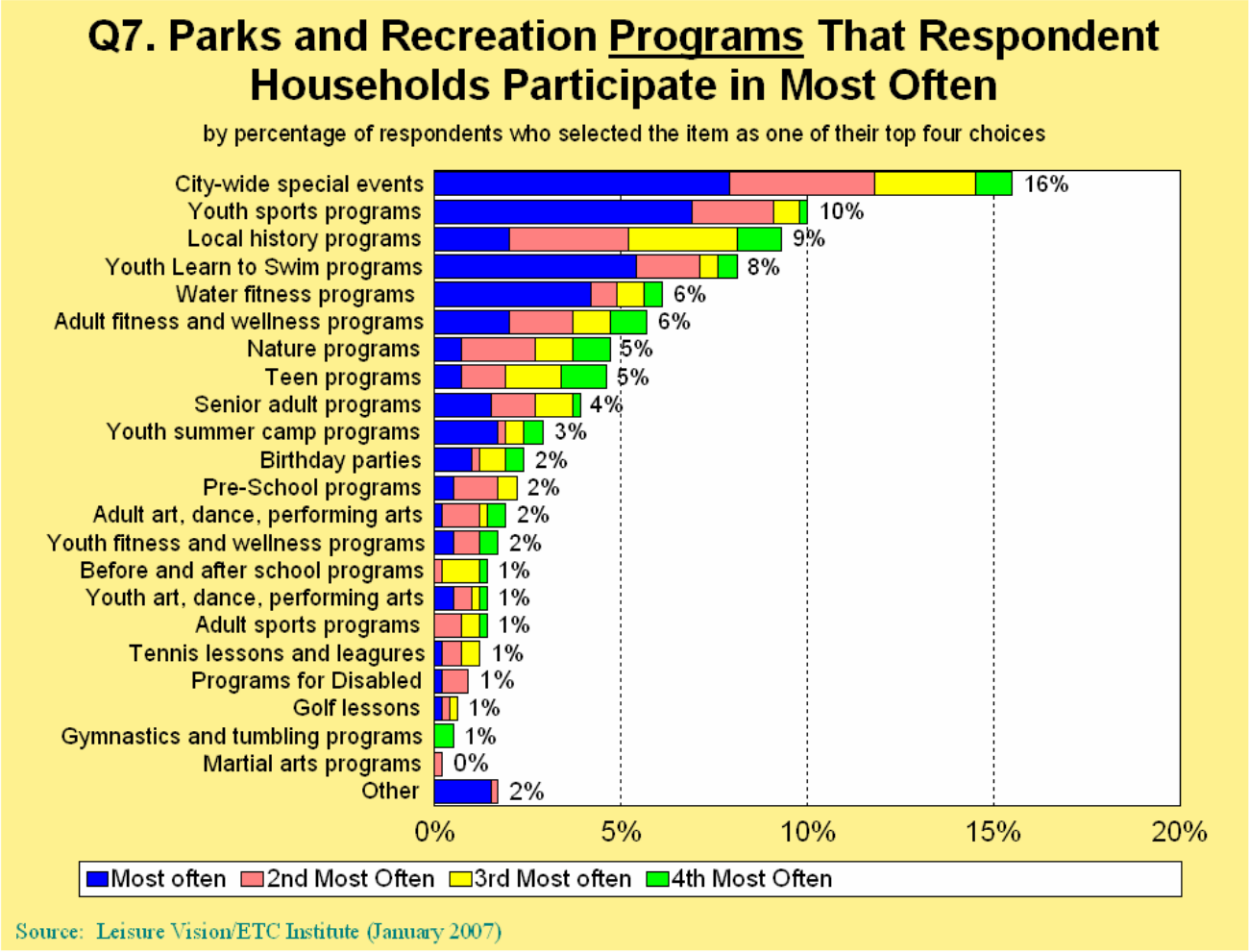
From the list of 22 recreation programs, respondents were asked to select the four that are most important to their household. The following summarizes key findings:

Based on the sum of their top four choices, the programs that respondents rated as the most important are: adult fitness and wellness programs (26%), citywide special events (20%), and water fitness programs (18%). It should also be noted that adult fitness and wellness programs had the highest percentage of respondents select it as the most important program.



Programs Respondents Currently Participate in Most Often in Oregon City Facilities
From the list of 22 recreation programs, respondents were asked to select the four that their household currently participates in most often at City of Oregon City facilities. The following summarizes key findings:

Based on the sum of their top four choices, the programs that respondent households currently participate in most often at City of Oregon City facilities are: citywide special events (16%), youth sports programs (10%), local history programs (9%), and youth learn to swim programs (8%). It should also be noted that citywide special events had the highest percentage of respondents select it as the program they currently participate in most often at City of Oregon City facilities.



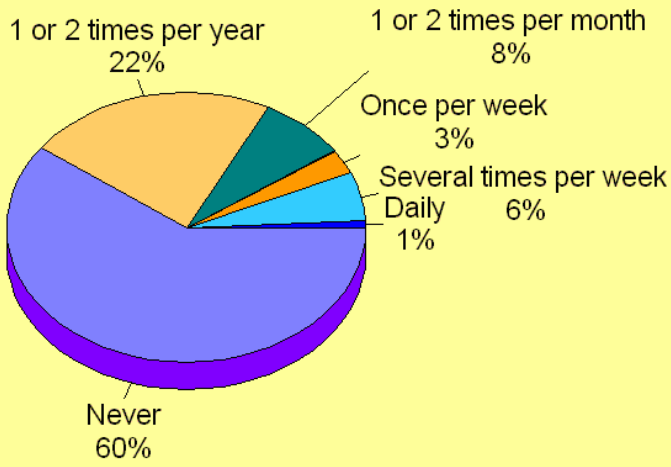
Current Usage of Oregon City Indoor Pool

Respondents were asked to indicate how often they and members of their household had visited the current Oregon City indoor swimming pool over the past 12 months. The following summarizes key findings:

60% of households have not used the indoor swimming pool over the past 12 months. Twenty-two percent of households have used the indoor pool one or two times per year with an additional eight percent using it one or two times per month. Ten percent of households use the indoor pool at least once per week.

Q8. How Often Respondent Households Use the Current Oregon City INDOOR pool

by percentage of respondents

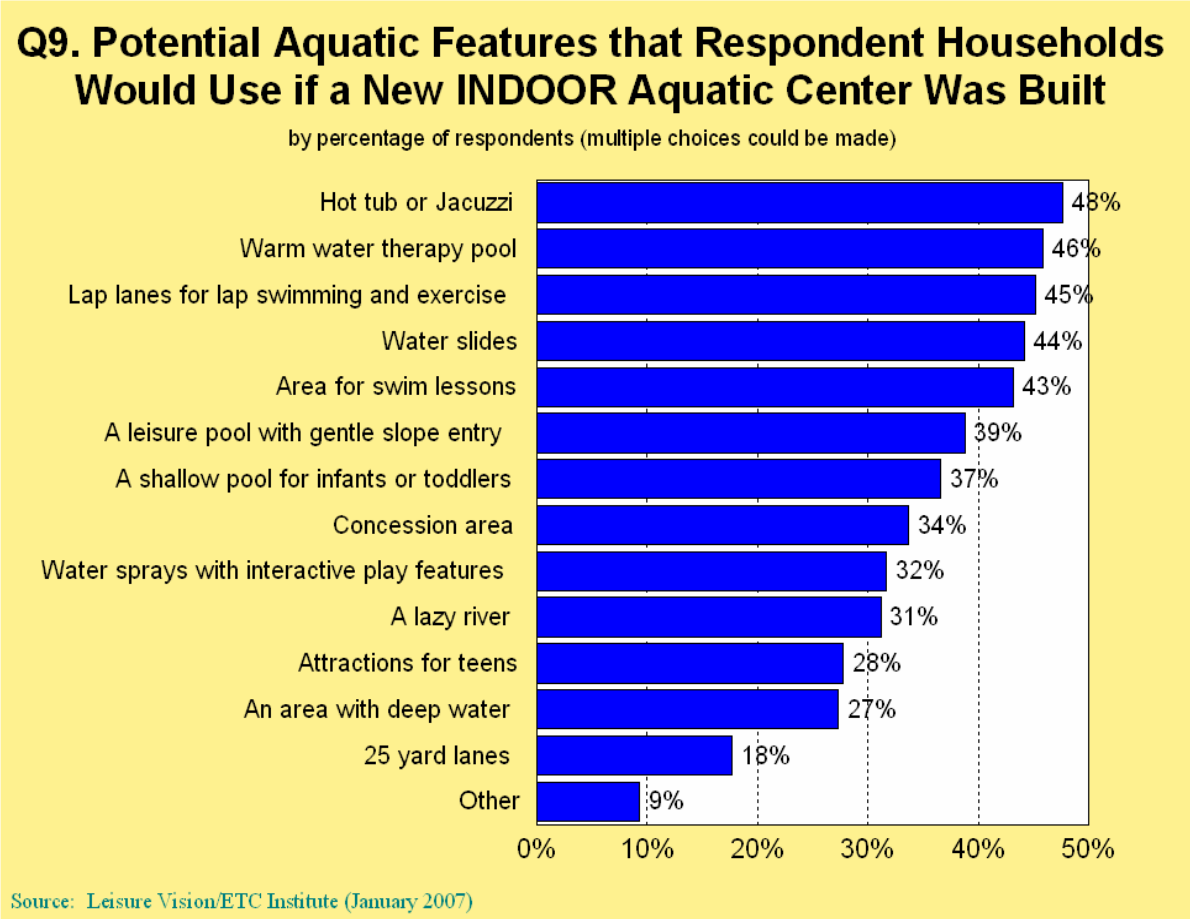


Source: Leisure Vision/ETC Institute (January 2007)

Potential New Indoor Aquatic Features at a New Indoor Aquatic Center

From the list of 13 new indoor aquatic features that could be developed at a new indoor aquatic center in Oregon City, respondents were asked to indicate all the features that they and members of their household would use. The following summarizes key findings:

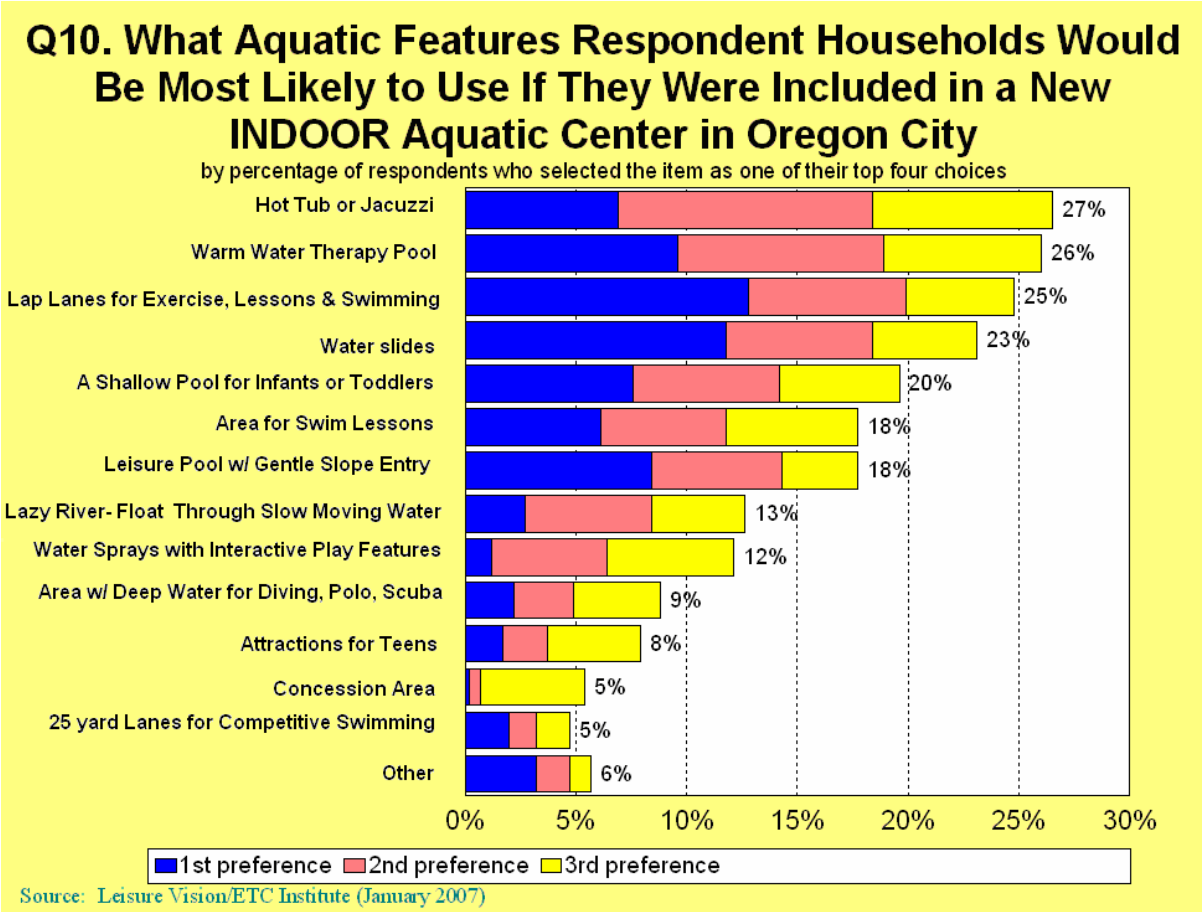
There were five different potential aquatic features that over 40% of respondents indicated they would use: hot tub or Jacuzzi (48%), warm water therapy pool (46%), lap lanes for lap swimming and exercise (45%), water slides (44%), and an area for swim lessons (43%).



Most Important Aquatic Features

From the list of 13 new indoor aquatic features that could be developed at a new indoor aquatic center in Oregon City, respondents were asked to indicate the three features that they and members of their household would use the most. The following summarizes key findings:

Based on the sum of their top three choices, the aquatic features that respondents would use the most are: hot tub or Jacuzzi (27%), warm water therapy pool (26%), lap lanes for lap swimming and exercise (25%), and water slides (23%). It should also be noted that lap lanes for lap swimming and exercise had the highest percentage of respondents select it as the aquatic feature they would most likely use.



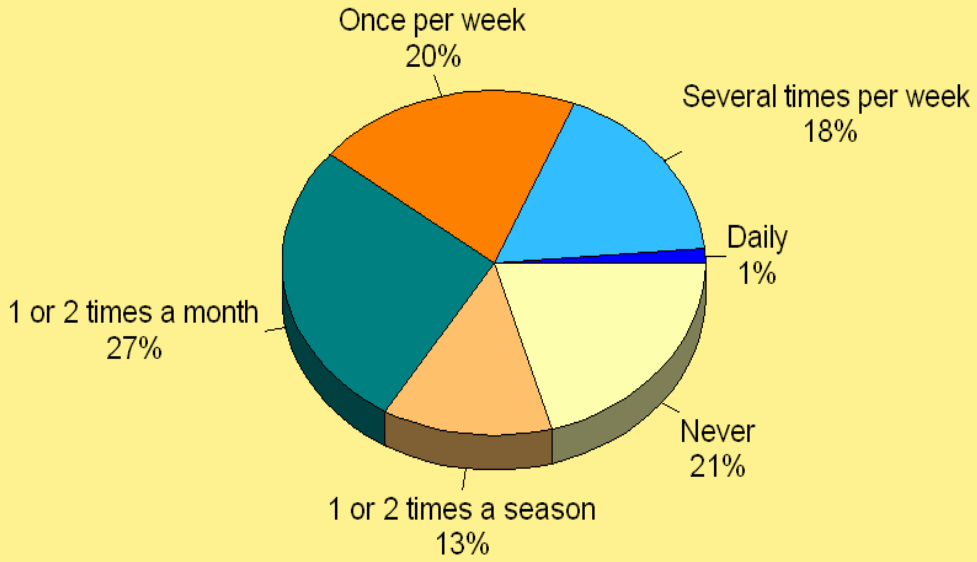
Potential Usage of a New Indoor Aquatic Center

Respondent households were asked how often they and members of their household would use a new indoor aquatic center in the City of Oregon City if it had the types of aquatic features most important to members of their household. The following summarizes key findings:

Seventy-nine percent of households indicated they would use a new indoor aquatic center if it had the features most important to their households. Thirty-nine percent of households would use the indoor aquatic center at least weekly, with twenty percent indicating they would use it once per week, eighteen percent several times per week, and one percent daily.

Q11. How Often Respondent Household Would Use the Aquatic Center Each Season If Oregon City Developed a New Aquatic Center and It Had the Types of Features Most Important to Households Members

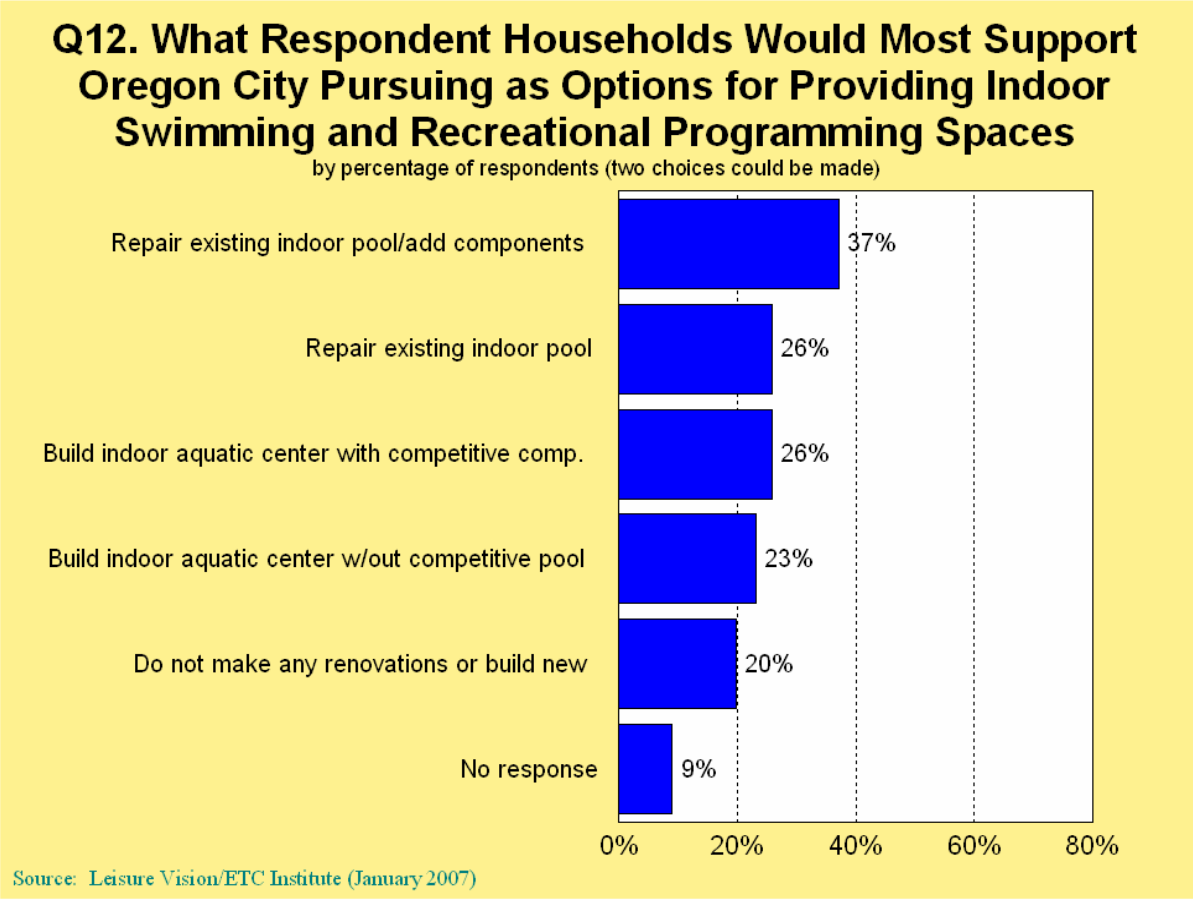
by percentage of respondents



Source: Leisure Vision/ETC Institute (January 2007)

Options Oregon City Would Support Regarding Providing Indoor Aquatics
Respondents were asked to indicate which two of five optional actions the City of Oregon City should take regarding indoor aquatics in the community. The following summarizes key findings:

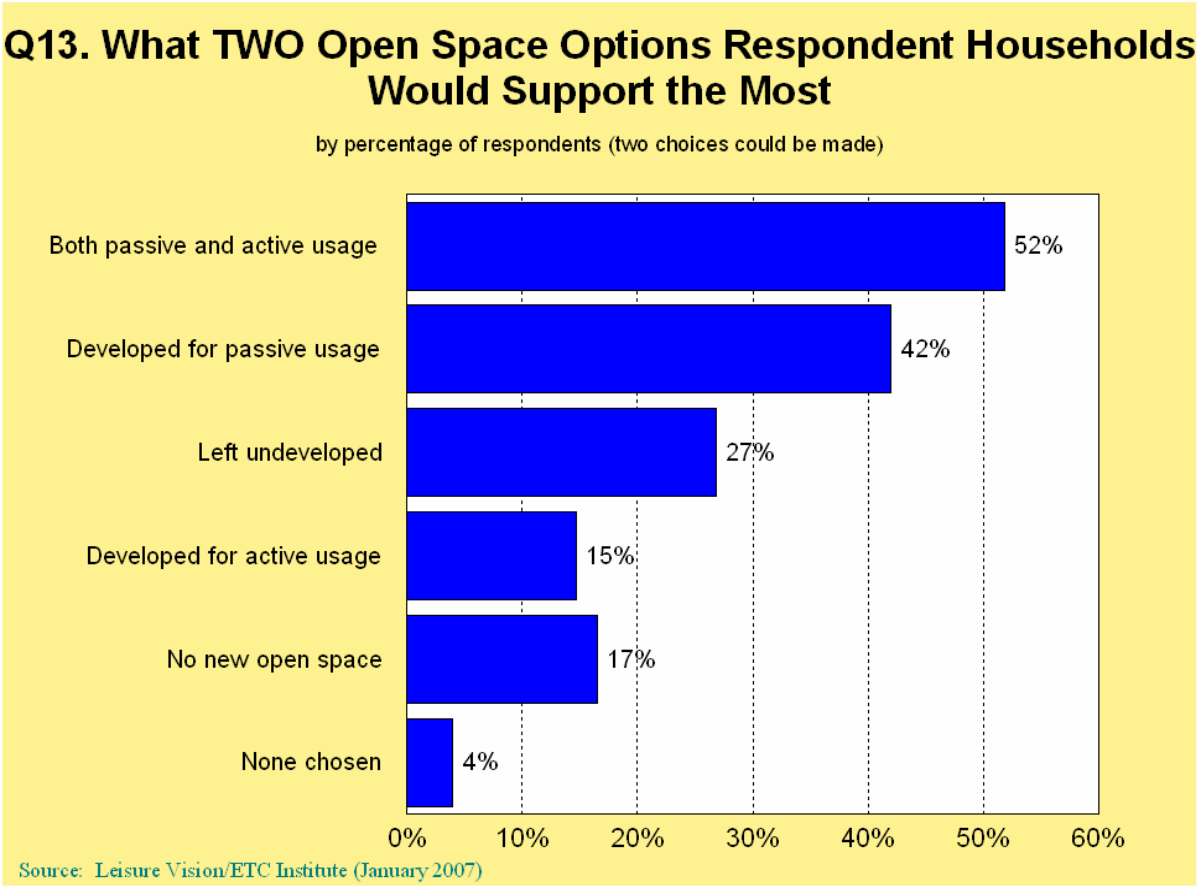
Thirty-seven percent of respondents indicated the City should repair the existing pool and add the additional aquatic components that are of highest priority to their household at an estimated cost of $3 million. An equal percentage of respondents (26%) favored either repairing the existing indoor pool at an estimated cost of $1.4 million or building a new indoor aquatic center with leisure and competitive components at an estimated cost of $8.8 million. In addition, 23% of respondents favored building a new indoor aquatic center with leisure components and no competitive pool at an estimated cost of $7.5 million. 20% of respondents indicated that the City should not make any renovations to the existing pool or build a new aquatic center and 9% did not response.



Options Oregon City Should Pursue Regarding Open Space

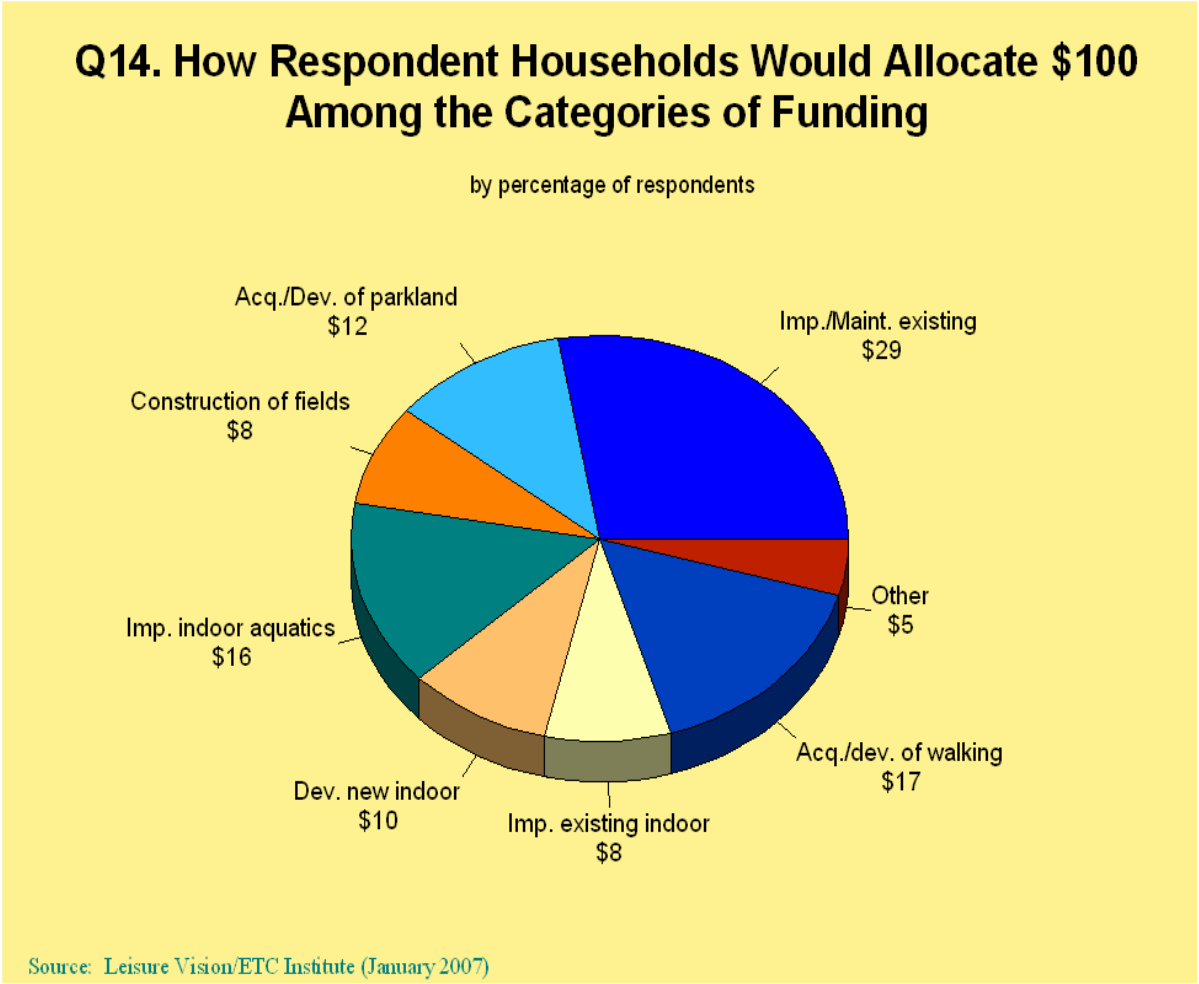
From a list of five options, respondents were asked to indicate the two options they would most support regarding the acquisition and development of open space. The following summarizes key findings:

Open space should be acquired and developed for both passive and active usages (52%) was the option that was supported by the highest percentage of respondents based on a sum of their two choices. Forty-two percent of respondents supported open space being acquired and developed only for passive usage based on a sum of their two choices, and 27% supported open space being acquired and left undeveloped for future generations. 17% of respondents did not favor acquiring open space and 4% did not choose any response.



Allocation of $100 for Parks and Recreation Categories of Funding
From a list of eight options, respondents were asked to indicate how they would allocate an additional $100, if it was available to fund various parks and recreation improvements. The following summarizes key findings:

Respondents indicated they would allocate $29 out of an additional $100 to improvements and maintenance of existing parks, playgrounds, and recreation facilities. Other categories of funding respondents would allocate money to include: acquisition/development of walking and biking trails ($17), acquisition/development of parkland ($12), improvements to indoor aquatic facilities ($16), development of new indoor recreation, fitness, and sports facilities ($10), construction of new game fields ($8), improvements to existing indoor recreation, fitness, and sports facilities ($8), and other ($5).



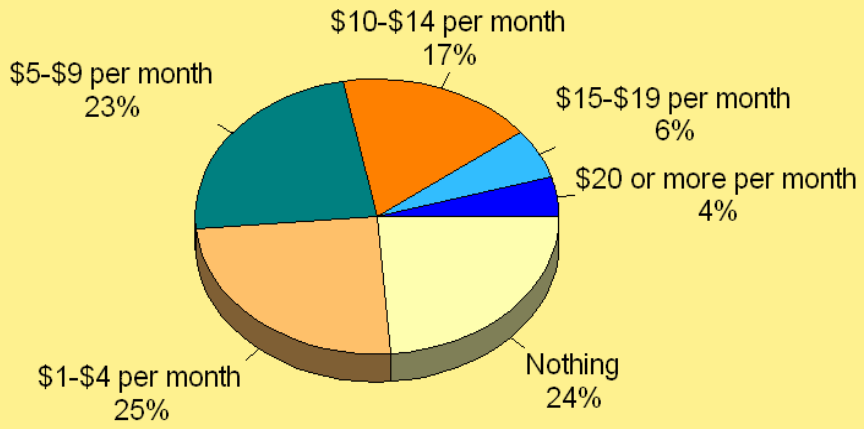
Maximum Amount of an Additional Maintenance Utility Fee

Respondents were asked to indicate the maximum amount of an additional maintenance utility fee they would be willing to pay per month to build and operate the types of parks, recreation, and/or aquatic facilities most important to their household. The following summarizes key findings:

Seventy-six percent of respondents indicated they would pay some additional maintenance utility fee per month for the types of parks, recreation, and/or aquatic facilities most important to their household. Twenty-five percent of respondents indicated they would pay $1-$4 per month, 23% of respondents indicated they would pay $5-$9 per month, 17% would pay $10-$14 per month, 6% would pay $15-$19 per month, and 4% would pay $20 or more per month.

Q15. MAXIMUM Amount of Additional Maintenance Utility Fee Respondent Households Would Be Willing to Pay Per Month to Build and Operate the Types of Parks, Recreation, and/or Aquatic Facilities Most Important to Respondent Household

by percentage of respondents



Source: Leisure Vision/ETC Institute (January 2007)

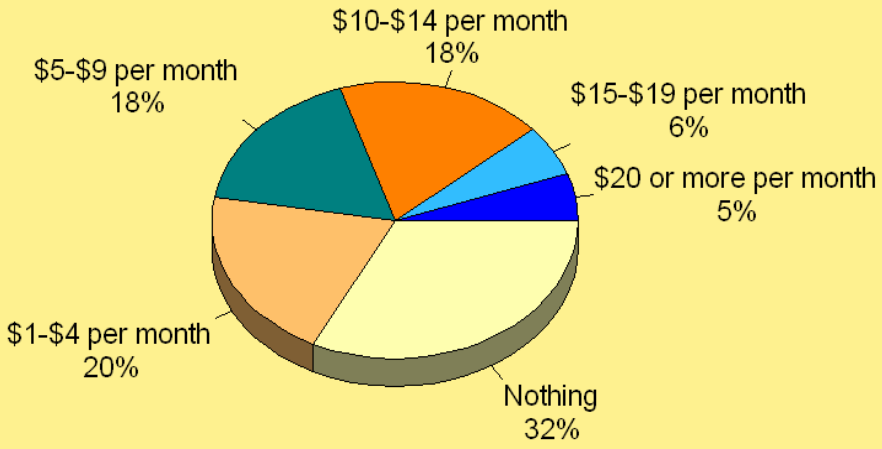
Maximum Amount of Additional Property Taxes

Respondents were asked to indicate the maximum amount of additional property taxes they would be willing to pay per month to build and operate the types of parks, recreation, and/or aquatic facilities most important to their household. The following summarizes key findings:

Sixty-eight percent of respondents indicated they would pay some additional property taxes per month for the types of parks, recreation, and/or aquatic facilities most important to their household. Twenty percent of respondents indicated they would pay $1-$4 per month, 18% of respondents indicated they would pay $5-$9 per month, 18% would pay $10-$14 per month, 6% would pay $15-$19 per month, and 5% would pay $20 or more per month.

Q16. MAXIMUM Amount of Additional Property Taxes Respondent Household Would Be Willing to Pay Per Month to Build and Operate the Types of Parks, Recreation, and/or Aquatic Facilities that are Most Important to Respondent Household

by percentage of respondents

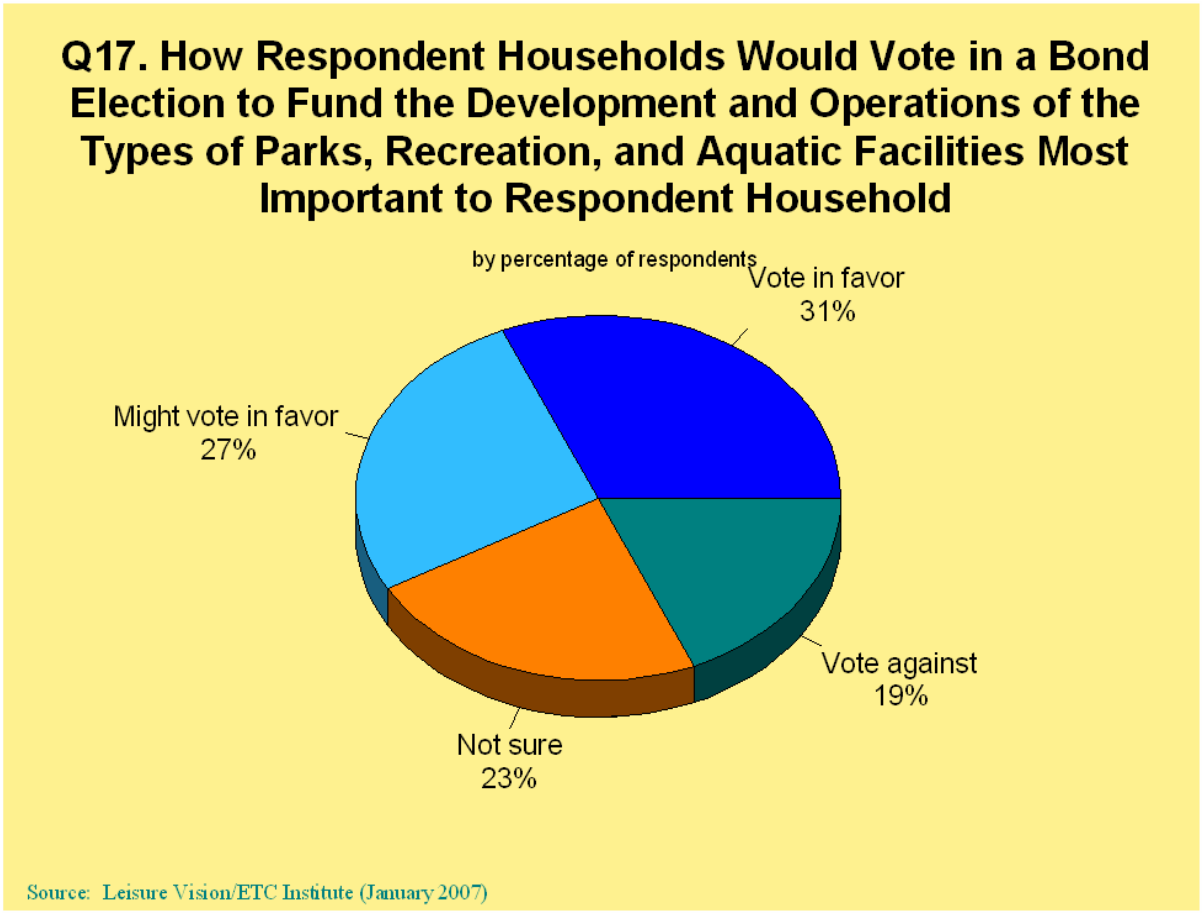


Source: Leisure Vision/ETC Institute (January 2007)

Voting in a Bond Election

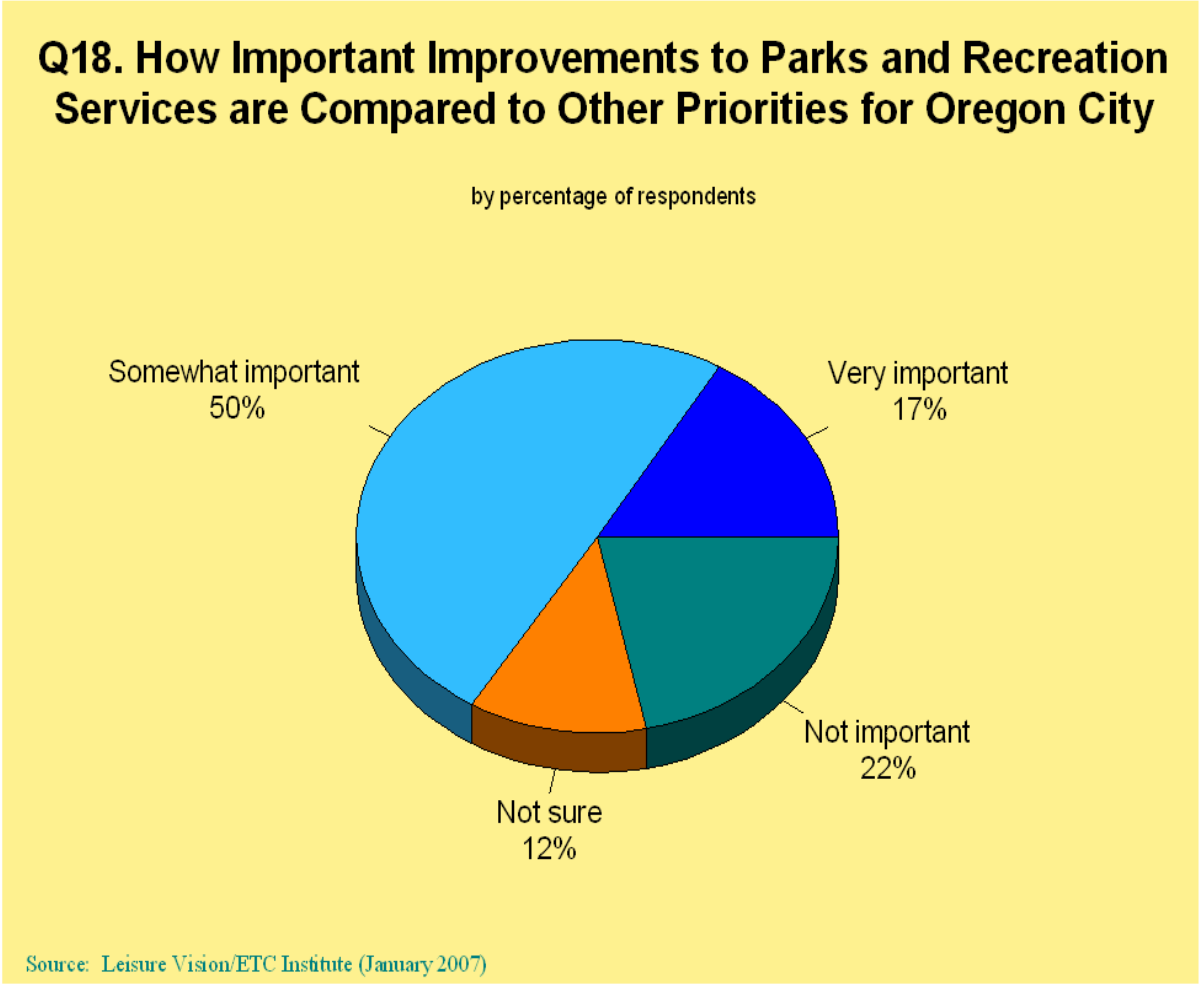
Respondents were asked to indicate how they would vote in a bond election to fund the development and operations of the types of parks, recreation, and aquatic facilities that are most important to their household and with the amount of additional property taxes they indicated they would support. The following summarizes key findings:

Fifty-eight percent of respondents indicated they would vote in favor (31%) or might vote in favor (27%) of the bond election. Twenty-three percent of respondents indicated they were not sure and 19% indicated they would vote against the bond election.



Priority of Improvements to Parks and Recreation Services Compared to Other City Priorities
Respondents were asked to indicate how important improvements to parks and recreation services were compared to other priorities for Oregon City, such as law enforcement, fire, and streets. The following summarizes key findings:

Sixty-seven percent of respondents indicated parks and recreation services were very important (17%) or somewhat important (50%), as compared to other priorities for Oregon City. Twenty-two percent of respondents indicated they were not important and 12% indicated not sure.



Key Findings of the Community Attitude and Interest Survey

Overall Importance

- Sixty-eight percent of respondents indicated that parks and recreation services were very, or somewhat, important.

Funding & Pricing

- Fifty-eight percent of respondents indicated they would/or might vote in favor of the bond election.
- Sixty-eight percent of respondents indicated they would pay some additional property taxes per month
- Seventy-six percent of respondents indicated they would pay some additional maintenance utility fee per month

High need and interest in parks and recreation programs include:

- Adult fitness and wellness programs
- City-wide special events
- Water fitness programs
- Youth sports
- Local history programs
- Youth learn to swim programs

High need and desire for parks and recreation facilities include:

- Walking and biking trails
- New parks
- Open space and natural areas
- Large picnic areas and shelters
- Swimming pool
- Playgrounds
- Indoor Program Space

*See also **Appendix I** and subsections for survey results crosstabs.*

IV. What We Have Now – An Analysis of Programs and Spaces

Following is a description and analysis of Oregon City's current special event programs, parks and special use facilities, trails and open space, including an overview of other publicly owned open space land surrounding Oregon City. Additional findings related to these program areas, facilities, uses, and Level of Service analysis follow in the GRASP® Analysis section to provide insights into how these parks and recreation facilities are meeting current needs and will meet future needs. This section of the report concludes with a description of some of the key area recreation providers to help assess how these alternative providers impact and complement Oregon City's future opportunities for expanded parks and recreation services as a mountain resort city.

A. Recreation Programs and Services

The City's recreational program provides opportunities, activities, special events, and programs to the community. The Department currently offers adult programs such as Karate, Yoga, Pilates, Scottish Single Stick (a form of fencing), and Tribal Dance. The youth offerings include summer outdoor day camps, sports camps, performing arts camps, sports classes, and field trips.

Teen Scene, a Friday night dance for middle school kids has been operating successfully for over eight years. However the department has seen a significant decline in attendance over the last year. In the years prior to the past year, from 150-250 middle school age youth attended this ongoing activity at the swimming pool each week to socialize and dance in a safe, supervised environment. Programming for this age group is being revised to gain more participation.

Several special events are offered annually by the Department, including the 4th of July Celebration, and the very popular Summer Concerts in the Park. The newest special event, the Daddy Daughter Dinner Dance, has been well attended the past three winters. This program provides fathers with an opportunity to spend some quality time with their daughters at a Valentine's Day themed event. Additionally, the Department plays a supporting role or has played a role in forming other popular community events such as the Pioneer Family Festival, the Oregon City Farmers Market, the First City Arts Fair and others.

The lack of a community recreation center poses a significant challenge to programming. The City does not have a public facility available to host many of the activities that may otherwise be offered to the community. Past budget reductions have also resulted in the elimination of the recreation programmer's position. As a result, the City is limited in their capacity to offer more programs and activities than they currently do.

Carnegie Center

The Carnegie Center originally opened in 1913 as the site of the Oregon City Public Library and operated as such until 1994. It has since been reopened as a community center. In 2001, the Carnegie underwent a major renovation. The yearlong, $1.4 million project restored the building's original façade as well as updated the building to current safety, ADA, and construction standards.

In 2005, the City decided to issue a request for proposals to organizations interested in partnering with the City in managing the Carnegie Center. This process resulted in the City entering into a

multi-year management agreement with Fine Art Starts to operate the center. This management agreement nearly eliminates all city subsidies to the operation of the facility, while maintaining its use as a public community center with an art-based focus.

Pioneer Adult Community Center

The Pioneer Adult Community Center is a multi-purpose facility offering nutritional, educational, recreational, and social services to older adults in the community. It is a focal point nutrition site, which provides needed services to low income and homebound seniors, as well as provides opportunities to the elderly to maintain independent lifestyle.

Nutrition Program

The Pioneer Center provides nutrition service to those 60 and older and to disabled clients referred by Medicaid. The nutrition program includes both congregate (dining room) and home delivered meals (meals on wheels). The program provides approximately 28,000 meals a year to homebound clients. For Clackamas County, it is second only to the Milwaukie center in the number of home bound meals provided. Seniors who are more independent participate in the center's lunchtime congregate meal program. We provide approximately 6,360 congregate meals on-site annually.

Transportation

A door-to-door transportation system provides service to those 55 and older as well as younger disabled clients. Rides are provided for personal business, medical appointments, shopping, and to the center for classes, exercise, and activities. The center provides approximately 12,500 rides annually.

Client Services

Outreach and in-house services are available for seniors and their families in need of information and referrals to other agencies. The center provides assistance completing applications requesting energy assistance, medication assistance, and county and federal services. The client services include approximately 10,000 served annually. This includes both on-site (Pioneer Center) and home visits for homebound seniors who need nutritional assistance, are at risk, or need referrals to other services provided in the community.

Activities and Recreation Programs

Educational and recreational programs are provided by the Pioneer Center. Some are free of charge and others have a class fee to cover the expense of instructors and materials. Some programs are co-sponsored with other community organizations. Also offered are day trips (2-3 per month), dine out trips to local restaurants, ballroom dancing, games and exercise classes. The center also provides the community with space for meetings, church programs, fund raising events, support groups, and individual rentals. It serves approximately 32,000 participants annually through these programs and activities.

Oregon City Pool/Aquatics

The Oregon City Municipal Swimming Pool was constructed in 1965 with the multi-purpose room, kitchen, and offices added in the late 1970's. The facility serves to provide the community with a wide variety of aquatic and recreational programming.

The swimming pool provides basic, learn to swim instruction to roughly 3,000 Oregon City area school children each year through a partnership with the Oregon City School District. For many kids, this program provides the only structured swimming lesson instruction they will receive. In addition, the pool's public swimming lesson program serves approximately 2,000 additional children annually.

The swimming pool also offers water exercise classes, lap swim programs, and recreational swim times. Aqua Camp is a very popular summer program. The facility is also rented to the Oregon City Swim Team (a not-for-profit swim club) and play host to swim teams from Oregon City and Gladstone High Schools.

Annual attendance for all programs totals approximately 90,000.

The Oregon City Pool is an aging facility that continues to deteriorate over time. Much of the facility's needed routine maintenance has been deferred, due to lack of budgeted capital improvement funding. While the facility is still operational, the costs of maintenance have become quite high. In addition, the size of the community has grown substantially since the swimming pool was first opened.

A pool facility assessment was conducted as part of the Park and Recreation Master Plan Update. It is the opinion of the assessment team that the existing facility is basically sound. However, it is not without problems and is in need of specific improvements in order to meet code standards, serviceability requirements, and the long-term recreational needs of Oregon City residents. If the facility repairs and improvements noted above are performed, the facility could serve the community well for another 30 years. Of course, ongoing maintenance, equipment repair, and in some cases replacements will be required over this time. The complete Oregon City Pool Assessment report can be found in ***Appendix II***.

Ermatinger House

The Ermatinger House is the oldest existing house in Clackamas County, and one of the most historically significant. Originally sited on Main Street on the lower level, the house was among the historic homes from Oregon City's earliest years which were relocated to save it from encroaching development around Willamette Falls. It was moved first in 1910 from Singer Hill to Center Street. In 1987 it was moved again, to its current location, where it was restored.

The Ermatinger House is operated by the City, in cooperation through the efforts of dedicated volunteers. It is the desire of the Department to shift the management of the Ermatinger House to an organization that is better suited to manage and curate heritage and historical sites. Staff is continuing to explore these potential opportunities

Miscellaneous

Sportcraft Landing Marina License Agreement

The Department is responsible for negotiating and managing the long-standing license agreement with Sportcraft Landing, Inc., a private for-profit business operating a marina and related services on city-owned or controlled waterfront property. A new license agreement was entered into in April 2007 between the City of Oregon City and Sportcraft. The new agreement is for five years with optional three-year renewal periods. Significant improvements were made to the new agreement which increase the revenue received by the City and which enhance waterfront usage and aesthetics.

Trail News City Newsletter

The Department coordinates this important city publication. It doubles as a programs and services guide and a general city news and information publication. Over the past year, the layout and design of the Trail News has shifted from an in-house publication to one utilizing the services of a professional graphic design contractor. This has vastly improved the quality of the publication.

Library Board and Parks and Recreation Advisory Committee

The Department provides coordination and staff support to these two city boards and committees.

SWOT Analysis – Staff Interviews

Strengths

Although Oregon City's recreation facilities are aging, staff does feel that the facilities have served the community fairly well. For example, the Department has made upgrades to some of the parks in recent years, such as playgrounds, restrooms, and landscaping. The staff has heard very positive feedback from the community in regard to the increase in level of service through these upgrades and maintenance efforts, much of which have been provided through partnerships and volunteer efforts. The Department also prides itself on providing strong youth aquatics programs and well-attended senior programs.

Oregon City Parks and Recreation has done very well to serve the community with the limited resources and staffing that it has available. The City has access to funding for park and facility development, but very limited funding for operations and maintenance. The accomplishments of the Department are largely due to the dedication and hard work of the staff to provide high quality programs and facilities.

Table 17: Strengths of Oregon City's Parks and Recreation

Strengths	Examples
Park Upgrades	Upgrades to parks have been successful
and Maintenance	Positive public feedback
	Park system continues to improve
Partnerships	Good utilization of partners (Eagle Scouts, high school, corrections program)
	Strong partnership with public works
Volunteer Efforts	Good volunteer coordination by staff
Efficient Use of	Planning and development program for new parks
Limited Resources	Department does a lot with limited funding and staffing resources
High Use of	Good senior classes and programs
Pioneer Center	Good utilization of space at senior center
	Good marketing for rental space
Quality Programs	Strong aquatics programs
Dedicated Staff	Aquatics staff is knowledgeable and helpful
	All staff members give 100%

Weaknesses

The Department's biggest challenge is its severe funding source limitations, which have hindered the Department from being adequately staffed or funded to provide for operations and maintenance. Currently the Department's budget is primarily provided by SDC funding, which allows for development, but not operations and maintenance. This leaves the Department dependent on and vulnerable to volunteer efforts. In addition, the City can continue to increase the number of parks and facilities, but does not have the money to staff and maintain them. Furthermore, lack of funding has restricted the number and variety of recreation programs that the Department can provide for the community.

Table 18: Weaknesses of Oregon City's Parks and Recreation

Weaknesses	Examples
Department is Severely Understaffed	Staff does such a good job that public does not see the need to increase staff
	Department relies very heavily on volunteers
	The Department is vulnerable to volunteers leaving
	Baby Boomers do not seem as willing to volunteer as older seniors
	Staff frustration because of lack of resources to provide the quality facilities that they want to provide
Increasing and Facilities and Responsibilities	No full-time recreation programmers, but an increasing demand for programs
	Increasing "streetscape" properties
	Increasing park properties and no staff to maintain them
Lack of Funding for	SDC funding cannot be used for maintenance
Operations and Maintenance	Aging facilities have higher needs for repair
Underserved Portions of	Adult sports
the Community	Hispanic community
	Teens
	Adult and youth recreation programming

Opportunities

The Department's primary focus for opportunities is in identifying funding for operations and maintenance. If this is achieved, then the community's need for a new aquatic facility, upgrades to the Pioneer Center, infrastructure improvements, increased staffing, and additional recreation programs could be accomplished. Examples of these needs and the benefits that could be provided are listed in ***Table 19***.

Table 19: Opportunities for the Oregon City Community

Opportunities	Examples
Additional Programs	More seniors trips
	More adult sports
	More café-style congregate meals
	Increased lap time at the pool
Swimming Pool	New facility would better serve the community
	Update design with current trends
	Want zero depth, lap lanes, spray pads, etc.
	A new facility would draw in regional users
	Need new location, with less site constraints
	Therapeutic pool would provide for seniors
Facility Improvements	Elevator at the Pioneer Center needs to be replaced
	Need shower facilities at the Pioneer Center for fitness
	Kitchen facilities at Pioneer Center need updated
	Need to update trails and play equipment
	Parks and facilities need general infrastructure replacement
	ADA accessibility at parks and facilities
	More parking at facilities would increase usage
Partnerships	Need to establish partnerships for fitness and aquatics
	Private fitness facilities
	Community college
	County Department of Aging
Funding	Need adequate staffing
	Need improvements to aging infrastructure
	Reevaluating rentals and partner agreements could allow the Department to increase revenue

Threats

When posed with the question about "sensitive" issues that should be considered in this Master Plan, there were very few mentioned that had not been brought up from previous questions. This may be illustrative of the fact that the Department is very aware of, and open to discussing how to address the challenges that face them. Although well known, those issues that were brought up are very important topics for the long-term vitality of the Oregon City Parks and Recreation Department. These issues will be very important to address not only in this Parks and Recreation Master Plan, but also through strategic planning for the entire City. ***Table 20*** contains a list of the issues discussed.

Table 20: Threats to the Oregon City Community

Threats	Examples
Lack of Funding	Aging facilities in need of upgrades, repairs, and maintenance
	As public works expands so does the work load of the parks department
	Inventory has been growing, but staffing has stayed the same
Distrust of Government	Community holds an anti-government attitude
	City lacks credibility with the public because of the Firehouse Bond
	Credibility is a major problem because special elections for funding need a double majority to pass

B. Inventory

Inventory Process and Method

Providing an accurate inventory is essential to determining the current Level of Service (LOS) of a community. In order to take full advantage of the GRASP® methodology, a complete inventory was collected that lists not only quantitative information but qualitative information. The inventory compilation is a three-step process: preliminary data collection, site visits, and data review and compilation.

Preliminary data collection

A preliminary inventory was prepared using information from aerial photography, Geographic Information Systems (GIS), and website information. Components included physical features intended for use by visitors to the parks, such as playgrounds, sports fields, picnic shelters, etc. Each of the components was given a GIS point and a name.

Site visit

In September 2006, the planning team visited Oregon City, Oregon. Initial meetings established a "standard of service" based on the quality and condition expected by the residents and staff of Oregon City. These standards were determined during meetings with the staff and public, from general observations, and with the professional expertise and experience of the consulting team. Unique to Oregon City, these standards form the basis of a component rating system which was used to score the parks system for quality, condition, and appropriateness.

Using the established standards and the preliminary inventory, the consultant team visited each property, gathered the pertinent information listed below, and scored each component according to the following 3 tier rating system: *1= Below Expectations*, *2 = Meets Expectations and, 3 = Exceeds Expectations*.

- Confirmation of component type
- Confirmation of component location
- Evaluation of component condition
- Record of comfort and convenience features
- Evaluation of comfort and convenience features
- Evaluation of park design and ambience
- Site photos
- General comments

Components were evaluated as described above. In addition to the components' scores, each park site or facility was given a set of scores to rate its comfort, convenience, ambient qualities, and to indicate how well it met expectations for its intended function. These scores will be used as modifiers that affect the scores of the components within the park or facility during the GRASP® analysis. For a complete description of the GRASP® Scoring Method, see ***Appendix III***. Information collected during the site visit was compiled into a dataset, which was submitted to city staff for verification.

The compiled inventory data is shown in the chart in ***Appendix IV*** (GRASP® Inventory Summary), and on the inventory Perspective in ***Appendix V Perspective A*** (GRASP® Inventory).

Preliminary Inventory Summary and Findings

The Oregon City Community Services Department has a diverse inventory of properties to serve the needs of the community. Its holdings can be divided into four major categories: developed parks, open/green space, trails, and indoor facilities.

Table 21: Inventory Summary

Facility type	Quantity	Size in Acres
Developed parks	36	122.17
Open space	17	72.67
TOTAL Outdoor properties	**46**	252.435
		Size in Square Feet
TOTAL Indoor facilities	**7**	36,490
		Length in Miles
TOTAL Miles of trails	**N/A**	6.88

Oregon City's parks, open space, and trails are defined by the area's unique history, topography, and environment. The location of many of the City's developed parks and undeveloped open space take advantage of the views provided by the City's steep terrain and natural promontories which offer views of the Willamette and Clackamas Rivers, as well as Mount Hood and the Cascade Mountains.

Developed Parks

Developed parks in Oregon City are located throughout the City and can be roughly divided into three major areas: river and bluff parks, historic downtown parks, and outlying suburban parks. Parks located along the Willamette River or bluffs include Clackamette Park, Jon Storm Park, McLoughlin Promenade, and Sportcraft Landing. These four parks are connected by trails and are extremely popular with the community. They afford some of the more impressive views of the river and provide access to the water for a variety of recreational activities, including fishing and boating. These parks are well maintained and are highly valued by the City and community.

Parks located in the historic downtown area fall into two categories:

1) Parks associated with historic sites or recreational facilities, and
2) Small neighborhood parks.

Oregon City has a wealth of historic properties and has worked to preserve these properties as public facilities operated for social, educational, and/or recreational use. These properties include The End of the Oregon Trail Interpretive Center, McLoughlin House National Historic Site (operated by the National Parks Service), Barclay House, Buena Vista Club House, Ermatinger House, Carnegie Center, and Pioneer Community Center. These facilities are maintained and/or preserved and provide valued services to the community. Some such as The End of the Oregon Trail Interpretive Center and McLoughlin House National Historic Site provide value as tourism destinations. An aquatic center also exists in the downtown area, however this facility is old and in poor condition. The possibility of a new pool facility and location is currently under review.

Small neighborhood parks scattered throughout the historic downtown area provide valuable green space and often boast beautiful mature trees, which provide the parks with a generous shade canopy. However, older buildings, site furnishings, and shelters, in addition to a below average level of maintenance in these parks, leaves ample room for renovation and improvement.

Outlying suburban parks are primarily neighborhood parks with similar amenities focused primarily on passive recreation, such as a picnic shelters, playgrounds, and open turf fields. The exception is Chapin Park and the recently opened Wesley Lynn Park, which has a community-wide draw and a center for the City's active recreation and sport facilities.

Properties unique to Oregon City's developed parks include Pioneer Center (a community senior center), the historic Carnegie Library (also serving as a community art center), and Mountain View Cemetery. The City also has built unique relationships to ensure the safety, maintenance, and economic sustainability of its parks by creating cooperative relationships between city, non-profits, and private individuals. The End of the Oregon Trail Interpretive Center and the Park Host Program are prime examples. Special amenities unique to Oregon City's park system include river access, scenic views, and an RV Park.

Open Space

According to The Oregon City Park and Recreation Master Plan (1999), Oregon City has a total of about 38 acres of open space in 4 sites: Old Canemah Park, River Access trail, Singer Creek Park, and Waterboard Park. Centrally located with trail access and connections, these parcels are undeveloped and provide habitat protection, historic and cultural preservation, and the protection of scenic views.

Further analysis of the park, recreation, open space, and trail inventory is discussed in the GRASP® Level of Service section that follows.

C. The GRASP® Level of Service Analysis

During the planning process, several methods were employed to analyze the current facilities in relationship to the needs of the community. This relationship is often referred to as Level of Service (or LOS) and each methods used in this analysis provides a different look at the community and addresses various aspects of the system. These tools allow for analysis of the inventory, location, distribution, and access to the parks and recreation. When the results of each analysis are combined, a full view of the system and the LOS that is provided to each resident is created, on which recommendations can be formed.

NRPA Standards

Level of Service (LOS) is typically defined in parks and recreation master plans as the capacity of system components and facilities to meet the needs of the public. The traditional means of measuring Levels of Service (LOS), often called the **NRPA** (National Recreation and Parks Association) Standards method, was typically based on providing X number of facilities or acres per 1,000 person population (or "capacity"). This methodology was developed in the 1970's and 80's and is not accurate for the majority of public agencies. Even NRPA officials are now calling this standards methodology "obsolete." It has been, however, used extensively, and therefore we provide these historic comparisons for population based components as part of this plan. See Level of Service Capacities in the following section for this analysis.

In order to find a way to standardize LOS that is accurate, implemental, and can be benchmarked, this plan includes an enhanced approach using the **Geo-Referenced Amenities Standards Process (GRASP®)**. This methodology builds on traditional community standards based on capacity, but can track not only the quantity, but also quality and distribution of amenities and components of a group of components.

GRASP® technology applies to individual components, such as basketball courts, as well as to overall facilities, such as neighborhood and community parks. It replaces the traditional classification of parks with a classification of the individual components within parks and open space according to their functions to create a component based system. By thinking of the components within the parks, trails, and recreational facility system as an integrated whole that provides a service to residents, it is possible to measure and quantify the net Level of Service provided.

Process

As mentioned in the description of the inventory process, each of the various components found within the community was evaluated for its quality and condition. The geographic location of the component was also recorded. Capacity also is part of the LOS analysis, due to the fact that the quantity of each component is also recorded.

GRASP® uses comfort, convenience, and ambience as characteristics that are part of the context and setting of a component. These comfort and convenience features are items such as drinking

fountains, seating, and shade. They are not characteristics of the component itself, but when they exist in proximity to a component they enhance the value of the component.

By combining and analyzing the value of each component with the comfort and convenience features, it is possible to measure the service provided by the entire park system from a variety of perspectives and for any given location. This was done for Oregon City, and the results are presented in a series of perspectives and tables that make up the GRASP® analysis of the study area.

GRASP® Level of Service shows how well the community is served by the relevant components by evaluating individual park GRASP® scores, using perspectives to graphically display the GRASP® scores, and with a quantified measurement spreadsheet (as presented in the LOS Capacities Figure at the end of the following section. This quantification system provides a benchmark against which a community can determine how it is doing in providing services in relation to the community's goals, presently and over time.

The GRASP® enabled dataset is "living" digital data. Oregon City is encouraged to maintain and update this valuable resource, so that further analyses may be performed to measure progress in maintaining and enhancing levels of service for the community.

GRASP® Perspectives

After all relevant components have been inventoried, analysis maps, called "perspectives," are created to graphically depict analysis of several variations and composites of key issues and components. For each perspective, each inventoried component is assigned a service radius. This is the distance from which getting to the component can be accomplished within a reasonable time frame.

When the service areas for multiple components are plotted on a perspective, a picture emerges that represents the cumulative service provided by that set of components upon the geographic area. Where service areas for multiple components overlap, a darker shade results from the overlap. Darker shades indicate locations that are "served" by more components. The shades all have numeric values associated with them, which means that for any given location on a GRASP® perspective, there is a numeric GRASP® Level of Service score for that location and that particular set of components.

The perspectives can be used to determine levels of service throughout the community from a variety of analysis standpoints. These perspectives can show a specific set of components, depict estimated travel time to services, highlight a particular geographic area, or display facilities that accommodate specific programming.

In the completed perspectives, it is not necessary for all parts of the community to score equally in the analyses. The desired level of service for any particular location will depend on the type of service being analyzed, and the characteristics of the particular location. Commercial and industrial areas might reasonably be expected to have lower levels of service for parks and recreation opportunities than residential areas. Levels of service for retail services in high-density residential areas might be different from those for lower-density areas.

The perspectives can be used to determine if current levels of service are appropriate in any given location, and whether or not that level of service is appropriate to continue. If so, then plans can be developed that provide similar levels of service to new neighborhoods. Conversely, if it is

determined that different levels of service are desired, new planning can differ from the existing community patterns to provide the desired LOS.

Reading the GRASP® Perspectives

One-third mile buffers have been placed around each component and shaded according to its GRASP® score. The one-third mile buffer shows the distance that a resident can reasonably walk in 10 minutes. As described in the inventory section, each component received a score based on its condition, appropriateness to its location and distribution within the park system. This initial score was then modified to take into account factors that add to the comfort and convenience of the component and the park. On each GRASP® perspective, lower GRASP® scores are lighter in color and higher scores darker in color.

GRASP® Perspective Descriptions

PERSPECTIVE B: GRASP® ANALYSIS AREAS

This perspective shows the analysis areas that were used in the Level of Service analysis for existing facilities in Oregon City, Oregon. Analysis areas are determined by the major barriers to pedestrian access and by major development patterns within a city. Barriers to access often include major roads, railroads, and natural features that may inhibit a pedestrian's access to parks, open space, and trails. In Oregon City, the analysis areas have been determined by the City's unique topography which "steps" the City down to the Willamette River in three district levels, as well as two district levels by Highway 213. These five levels have been identified as the following:

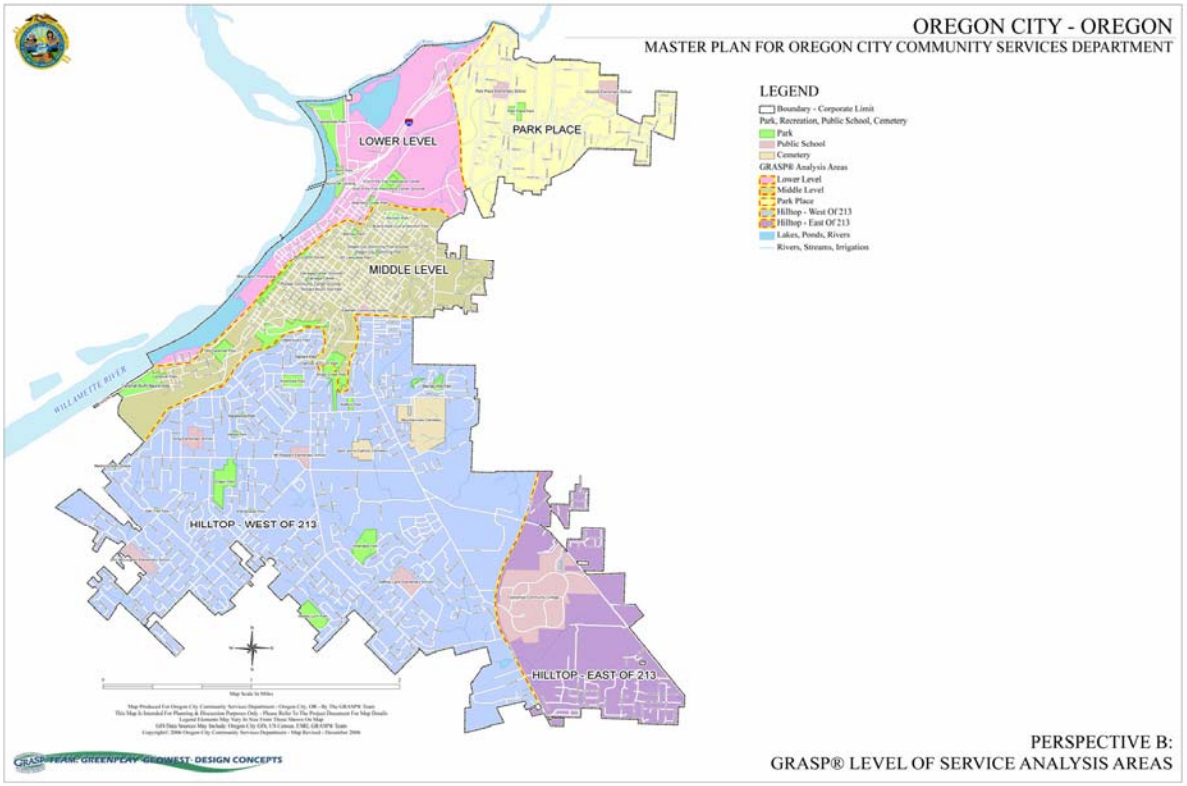
1. Hilltop East of 213
2. Hilltop West of 213
3. Middle Level
4. Lower Level
5. Park Place (has also been identified to describe a development area northeast of downtown)

Barriers

Although access between the City's two upper topographic levels or steps is good, the lower level along the Willamette River is separated from the rest of town by a major topographic feature, the river bluffs. The bluffs, which run along the northwestern edge of town parallel to the river, inhibit pedestrian access due to the steepness of the terrain.

The second major barrier to pedestrian access is Highway 213. This highway creates the split between Hilltop East and West and also cuts the Park Place area off from the rest of the City. Currently there are few pedestrian crossings, which make traversing the highway difficult and dangerous. Other major roads within Oregon City, including Interstate 205 and Highway 99E, in the northwest corner of the City have pedestrian connections, making them relatively insignificant barriers to pedestrian access.

Appendix V GRASP® Perspective B



Summary

The following summary breaks down each study area as described in Perspective B, into percentages and acres based on the existence and score of LOS. See also ***Figure 5***.

Area 1–Lower Level– has an average LOS score of 31.48, with 89% of this area currently served. Twenty-five percent of this total served area is above the City's average LOS score of 45. While Area 1 has a good percentage of its total area served (89%), the majority of Area 1 (67%) has a level of service which is below the City's average LOS score of 45. Service in this area is heavily dominated by passive recreation areas and therefore Area 1's below average ranking might be explained by a lack of active recreation components.

Area 2- Middle Level- has an average LOS score of 69.31, with 88% of this area currently served. Fifty percent of this served area is above the City's average LOS score of 45. Like Area 1, Area 2 also has a large percentage of its total area served (88%). This area also has a better balance between passive and active and indoor and outdoor components than Area 1, which may account for it having a higher percentage of above average LOS score.

Area 3- Park Place - has an average LOS score of 28.63. While 85% of this area is currently served, just 2% of this served area is above the City's average LOS score of 45. The quality and diversity of services in this area should be improved in the future, especially if the area continues to develop and expand to the west. Pedestrian connections to adjacent Area 1 (Lower Level) would also improve LOS in Area 3.

Area 4- Hilltop West of 213 - has an average LOS score of 49.42, with 90% of this area currently served. Thirty-eight percent of this served area is above the City's average LOS score of 45. This area represents the largest percentage of the City's acreage and maintains an above average LOS score for all but 10% of its total area. This area is well served for its size, but improvements might be made in order to distribute services more equitably.

Area 5- Hilltop East of 213 - has an average LOS score of 18.63, with 67% of this area currently served. Zero percent of this served area is above the City's average LOS score of 45. This Area's low average LOS score may be remedied by increasing recreation amenities in this area. Increasing amenities on the border between Area 4 and 5 and providing better pedestrian connectivity over Highway 213 would serve to improve the total distribution of services and LOS for both areas.

Figure 6: LOS Summary Sub-Area Analysis Matrix

GRASP LOS Summary Sub-Area Analysis Matrix

Oregon City - Oregon

This table is based on the GRASP Perspective C. Walkable Access to All Components GRASP™ Analysis Map

Analysis Area	Total Acres	Acres. w/LOS	% of Total w/LOS	Avg. LOS Score per Acre Served	Acres <45	Acres 45+	% of Total Area <45	% of Total Area 45+	% of Served Area <45	% of Served Area 45+
Lower Level	748.37	668.87	89%	31.48	503.56	165.31	67%	22%	75%	25%
Middle Level	808.42	709.98	88%	69.31	353.80	356.18	44%	44%	50%	50%
Park Place	639.42	540.88	85%	28.63	531.54	9.34	83%	1%	98%	2%
Hilltop West Of 213	3003.29	2704.69	90%	49.42	1669.14	1035.55	56%	34%	62%	36%
Hilltop East Of 213	744.49	501.41	67%	18.63	501.41	0.00	67%	0%	100%	0%
Entire Oregon City	5943.99	5126.83	86%	45	3559.45	1566.38	60%	26%	69%	31%

Definitions

Total Acres: Total area within the designated analysis area as calculated from the GIS

Acres With LOS: Area within each analysis area that has some service (LOS = 1 or Greater).

Percent of Total with LOS: Percentage of the designated analysis area that has some service (LOS = 1 or Greater).

Average LOS per Acre Served: The average GRASP™ score for any given acre within the designated analysis area.

Note: A score of 45 is the approximate median score for the City as a whole and is also the approximate average LOS score per acre for the entire City

Percent of Total Area <45: The percentage of the served area within each analysis area that has a GRASP™ score of less than 45 points.

Percent of Total Area 45+: The percentage of the served area within each analysis area that has a GRASP™ score of 45 points or more.

Percent of Served Area <45: Of the area that has some service, the percentage of the served area that has a GRASP™ score of less than 45 points.

Percent of Served Area 45+: Of the area that has some service, the percentage of the served area that has a GRASP™ score of 45 points or more.

It is important to note the barriers to walkability, as described in **Perspective B** impact the LOS scores in **Perspective C**. Most notably, the bluffs along the river and Highway 205 impact the LOS scores for the northeast corner of Oregon City where Clackamette Park is located. This park receives a high LOS score on **Perspectives F and G** because the impediments to walkability are not factored into the LOS score.

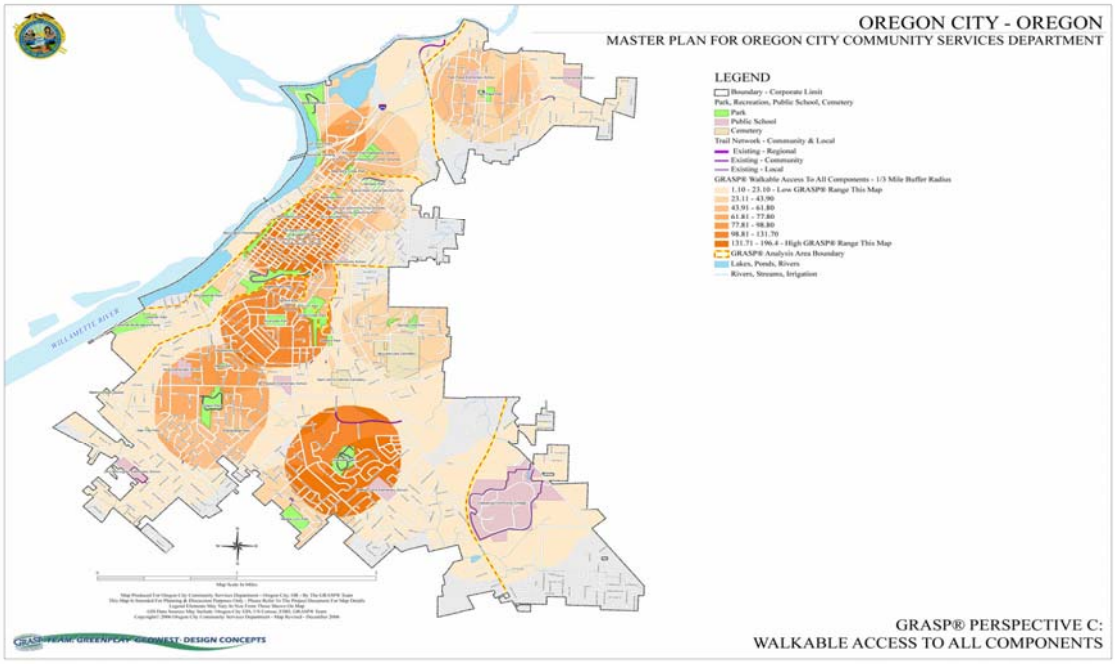
PERSPECTIVE C: WALKABLE ACCESS TO ALL COMPONENTS

This perspective shows all of the parks and recreation components within the Oregon City limits. As described above, a one-third mile buffer has been applied to each component and its color assigned based on the GRASP® score derived from the inventory process. There are three areas which show a high level of service. One area of high concentration is located in the Middle Level, which includes the downtown area of Oregon City where the presence of the Carnegie Center, the Pioneer Community Center, Richard Bloom Tots Park, McLoughlin Promenade, McLoughlin House, D.C. Latourette Park, Oregon City Swimming Pool and grounds, and Barclay Park create a high level of service.

The other two areas of high LOS concentrations are located in Hilltop West of 213. The first area of concentration is centered around Rivercrest Park and includes Waterboard Park, Dement Park, Charman and Linn Park, Singer Creek Park, and Stafford Park. The second area of concentration is centered around Hillendale Park and also includes Gaffney Lane Elementary School.

Other parts of town demonstrate a good level of neighborhood service. Additional concentrations show up south of downtown where Chapman Park and King Elementary School are located. The End of the Oregon Trail Interpretive Center to the north and Chapman Park to the south also indicate a decent level of service.

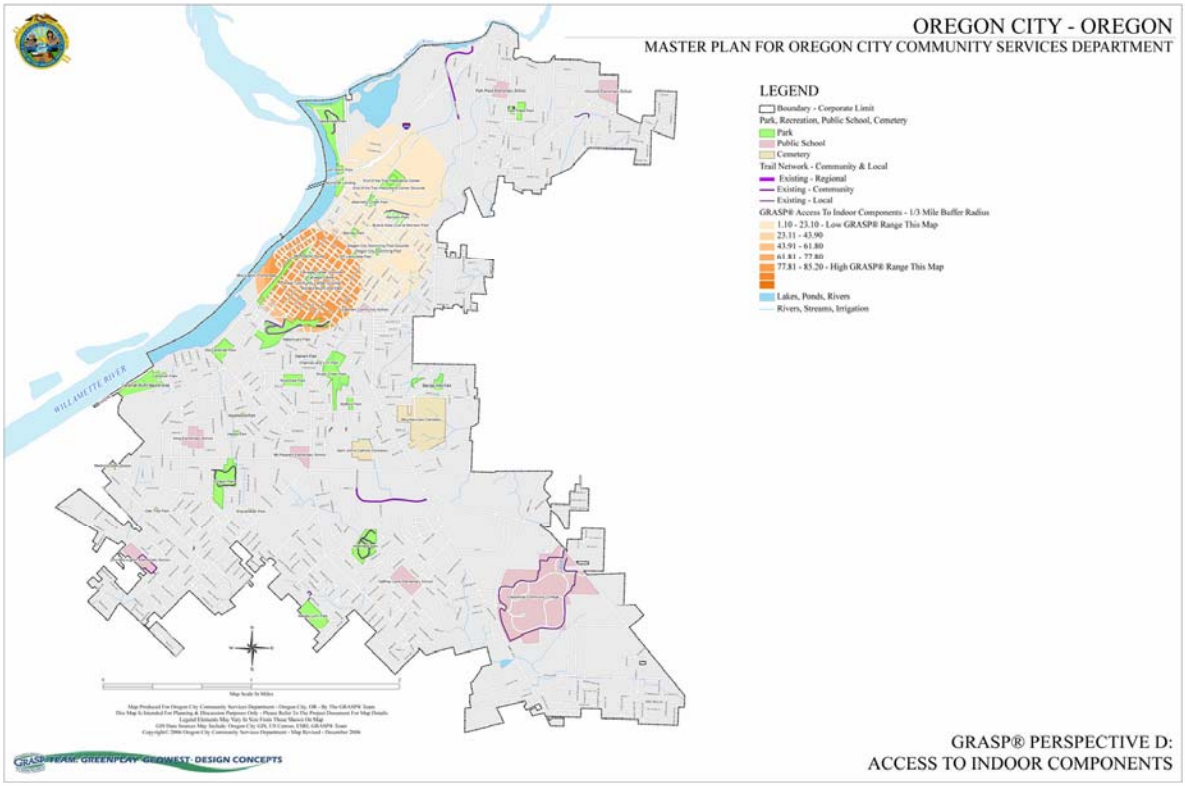
Appendix V GRASP® Perspective C



PERSPECTIVE D: ACCESS TO INDOOR COMPONENTS

Shown on this perspective is the neighborhood access to indoor components. The highest concentration of indoor recreation facilities occurs in the downtown area and along the riverfront in the Middle Level. These facilities include the Carnegie Center, Pioneer Community Center, and McLoughlin Park. A second area of concentration occurs north of downtown around The End of the Oregon Trail Interpretive Center and The Buena Vista Clubhouse.

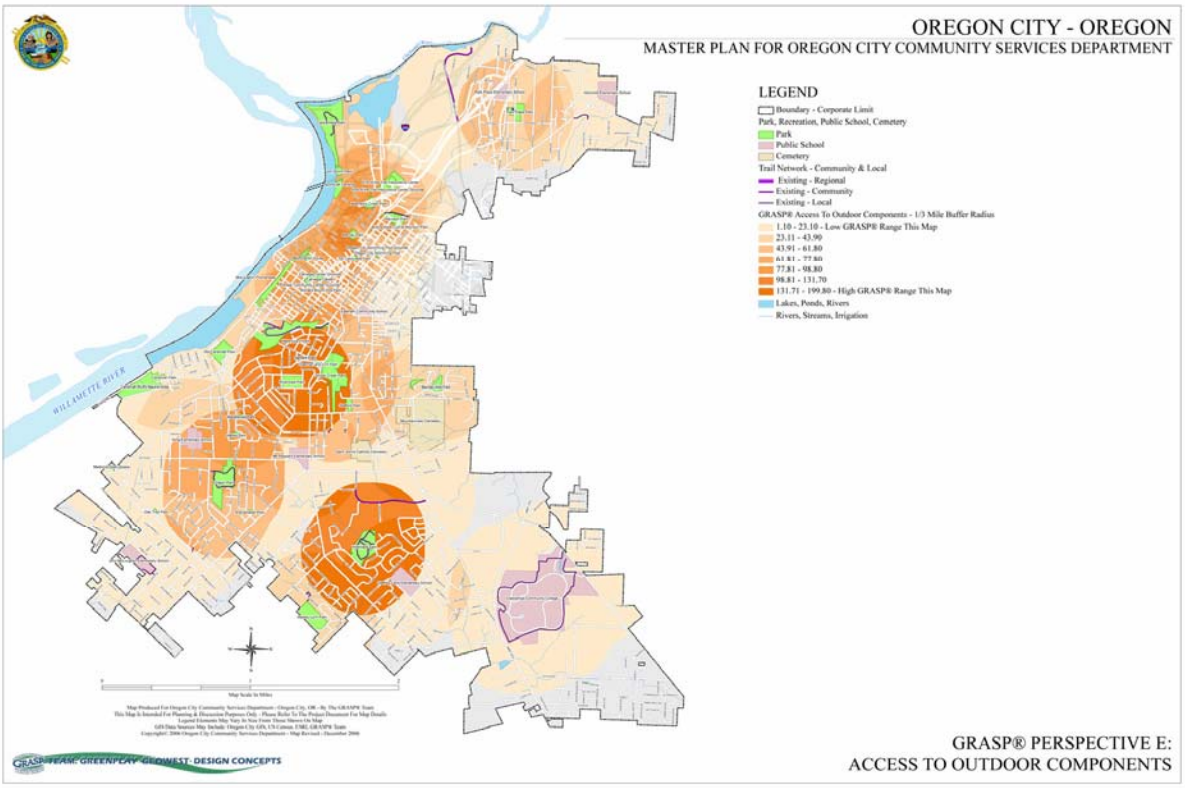
Appendix V GRASP® Perspective D



PERSPECTIVE E: ACCESS TO OUTDOOR COMPONENTS

Shown on this perspective is the neighborhood access to outdoor components. The highest concentration of outdoor components occurs in Hilltop West of 213. Two areas of high concentration occur here, one in the area surrounding Rivercrest Park and Singer Creek Park, and another in the area surrounding Hillendale Park. A third area located around Chapin Park also shows a relatively high LOS score.

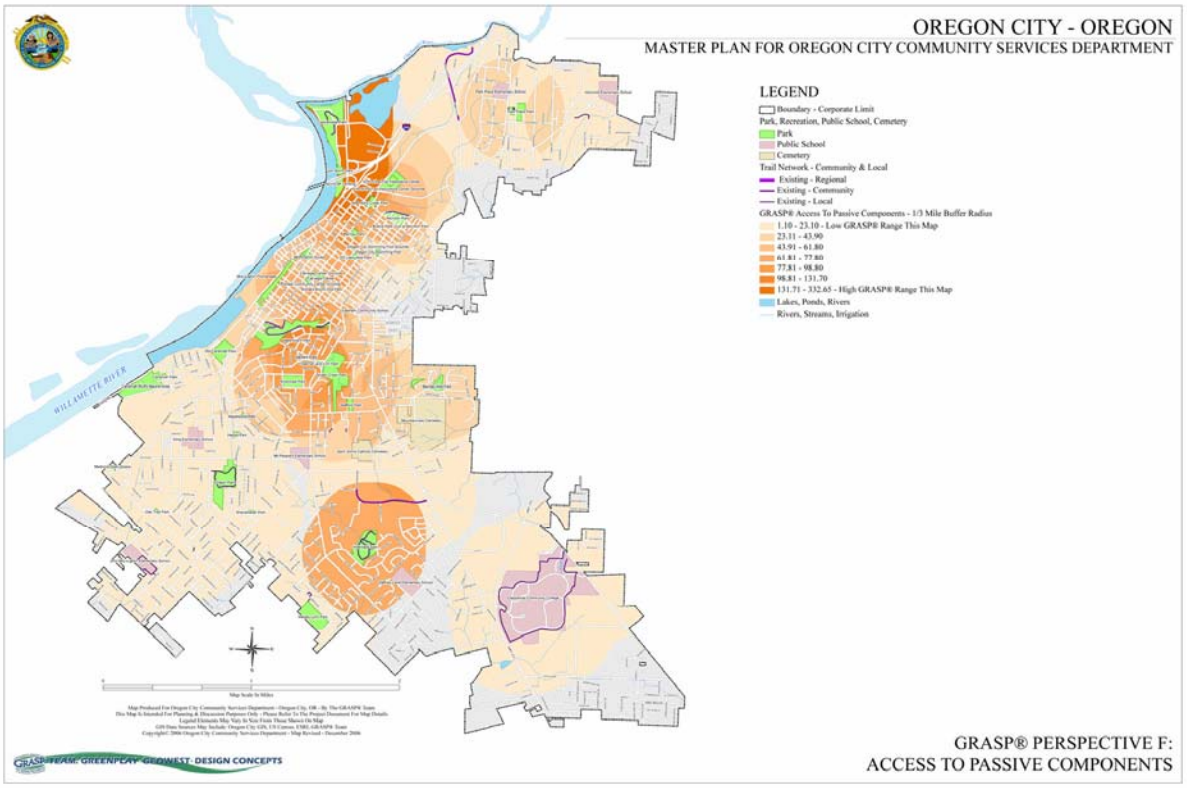
Appendix V GRASP® Perspective E



PERSPECTIVE F: ACCESS TO PASSIVE COMPONENTS

Shown on this perspective is the neighborhood access to passive components. The concentration of passive components in Oregon City is higher than active components (shown in **Perspective G**) with a high passive LOS of 332.65 points and a high active score of 167.2 points, there is a difference of 165 points. This is quite unique and speaks to the success Oregon City has had in protecting and managing spaces for passive use. The highest area of concentration of passive components occurs in the Lower Level along the Willamette River associated with Clackamette Park, Jon Storm Park, and Sportcraft Landing. The proximity of The End of the Oregon Trail Interpretive Center and grounds also adds to this extremely high LOS score. Two other areas of concentration of passive components occur in Hilltop West 213 around Rivercrest Park and Hillendale Park.

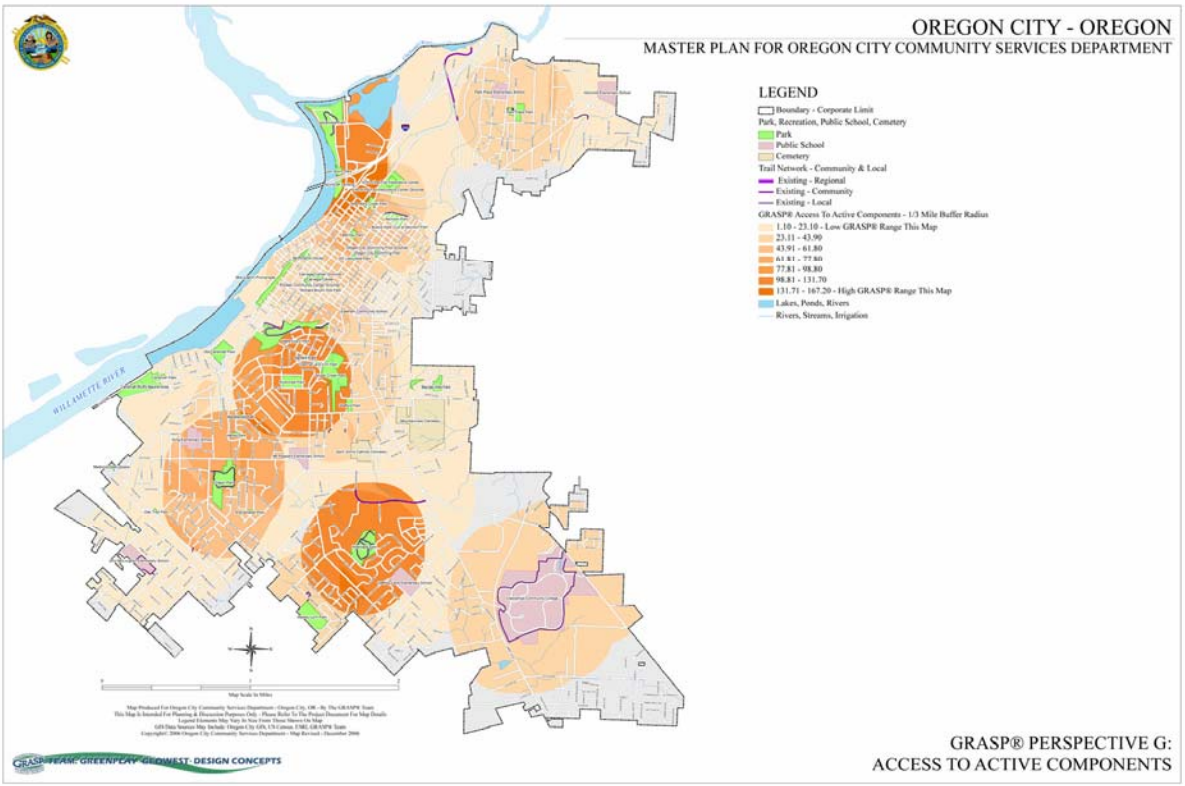
Appendix V GRASP® Perspective F



PERSPECTIVE G: ACCESS TO ACTIVE COMPONENTS

As in the passive components perspective, components have been mapped with a one-third mile buffer and shaded according to each component's GRASP® score. Also like the passive components perspective, there is a concentration of service in the area around Clackamette Park, Jon Storm Park, and Sportcraft Landing. However, even within this concentration, the active scores are considerably lower than passive scores for this area. In contrast, while active scores are concentrated around Rivercrest Park and Hillendale Park (as passive scores are as well), the active scores for this area are considerably higher here than passive scores.

Appendix V GRASP® Perspective G



D. Level of Service Capacity

The analysis mapping shown in the previous section gives a good picture of the overall LOS for the community. It also shows component distribution and areas of service concentration. In addition, it is also helpful to take a detailed look at the variety and capacity of the components in the system. This is especially true for things like programmed athletic fields, and group picnic shelters, where having an adequate supply of facilities is more important than the location or distribution of those facilities. The quantity of some components is dictated by the ability of the component to provide service to the amount of the population that will be using the facility. For some components this is a fairly easy calculation because the components are programmed for use. The programming determines how many people will be using the facilities over a period of time. For example, sports fields and courts fall into this category.

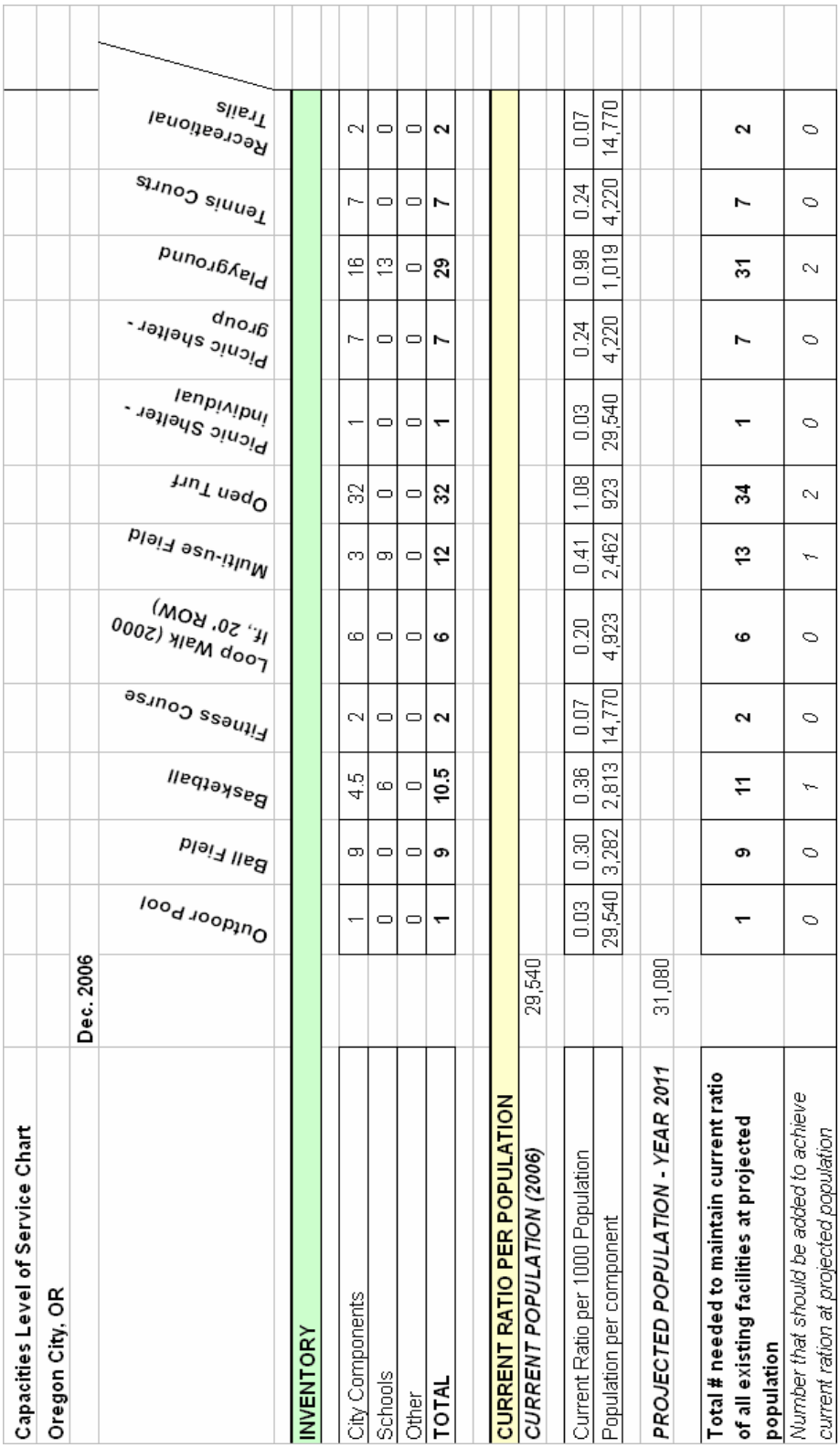
One set of numbers that is typically referred to in a capacity analysis is the "NRPA standards." In conducting planning work, it is key to realize that these standards can be valuable when referenced as "norms" for capacity, but not necessarily as the target standards for which a community should strive as communities can differ greatly in need and desire for recreation facilities. Capacity standards are utilized in this plan as a tool to address Level of Service Target Standards, established in the analysis phase of the planning process. In the presentation of the findings section of the plan, only the current Capacity LOS is discussed.

The following spreadsheet represents the Capacity LOS for Oregon City. This sheet more closely resembles a traditional LOS analysis and shows how the quantities of certain park and recreation components compare to population. For each component, the spreadsheet shows the current quantity of that component on a "per-1000 persons" basis (referred to as the Capacity LOS) and the pro-rata number of persons in the community represented by each component. This kind of analysis can be used to show the capacity of the current inventory. In other words, it can show how many people are potentially being served by park components. These figures are provided for city-owned facilities, schools, and other providers (such as the county and HOA) for the total of all facilities from all providers. In this case the LOS has been calculated twice, once using the facilities provided by all providers and secondly using only the City inventory. In comparing the LOS of city-owned facilities to that of all providers, the City can understand how much of the LOS being provided to the residents is within their control.

Aside from measuring what is currently provided to the residents of Oregon City, the spreadsheet in ***Figure 6*** is also set up to project the number of facilities that will need to be added to maintain the current ratios to accommodate population growth. The spreadsheets show the total numbers of facilities the City can expect to have for the growing population, as well as the number of new facilities that will be needed to provide a continued LOS to the community.

In the analysis phases of this plan, the ratios presented in the following chart will be examined for community appropriateness and changed based on public and staff input. This will create a set of target numbers which the community will be able to use to guide component selection for new parks. These target numbers will also be helpful in determining the number of population based components that will be needed to address the needs of the expected population growth.

Figure 7: Level of Service Capacities



Capacities Level of Service Chart																			
Oregon City, OR																			
		Dec. 2006																	
			Outdoor Pool	Ball Field	Basketball	Fitness Course	Loop Walk (2000 lf., 20' ROW)	Multi-use Field	Open Turf	Picnic Shelter - individual	Picnic shelter - group	Playground	Tennis Courts	Recreational Trails					
INVENTORY																			
City Components			1	9	4.5	2	6	3	32	1	7	16	7	2					
Schools			0	0	6	0	0	9	0	0	0	13	0	0					
Other			0	0	0	0	0	0	0	0	0	0	0	0					
TOTAL			**1**	**9**	**10.5**	**2**	**6**	**12**	**32**	**1**	**7**	**29**	**7**	**2**					
CURRENT RATIO PER POPULATION																			
CURRENT POPULATION (2006)		29,540																	
Current Ratio per 1000 Population			0.03	0.30	0.36	0.07	0.20	0.41	1.08	0.03	0.24	0.98	0.24	0.07					
Population per component			29,540	3,282	2,813	14,770	4,923	2,462	923	29,540	4,220	1,019	4,220	14,770					
PROJECTED POPULATION - YEAR 2011		31,080																	
Total # needed to maintain current ratio of all existing facilities at projected population			**1**	**9**	**11**	**2**	**6**	**13**	**34**	**1**	**7**	**31**	**7**	**2**					
Number that should be added to achieve current ration at projected population			*0*	*0*	*1*	*0*	*0*	*1*	*2*	*0*	*0*	*2*	*0*	*0*					

V. How We Manage - Findings on Administration and Funding

A. Administrative, Budgetary, and Programming Analysis

Oregon City Staffing Levels

Throughout the public input process, information gathering, park and facility inventory and assessment, the common issue that continued to surface was the Department's constant challenge resulting from extremely low staffing levels. The staffing levels are the product of severe funding source limitations, which have hindered the Department. Historically, the Department has been extremely dependent on volunteer efforts. Another facet of this issue is that the City has continued to increase the number of parks and facilities, but has not been able to add the staff to maintain them. In addition, the lack of specialized staff has restricted the number and variety of recreation programs and special events that the Department can provide for the community. As a comparison with other communities with similar population, a Staffing Level Benchmark, ***Table 18***, follows.

Table 22: Staffing Level Benchmark

Topic	Lisle, IL	Darien, IL	Winter Haven, FL	Oregon City, OR	Woodridge, IL	Commerce City, CO	Glen Ellyn, IL	Conroe, TX	South Jordan, UT
Population of Service Area	32,000	22,860	27,466	29,540	34,000	36,000	36,000	36,811	44,276
Full-Time Employees	39	21	86	11	28	33	29	84	31
Part-Time Employees	368	45	131	14	430	N/A	600	N/A	N/A

Based on the City's adopted 2006-07 fiscal year budget, the entire parks and recreation department combined staffing is equivalent to 25.81 FTE (full time employees). Oregon City Community Services has 11 full-time employees, approximately 40 part-time employees, as well as hundreds of volunteers that contribute to the services of the Department. Following is a breakdown of the FTEs, per area of operation:

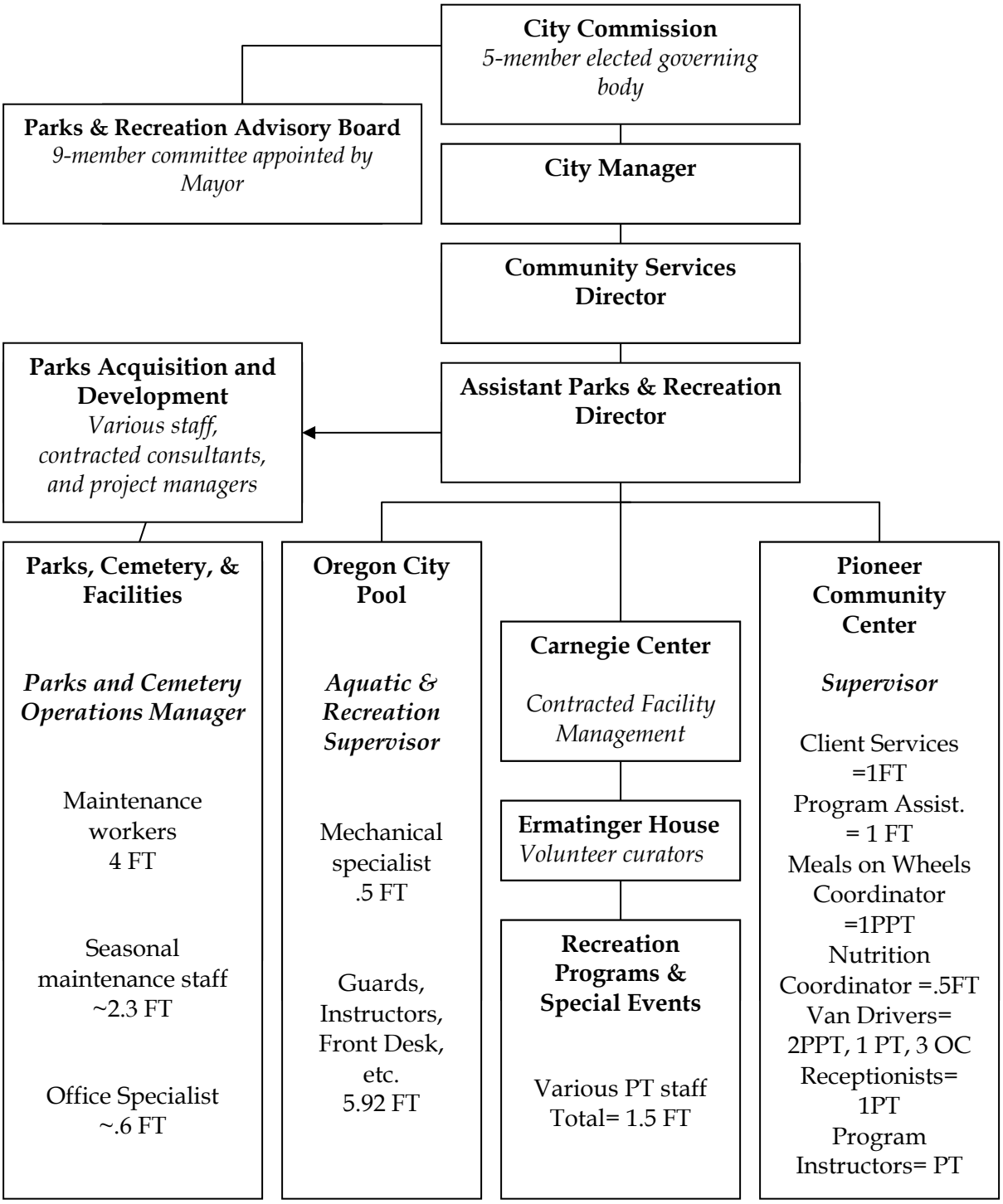
- Parks maintenance= 5.25
- Cemetery Operations = 3.675
- Aquatics = 7.84
- Administration/Recreation = 1.907
- Pioneer Community Center = 7.15

**Note: The Community Services Director and the Assistant Parks and Recreation Director position are allocated in portions across all areas of operation for the Department.*

Please review the information in the Organizational Chart in

Figure 8 for a detailed description of the number, organization, and positions within the Department.

Figure 8: Organizational Chart Oregon City Community Services Department Organizational Chart



The administrative staff is being proactive by focusing on the Department's visibility and its sustainable funding of programs and facilities. Oregon City has both mature and developing areas, intermixed within the community. With future development areas such as Park Place, Beaver Creek, and the Cove Development, the amount of tax dollars that the City is currently receiving ($831,600 or 25.09% of the budget in fiscal year 2006-07) should dramatically increase as a percent of the total budget in the near future. The Department currently only has one fund that receives tax funding, the General Fund. The following are the allocations for the fiscal year 2006 to 2007 budget.

Table 23: Fiscal Year 2006/2007 Budget Allocations

Fund	2006-07 Operating Budget	Percent
General Fund (all combined)	$831,600	25.09%
Parks SDC Fund	$2,337,114	70.52%
Parks and Recreation Trust Fund	$75,178	2.27%
Parks and Recreation Trustee Fund	$70,000	2.11%
TOTAL	**$3,313,892**	**100.00%**

These four funds are used to establish each division's budget. The Department previously had three cemetery funds: the Operations, Endowment, and Mausoleum funds. The Operations and Mausoleum funds were rolled into the General Fund. The cemetery Endowment fund is currently inactive and does not contribute to the Department's annual operating budget. The Parks and Recreation Trustee Fund is a specialized fund for donations that are earmarked for special projects. The fund balance is approximately $70,000, and estimate revenue is approximately $12,000 annually. The Department may benefit by considering the establishment of a 501(c) (3) Parks and Recreation Foundation that would provide the benefits of a formal fundraising structure, federal and state tax exemptions, eligibility for public and private grants, and limited liability.

One major area of concern for the Department is that there is currently not a dedicated funding source for preventative maintenance and repairs, which is an important issue for the sustainability of the City's parks and recreation facilities. This has been illustrated by the aging infrastructure and equipment needs associated with the Oregon City Swimming Pool, the elevator at the Pioneer Center, playgrounds, and parking. Although the Department's SDC Fund allows for additional capacity and development of park and open space facilities and resources, there is no funding source to maintain these facilities once built. The Department will need to address this issue in order to provide for long-term sustainability.

Cost Recovery

In regard to program fees, the Department's cost recovery levels are quite comparable to national averages (30-40%), with an overall cost recovery of 35.37%, as illustrated in ***Table 24.*** Currently, the Department does not use a set philosophy or methodology to set their program fees. The administrative staff has expressed interest in using the Cost Recovery Pyramid Methodology, outlined in ***Appendix VI***, to establish changes to streamline and justify the Department's budgeting and fee policies.

Table 24: Cost Recovery by Program Area

Program Area	2006-07 Total Revenue	2006-07 Total Expenditures	Net	Cost Recovery
Parks maintenance	$84,600	$534,112	-$449,512	15.84%
Cemetery	$192,200	$399,498	-$207,298	48.11%
Aquatics	$300,300	$502,602	-$202,302	59.75%
Administrative support	$77,000	$161,224	-$84,224	47.76%
Carnegie Center	$3,600	$2,000	$1,600	180.00%
Pioneer Community Center	$175,500	$646,886	-$471,386	27.13%
TOTAL	**$833,200**	**$2,246,322**	**-$1,413,122**	**37.09%**

Program Participation

Many of the recreation programs provided by the City are in steady demand and have fairly high participation numbers. At the Pioneer Adult Center trips are up 72%, adult recreation is up 56%, rentals are up 47%, and recreational classes are up 38% compared to previous years. However, in recent years participation has slightly declined in some areas, such as aquatics. This may be due to the general decline in the condition of the facilities, as a result of the lack of maintenance funding. In addition, changing recreation trends, demographics, and demands for specific activities and programs may have an influence on participation numbers. Please review the information provided in the previous Current Park and Recreation Trends section of the report for more detailed information. The information in ***Table 25*** illustrates the past four years' participation numbers in the Department's program areas.

Table 25: Program Participation

Oregon City Parks and Recreation					
2001-2006 Program Attendance					
June-July					
Aquatics	**2002-2003**	**2003-2004**	**2004-2005**	**2005-2006**	**Percent Change**
School Lessons	17,406	16,401	19,822	17,544	0.79%
Public Lessons	20,021	19,312	18,690	17,210	-14.04%
Lap Swim	7,588	7,500	8,819	8,724	14.97%
Recreational Swim	8,437	7,967	8,563	7,799	-7.56%
Family Swim	2,018	1,694	1,923	1,766	-12.49%
Water Exercise	7,371	8,283	7,245	5,498	-25.41%
Swim Team/ Synchro	15,085	9,035	10,963	10,178	-32.53%
Rentals	13,288	12,457	10,924	5,352	-59.72%
TOTAL AQUATICS	**91,214**	**82,649**	**86,949**	**74,071**	**-18.79%**

Carnegie Center	2002-2003	2003-2004	2004-2005	2005-2006	Percent Change
Gallery	12,493	13,764	10,908	682	-94.54%
Children's Museum	7,851	6,064	5,224	130	-98.34%
Adult Classes	333	644	343	0	-100.00%
Youth Classes	140	194	311	0	-100.00%
Meetings	720	572	459	26	-96.39%
Concerts in the Park	7,300	6,675	7,000	7,100	-2.74%
Ermatinger	206	489	50	0	-100.00%
Java	255	355	0	0	-100.00%
Events	958	498	2,154	0	-100.00%
Rental	225	343	339	0	-100.00%
TOTAL CARNEGIE	**30,481**	**29,598**	**26,788**	**7,938**	**-73.96%**

Recreation	2002-2003	2003-2004	2004-2005	2005-2006	Percent Change
Parent and Child	34	4,764	8,673	9,701	28532.4%
Youth Classes	144	620	924	610	323.61%
Adult Classes	2,076	1,099	1,331	737	-64.50%
Indoor Playground	117	0	0	0	-100.00%
Events	195	58	3,100	3,000	1438.46%
Summer Day Camp	752	454	760	773	2.79%
Drop in Program	0	0	0	0	0.00%
Preschool Day Camp	121	76	60	198	63.64%
Teen Camp	120	0	0	0	-100.00%
Field Trips	156	7	21	4	-97.44%
TOTAL RECREATION	**3,681**	**7,078**	**14,166**	**15,023**	**308.12%**

Pioneer	2002-2003	2003-2004	2004-2005	2005-2006	Percent Change
Home Delivered Meals	26,313	27,482	30,593	29,912	13.68%
Congregate Meals	4,760	6,269	7,085	6,484	36.22%
Transportation	11,070	10,093	10,252	11,385	2.85%
Outreach Services	30,464	17,941	7,995	8,012	-73.70%
Trips	1,048	1,090	1,805	1,809	72.61%
Recreation	7,094	9,270	11,720	11,073	56.09%

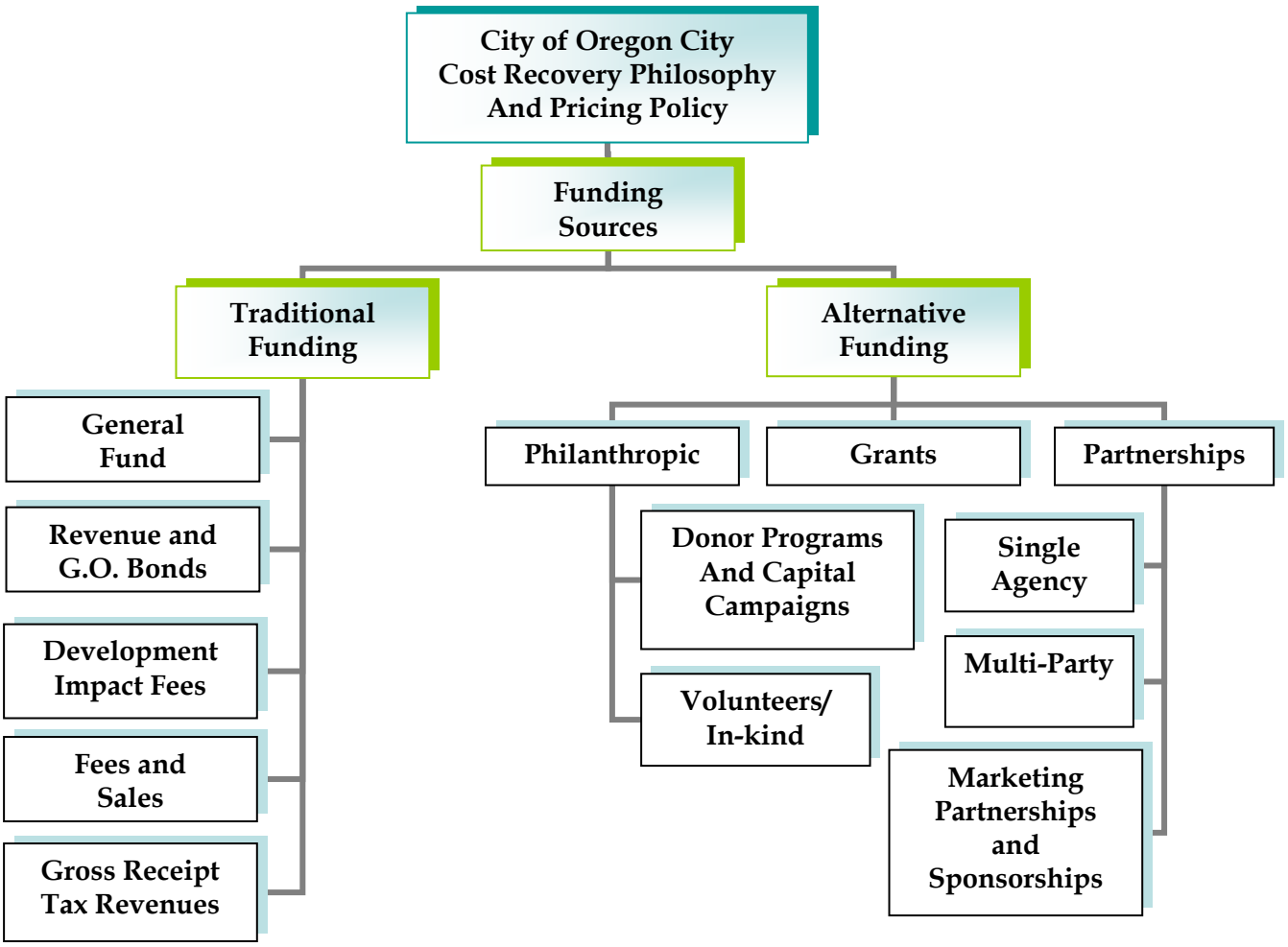
	Classes	4,746	4,692	5,043	6,572	38.47%
	Meetings	3,150	2,900	3,133	3,507	11.33%
	In-House Services	1,903	2,070	1,892	2,051	7.78%
	Rentals	5,634	5,809	4,553	8,304	47.39%
	TOTAL PIONEER	**96,182**	**87,616**	**84,071**	**89,109**	-7.35%

Parks		**2002-2003**	**2003-2004**	**2004-2005**	**2005-2006**	**Percent Change**
	Atkinson	7	2	1	2	-71.43%
	Buena Vista	45	45	118	356	691.11%
	Chapin	34	37	63	50	47.06%
	Clackamette General	43	42	39	59	37.21%
	Clackamette Horseshoe	22	30	22	46	109.09%
	Hillendale	38	39	33	57	50.00%
	Rivercrest	37	39	28	64	72.97%
	Ball Fields	0	0	5	435	435.00%
	RV Park	3,110	3,028	3,367	3,847	23.70%
	TOTAL PARKS	**3,336**	**3,262**	**3,676**	**4,916**	**47.36%**

GRAND TOTAL	**224,894**	**210,203**	**215,650**	**191,057**	**-15.05%**

B. Alternative Funding Sources

The City has historically used a variety of funding mechanisms for financial resources. The following schematic shows the wide variety of funding mechanisms available.



In order to fund the Department in the future, consideration will need to be made for a variety of types of funding sources. It cannot be expected that traditional (general fund or taxing) funding alone will cover the desired amenities and services. The following pages outline a variety of funding sources that can be considered to increase revenue and cost recovery for funding the Department.

C. Potential Funding Sources

These funding sources are currently being used, or could easily be used by the City of Oregon City Community Services Department to create the existing budgets for capital and operational expenditures.

Systems Development Charges (SDC's)
These fees are assessed for the development of residential and/or commercial properties with the proceeds to be used for parks and recreation purposes, such as open space acquisition, community park site development, neighborhood parks development, regional parks development, etc.

Recreation Service Fees
This is a dedicated user fee, which can be established by a local ordinance or other government procedures for the purpose of constructing and maintaining recreation facilities. The fee can apply to all organized activities, which require a reservation of some type, or other purposes as defined by the local government. Examples of such activities include adult basketball, volleyball, and softball leagues, youth baseball, soccer, and softball leagues, and special interest classes. The fee allows participants an opportunity to contribute toward the upkeep of the facilities being used.

Land and Water Conservation Fund
These funds are awarded for acquisition and development of parks, recreation, and supporting facilities through the National Park Service and State Park System.

Inter-modal Transportation and Efficiency Act
This funding program, commonly called TEA-21 Grants was authorized by the Federal Government in 1991. Funds are distributed through the state. There are several million dollars in enhancement revenues available for transportation related projects, including bicycle and pedestrian trails, rail depot rehabilitation, landscaping, and beautification projects.

Grants
Varieties of special grants either currently exist through the federal and state governmental systems, or will be established through the life of current and proposed facilities. See ***Appendix VII*** for potential grant opportunities.

Fees/Charges
The plan has documented that the Department is far undervalued and must position its fees and charges to be market-driven and based on both public and private facilities. The potential outcome of revenue generation is consistent with the national trends relating to public park and recreation agencies, which generate an average 35% to 50% of operating expenditures.

Private Developers
These developers lease space from city-owned land through a subordinate lease that pays out a set dollar amount plus a percentage of gross dollars for recreation enhancements. These could include a golf courses, marinas, restaurants, driving ranges, sports complexes, equestrian facilities, recreation centers, and ice arenas. (Which are currently in place at Sportcraft Landing.)

Reservations
This revenue source comes from the right to reserve specific public property for a set amount of time. The reservation rates are usually set and apply to group picnic shelters, meeting rooms for weddings, reunions and outings or other types of facilities for special activities.

Volunteerism
The revenue source is an indirect revenue source in that persons donate time to assist the Department in providing a product or service on an hourly basis. This reduces the City's cost in providing the service plus it builds advocacy into the system.

Catering Permits and Services
This is a license to allow caterers to work in the park system on a permit basis with a set fee or a percentage of food sales returning to the City. Also, many cities have their own catering service and receive a percentage of dollars from the sale of their food.

Ticket Sales/Admissions
This revenue source is on accessing facilities for self-directed activities such as pools, ice-skating rinks, ballparks and entertainment activities. These user fees help offset operational costs.

Solid Waste Fee
Cities are able to add cost for land fills and drop stations that are designated to provide space and facilities for both. Once these fees cover the cost of buildings and landfills they can re-dedicate a percentage to other city services. Several cities have opted to finance park improvements from solid waste fees (Oregon City already collects a host fee for a major solid waste transfer station site). On an annual basis a portion of these funds are utilized for community enhancement projects, which are competed for via a grant program. (The parks and recreation department has been the beneficiary of some of these funds as distributed each year).

Booth Lease Space
In some urban cities, they sell booth space to sidewalk type vendors in parks or at special events. For a flat rate based on volume received. The booth space can also apply to farmers markets, art schools, and antique type fairs.

Camping Fees and Hook-Up Fees
City and county parks along with state parks permit camping for RV's, tents, and primitive camping. Fees range from a high of $18.00 to $20.00 a night per site to $6.00 or $7.00 for primitive space. Additional fees will be added for water, electricity, sewer, and cable T.V. access.

Lighting Fees
Some cities charge additional fees for the lighting charges as it applies to leagues, special use sites, and signature type facilities that require lighting above a recreational level. This includes demand charges.

Program Contractor Fees
Cities and counties receive a percentage of gross contractor fees for contractor programs held on city or county facilities. The percentages range from 25% to 40% depending on space, volume, and the amount of marketing the City does for the contractor.

Patron Cards
This allows patrons of a specific recreational facility to purchase patron cards for a month or a year that allow them special privileges above the general public. These privileges include having rights to early tee times, reservations, and special tours, shows, or events. The patron cards can range in price from $15.00 a month to $150.00 a year.

Surplus Sale of Equipment by Auction
Cities and counties have surplus auctions to get rid of old and used equipment that generates some income on a yearly basis. There are city and state policies already in place which govern how this happens.

Permits (Special Use Permits)
These special permits allow individuals to use specific park property for financial gain. The City either receives a set amount of money or a percentage of the gross service that is being provided.

These funding sources are potential funding opportunities the City of Oregon City Community Services Department might consider for additional funding of capital and operational expenditures.

Maintenance Utility Fee
Cities can add a maintenance utility fee to the monthly utility bills that can be used for maintenance and operations of parks and recreation facilities and services. This can be done without a vote of the citizens.

Franchise Fee on Cable
This allows cities to add a franchise fee on cable to be designated for parks. The normal fee is $1.00 a month or $12.00 a year per household. Fees are usually designated for open space acquisition or capital improvements.

Water Utility Fee
Cities have added a special assessment on water utility fees paid by homeowners and businesses to cover the costs of watering street trees, landscaping, fountains, and pools. The fee is usually a percentage of the bill (2 or 3%). This fee is similar to the Maintenance Utility Fee (above).

Partnerships
Partnerships are joint development funding sources or operational funding sources between 2 separate agencies, such as 2 government entities, a non-profit and a city department, or a private business and a city agency. Two partners jointly develop revenue producing park and recreation facilities and share risk, operational costs, responsibilities, and asset management based on the strengths and weaknesses of each partner. For a sample partnership policy see ***Appendix VIII***.

Corporate Sponsorships
This revenue-funding source allows corporations to invest in the development or enhancement of new or existing facilities in park systems (we don't solicit these currently but might be willing to). Sponsorships are also highly used for programs and events (we do utilize this method for programs and special events). For a sample sponsorship policy see ***Appendix IX***.

Film Rights
Many cities and counties permit out their sites such as old ballparks or unique grounds or sites for film commissions to use. The film commission pays a daily fee for the site plus the loss of revenue the City will incur if the site generates income. (A citywide policy is currently being worked on for this, not limited to just parks).

Cost Avoidance
If the Department can stay driven by the market and focus on its core businesses it may be able to save money. By shifting its role as direct provider, the City will experience savings by deciding whether or not to provide that facility or program. This is cost avoidance. The estimated savings could be realized through partnering, outsourcing, or deferring to another provider in the provision of a service and/or facility.

Foundation/Gifts
These dollars are raised from tax-exempt, non-profit organizations established with private donations in promotion of specific causes, activities, or issues. They offer a variety of means to fund capital projects, including capital campaigns, gifts catalogs, fundraisers, endowments, sales of items, etc.

Inter-local Agreements
Contractual relationships entered into between 2 or more local units of government and/or between a local unit of government and a non-profit organization for the joint usage/development of sports fields, regional parks, or other facilities.

General Obligation Bonds / Referendum
Bonded indebtedness issued with the approval of the electorate for capital improvements and general public improvements. The plan recommends massive capital needs, renovation, and new facilities, to meet the needs and demands of residents of the City. These general obligation bonds would be initiated through city council approval and citizen vote.

Private Concessionaires
Contract with a private business to provide and operate desirable recreational activities financed, constructed, and operated by the private sector with additional compensation paid to the City.

Naming Rights
Many cities and counties have turned to selling the naming rights for new buildings or renovation of existing buildings and parks for the development cost associated with the improvement. This opportunity exists in the City.

Cell Towers
Cell towers attached to existing light poles in game field complexes are another source of revenue the City could seek to help support the system.

Capital Improvement Fees
These fees are on top of the set user rate for accessing facilities such as golf, recreation centers, and pools to support capital improvements that benefit the user of the facility.

Merchandising Sales
This revenue source comes from the public or private sector on resale items from gift shops and pro shops for either all of the sales or a set gross percentage.

Concession Management
Concession management is from retail sales or rentals of soft goods, hard goods, or consumable items. The City either contracts for the service or receives a set of the gross percentage or the full revenue dollars that incorporates a profit after expenses.

Friends Associations
These groups are formed to raise money typically for a single focus purpose that could include a park facility or program that will better the community as a whole and their special interest.

Advertising Sales
This revenue source is for the sale of tasteful and appropriate advertising on park and recreation related items such as in the City's program guide, on scoreboards, dasher boards and other visible products or services that are consumable or permanent that exposes the product or service to many people.

Marine Slips/Permits
This revenue source is for a permit to store boats on public property for a set amount based on a lineal foot and service charges on an annual basis.

Parking Fees
This fee applies to parking at selected destination facilities such as beach parking areas, major stadiums, and other attractions to help offset capital and operational costs. This is similar to a boat launch fee idea at Clackamette & Sportcraft.

Horsepower Fee
In some county parks, they charge a horsepower fee to use public park reservoirs. The higher the horsepower, the more money the user pays. A basic fee is applied, for example $35.00, and horsepower rates are typically $1.00 or $2.00 per horsepower. This is similar to the boat launch parking fee suggested above.

Equipment Rental
The revenue source is available on the rental of equipment such as tables, chairs, tents, stages, bicycles, roller blades, and boogie boards that are used for recreation purposes.

Special Fundraisers
Many park and recreation agencies have special fundraisers on an annual basis to help cover specific programs and capital projects.

Recreation Surcharge Fees on Sports and Entertainment Tickets, Classes, MasterCard, Visa, Golf
This fee is a surcharge on top of the regular sports revenue fee or convenience fee for use of MasterCard and Visa. The fee usually is no more than $5.00 and usually is $3.00 on all exchanges. The money earned is used to help pay off the costs of improvement or for operational purposes.

Gift Catalogs
Gift catalogs provide organizations the opportunity to let the community know on a yearly basis what their needs are. The community purchases items from the gift catalog and donates them to the City.

Maintenance Endowments
Maintenance endowments are set up for organizations and individuals to invest in ongoing maintenance improvements and infrastructure needs. Endowments retain money from user fees, individual gifts, impact fees, development rights, partnerships, conservation easements, and for wetland mitigations.

Membership and Season Pass Sales
The cities or counties sell memberships to specific types of amenities to offset operational costs. These membership fees can apply to recreation and fitness centers, tennis centers, golf courses, pools, or ice-rinks.

Security and Clean-Up Fees
Cities will charge groups and individuals security and clean-up fees for special events other type of events held in parks.

The funding sources listed below are potential funding opportunities the City of Oregon City Community Services Department could consider for additional funding of capital and operational expenditures. These funding sources may not be available currently in the State of Oregon or an intergovernmental agreement may be necessary for implementation. These funding sources may meet with some resistance and be more difficult to implement.

Creation of an Authority
The City needs to adopt the creation of a recreation authority or district to create an atmosphere that would allow the Department to initiate long-term successes. Many successful park districts exist throughout the country and facilitate creative business approaches to leisure services that some governmental entities cannot provide. The planning team views this action as key to plan success.

Hotel, Motel, and Restaurant Tax
Tax based on gross receipts from charges and meals services, which may be used to build and operate sports fields, regional parks, golf courses, tennis courts, and other special park and recreation facilities.

Sales Tax
The revenue source is very popular for funding park and recreation agencies either partially or fully. The normal sales tax rate is 1¢ for operations and 1/2¢ for capital. This tax is very popular in high traffic tourism-type cities and with counties and state parks.

Food and Beverage Tax
The tax is usually associated with convention and tourism bureaus. However, since parks and recreation agencies manage many of the tourism attractions, they receive a portion of this funding source for operational or capital expenses.

Utility Roundup Programs
Some park and recreation agencies have worked with their local utilities on a round up program whereby a consumer can pay the difference between their bill up to the even dollar amount and they then pay the Department the difference. Ideally, these monies are used to support utility improvements such as sports lighting, irrigation cost, and HVAC costs

Land Trust
Many counties have developed land trusts to help secure and fund the cost for acquiring land that needs to be preserved and protected for greenway purposes. This could be a good source to look to for acquisition of future lands.

Local Improvement Districts (LID's)
Taxing districts established to provide funds for certain types of improvements that benefit a specific group of affected properties. Improvements may include landscaping, the erection of fountains, and acquisition of art, and supplemental services for improvement and promotion, including recreation and cultural enhancements.

Revenue Bonds
Bonds used for capital projects that will generate revenue for debt service where fees can be set aside to support repayment of the bond. There are very limited opportunities for the City of Oregon City to utilize revenue bonds to develop facilities.

Real Estate Transfer Fees
As cities and counties expand, the need for infrastructure improvements continues to grow. Since parks add value to neighborhoods and communities, some cities and counties have turned to real estate transfer fees to help pay for needed renovations. Usually transfer fees amount to ¼ to ½% on the total sale of the property.

Benefit Assessment Act of 1982
(Government Code section 54703 et seq.)
This statute provides a uniform procedure for the enactment of benefit assessments to finance the maintenance and operation costs of drainage, flood control, and street light services and the cost of installation and improvement of drainage or flood control facilities. Under legislation approved in 1989 (SB 975, Chapter 1449), this authority is expanded to include the maintenance of streets, roads, and highways. As with most other assessment acts, cities, counties, and special districts that are otherwise authorized to provide such services may use it.

The Mello-Roos Act
The 1982 Mello-Roos Community Facilities Act (Government Code Sections 53311 et seq.) enables cities, counties, special districts, and school districts to establish community facilities districts (CFDs) and to levy special taxes to fund a wide variety of facilities and services. The proceeds of a Mello-Roos tax can be used for direct funding and, in the case of capital facilities, to pay off bonds. Mello-

Roos financing has similarities to special taxes and special assessments, and in some situations, it has advantages over both.

Establish a Greenway Utility
Greenway utilities are used to finance acquisition of greenways and development of the greenways by selling the development rights underground for the fiber optic types of businesses.

Subordinate Easements – Recreation / Natural Area Easements
This revenue source is available when the City allows utility companies, businesses, or individuals to develop some type of an improvement above ground or below ground on their property for a set period of time and a set dollar amount to be received by the City on an annual basis.

Irrevocable Remainder Trusts
These trusts are set up with individuals who typically have more than a million dollars in wealth. They will leave a portion of their wealth to the City in a trust fund that allows the fund to grow over a period of time and then is available for the City to use a portion of the interest to support specific park and recreation facilities or programs that are designated by the trustee.

Life Estates
This source of money is available when someone wants to leave their property to the City in exchange for them to live on their property until their death. The City usually can use a portion of the property for park purposes and then all of it after the person's death. This revenue source is very popular for individuals who have a lot of wealth and their estate will be highly taxed at their death and their children may have to sell of their property because of probate costs. This allows the person to receive a good tax deduction yearly on their property while leaving a life estate. It is good for the City because they do not have to pay for the land.

Integrated Financing Act
This legislation creates an alternate method for collecting assessments levied under the Landscaping and Lighting Act, the Vehicle Parking District Law and the Park and Playground Act. This act applies to all local agencies. This act can be used to pay the cost of planning, designing, and constructing capital facilities authorized by the applicable financing act, pay for all or part of the principle and interest on debt incurred pursuant to the applicable financing act and to reimburse a private investor in the project. It serves two unique properties: one, it can levy an assessment which is contingent upon future land development and payable upon approval of a subdivision map or zone change or the receipt of building permits; two, it allows the local agency to enter into an agreement with a private investor whereby the investor will be reimbursed for funds advance to the agency for the project being financed.

Business Excise Tax
This tax is for new businesses that settle into a community on products sold based on the wholesale cost. Park districts in Illinois use this source as one of their revenue sources.

Room Overrides on Hotels for Sports Tournaments and Special Events
Cities have begun to keep a percentage of hotel rooms that are booked when the City hosts a major sports tournament or special event. The overrides are usually $5.00 to $10.00 depending on what type of room. Monies collected help offset operational costs for the City in hosting the events. (This is a limited opportunity in Oregon City because of the Cities lack of hotels.)

Leasebacks on Recreational Facilities
Many cities do not have capital dollars to build revenue-producing facilities but they will hire a private investor to build the facility according to the specifications they want, the investment company will finance the project and the City will lease it back from them over 20 years. This can be reversed where by the City builds the facility and leases to private management to operate it for a percentage of gross dollars to pay off the construction loans through a subordinate lease.

Family Tree Program
Many cities have worked with local hospitals to provide cash to the parks system to buy and plant a tree in honor of every newborn in the City. The hospitals invest $250.00 to $300.00 and receive the credit from the parents of the newborns. The parks system gets new trees of ample size.

Alcohol Tax
A percentage of alcohol tax gained by the state is made available for individual cities and county park systems to retain support efforts to develop programs and services targeted for youth to assist in skill development programs, after-school programs, summer camps, and other family type programs.

Cigarette Tax
In some states the sales tax gain by the state for cigarettes is redistributed to cities and counties for programs to teach and curb youth smoking through effective prevention recreation programs.

Sell Development Rights
Some cities and counties sell their development rights below park ground or along trails to fiber optic companies or utilities. The park agency detains a yearly fee on a linear foot basis.

Signage Fees
This revenue source taxes people and businesses with signage fees at key locations with high visibility for short term events. Signage fees range in price from $25.00 per signs up to $100.00 per sign based on the size of the sign and location.

Dog Park Fees
These fees are attached to kennel clubs for the right for their club to have their own dog park facilities for their exclusive use. Fees are on the dogs themselves and on people who take care of people's dogs.

Land Swaps
This is where the city or county trades property to improve their access of protection of resources. This could include property gain by the city for non-payment of taxes or a situation in which a developer needs a larger or smaller space to improve their profitability. The city or county typically gains more property for more recreation opportunities in exchange for the land swap.

*Recommendations related to funding improvements can be found in **Section VI**, Recommendations and Action Plans.*

D. Summary of Key Finance and Funding Findings

Organizational Management

The Oregon City Community Services Department resources are below standards for staffing resources. If Oregon City considers expanding recreation services and/or facilities in the future, staffing resources and allocations may need to be re-evaluated.

Finance and Cost Recovery

The City of Oregon City has an average cost recovery for parks and recreation services. Current funding for park capital improvements is extremely limited. Ongoing operational and maintenance funding is very low and the level of service to the community is minimal.

Partnerships

Oregon City has no overall partnership policy or plan. There is substantial opportunity for additional partnerships and alternative funding, but no allocated staff or resources to procure these functions.

VI. Recommendations and Action Plans

Great Things to Come

The previous sections have provided findings and analysis of the various management and planning issues for the City of Oregon City. This section provides recommendations for improvements for Oregon City based on the information gathered from survey results and from the public input process. The information gathered has aided in identifying community issues, analyzing future needs, and addressing how to implement them. The recommendations in this section are not necessarily prioritized, although the capital improvement recommendations in the charts within this section are prioritized within the timeframe indicated. It is understood that these priorities may change or shift based on funding opportunities, political climates, etc. and is intended to provide guidelines as to what is needed to keep up with the quick growth and development that is occurring in Oregon City.

Recommendations for the next five years address the needs of the community and can be implemented with funding sources identified. The five-year recommendations are guidelines based on current information and planning. Planning beyond the next five years is not as certain, as the community will change drastically. It is recommended that another Parks and Recreation Master Planning process begin within the next five to six years to more accurately plan for the future. Most communities conduct a new Master Planning process every five to six years to maintain their ability to receive grants with a current long-range plan in place.

Guiding Themes

Based on the Findings in the previous sections of this plan, some guiding themes have emerged and provide the framework for the City of Oregon City's approach toward parks and recreation facilities and services. Oregon City should capitalize on its great assets and focus on taking care of what they have, as a priority.

A strong parks and recreation component is central to the quality of life goals of Oregon City. This Parks and Recreation Master Plan Update promotes the enhancement and expansion of parks and recreation opportunities for the community.

There are several guiding themes expressed through the community planning processes that are summarized below:

- Build on Oregon City's natural and recreational outdoor assets
- Support a pedestrian-friendly, "walkable" community, including bicycling
- Enhance the "quality of life" for residents through parks and recreation
- Create new funding mechanisms to sustain the level of standards the community supports
- Balance passive, self-directed, and active recreational opportunities through goals and strategies
- Maintain and upgrade the existing assets and expand park and recreation opportunities as opportunities arise
- Expand citywide events
- Further embrace the historical aspects of Oregon City

A. Recommendations

Goal 1: Maximize the Planning Effort

First Steps

Objective: **Incorporate the action items of this plan into the City's annual work plans to achieve the recommendations of this plan and to enhance effectiveness of staff effort.**

Strategy:

- Assign responsibility and time frame, and allocate resources necessary to complete each action identified in annual work plans.

Objective: **Assure that all levels of staff are informed of and are set up to work together to implement the recommendations and strategies of the plan.**

Strategies:

- Inform all levels of staff of the direction of the Plan, allow for staff input, encourage buy-in, and encourage input from all staff members.
- Provide cross-departmental staff teams/team members, as appropriate, with education development opportunities, necessary equipment, and supplies.

Goal 2: Increase Level of Service in Parks and Facilities

Objective: **Increase level of maintenance throughout the parks system to increase the level of service**.

National averages show that park systems that have an average of one full-time employee (FTE) per 7 to 10 developed acres are able to adequately maintain parks to a safe and publicly acceptable

level. Oregon City has approximately one FTE for every 16 acres which shows a staffing level much below the national average. In order to meet the low end of national staffing averages Oregon City would need to almost double maintenance staff by adding eight positions. Although the City's financial situation may not allow the Department to add eight staff members, it is imperative that the maintenance staff increase not only to keep up with current parks, but also to be able to adequately maintain the parks that are planned for developments such as the Park Place, Beaver Creek, and the Cove. Without additional maintenance staff the Department will struggle to complete improvements listed as recommendations in this plan.

Strategies:

- Increase staffing for parks maintenance.
- Increase funding for parks maintenance by increasing the city maintenance utility fee referenced in Goal 5, as well as Section V- C.
- Provide consistent levels of maintenance throughout the parks system by implementing standard maintenance procedures and developing budget planning tools where possible.
- Develop a playground replacement schedule for all playground equipment.
- Develop a maintenance equipment replacement schedule to plan for major expenditures.

Objective: **Use available resources and partners to aid in park maintenance.**

Strategies:

- Continue the park host program, ballfield maintenance agreements with leagues, and partnerships with high school classes, and evaluate their effectiveness on an annual basis.
- Continue to look for opportunities to partner with community groups and volunteers to increase the quality of maintenance in parks.

Objective**: As resources and opportunities exist, repair and renovate existing facilities to bring existing parks up to the level of community expectations.**

Strategies:

- Renovate the Oregon City Swimming Pool per the survey results, and as recommended in the Oregon City Pool Study (***Appendix II***).
- Improve the basketball court at Barclay Hills Park.
- Replace the playground at Canemah Park.
- Add a commercial caterer's kitchen to Carnegie Center.
- Evaluate the need for and possibly renovate the fitness course at Chapin Park.

Cost Estimates of Renovations and Additions

Park/Facility	Improvement	CIP cost estimates	O&M cost estimates
Oregon City Pool	Renovate existing pool and add leisure components and program space	$3,000,000	additional $200,000 / year
Barclay Hills Park	Upgrade basketball court	varies	minimal
Canemah Park	Replace playground	$100,000	$2,000
Carnegie Center	Add commercial caterer's kitchen	$150,000	N/A (additional rental revenues)

Objective: **Increase the comfort and convenience of parks.**

Strategies:

- Add dog waste pickup stations and trashcans to all parks prioritizing those with high dog activity.
- Add bike racks to all parks, especially along bike routes and trails.
- Provide single picnic tables in parks to increase picnic opportunities and support passive use of parks.

Cost Estimates of Improvements

Park	Improvement	CIP cost estimates	O&M cost estimates
All developed parks and open spaces	Install dog waste stations ($1,100 per property), including bag dispenser and trash receptacle	$35,200	$2,000
All developed parks and open spaces	Install bike racks ($600 per park), including rack and concrete pad	$19,200	minimal
10 parks throughout the system	Add single picnic tables ($1000 per table), 3 tables per park	$30,000	$2,000

Objective: **Increase diversity of components in parks.**

***Strategies*:**

- Increase the LOS provided to the community by adding new facilities like those found in other Oregon parks such as: leisure aquatic amenities, an off-leash dog park, a nature center, and an amphitheater. Explore the idea of adding an adventure or destination playground, farmer's market area, and outdoor performing arts space.
- Solicit public input in the development or renovation of all parks.

Objective: **Determine the best uses for neighborhood parks.**

This planning process recognizes that neighborhood parks are valued by the residents of Oregon City. Seventy percent of the survey respondents stated that they have a need for neighborhood parks. This facility was second only to walking and biking trails in terms of need. In addition, 34% of the respondents list neighborhood parks in the top four most important facilities to have in their parks system. Because neighborhood parks are so important to residents, it will be important to use these parcels to keep up with the needs of the community. However, it is recommended that the City should focus its efforts towards neighborhood parks of at least three acres in size. It is important that plans for these parks be developed with neighborhood input. These plans may call for some development or may call for the parks to be left undeveloped, depending on the feedback from the neighborhoods. Each existing or future neighborhood park should be considered on an individual basis for its current or potential recreational value.

Strategies:

- Hold public meetings or visit with neighborhood groups to gain input about future of neighborhood parks.
- Create master plans for each park based on public input.
- Implement master plans after funding has increased to keep up with maintenance.

Objective: **Determine the most efficient action to reduce the number of mini-parks or pocket parks owned and maintained by the City.**

Respondents to the survey also list their need for small neighborhood parks as being met. Currently the Oregon Community Services Department has several very small neighborhood (mini or pocket) parks that are either undeveloped or have a very low level of development. These parks, less than three acres, known as "mini-parks" or "pocket parks", should be discouraged because of their limited recreational value and high cost to maintain. There are a few cases of specialized park sites which are smaller than three acres, such as Jon Storm Park or Richard Bloom Tots' Park, where the parks should be developed and maintained because of other considerations. Each existing or future mini or pocket park should be considered on an individual basis for its current or potential recreational value. For these same reasons, the City should not assume the ownership or operations of any privately developed/owned parks which do not meet these same thresholds: at least three acres in size and built to City parks standards.

Strategies:

- Explore opportunities for agreements with HOA's and neighborhood groups to maintain small neighborhood parks in exchange for development of the park.

- Hold public meetings or visit with neighborhood groups to gain input about future of neighborhood parks.
- The City should consider surplusing/disposing of existing mini-parks/pocket parks where feasible, after the local neighborhood has been given the opportunity to assume maintenance and operation responsibilities for the site.

Objective: **Continue to plan for parkland acquisition.**

Future park acquisition should be considered on an individual basis for its current or potential recreational value.

Strategies:

- Pursue the acquisition of property in the High School (Glen Oak Road) Area.
- Investigate and maximize opportunities presented by the Park Place, Beaver Creek, South End, The Rivers, and Cove Developments to increase city park acres from 258.2 to meet the ORPA median of 422 park acres.
- Look for land acquisition opportunities that are more than three acre parcels in the southern part of the Hilltop east of Hwy 213, in the "South End" area near the edge of the current city boundary or in the Urban Growth Boundary (roughly between Central Pt. and S. End Roads), in the Hilltop area east of Clackamas Community College and Beavercreek Rd. (UGB/future growth areas), and in the eastern portion of the Middle Level.
- The City should not acquire or develop additional mini-parks or pocket parks that are less than three acres in size. Mini/pocket parks may be developed within single-family subdivisions as long as they are owned and maintained by homeowners associations.

See GRASP® Recommendation Perspective located in ***Appendix V****.*

Goal 3: Increase access to parks by implementing trails plan

Objective: **Use the 2004 Oregon City Trails Master Plan to seek out opportunities to increase miles of trails within Oregon City (currently six) to meet, if not greatly exceed, the ORPA median of nine miles of developed trail.**

Strategies:

- Work to fund Tier 1 local trails as identified in the 2004 Trails Master Plan. Place emphasis on constructing trails that connect parks to other parks, trails, or neighborhoods. For example: Park Place Development Trails (L4), Barclay Park Connection (L11), Parks Trail (L21), and Wesley Lynn – Chapin Trail (L23).
- Continue to fund planning and construction for Tier 1 Regional Trails as identified in the 2004 Trails Master Plan. Use the Trails Master Plan for priorities and specifics about implementation costs.
- As funding permits, determine the existing condition and location of the Oregon Trail-Barlow Road Historic Corridor and review the existing standards within the Oregon City Municipal Code to determine if modifications to the development standards and/or City master plans are necessary to protect the corridor. If modifications to the existing code language are proposed, they should include methods to encourage property owners to preserve the historic corridor in the original condition while allowing the property to be used in an economically viable manner. This strategy recommendation shall

utilize/reference the ***Barlow Road Historic Corridor Westernmost Segment of the Oregon Trail Background Report & Management Plan (Clackamas County, 1993)***, or most current adopted report.

Estimated Trail Costs for 2007

Trail number	Trail name	2004 estimated cost	2007 estimated cost (assumed 3% inflation)
L4	Park Place Trails	$92,286	$100,843
L11	Barclay Park Connection	$30,181	$32,980
L21	Parks Trail	$492,217	$538,623
L23	Wesley Lynn – Chapin Trail	$300,413	$328,270

Objective: **Make parks accessible and inviting for cyclists and other trail users.**

Strategies:

- Add bike racks to all parks, prioritizing parks near trails or bikeways.
- Provide drinking fountains and resting areas in parks that contain trails.
- Maintain internal park trails for safe bicycle use.
- Work with the Planning and Public Work Department to provide safe bikeways to parks.

Goal 4: Strategically Increase Programming and Partnerships

Objective: **Establish and promote more special events and local history programs in Oregon City.**

Strategies:

- Collaborate with local historical organizations to cross-market and promote existing history programs through website links, program guides, newsletters, and fliers.
- As additional funding is obtaining, establish dedicated city staffing for planning and marketing programming and special events.
- Evaluate the special event, rental, and programming opportunities available at the Carnegie Center when renegotiating lease agreement with current contracted manager in 2009. The City should be aware of not directly competing with existing private businesses or agencies which offer similar services in the community.
- Dedicated staffing and minor renovations to the facility may enable the City to host a wide variety of revenue-producing special events, concerts, programs, and rentals at this facility.
- Establish a streamlined community special events plan through collaborative efforts between the Oregon City and community partners and organizations, anchored to common goals.
- Investigate the community interest, agency budget capacity, and partnership opportunities for creating new community special events, such as:
    - Historical (i.e. -pioneer days festival, wagon rides, walking history tours, etc.)

- Arts and Culture (i.e. -movies and concerts in the park, art festivals, children's storytelling, etc.)
- Holiday related (i.e. -Halloween haunted forest, egg scrambles, holiday market, etc.)
- Health and Wellness (i.e. -fun runs and walks, community bike rides, dance contests, health fairs, etc.)

Objective: **Strategically Meet the Community's Demand for New Programs and Services**

Provide a variety of recreational programming and opportunities to meet the various needs of the community.

Strategies:

- Allocate resources to provide *quality* recreation programming, based on community input.
- Gain input from recreation participants through post-program or event evaluations.
- Continue to gain information from the community as to what programs are desired and popular through a statistically valid survey, at minimum every five years.
- Initiate collaborations to provide a greater *quantity* of diverse, cost effective recreation programs and activities.
- Expand the number of community-wide and regional special events which should be located in parks and/or facilities best suited to accommodate the activity/event (i.e. –historical festivals, concerts, etc.)
- Expand fitness and wellness programs for the entire community, with a focus on aquatics and adult programs.
    - Consider marketing the cardio and weight facilities at the Pioneer Center to all ages, to better serve the needs of the entire community.
    - Provide additional health and wellness programs like yoga, Pilates, and aerobics.
- Continue and expand youth learn-to-swim programs to meet the interests and safety needs of the community.
- Create additional opportunities for adult and youth "recreational" sports activities (soccer, basketball, softball, baseball, and swimming programs).

Objective: **Collaborate to attract more residents and visitors to utilize and participate in Oregon City's parks and recreation services and facilities**

Strategies:

- Work with local tourism organizations to attract private recreation companies to the Oregon City area to provide activities such as environmental and wildlife education, tours to nearby attractions, historical tours, guided hiking, and ecotourism.
- Partner with Fine Arts Starts to provide drop-in single-session activities such as: art workshops, culinary instruction, gallery tours, instructional dance classes, drama classes, and theatre/film viewings at the Carnegie Center.
- Continue and establish relationships with the following partner organizations to implement the recommendations of this master plan and to provide an increased number of and high quality recreation programs, activities, and services that will attract both residents and visitors:

- Local volunteers
- Youth sports associations
- Clackamas Community College
- Clackamas County Department of Aging
- End of the Oregon Trail Interpretive Center
- School District
- John Inskeep Environmental Learning Center
- National Park Service – McLoughlin House National Historic Site
- Stevens-Crawford Museum
- Home Orchard Society Arboretum

Objective: **Increase Partnerships and Collaborative Efforts**

Build partnerships within the community to take advantage of existing facilities, share new facilities, and provide additional programming and services to the community.

Strategies:

- Continue dialogue between the Parks and Recreation Department and Public Works about the potential for staff sharing for responsibilities such as medians, landscaping, and grounds maintenance.
- Investigate partnerships with local medical and health organizations to increase fitness and health programming for the aging population within the community.
- Create new and formalize existing partnerships (*see Sample Partnership Policy in* ***Appendix VIII***) with equity agreements that are reviewed annually.
- Strengthen and expand Intergovernmental Agreements (IGA's) with schools for use of fields, gyms, and multipurpose spaces.
- Explore the possibilities of revising and promoting an adopt-a-park program to help with park maintenance, beautification, and civic pride.
- Create a "Park Ambassador" program where residents living adjacent to parks are trained to inspect parks and then file a weekly report in exchange for a nominal fee or pass.

Goal 5: Increase Cost Recovery and Funding

Objective: **Research potential traditional funding opportunities.**

The City has the ability to use these mechanisms to enhance the quality of life in Oregon City and expand recreation, park, open space, trails, programs, and services to the community. The survey indicated initial support for additional fees and taxes to support current City operations and maintenance needs and to provide desired facilities, parks, trails, programs, and services.

Strategies:

- Based on strong positive support from the community survey, work with the City Commission to establish an additional five dollar maintenance utility fee (per household/per month) to build and operate City parks, recreation, and aquatic facilities. This maintenance utility fee is established for all households for the purpose of assisting in funding the operational and maintenance costs for facilities to enhance the level of service to the community. It is not considered a user fee for services.

- Work with residents and partners to establish additional revenue through a combination of the following sources to implement the recommendations of the Master Plan:
    - City maintenance utility fees increase
    - System Development Charge increase
    - City sales tax increase
    - Bond referendum / City property tax
    - Redirection of existing City funds
    - Alternative Funding (*see* ***Section V- C.***)
    - Strategic partnerships
    - Fees and charges (particularly with athletic associations)
    - Program grants (*see* ***Appendix VII***)
- Further investigate support for an education campaign for a ballot initiative to pass a tax increase or bond referendum for future capital improvements.
- Utilize additional funding gained to adequately staff the Department; increasing staffing levels from 11 FTE's and 40 PTE's (2007) by 100% over the next five years.

Objective: **Pursue alternative funding to implement the Master Plan.**

Many departments within Oregon City have experienced challenging times in the recent past, with limited funding and staffing levels, and the Department should explore the best means of achieving its funding goals. Alternative funding methods may be instrumental to the operations of the City's recreation programs and facilities on an ongoing basis. Allocating resources (assigning staff time, matching funds, etc.) to pursue alternative funding should be considered an investment in the future, with an outlined and expected positive rate of return.

Strategies:

- Identify opportunities to increase community support and revenue opportunities such as grants, partnerships, sponsorships, volunteers and earned income (*see* ***Section V-C***. for Alternative Funding Resources).
- Assign staff resources and/or investigate the possibility of utilizing volunteer efforts to apply for such funding.
- Develop a "Wish List" to identify philanthropic opportunities that align with these needs. Once identified, aggressively apply for grant funding.
- Expand and formalize a volunteer program to include standards, recruiting, training, retaining, and rewarding volunteers in all program areas.
- Create new and formalize existing Sponsorships (*see* **Sample Sponsorship Policy** in ***Appendix IX***) with equity agreements that are reviewed annually.
- Create an annual "Sponsorship Manual" listing all the opportunities for the year and distribute within the community in a menu format that creates a sense of urgency within the business community.
- Establish a 501 (c) (3) Parks and Recreation Foundation to facilitate the receipt of grant funds and other fundraising activities.
- Seek collaborations with developers for the Park Place, Beaver Creek, and Cove development projects to include recommended parks and recreation facilities and standards as outlined in the Improve Level of Service Section (Goal 2).

***Objective*: Create a cost recovery philosophy and policy.**

It is important for the City to develop a pricing and cost recovery philosophy that reflects the values of the community and the responsibility it has to the community. This philosophy will be especially important if the City moves forward in the development of new programs and additional and/or expanded facilities; and as it strives for sustainability and determines how much it is willing to subsidize operations.

One means of accomplishing this goal is applying the Pyramid Methodology. This methodology develops and implements a refined cost recovery philosophy and pricing policy based on current "best practices" as determined by the mission of the agency and the program's benefit to the community and/or individual.

Critical to this philosophical undertaking is the support and understanding of elected officials and ultimately, its citizens. Whether or not significant changes are called for, the agency wants to be certain that it is philosophically aligned with its residents. The development of the core services and cost recovery philosophy and policy is built on a very logical foundation, using the understanding of who is benefiting from parks, recreation, and natural resources services to determine how the costs for that service should be paid. For an overview of the Pyramid Methodology, please review the contents in ***Appendix VI***.

Strategies:
Develop ongoing systems that help measure cost recovery goals and anticipate potential pitfalls utilizing the following points:

- Understand current revenue systems and their sustainability.
- Track all expenses and revenues for all programs, facilities, and services to understand their contribution to overall department cost recovery.
- Analyze who is benefiting from programs, facilities, and services and to what degree they should be subsidized.
- Fees for programs should acknowledge the full cost of each program (those direct and indirect costs associated with program delivery) and where the program fits on the scale of who benefits from the program of service to determine appropriate cost recovery target. Current cost recovery is at an average level and creating a cost recovery philosophy could enhance revenues to an above average level for operations and maintenance.
- Define direct costs as those that typically exist purely because of the program and change with the program.
- Define indirect costs as those that would exist anyway (like full time staff, utilities, administration, debt service, etc.)
- Define ability to pay as an implementation concern to be addressed through a fee reduction or scholarship program.
- Continue to encourage the pursuit of alternative funding for the Department.

***Objective:* Increase participation and revenue from current services.**

Strategies:

- Utilize the marketing strategies in the Marketing, Communications, and Credibility section (Goal 6), to work to increase participation numbers and user fee revenue.

- Evaluate participation numbers of current programming so as to increase marketing and participation in programs that are not currently at capacity.
- Establish user fees for adult athletic associations using city recreation facilities that cover all direct costs of the field or facility use. Seek means with youth athletic associations using city facilities that minimally cover the costs of their use.

Goal 6: Marketing, Communications, and Credibility

Objective: **Generate awareness and credibility about Community Service offerings and needs as expressed by the public.**

Strategies:

- Formalize an evaluation and annual in-house benchmarking program to solicit participant feedback and drive programming efforts.
- Collect feedback data that supports the expressed desire for improvements to programs and activities.
- Create a "Mystery Shopper" program where secret shoppers evaluate services anonymously and results are tracked.
- Prepare an annual report providing information to the public about parks and recreation funding, stewardship of tax dollars and fees and charges, and distribute the report as widely as possible.
- Work with the Chamber of Commerce and the local Welcome Wagon to develop information packets that promote city services to tourists and new residents.
- Create an annual marketing plan for the Community Services Department.
- Develop an evaluation process for marketing media such as newspaper, seasonal brochures, website, direct mail, targeted e-mails, radio, and television advertising to continuously determine effectiveness of marketing dollars.
- Create seamless product delivery for park and recreation services that delivers from a consumer vantage.

Objective: **Create a seamless and cohesive customer service delivery system for the provision of all community services programs and services regardless of the location.**

Strategies:

- Continue expanding current registration system to a fully integrated fax, on-line, and phone registration system.
- Network the registration system into all Community Services facilities for ease of registration for patrons.
- Develop a comprehensive cross training program for all staff and instructors including knowledge of all program areas as well as customer service.
- Use program tracking and evaluation tools to capacity by designing reports to readily identify life cycles of programs, identify programs not meeting minimum capacity (review all program minimums for cost effectiveness), identify waiting lists, etc.

Goal 7: Track Performance Measures

Objective: **Create standards for all community services activities and services.**

Strategies:
Establish service standards for all community services activities. Suggested criteria for service standards include:

- Programs:
  - Participation levels
  - Revenue
  - Instructors
  - Customer satisfaction
  - Cost per experience (or per hour, per class)
  - Customer retention
- Instructors:
  - Experience
  - Knowledge
  - Friendliness
  - Recruiting
  - Rewarding
  - Training
  - Standards
- Volunteers:
  - Experience
  - Knowledge
  - Friendliness
  - Recruiting
  - Rewarding
  - Training
  - Standards
- Facilities:
  - Cleanliness
  - Aesthetics
  - Comfort
- Staff:
  - Experience
  - Knowledge
  - Friendliness
  - Rewarding
  - Training
  - Trends

Strategies:

- Identify all major maintenance tasks including such things as:
  - Turf /Mowing
  - Plantings
  - Restrooms

    - Sidewalks and paths
    - Irrigation
    - Weed and insect control
    - Curb appeal
    - Playground and picnic equipment
    - Courts and fields
    - Litter control
- Evaluate and develop a scoring system for each task to meet desired service levels.
- Involve staff in the development of the standards and scoring system.
- Conduct maintenance standards training for all staff.
- Establish and monitor recordkeeping procedures to document the actual hours and materials costs for each maintenance operation.
- Apply appropriate maintenance standards and define set up/tear down requirements for all special events, tournaments, or other activities that currently stress resources. Assure adequate staffing and funding to take on the task, prior to making a commitment.

Goal 8: Sustainability

Objective: **Follow the defined goals and adopted policies for sustainability set forth by the City Commission as this five-year Plan is implemented.**

A sustainability effort within all city departments is a top priority of the City Commission. The City of Oregon City defines sustainability as "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This entire Plan Update is founded in sustainability in that it has a realistic five-year implementation plan and strongly addresses the need to take care of that which we already have (e.g. deferred maintenance, and having a plan to maintain that in which we build). See recommendations for additional maintenance staff and resources (Goal 2).

Strategies:

- Refer to and implement "The U. S. Mayors' Climate Protection Agreement" adopted by the City of Oregon City Commission in January of 2007 wherever possible.
- Implement the Oregon Recreation and Parks VIP Strategic Plan (Vision) that has goals which address natural resource protection, public resource stewardship, cultural resources, economic development, and other sustainability related practices.
- Continue current sustainability practices in progress including:
    - Using alternative energy sources when possible
    - Minimize vehicle use
    - Recycle wherever possible
    - Minimize printing, utilize efficient printing practices
    - Use file sharing practices
    - Turn off all unnecessary electrical uses such as calculators, radios, etc.
    - Unplug chargers when not in use
    - Utilize Energy Saver features on machines when possible
    - Utilize biodegradable or recycled products where possible
    - Install motion sensor light switches in all buildings
    - Replace non-energy efficient lights with fluorescent lights

B. Recommendation Cost Estimates

The following table includes capital projects and additional items that significantly impact the annual operational and maintenance budgets. All cost estimates are in 2007 figures. Funding sources listed are suggested methods of funding and can be enhanced with additional methods of funding. Overall staffing cost projections are included in the annual operational and maintenance cost estimates.

Cost Estimates and Funding Sources for 2008-2010 Recommended Priorities

Recommendation 2008-2010 Priorities	Capital Cost Estimate	Capital Funding Sources	Annual Operational & Maintenance Cost Estimate (incl. staffing)	O/M Funding Sources
Replace playground at Canemah Park	$100,000	General Fund, Grant, Partnerships, Parks System Development Charges (SDC's)	$2,000	Maintenance Utility Fees
Renovate City swimming pool	$3,000,000	Bond Referendum, Property Tax, Sales Tax	$150,000	User Fees, Maintenance Utility Fees, General Fund
Construct Barclay Park Connection Trail	$32,980	Grants, General Fund, Partnerships, Sales Tax, Property Tax, Parks SDC's	$900	Maintenance Utility Fees
Construct Wesley Lynn-Chapin Trail	$328,270	Grants, General Fund, Partnerships, Sales Tax, Property Tax, Parks SDC's	$8,900	Maintenance Utility Fees
Upgrade existing parks per Goal 2	$84,400	CIP Fund, General Fund, Partnerships, Sales Tax, Property Tax, Parks SDC's	$8,000	Maintenance Utility Fees, General Fund
Add two full-time park maintenance staff	N/A	N/A	$70,000	Maintenance Utility Fees, General Fund, User Fees
Glen Oak Road/High school acquisition area	$3,000,000	Park's SDC's, Metro Parks Local Share Funds, Grants	N/A	N/A
Add one recreation programmer	N/A	N/A	$40,000	Maintenance Utility Fees, General Fund, User Fees
Total 2008-2010 CIP (in 2007 dollars)	**$6,545,650**		**$279,800 per year**	

Recommendation 2011-2012 Priorities	Capital Cost Estimate	Capital Funding Sources	Annual Operational & Maintenance Cost Estimate (incl. staffing)	O/M Funding Sources
The Cove Development	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Park Place Concept Plan	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Construct Park Place Trails	$100,843	SDC, Grants, General Fund, Partnerships, Sales Tax, Property Tax	$2,700	Maintenance Utility Fees
Construct Parks Trail	$538,623	Grants, General Fund, Partnerships, Sales Tax, Property Tax	$14,600	Maintenance Utility Fees
Add six full-time park maintenance staff	N/A	N/A	$210,000	Maintenance Utility Fees, General Fund, User Fees
Beaver Creek Concept Plan	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Add one recreation programmer	N/A	N/A	$40,000	Maintenance Utility Fees, General Fund, User Fees
South End Concept Plan	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
The Rivers Development	$?	SDC, Grant, Partnerships	$?	Maintenance Utility Fees
Add commercial kitchen to Carnegie Center	$150,000	User Fees, SDC, Sales Tax, Partnerships	N/A	N/A
Total 2011-2012 CIP (in 2007 dollars) (+ Cove, Park Place, Beaver Creek, South End, The Rivers)	**$789,466**		**$267,300 / year**	
Total Five Year CIP (in 2007 dollars) (+ Cove, Park Place, Beaver Creek, South End, The Rivers)	**$7,335,116**		**$547,100 / year**	

PARK AND RECREATION MASTER PLAN

OREGON CITY, OREGON

Prepared By

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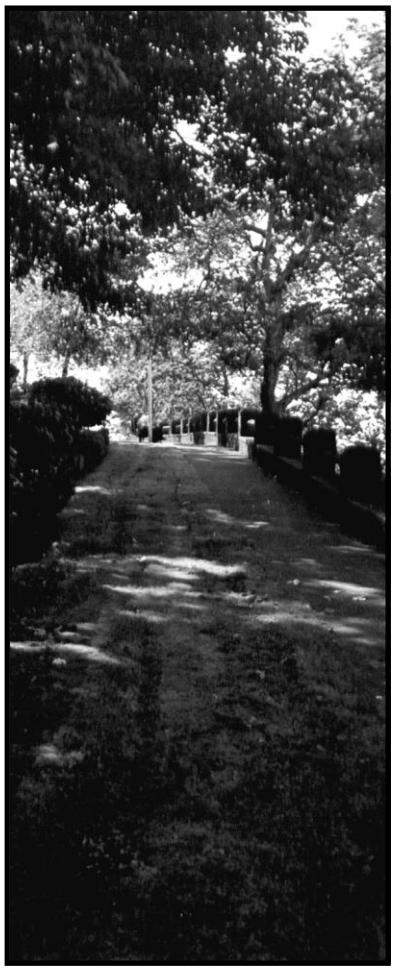
Portland, Oregon 97225

July 1999



PARK AND RECREATION MASTER PLAN

OREGON CITY, OREGON

VOLUME 1

Prepared By

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July 14, 1999

ACKNOWLEDGMENT

JC Draggoo & Associates would like to recognize the time and effort the Planning Advisory Committee spent on this study. The Committee, which represented various recreational interests throughout the community, has spent many hours discussing issues and reviewing background material. Their work was of major importance and contributed directly to the success of the study.

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Dave Seward – Adult Sports (Softball)
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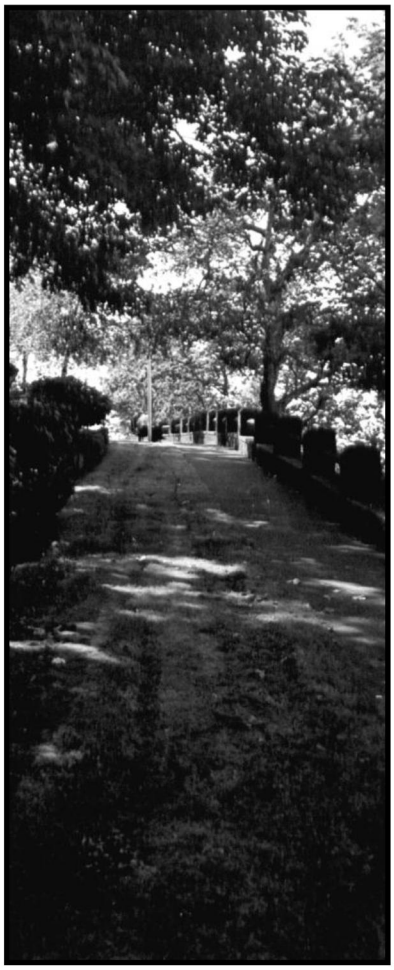


SECTION I

Introduction and Background

SECTION I

Introduction and Background

INTRODUCTION TO THE PROJECT

This report is a summary of findings and recommendations for meeting park and recreation needs in Oregon City. Once implemented, the Plan will provide policies for developing the park system, furnish instructions for managing the leisure services program and suggest methods of financing improvements and services. The plan also provides a short-term strategy (six-years) for meeting the most critical needs in Oregon City.

More specifically, the Plan identifies and evaluates existing park and recreation areas, assesses the need for additional park and recreation facilities, establishes design standards for future park acquisition and development, and recommends an approach to funding park development and maintenance.

Report Organization

Due to the large amount of technical information in the Plan, the document has been divided into two separate volumes. They are:

Volume I: Park and Recreation Master Plan. The plan provides for park and recreation services in Oregon City.

Sections 1 – 3 Background Information: includes all community profile information such as the physical characteristics of the city, an analysis of existing parks and recreational facilities in Oregon City, and a review of the management structure related to park and recreation services.

Sections 5 – 6 Recreation Needs Assessment: While Volume II provides the full analysis, Section 5 and 6 summarizes the findings of the recreation survey and standards for assessing park and facility needs.

Sections 7 - 8 Policies and Recommendations: includes recommendations and policies for future park sites, open space areas and trails. Also includes suggested management changes in terms of organizational structure, staffing and approaches to maintenance.

Section 9 Implementation: provides a list of potential funding sources, identifies project priorities, suggests a financing strategy and recommends a six-year capital improvement program.

Appendix A – Park Evaluations: offers a detailed inventory and evaluation of each of the City park facilities.

Volume II Recreation Needs Assessment: This document discusses the results of the recreation survey, workshop meetings, and assesses park and facility needs.

Background Reports

In addition to the above two volumes, a series of background reports were prepared during the study process. These documents included:

Discussion Paper #1	Community Profile
Discussion Paper #2	Inventory and Analysis of Existing Park Areas
Discussion Paper #3	Analysis of Existing Management and Operations
Discussion Paper #4	Recreation Survey Results/Workshop Results
Discussion Paper #5	Recreation Needs Assessment
Discussion Paper #6	Design Policies and Development Standards/Outline Recommendations

PUBLIC INVOLVEMENT

In order to reflect the views of the community and build consensus support for the plan, public participation was an integral part of the planning process. Public involvement was achieved through the following methods:

- Creation of the Planning Advisory Committee
- Community Recreation Survey
- Public Workshop Meeting
- Contacts With User Groups
- "Open House" Meeting

The methods involved focused on activities that solicited input and public involvement from a variety of interests.

PLANNING PROCESS

The planning process was divided into four basic elements. These are outlined below.

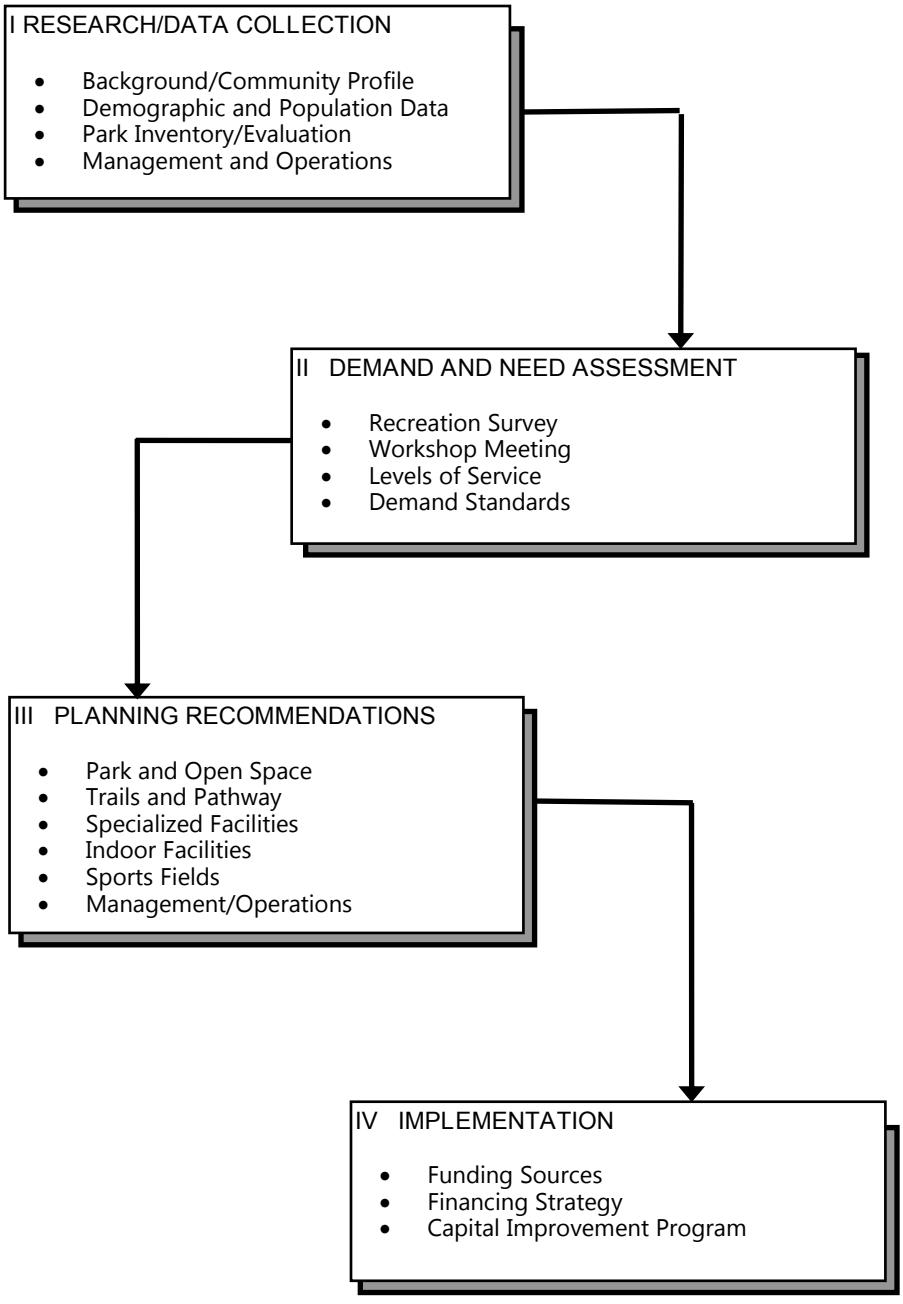


FIGURE 1
Planning Process

INTEGRATION WITH OTHER PLANNING DOCUMENTS

There have been several planning documents and studies prepared over the years that influence, to a varying degree, park and recreation services within the City. These documents were reviewed for policies, guidelines and relevant information that could be used and incorporated into the City's Park and Recreation Master Plan. A summary of each of these is listed below:

- **Comprehensive Plan (1982)**
- **Capital Facilities Improvement Plan (1998)**
- **Stormwater Master Plan (1988)**
  - * Sound End Basin Master Plan (1997)
  - * Caufield Basin Master Plan (1997)
- **Metro Greenspaces Program (1995)**
  - * Canemah Bluff Target Area (1996)
  - * Newell Creek Target Area (1996)
- **End of Oregon Trail Master Plan (May 1996)**
- **Park Place Park Master Plan (1995)**
- **City of Oregon City Parks Master Plan Update (1991)**

Comprehensive Plan

The comprehensive plan contains a number of sections related to park and recreation services.

Historic Preservation: identifies areas that have historical significance such as landmarks, buildings and/or areas/districts.

Natural Resources and Hazards: examines the natural resources within in the community and identifies those that are potentially hazardous to the public. Resources identified include mineral resource areas, fish and wildlife, scenic resources, and water areas. Natural hazards are defined as floodplains, steep slopes (greater than 25%), wetland and geologic hazards.

Parks and Recreation: provides an inventory and policies for upgrading existing parks, park standards and new park and waterfront development.

Willamette River Greenway: provides policies for the preservation and use of the land along the Willamette River.

Transportation: provides policies for various types of transportation including bikeways.

Capital Facilities Improvement Plan

This plan identifies general policies, goals, levels of service and facility improvements. The main focus of this planning effort was to identify a capital improvement program based on the established level of service. Projects addressed deficiencies based on regulations, current policies and discretionary improvements.

Drainage Master Plan

This plan identifies design procedures and standards, a capital improvement program and funding methods for improving drainage conditions in 22 areas. Further hydrological studies have been completed for the South End Basin and Caufield Basin.

Metro's Greenspaces Program

This program identifies natural areas that are regionally significant that would be held in public trust for future parks, trails, or fish and wildlife habitat. Two areas have been identified in Oregon City: 1) Canemah Bluff area and 2) Newell Creek Canyon.

End of Oregon Trail Interpretive Master Plan

The Master Plan prepared by the Oregon Trail Foundation establishes a number of goals and objectives that promote the preservation of culture and the education of the public regarding the Oregon Trail experience. Among these is the desire to develop site relationships with the Willamette River, Clackamas River and Abernethy Creek and to develop connections that unify the whole site.

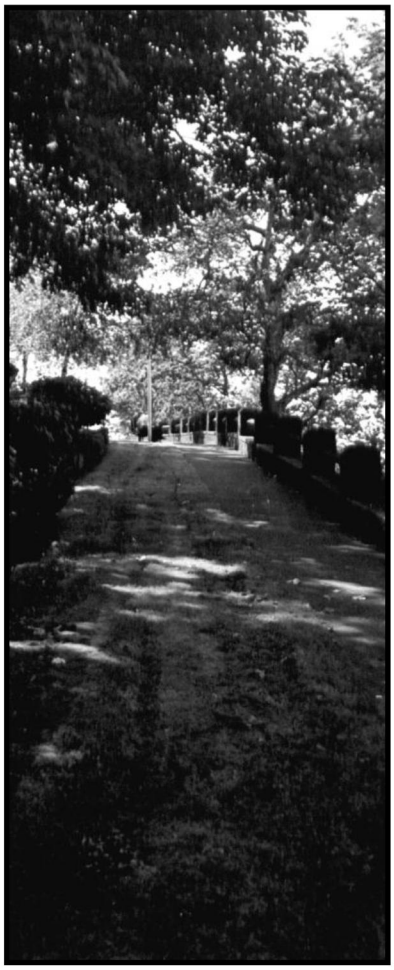
The master plan proposes to expand the current interpretive and educational facilities on to the landfill site to the north. New facilities will include a living history area, outdoor amphiteather, education facility, group rental areas, regional visitor center and trail/historic landscape areas.

Park Place Park Master Plan

This master plan provides background data and a master plan for the long-range development of the Park Place Park. Phase I of this plan was implemented in 1996-1997.

Parks Master Plan Update

This plan provided an update of the City's previous Parks Master Plan. The document contains park classifications and standards, an inventory of facilities and an implementation program.



SECTION II

Community Profile

SECTION II

Community Profile

REGIONAL CONTEXT

Located in northwestern Oregon, Oregon City is situated in Clackamas County at the northern end of the Willamette Valley. The City is positioned at the confluence of the Willamette and Clackamas Rivers, near the foothills of the Cascade Range. Oregon City lies at the southern edge of the Portland Metropolitan area. The City is linked with the Willamette Valley by various modes of transportation. Highway 99 (McLoughlin Boulevard) and Highway 213 connect the City of Oregon City with destinations north and south.

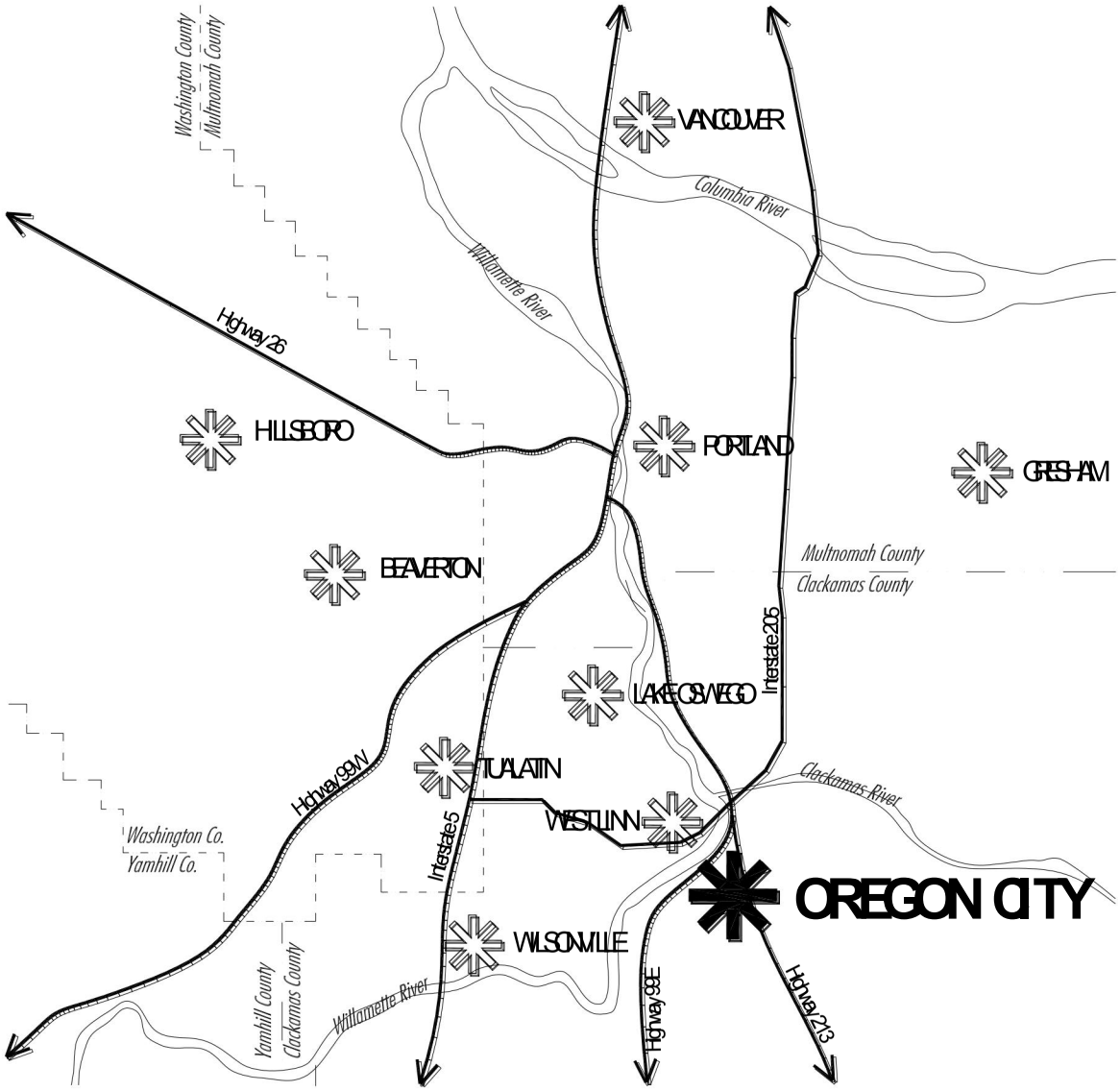


FIGURE 2
Regional Location

PLANNING AREA

The planning area for this study includes the area within the Oregon City city limits plus the unincorporated lands within the City's urban growth boundary (UGB). The specific boundaries stretch from the Clackamas River on the north to a point north of Henrici Road on the south and from Willamette River on the west to a point east of Highway 213/Beaver Creek Road on the east.

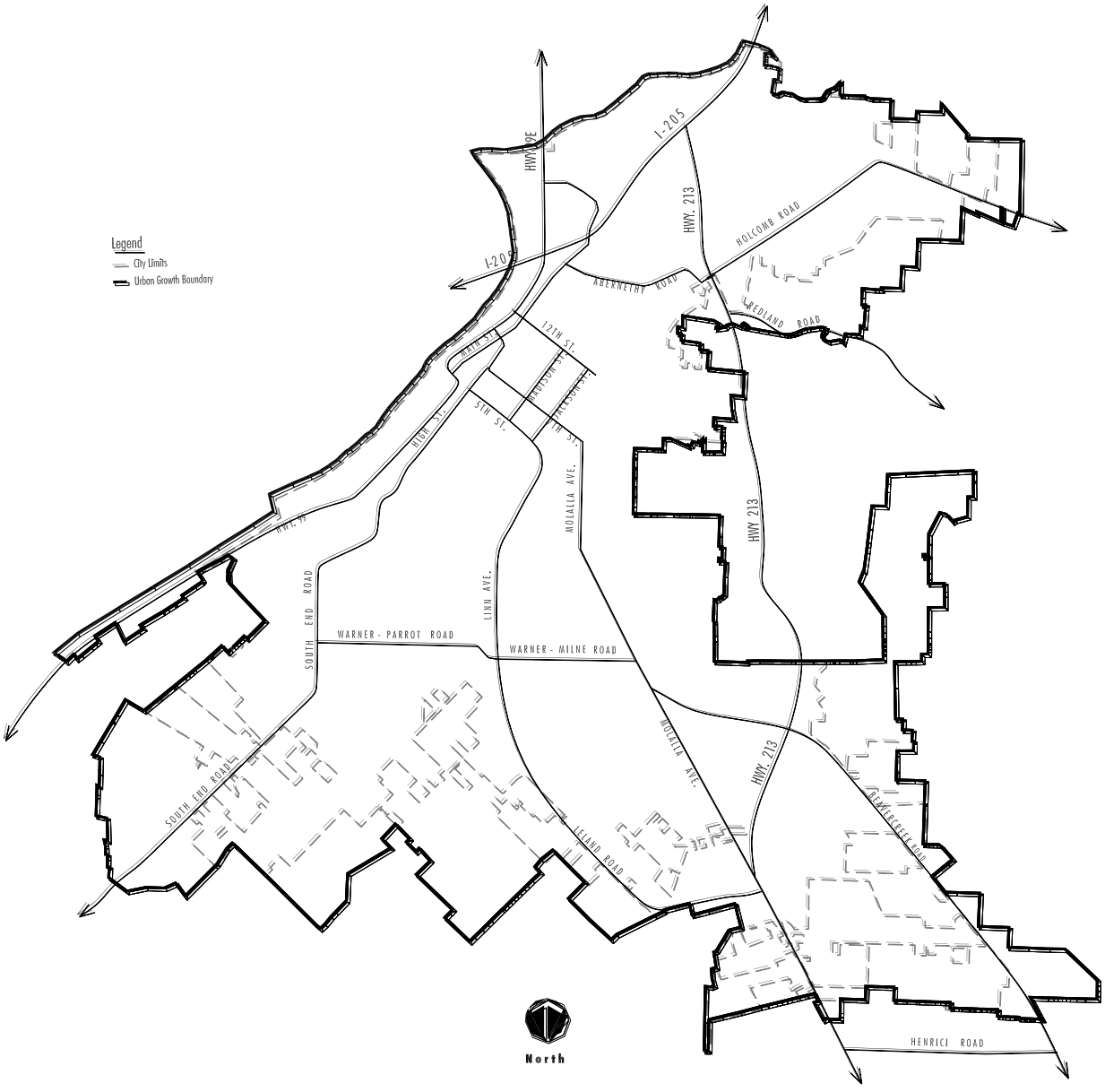


FIGURE 3
Planning Area Map

NATURAL RESOURCES

The natural resources in the Oregon City area are important for a variety of reasons. The topography, surface water features, floodplain/floodway and wetlands all impact the potential for development. While these lands are considered environmentally sensitive and have limited development potential, they are often conducive to park, open space, and recreation uses. Aside from these functions, the protection of these areas has a number of other benefits such as protecting unique landforms, maintaining aquifer recharge areas and other hydrological functions, and preserving the riparian and vegetative cover. The natural features that influence the provision of park, recreation and open space areas include topography/terrain; rivers, streams and drainage ways; floodplains and wetlands.

Topography/Terrain

The topography in the Oregon City area is directly attributed to hydrological processes that occurred over millions of years. These processes have resulted in the formation of a broad valley that is flanked by the foothills of the Coast and Cascade Ranges. Oregon City is located in a transitional area, where the edge of the valley meets the foothills of the Cascade Range. This rise from the valley floor provides a variety of topography features.

The terrain in the Oregon City area can be divided into three distinct regions. The largest of these areas consists of a large plateau and stretches from the eastern edge of the planning area to the top of the hillsides overlooking the Willamette River. It encompasses most of the central, east and south portions of Oregon City. The second major area consists of the lowland areas along the Willamette and Clackamas Rivers. This encompasses most of north Oregon City and the areas immediately along the two rivers. The terrain between these two areas consists of moderate to steep hillsides and offers excellent views of the river and the West Linn area.

Topography is a major factor in both the development and overall aesthetic character of the City of Oregon City. The steep slopes/cliffs provide a backdrop for the City, offer scenic views, and define districts within the City. The City has identified several areas in the Comprehensive Plan that are considered steep hillsides. This includes Canemah Bluff, Newell Creek Canyon and the hillsides above Abernethy Creek.

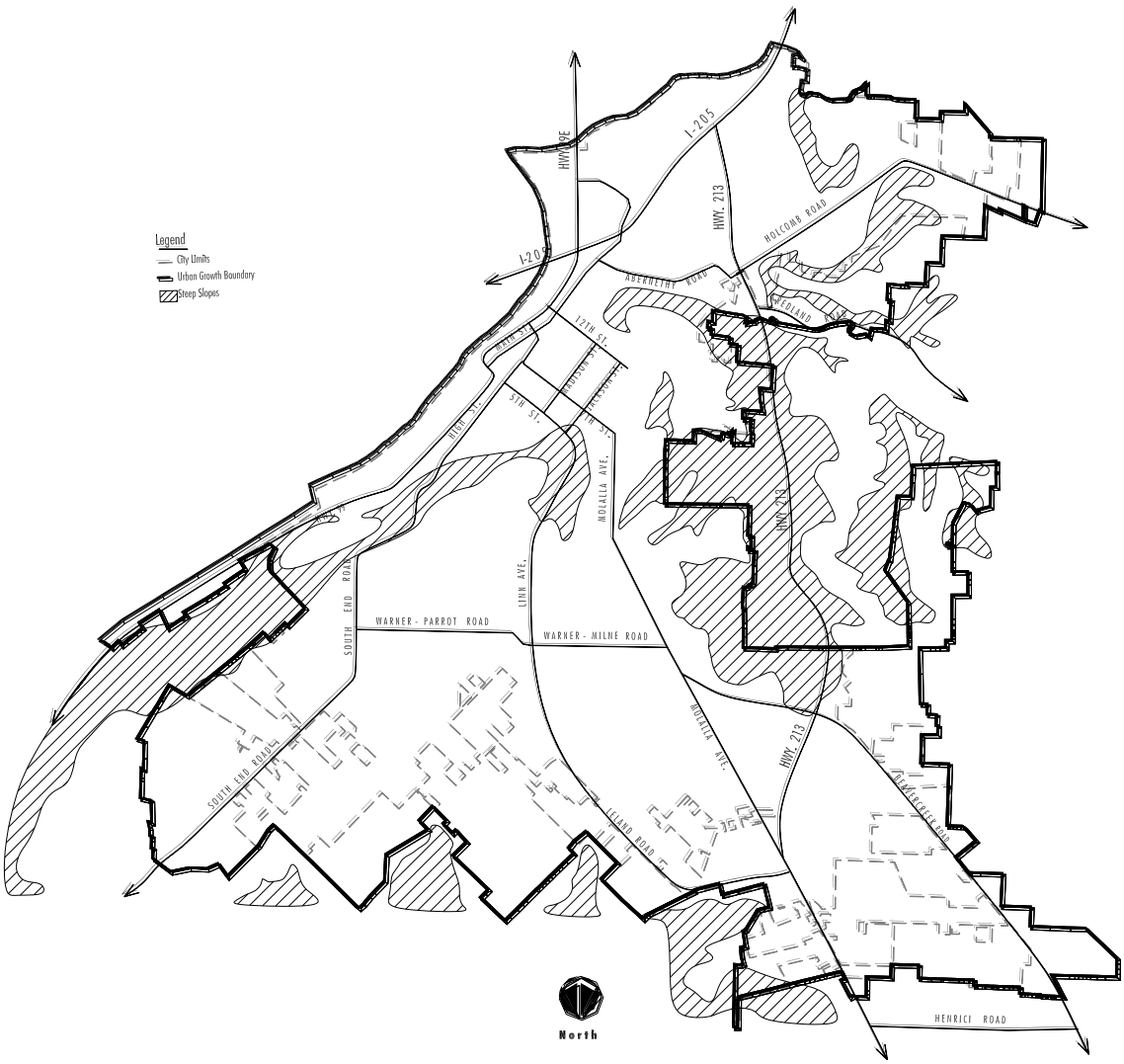


FIGURE 4
Topographic Features

Rivers, Streams and Drainage ways

The drainage system in the Oregon City area is part of the Willamette River Drainage Basin and consists of a hierarchy of rivers, streams, creeks and other drainage ways. Drainage basins are described in terms of their size. The primary basins are those which have the largest carrying capacity and are subsequently divided into smaller sub-basins.

Rivers, streams and drainage way areas are important because of their ability to provide habitat corridors for fish and wildlife, preserve riparian vegetation and carry storm water runoff. In addition to their functional and aesthetic characteristics, the drainage ways can also serve as conduits for trails.

In the Oregon City area, the Willamette River is the most prominent water feature within the local drainage system. To a lesser extent, the Clackamas River also provides many of the same characteristics. The City has identified several features in its Comprehensive Plan that are considered urban streams and other drainage ways. These include Abernethy Creek, Newell Creek, Singer Creek, Beaver Creek, Caufield Creek, Coffee Creek, Little Beaver Creek and Mud Creek. Each of these features is a tributary to the Willamette drainage corridor.

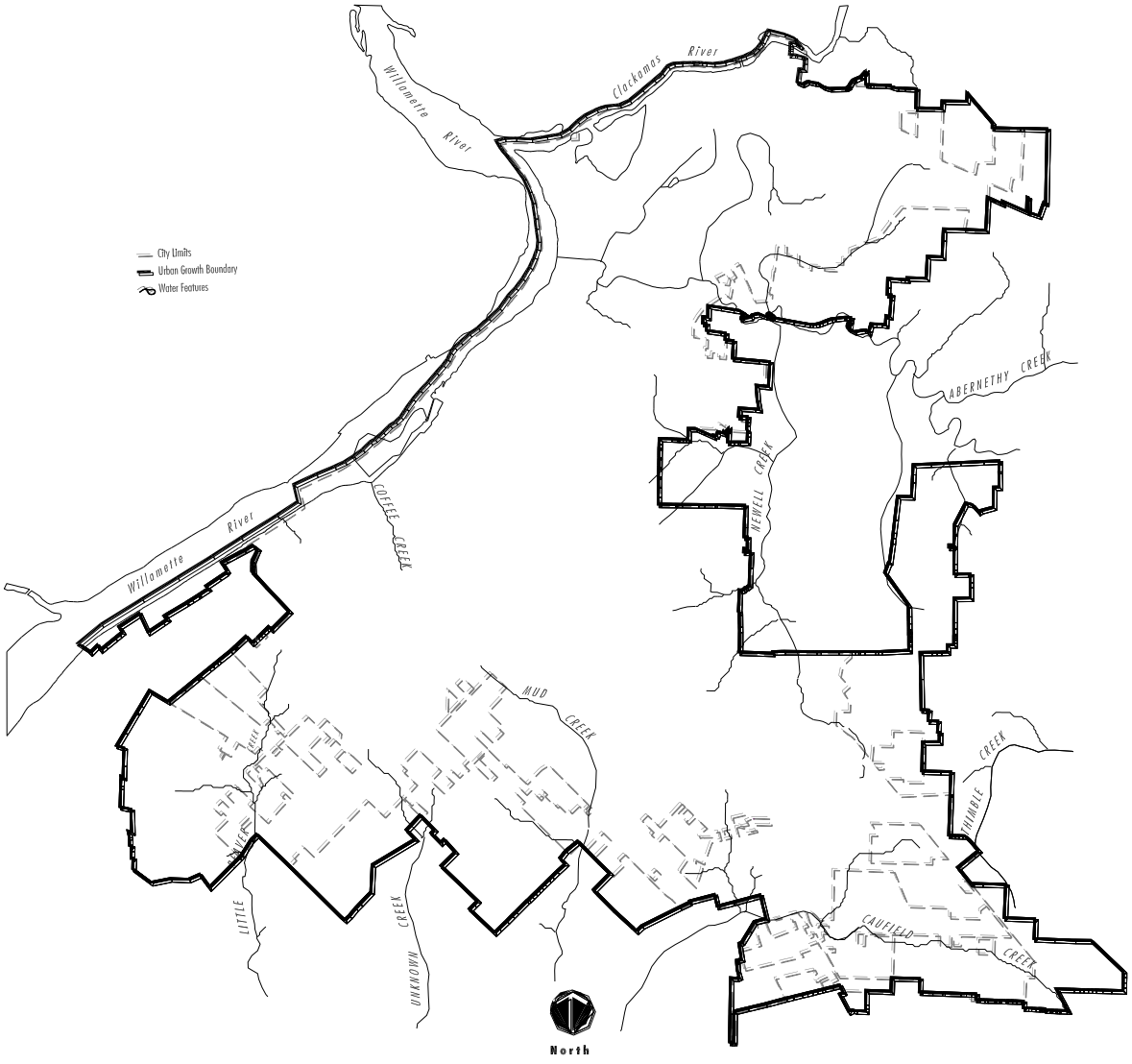


FIGURE 5
Water Features

Floodway/Floodplains

Floodplains are areas that are seasonally inundated by flooding rivers, steams, creeks, etc. These areas are delineated in terms of their frequency of flooding, such as 100 year and 500 year. The floodway is an area within the floodplain that includes that channel and any area below the ordinary high water level. These areas have been identified and mapped by the Federal Emergency Management Agency (FEMA).

Because lands within these areas are subject to flooding, development is usually heavily regulated and/or prohibited, particularly in the floodways. Generally, these areas are less conducive to the construction of housing, commercial, or industrial structures. However, these areas can be used as a resource for recreation, in the form of open space, sports fields and scenic areas.

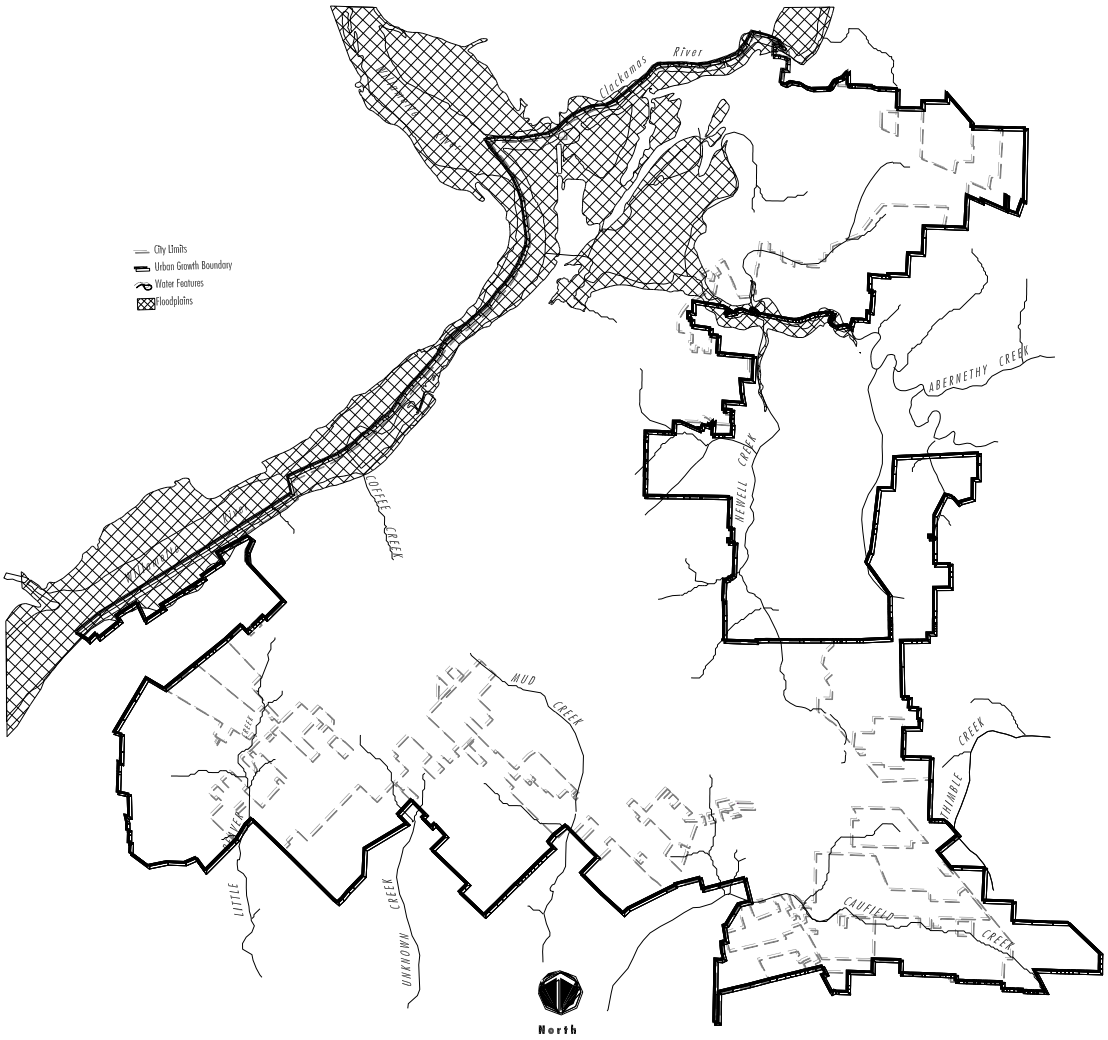


FIGURE 6
Floodplains

Wetlands

Wetlands are areas that have surface or ground water that supports vegetation typically adapted for life in saturated (hydric) soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. These types of areas are important features because of their ability to detain and absorb storm water, recharge groundwater, improve water quality and provide habitat.

For purposes of parks and recreation, wetlands are important for a number of reasons. The identification of wet areas creates a constraint to development, meaning lands are not conducive to construction of housing, commercial, or industrial. This means that the areas can be used as a resource for recreation, in the form of open space, interpretive areas, or scenic areas. The US Fish and Wildlife Service (NWI) has identified existing wetlands areas within the Oregon City area. The primary areas are located in the Red Soils Industrial Area,

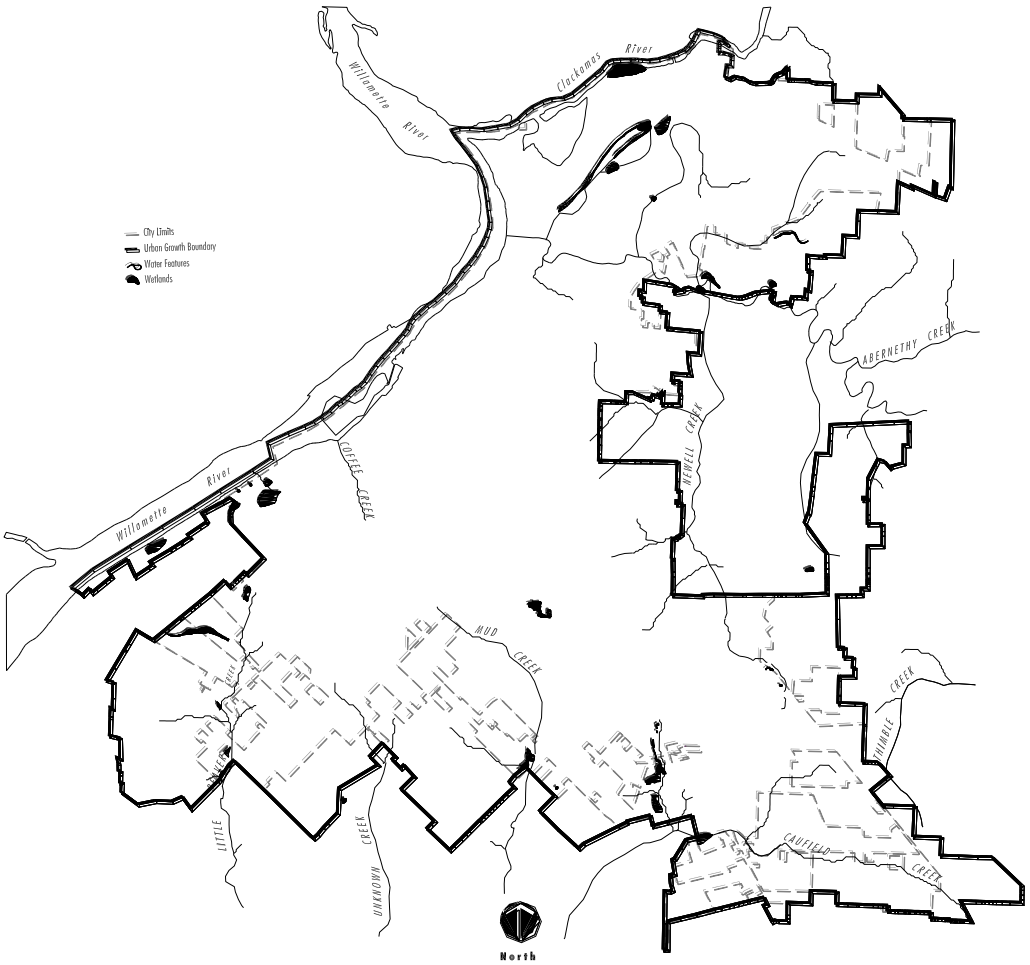


FIGURE 7
Wetlands

LAND USE

Land use plays an important role in the location, distribution and availability of park and recreational facilities. The diversity of land-uses in the Oregon City area make it necessary to evaluate the most effective means of meeting the park and open space needs for each major category. Residential areas will need a park to fulfill needs of area residents. Industrial areas will require parks that focus on use during the day, or where people will travel to at night. Commercial areas are more likely to require plazas and places for passive recreation that are smaller in area. In addition, land use helps to identify areas where development is at a high density.

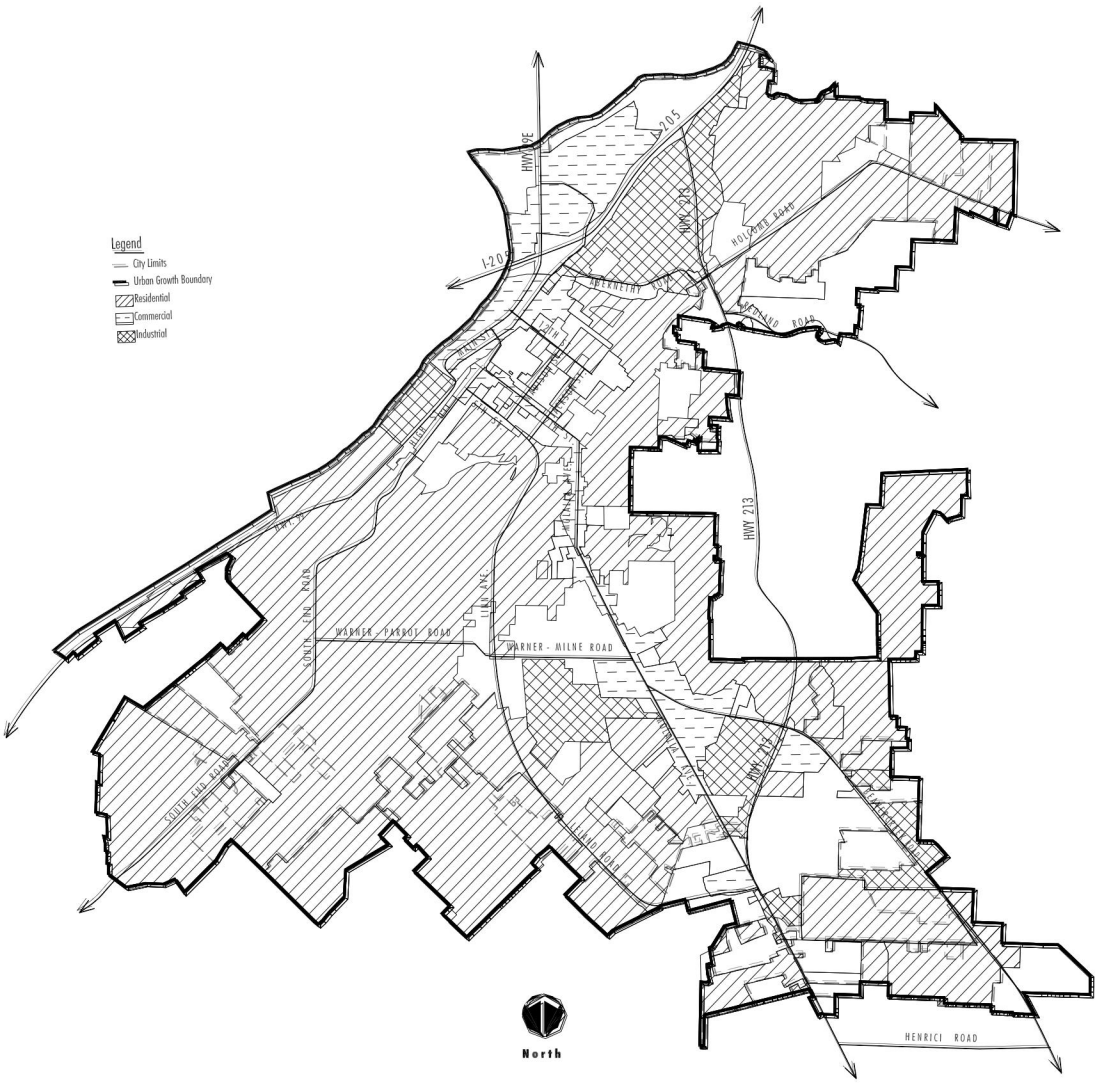


FIGURE 8
Land Use Map

Vacant Land

Because most of the developed land in the City is composed of residential uses, proximity and location are important siting criteria. Also important is the overall development level of the City. This is particularly important in terms of locating future park and recreation facilities. As one can see from the *Vacant Lands Map* found below, the area within the existing City limits is well developed. Currently, there is approximately 1,406 acres of vacant land within the City. Most of the larger parcels of land are located along the periphery of the developed area of the City.

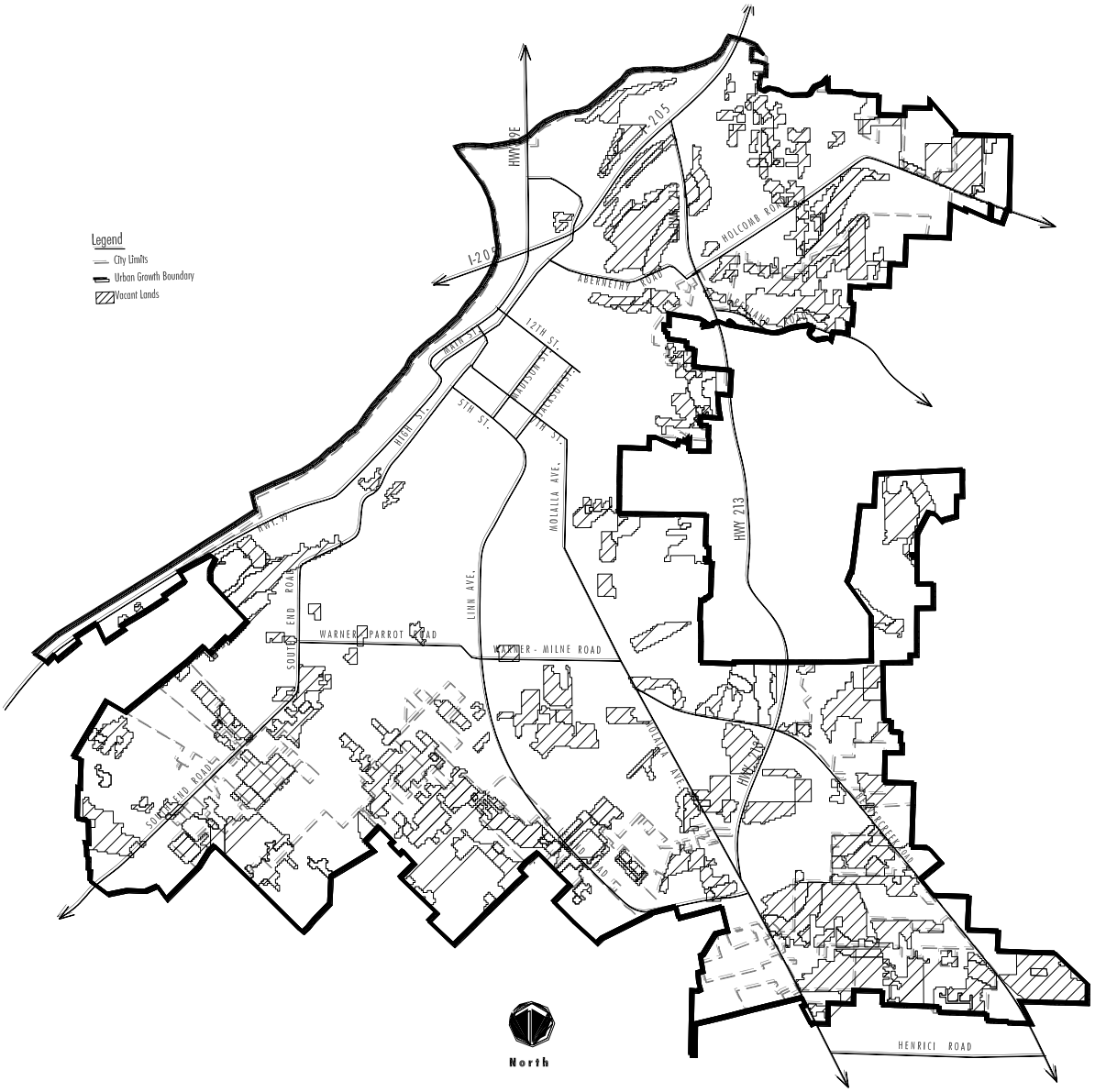


FIGURE 9
Vacant Land Map

URBAN GROWTH BOUNDARY/ ANNEXATION AREAS

Within the Oregon City planning area, there are several areas that are outside the current City limits, but within the City's urban growth area. In addition to the vacant land within the city, there is an additional 995 acres of vacant land within the Urban Growth Boundary, which will also be a source of potential population growth.

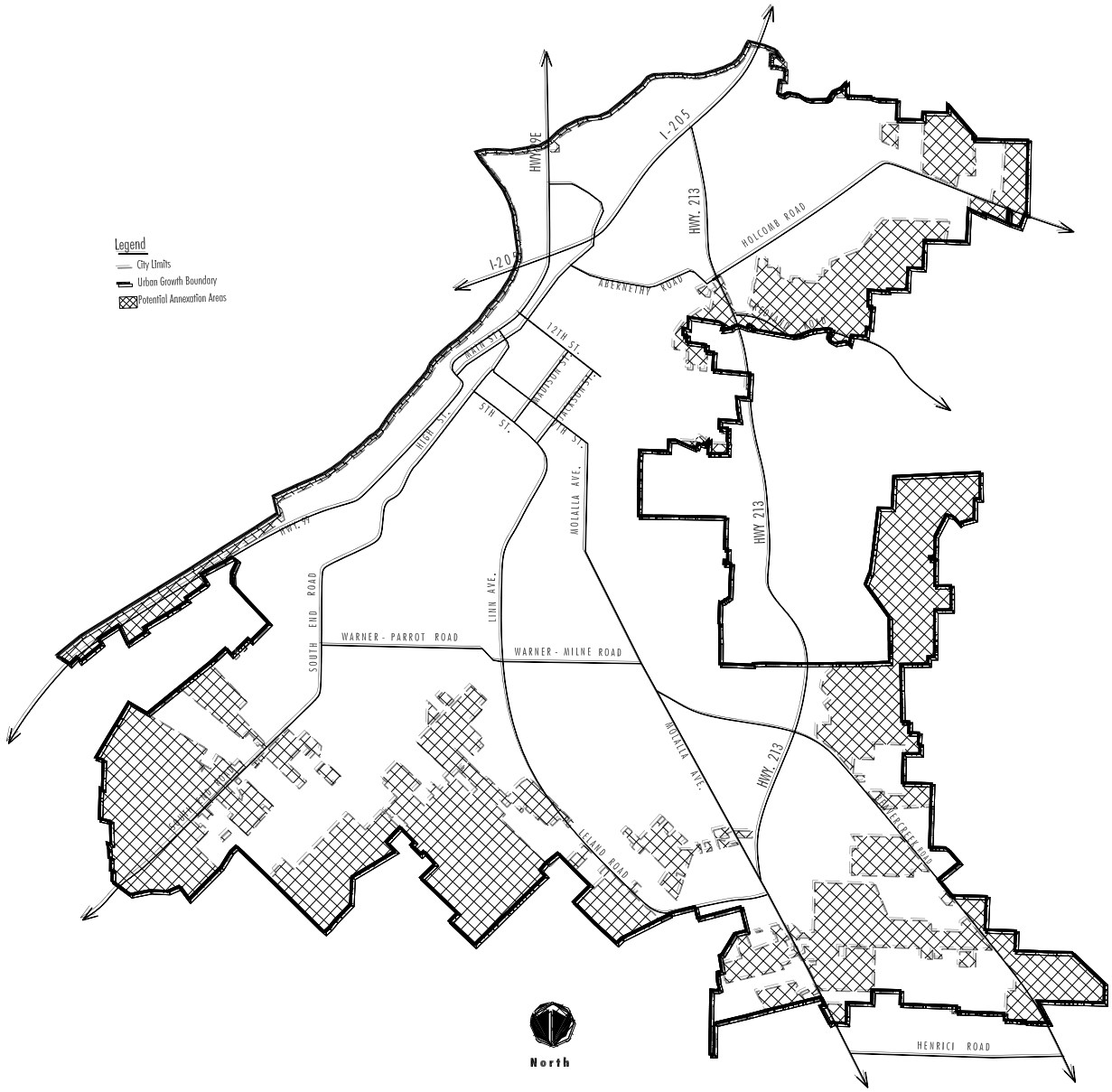


FIGURE 10
Potential Annexations Areas

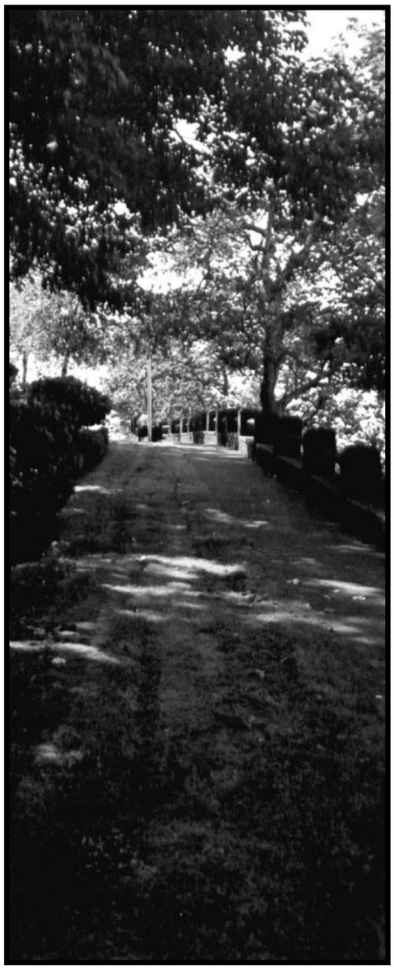
POPULATION PROJECTIONS

Population growth primarily occurs through two means; 1) annexation and 2) in-migration and infill. Both sources are particularly critical in identifying new demand for park and recreation services. Shown below is the population projection for the Oregon City area.

Table 1
Population Projections
City of Oregon City

Year	Oregon City Population
1990	14,698
1995	18,980
1997	21,895
2000	24,377
2005	29,155
2010	34,868
2015	41,702
2020	49,875

Source: JC Draggoo & Associates



SECTION III

Existing Recreational Areas and Facilities

SECTION III

Existing Recreational Areas and Facilities

INTRODUCTION

PARK LAND DEFINITIONS

Mini-Parks

Neighborhood Parks

Community Parks

Regional Parks

Special Use Areas

Linear Parks

This section provides an overview of the existing recreational areas and facilities in Oregon City. It includes land and facilities owned by the State, Clackamas County, Metro, Oregon City, Oregon City School District and various quasi-public organizations.

The most effective and efficient park system to manage is one made up of different types of parks, each designed to provide a specific type of recreation experience or opportunity. When classified and used properly, they are easier to maintain, create fewer conflicts between user groups and have less impact on adjoining neighbors. In order to assess the park system in Oregon City and to address future parkland needs, the parks have been classified as follows.

Mini-parks, tot lots and children's playgrounds are all small single purpose play lots designed primarily for small children usage. Because of their size, the facilities are usually limited to a small open grass area, a children's playground and a small picnic area.

Neighborhood parks are a combination playground and park designed primarily for non-supervised, non-organized recreation activities. They are generally small in size (about 5 acres) and serve an area of approximately one half-mile radius. Typically, facilities found in a neighborhood park include a children's playground, picnic areas, trails, open grass areas for passive use, outdoor basketball courts and multi-use sport fields for soccer, Little League baseball, etc.

A community park is planned primarily to provide active and structured recreation opportunities. In general, community park facilities are designed for organized activities and sports, although individual and family activities are also encouraged. Community parks serve a much larger area and offer more facilities. As a result, they require more in terms of support facilities such as parking, restrooms, covered play areas, etc. Community parks usually have sport fields or similar facilities as the central focus of the park. Their service area is roughly a 1-2 mile radius. Optimum size is between 20 to 50 acres.

Regional parks are recreational areas that serve the city and beyond. They are usually large in size and often include one specific use or feature that makes them unique. Typically, use focuses upon passive types of recreational activities. Those areas that are located within urban areas sometimes offer a wider range of facilities and activities.

Special use areas are miscellaneous public recreation areas or land occupied by a specialized facility. Some of the uses that fall into this classification include special purpose areas, waterfront parks, community gardens, single purpose sites used for field sports or sites occupied by buildings.

Linear parks are developed landscaped areas and other lands that follow linear corridors such as abandoned railroad right-of-ways, canals, powerlines and other elongated features. This type of park usually contains trails, landscaped areas, viewpoints and seating areas.

Natural Open Space Areas

Natural open space is defined as undeveloped land primarily left in its natural environment with recreation uses as a secondary objective. It is usually owned or managed by a governmental agency and may or may not have public access. This type of land often includes wetlands, steep hillsides or other similar spaces. In some cases, environmentally sensitive areas are considered as open space and can include wildlife habitats, stream and creek corridors, or unique and/or endangered plant species.

Beautification Areas

Beautification areas are landscaped features that are located along street right-of-ways and intersections, entry features and plazas. These types of facilities usually consist of trees and landscaping.

SUMMARY OF PUBLIC PARK, RECREATION AND OPEN SPACE AREAS

Listed below is a summary of the park, recreation and open space areas located within Oregon City.

Table 2
Summary of Parks, Recreation and Open Space Areas
Oregon City Planning Area

Park, Recreation and Open Space Areas	Total Park Land (Acres)	Number of Sites
City of Oregon City		
Mini-Parks	7.01	7
Neighborhood Parks	25.36	4
Community Parks	33.14	2
Regional Parks	21.76	1
Special Use Areas	70.08	10
Linear Parks	5.10	1
Natural Open Space	37.99	4
Beautification Areas	0.00	0
Undeveloped Park Land	18.57	6
Total City Areas	**219.01**	**35**
Clackamas County		
Natural Open Space Area	2.94	1
Undeveloped Park Land	0.60	1
Total County	**3.54**	**2**
Metro		
Natural Open Space Areas	118.47	2
Total Metro *	**118.47**	**2**
State of Oregon		
Special Use Area	0.18	1
Total State	**0.18**	**1**
Public School Properties		
School Recreation Areas (represents total site acreage)	118.30	11

Total Public Schools	**118.30**	**11**
TOTAL	**459.50**	**51**

*** Includes land within the Oregon City Planning Area only. Metro owns additional land adjacent to but outside the Oregon City Planning boundary.**

[Existing Park and Recreation Areas Map]

OREGON CITY RECREATIONAL AREAS

The table below summarizes the park, recreation and open space areas owned and maintained by the City of Oregon City. In some instances, it includes park facilities that have been developed on land owned by the Oregon City School District.

Table 3
Summary of City Parks by Type
Oregon City Planning Area

Park Area	Acres	Status
Mini-Parks		
Barclay Park	1.67	Developed (under-developed)
Canemah Park	0.34	Developed
Hartke Park	1.50	Developed (under-developed)
Hazelwood Park	0.50	Developed (under-developed)
Senior Citizens Park	0.20	Partially Developed
Shenandoah Park	0.70	Developed
Stafford Park	2.10	Developed (under-developed)
TOTAL	***7.01***	

Mini Parks

Neighborhood Parks		
Atkinson Park	5.60	Developed (under-developed)
Barclay Hills Park	6.76	Developed
Park Place Park	6.50	Partially Developed
Rivercrest Park	6.50	Developed
TOTAL	***25.36***	

Neighborhood Parks

Community Parks		
Chapin Park	17.50	Developed
Hillendale Park	15.64	Developed
TOTAL	***33.14***	

Community Parks

Regional Parks		
Clackamette Park	21.76	Developed
TOTAL	***21.76***	

Regional Parks

Table 3 (continued)

Special Use Areas

Linear Parks

Natural Open Space Areas

Beautification Areas

Park Area	Acres	Status
Special Use Areas		
Aquatic Center	1.33	Developed
Carnegie Center/Park	1.30	Developed
End of Oregon Trail Center (1)	8.40	Developed
Ermatinger House	0.25	Developed
D.C. Latourtette Park	0.80	Developed
McLoughlin House	0.80	Developed
Mt. View Cemetery	54.00	Partially Developed
Pioneer Community Center	0.80	Developed
Sports Craft Landing	2.00	Developed
Straight Cemetery	0.40	Developed
TOTAL	***70.08***	
Linear Parks		
McLoughlin Promenade	5.10	
TOTAL	***6.33***	
Natural Open Space Areas		
Old Canemah Park	8.21	Partially Developed
River Access Trail	1.23	
Singer Creek Park	11.03	Partially Developed
Waterboard Park	19.30	Undeveloped
TOTAL	***39.77***	
Beautification Areas		
None at this Time	---	
TOTAL	***---***	

(1) Also known as Kelley Field

Table 3 (continued)

Park Area	Acres	Status
Undeveloped Parkland		
Barclay Hills Site	1.00	Undeveloped
Dement Park	0.07	Undeveloped
High Rocks Site	2.30	Undeveloped
Jesse Court Site	13.50	Undeveloped
Madrona Drive Site	1.20	Undeveloped
Oak Tree Park	0.50	Undeveloped
TOTAL	***18.57***	

Undeveloped Parkland

Pathways/Trails

Table 4
Summary of Existing City Pathways/Trails
Oregon City Planning Area

Area	Miles	Comments
Multi-Use Paths		
River Access Trail	0.24	Paved
Park Trails		
Paved		
Chapin Park	0.50	Paved
Clackamette Park	0.53	Paved
Hillendale Park	0.38	Paved
McLoughlin Promenade	0.41	Paved
Old Canemah Park	0.24	Paved
Park Place Park	0.03	Paved
Singer Creek Park	0.67	Paved
Unpaved		
Waterboard Park	NA	Paved/Unpaved
TOTAL	**3.00**	

Table 5
Summary of City Parks, Open Space, and Recreation Areas
Oregon City Planning Area

Park Area Services Matrix	Regulation Softball Fields	Baseball/Softball	Multi-Use Backstop	Soccer Fields	Open Play Areas	Tennis Courts	Volleyball Courts	Basketball Courts	Playground Areas	Shelter Buildings	Picnic Areas	Restrooms	Parking Areas	Pathway/Trails	Natural Areas	Indoor Facilities	Other
MINI PARKS																	
Barclay Park (1.76 Acres)					■						■						
Canemah Park (0.34 acres)					■			1 H	■		■						
Hartke Park (1.50 Acres)					■	2		1F	■								
Hazelwood Park (0.50 Acres)					■				■		■						
Senior Citizens Park (0.20 Acres)					■							■					
Shenandoah Park (0.70 Acres)					■				■								
Stafford Park (2.10 Acres)					■				■		■		?				
NEIGHBORHOOD PARKS																	
Atkinson Park (5.60 Acres)					■				■	1	■	■			■	■	Buena Vista House
Barclay Hills Park (6.76 Acres)					■			1 H	■						■		
Park Place Park (6.50 Acres)					■				■			■	11	■			
Rivercrest Park (6.50 Acres)			■		■	2		1F	■	1	■	■	65				Wading Pool, Horseshoe
COMMUNITY PARKS																	
Chapin Park (17.50 Acres)	2	2		2	■				■		■	■	67	■			Exercise course
Hillendale Park (15.64 Acres)	1			1	■	2			■	1	■	■	40	■	■		Pond
REGIONAL PARKS																	
Clackamette Park (21.76 Acres)					■				■	2	■	■	95	■			Camping, boat launch, horseshoes, swimming
SPECIAL USE AREAS																	
Aquatic Center (1.33 Acres)													15			■	Wading pool
Carnegie Center (1.30 Acres)									■							■	Wading pool
End of Oregon Trail Center (8.40 Acres)													?			■	Interpretive center
Ermatinger House (0.25 Acres)													3			■	

D.C. Latourtette Park (0.80 Acres)						2		2 H									
McLoughlin/Barclay House (0.80 Acres)																	Museums
Mt. View Cemetery (54.00 Acres)																	Cemetery
Pioneer Community Center (0.80 Acres)													10				
Sports Craft Landing (2.00 Acres)												1	73				Boat launch
Straight Cemetery (0.40 Acres)																	Cemetery
LINEAR PARKS																	
McLoughlin Promenade (5.10 Acres)																	Viewpoints
NATURAL OPEN SPACE AREAS																	
Old Canemah Park (8.21 Acres)													5				
River Access Trail (123 Acres)													10				
Singer Creek Park (11.03 Acres)																	
Waterboard Park (19.30 Acres)																	

Dark shade indicates permanent facility, Light shade indicates portable facility H= Half Court F= Full Court

Table 5 (continued)

Park Area Services Matrix	Regulation Softball Fields	Baseball/ Softball	Multi-Use Backstop	Soccer Fields	Open Play Areas	Tennis Courts	Volleyball Courts	Basketball Courts	Playground Areas	Shelter Buildings	Picnic Areas	Restrooms	Parking Areas	Pathway/Trails	Natural Areas	Indoor Facilities	Other
UNDEVELOPED PARK LAND																	
Barclay Hills Site (1.00)															■		
Dement Park (0.07 Acres)					■												
High Rocks Site (2.30 Acres)																	
Jesse Court Site (13.50 Acres)																	
Madrona Site (1.20 Acres)															■		
Oak Tree Park (0.50 Acres)																	

STATE OF OREGON RECREATION AREAS

METRO RECREATION AREAS

CLACKAMAS COUNTY RECREATION AREAS

Listed below is a summary of State owned recreation lands.

Table 6
Summary of State Facilities
Oregon City Planning Area

Recreation Facilities (Outdoor)	Acres	Activity/Facility
Abernethy Historic Tree	0.18	

Listed below is a summary of Clackamas County park and open space areas.

Table 7
Summary of County Facilities
Oregon City Planning Area

Recreation Facilities (Outdoor)	Acres	Activity/Facility
Surface Water Management Site	2.94	
Clackamas County Museum	NA	
Charman & Linn Site	0.60	

Listed below is a summary of Metro open space areas.

Table 8
Summary of Metro Facilities – Planning Area Only
Oregon City Planning Area

Recreation Facilities (Outdoor)	Acres	Comments
Newell Creek Canyon	81.43	Total area includes 127 acres at the present time
Canemah Bluff	37.04	Total area includes 61 acres at the present time

QUASI PUBLIC RECREATION AREAS

Beginning below is a summary of the quasi-public recreation areas in the Oregon City area. This includes lands owned by the Oregon City School District, Clackamas Community College and private schools/churches.

Public Schools

Public schools are an important resource for recreation facilities such as sports fields, playgrounds and gymnasiums.

Table 9
Summary of Existing Public School Facilities
Oregon City Planning Area

School Facility	Use or Activity
Elementary Schools	
Barclay Elementary School (2.5 Acres)	Playground area, multi-use backstop, open play area, gymnasium
Eastham Elementary School (3.4 Acres)	Playground area, multi-use backstop (2), soccer field (small, overlay), open play area, gymnasium
Gaffney Lane Elementary School (10.4 Acres)	Playground area, softball field, soccer fields (2), multi-use backstops (2), covered play area, basketball court (1 full)gymnasium
Holcomb Elementary School (10.2 Acres)	Playground area, soccer field, open play area, covered play area, gymnasium
John McLoughlin Elementary School (11.6 Acres)	Playground area, youth baseball/softball field, soccer field, open play area, covered play area, gymnasium, running trail
King Elementary School (8.8 Acres)	Playground area, youth baseball/softball field, soccer field, multi-use backstops (2), open play area, covered play area, basketball courts (1 full, 1 half), gymnasium
Mt. Pleasant Elementary School (7.7 acres)	Playground area, softball field (1), youth baseball/softball, soccer field, covered play area, gymnasium
Park Place Elementary School (6.8 Acres)	Playground area, youth baseball/softball field, soccer field (overlay), multi-use backstops (2), open play area, covered play area, basketball courts (2, half), gymnasium
Middle Schools	
Gardiner Middle School (18.0 Acres)	Football field, track, soccer field, softball field, tennis courts I2), gymnasiums (2), open play area, playground, basketball courts (2 half) gymnasium
High Schools	
Oregon City High School - Jackson (20.5 Acres)	Football stadium, track, softball field, soccer field (overlay), gymnasiums (2)
Oregon City High School -	Football field, track, baseball field, softball

School Facility	Use or Activity
Moss(18.4 Acres)	field, gymnasium

Colleges

Table 10
Summary of Existing College Facilities
Oregon City Planning Area

School Facility	Use or Activity
Clackamas Community College	Tennis courts (6), softball fields (3), baseball field, football field, track, soccer field, gymnasium (2), running trail

Private Schools Churches

Below is a list of private schools/churches in the Oregon City area. Similar to the pubic schools, private schools provide some recreation facilities such as fields and gymnasiums

Table 11
Summary of Existing Private School/Church Facilities
Oregon City Planning Area

School Facility	Use or Activity
Elementary/Junior Highs Schools	
Open Door Day School	
St. John	Playground, multi-use field
High Schools	
North Clackamas Christian High School	

PRIVATE RECREATION AREAS AND FACILITIES

Listed in Table 12 below is a summary of private recreation facilities in the Oregon City area. It includes private recreation areas such as indoor recreation space (i.e. gyms) and other facilities.

Table 12
Summary of Private Indoor Recreation Facilities/Misc. Facilities
Oregon City Planning Area

Recreation Facilities (Indoor)	Activity/Facility
Nelsons Nautilus	Weigthroom, fitness area
Rose Farm	Historic Farm
Clackamas Historic Museum	Museum
Steven's Crawford House	Historical Home

NEARBY RECREATIONAL RESOURCES

Below is a list of recreational resources that serve the Oregon City area. It includes lands and facilities managed by State of Oregon, Metro, Clackamas County, City of West Linn, City of Gladstone, Oregon State Parks, Clackamas County Parks Department and private operators.

Table 13
Summary of Existing Facilities
Oregon City Vicinity

Recreation Area	Activity/Facility
Oregon City Golf Club (P)	18 holes
North Clackamas Aquatic Park (NC)	
Willamette Falls Locks and Wayside Viewpoint (S)	
Dahl Park (G)	
Meldrum Bar Park (G)	
Cross Park (G)	
Rivergreen Golf Course (P)	Golf course
Newell Creek Canyon Property (M)	Open space
Canemah Bluff Property (M)	Open space
North Clackamas Aquatic Facility (NC)	Indoor swimming pool/wave pool
Willamette Park (WL)	Sports fields
Mary S Young Park (S)	Open Space

S = State of Oregon
M = Metro
CC = Clackamas County Parks
G = City of Gladstone
WL = City of West Linn
P = Private
NC = North Clackamas Park and Recreation District

FACILITY DEFINITIONS

In Oregon City, many of the recreational facilities such as sport fields, tennis courts, etc., are of substandard quality in terms of development level, size or other limitations. This not only creates a poor playing experience but poses the question whether they should be counted in the facility inventory. Therefore, when new facilities are discussed, they shall meet the following minimum requirements.

Regulation Baseball Fields

Field dimensions: 320'+ outfields, 90 baselines, grass infield; permanent backstop and support facilities

Youth Baseball/Softball Fields

Field dimensions: 200'+ outfields, 60 baselines, dugouts. Grass infield not required; permanent backstop and support facilities

Regulation Softball Fields

Field dimensions (Slow pitch): 250' minimum-women 275' minimum-men outfields, 60 baselines, (fast pitch) 225'; skinned infield; permanent backstop and support facilities

Multi-Use Backstops

Field dimensions: 150'+ outfields, all grass field and backstop only

Regulation Soccer Fields

Field dimensions: 195' x 225' by 330' x 360', grass or all weather surfacing; permanent or portable goals

Youth Soccer Fields

Field dimensions: varies according to age U14 (60 yds. x 110 yds.) - U6 (20 yds. x 30 yds.); permanent or portable goals

Football Fields

Field dimensions: 160' x 360'; permanent goals

Tennis Courts

Appropriate dimensions, fenced and surfaced with a color coat.

Gymnasium Space

Appropriate dimension for the sport and have adequate dimensions outside the court for safe play. Playing surface should be of resilient flooring.

Swimming Pools

Appropriate dimension for intended use (recreation or competitive).

SUMMARY OF FACILITIES

Below is a list of recreational facilities categorized by type. This includes regulation baseball fields, youth baseball/softball fields, multi-use backstops, regulation softball fields, adult soccer fields, youth soccer fields, football fields, running tracks, tennis courts, gymnasium space and swimming pools.

Table 14
Summary of Recreation Facilities by Type
Oregon City Planning Area

Regulation Baseball Fields

REGULATION BASEBALL FIELDS (College/Babe Ruth/American Legion Fields)

Number	Location	Comments
1	Clackamas Community College	
1	Oregon City High School -Moss	
1	Oregon City High School –Jackson	
3	***TOTAL (Baseball Fields)***	

Youth Baseball/ Softball Fields

YOUTH BASEBALL/SOFTBALL FIELDS (Little League, Youth baseball and softball)

Number	Location	Comments
2	Chapin Park	
1	Hillendale Park	
1	King Elementary School	
1	McLoughlin Elementary School	
1	Mount Pleasant Elementary School	
1	Park Place Elementary School	
7	***TOTAL (Youth Baseball/Softball Fields)***	

Multi-Use Backstops

Multi-Use Backstops

Number	Location	Comments
1	Barclay Elementary School	

1	Eastham Elementary School	
1	Gaffney Lane Elementary School	
1	King Elementary School	
1	Mount Pleasant Elementary School	
1	Rivercrest Park	
6	***TOTAL (Multi-Use Backstops)***	

Regulation Softball Fields

SOFTBALL FIELDS (Men's, women's and Coed)

Number	Location	Comments
2	Chapin Park	
2	Clackamas Community College	
1	Gardiner Middle School	
1	Oregon City High School -Moss	
1	Oregon City High School-Jackson	
7	***TOTAL (Softball Fields)***	

Adult Soccer Fields

SOCCER FIELDS (195'-225' X 330-360')

Number	Location	Comments
3	Chapin Park	
3	Clackamas Community College	
2	Gaffney Lane Elementary School	
2	Gardiner Middle School	
2	Hillendale Park	Portable
2	Holcomb Elementary School	
2	King Elementary School	
2	McLoughlin Elementary School	
1	Mt. Pleasant Elementary School	
2	Oregon City High School - Jackson	Overlay
1	Oregon City High School -Moss	
1	Park Place Elementary School	Overlay
23	***TOTAL (Adult Soccer Fields)***	

Youth Soccer Fields

YOUTH SOCCER FIELDS (U6-U14)

Number	Location	Comments
1	Eastham Elementary School	Small
1	Rivercrest Park	

1	St. Johns (private)	
3	***TOTAL (Youth Soccer Fields)***	

Football Fields

FOOTBALL FIELDS

Number	Location	Comments
1	Clackamas Community College	
1	Gardiner Middle School	
1	Oregon City High School-Jackson	
1	Oregon City High School-Moss	
4	***TOTAL (Football Fields)***	

Tennis Courts

TENNIS COURTS

Number	Location	Comments
6	Clackamas Community College	
2	D.C. Latourette Park	
4	Gardiner Middle School	
1	Hartke Park	
2	Hillendale Park	
2	Rivercrest Park	
17	***TOTAL (Tennis Courts)***	

Gymnasiums

GYMNASIUMS (for basketball and volleyball play)

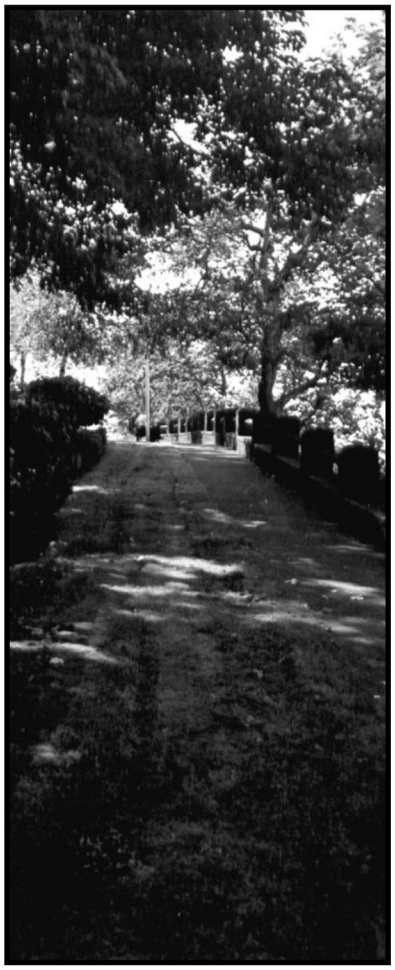
Number	Location	Comments
1	Barclay Elementary School	
2	Clackamas Community College	
1	Eastham Elementary School	
1	Gaffney Lane Elementary School	
2	Gardiner Middle School	
1	Holcomb Elementary School	
1	John McLoughlin Elementary School	
1	King Elementary School	
1	Mt. Pleasant Elementary School	
2	Oregon City High	

Swimming Pools

	School-Jackson	
2	Oregon City High School-Moss	
1	Park Place Elementary School	
16	**TOTAL (Gymnasiums)**	

SWIMMING POOLS (Indoor and Outdoor Pools)

Square Feet	Location	Comments
3,765	Aquatic Center	Indoor; 25 meters x 14 meters
3,765	**TOTAL (Pools)**	



SECTION IV

Existing Management and Operations

SECTION IV

EXISTING MANANAGMENT AND OPERATIONS

INTRODUCTION

This section examines the management approach to park and recreation services in Oregon City. It looks at the organizational structure and how it relates to other services in City Hall. This section also reviews the various staffing levels and cost of providing park and recreation services.

ORGANIZATOINAL STRUCTURE

In City Hall, there are eight separate departments that provide services to Oregon City residents. This includes Administration (finance, legal and personnel), Municipal Court, Police, Fire, Library, Recreation, Community Development and Public Works (streets, water, sewer, etc.). Each of these departments reports to the City Manager, who in turn is liaison to the Mayor and City Commission, and ultimately the citizens of the community.

City Structure

In Oregon City, park and recreation services are offered or managed in three separate departments.

- The *Recreation Department* is responsible for the operation of the Pioneer Community Center, Municipal Pool, Carnegie Center, and provision of some recreation programs.
- The *Community Development Department* is responsible for park planning, land acquisitions and capital improvement projects.
- The Park and Cemetery Maintenance Division under the *Public Works Department* is responsible for the maintenance and operation of the parks and cemeteries.

Because of the division of services between departments, coordination often becomes a problem and it is difficult to determine the total cost to provide park and recreation services. This separation of responsibilities creates further problems by advisory boards who have unclear missions and responsibilities. Please refer to Section VIII, *Management and Operational Recommendations* for further discussions.

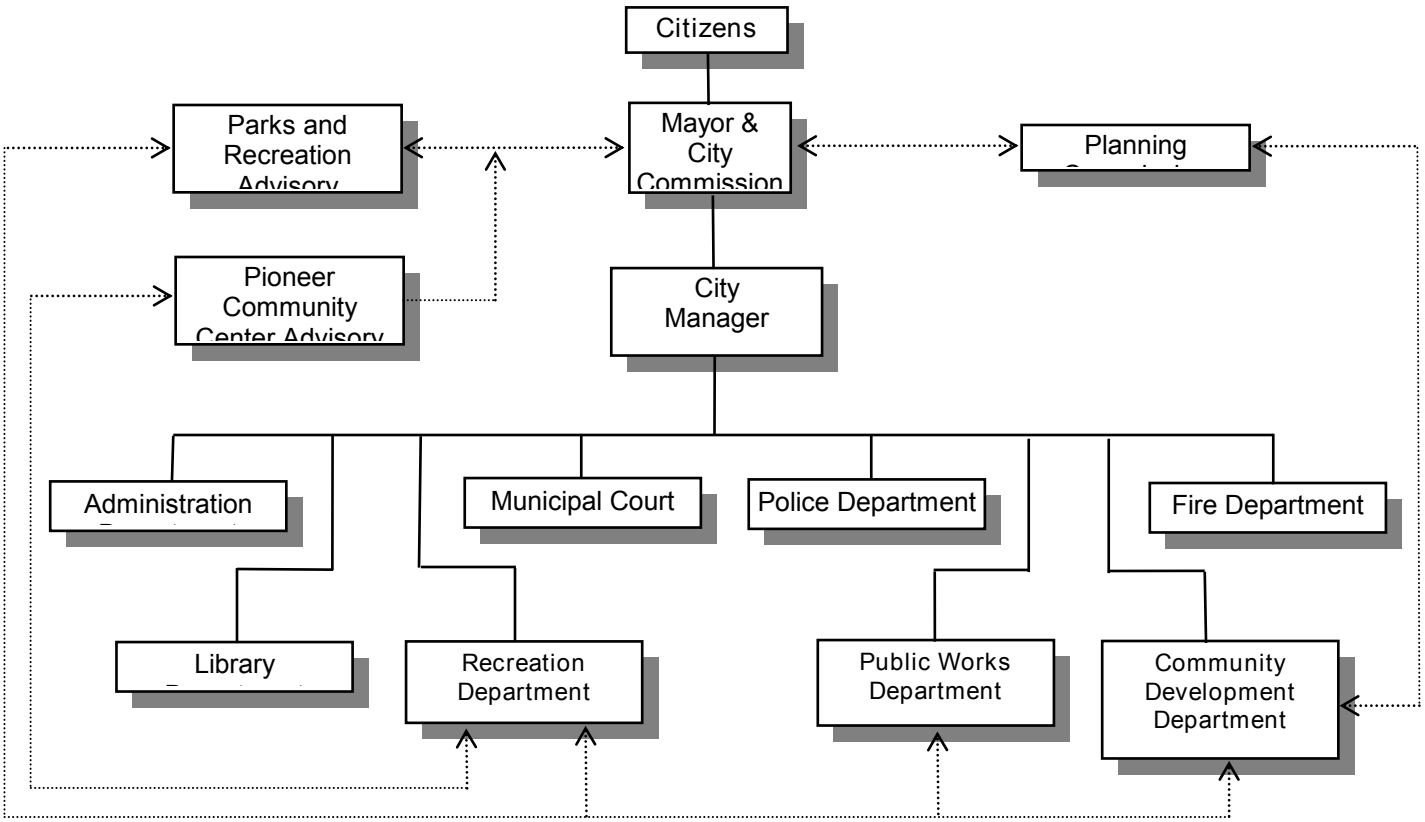


FIGURE 11
Recreation Department Organizational

Some of the problems typically associated with municipal agencies that have divided park and recreation responsibilities between departments is the lack of coordination, inability to track total costs, duplication of staff, and the inability to provide a coordinated effort to provide services.

But perhaps the greatest problem is that there is no single department that is promoting services or advocating park and recreation issues. By breaking into small units, each division or department does not have the ability to advance its program at budget time.

There are several boards and commissions that deal with park and recreation issues. These include:

- The Planning Commission
- Parks and Recreation Advisory Committee
- Pioneer Community Center Advisory Board

In addition to the organizations mentioned above, there are others that have a lesser influence or impact on the delivery of park and recreation services. These include:

- Historic Review Board
- Civic Improvement Trust Trustees
- Urban Renewal Agency
- Oregon City/Metro Enhancement Committee
- Oregon City Historic Trails Committee

Recreation Department

Within the Recreation Department there are four separate areas of responsibility. This includes 1) Carnegie Center; 2) Municipal Pool; 3) Pioneer Community Center and 4) Recreation Programs. Each of these functions is managed and/or supervised by the Community Activities Director.

Several part-time employees under the direction of the Community Activities Director currently operate the Carnegie Center. This division is responsible for providing cultural, artistic and educational programs. They are also responsible for the operation of the Ermatinger House.

The Oregon City Municipal Pool is operated under the direction of the Aquatics Coordinator with assistance from several part-time employees. This division is responsible for providing programs and activities associated with the pool facility.

The Senior Center Supervisor, under the supervision of the Community Activities Director, operates the Pioneer Community Center. The primary purpose of this center is to provide social, recreational and educational services to senior citizens of the community. In order to provide the various programs, the Center utilizes several part-time employees.

The Community Activities Director offers recreation programs with assistance from numerous instructors and volunteers. This division's primary responsible is to offer cultural and leisure activities to residents of the community.

Listed below is an illustration of the organization of the Recreation Department.

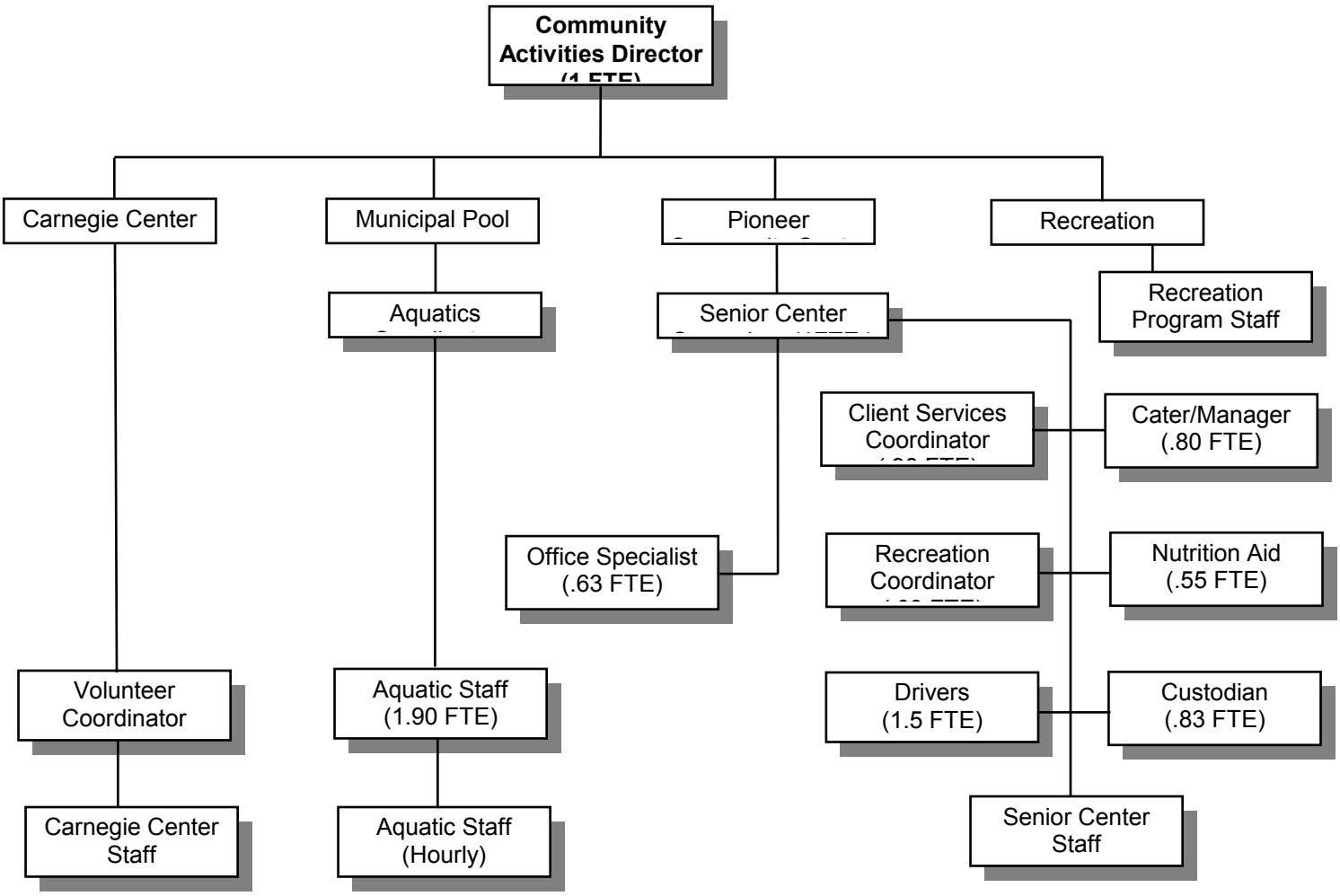


FIGURE 12
Recreation Department Organizational

Community Development Department

Within the Community Development Department there are several areas of responsibility that affect park and recreation services. These include 1) Administration and 2) Technical Services. Each of these functions is managed and/or supervised by the Community Development Director.

The Community Development Director with assistance from community involvement coordinator and the project coordinator is responsible for strategic planning, citizen involvement, grant applications and capital improvements.

Technical Services provides GIS information, maps, and other technical information for park and recreation services. This is the responsibility of the GIS Coordinator and GIS technician.

Listed on the following page is an illustration of the organization of the Community Development Department.

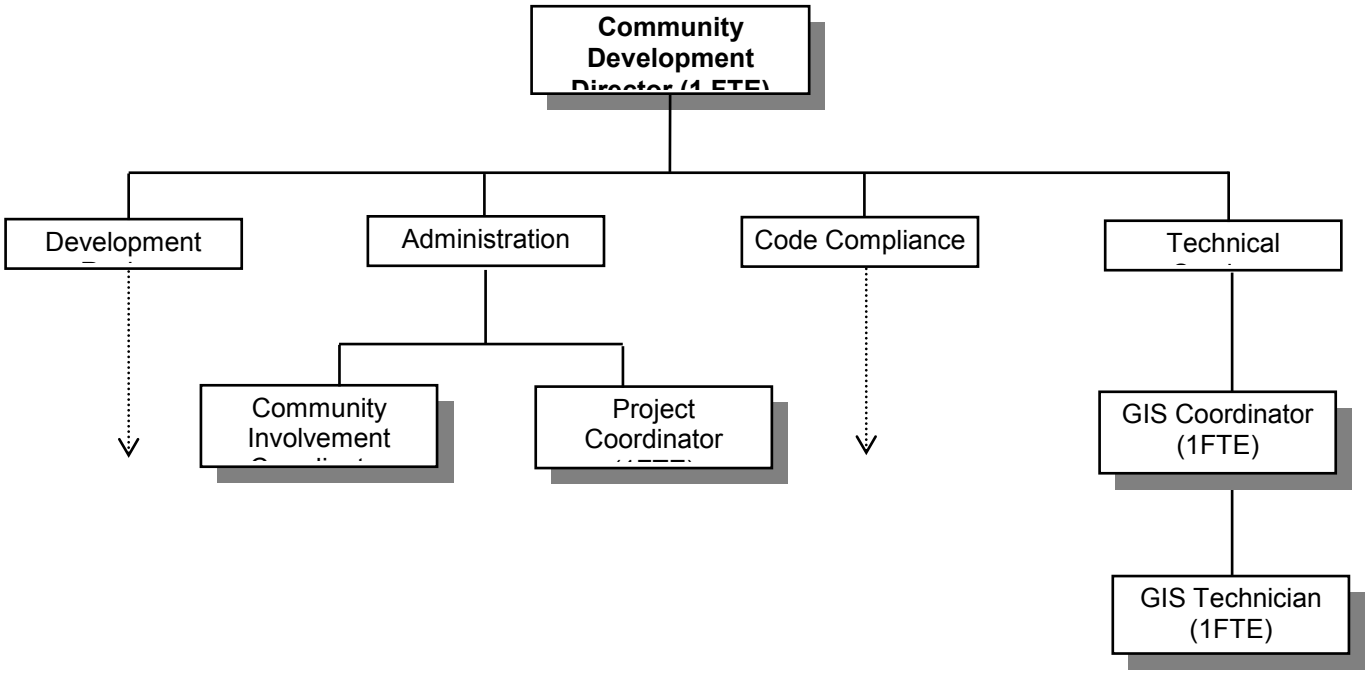


FIGURE 13
Community Development Department

Public Works Department

Similar to the Community Development Department, the Public Works Department has several responsibilities that affect park and recreation services. These include 1) Park Maintenance and 2) Cemetery Operations. The Public Works Director manages each of these functions.

The Operations Supervisor, under the direction of the Public Works Director, supervises the maintenance of the City's parks and recreational facilities, the operation the Mountain View Cemetery and the maintenance of Straight Cemetery.

Listed on the following page is an illustration of the organization of the Public Works Department.

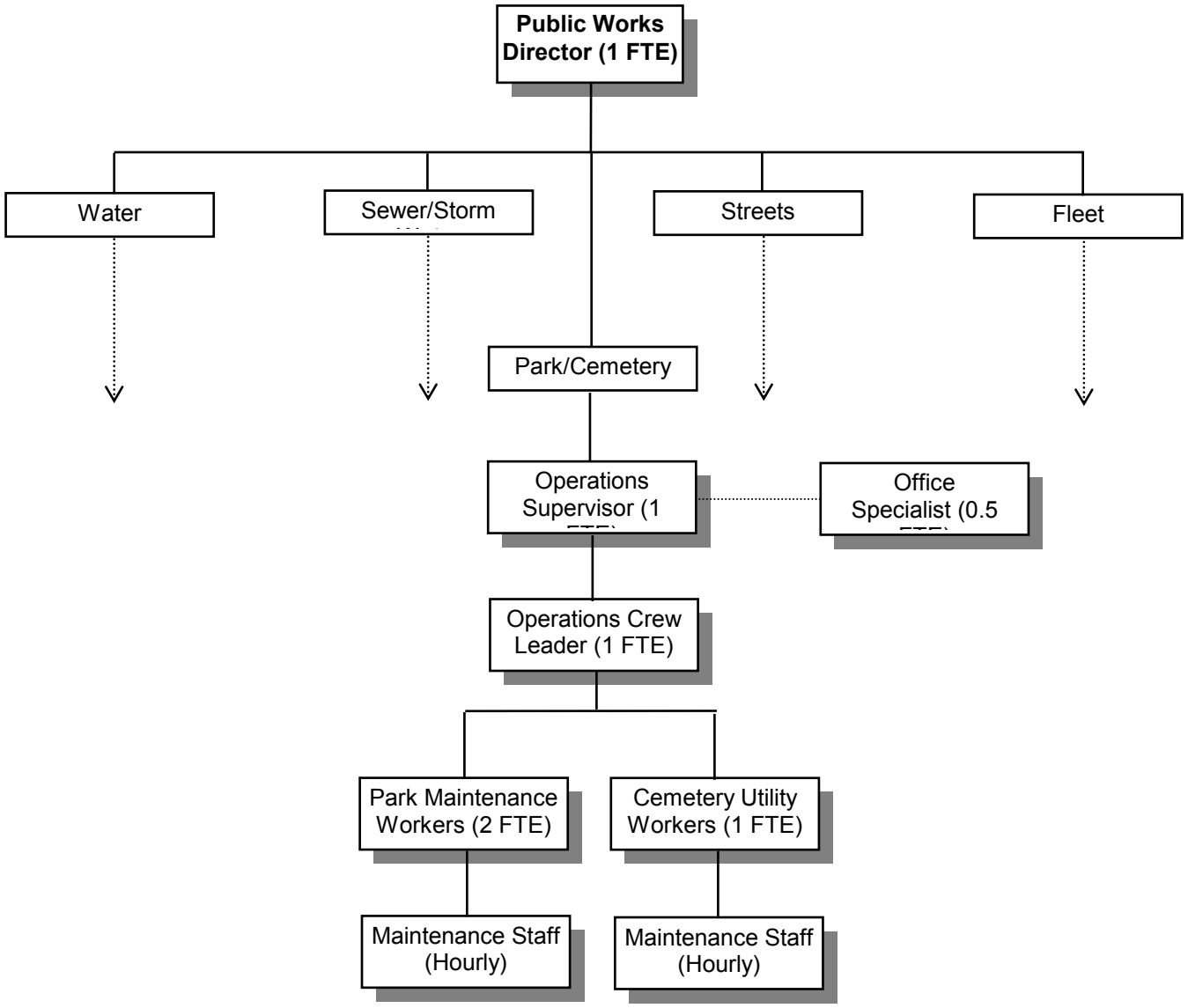


FIGURE 14
Public Works Department Organizational

STAFFING LEVELS

In order to provide parks and recreation services, the City currently employs staff equivalent to 25.16 full time employees. While this number has fluctuated over the last several years, it has ranged between 25- 30 FTE's.

Table 15 below shows the number of employees (full time equivalents) over the last several fiscal years.

Table 15
Employees (FTE's) FY 1995/96-1998/99
Parks and Recreation Services, Oregon City

Fiscal Year	Recreation Department (All Divisions) (FTE's)	Community Development Department (Selected Divisions) (FTE's) (1)	Public Works Department (Selected Divisions) (FTE's)	TOTAL (FTE's)
1995-96	20.11	0.16	7.74	28.01
1996-97	23.39	0.24	6.87	30.50
1997-98 (2)	18.14	0.28	6.74	25.16
1998-99 (3)	21.77	0.28	7.55	29.60

(1) Estimated by JCD: Assumes 6% of Total FTE for Community Development Director, Community Involvement Coordinator and Project Coordinator is applied toward park and recreation services. Also Assumes 8% of Total FTE for GIS Coordinator and GIS Technician is applied toward park and recreation services
(2) Revised Budget
(3) Adopted Budget

It is important to note that while the number of FTE's has fluctuated over the last couple of years, the number of FTE's per 1,000 population has continually decreased, due to the growth in population. Based on the1998/99 adopted budget, the ratio of FTE's to population is expected to increase slightly.

Table 16
FTE's/1,000 Population FY 1995/96-1998/99
Parks and Recreation Services, Oregon City

Fiscal Year	Population (Year)	TOTAL Employees (FTE's)	FTE/1,000 Population
1995-96	18,980 (1995)	28.01	1.48
1996-97	20,410 (1996)	30.50	1.47
1997-98 (1)	21,895 (1997)	25.16	1.15

1998-99 (2)	22,693 (1998)	29.60	1.30

(1) Revised Budget
(2) Adopted Budgeted

The ratio of employees to population is about average considering the type and number of facilities the City offers.

Full Time, Part Time and Seasonal Employees

The employment status of employees who contribute to the parks and recreation services is diverse. Staffing levels in Oregon City for the fiscal year 1997-1998 included 9.28 full-time employees, 5.89 part-time employees and 9.99 seasonal/hourly employees. These numbers are expected to increase slightly in the 1998/99 fiscal year to 8.28 full-time employees, 7.96 part-time employees and 13.56 seasonal/hourly employees. Keep in mind that this includes employees from three separate departments.

As you can see from Table 17 below, park maintenance and cemetery operations within the Public Works Department has the greatest number of full time employees. In contrast, the Recreation Department utilizes the greatest number of part time and seasonal employees. This is due primarily to the use of instructors, lifeguards and senior service personnel.

Table 17
Employees (FTE's) FY 1997-1998
Parks and Recreation Services, Oregon City

Department/Division	Full Time FTE's	Part Time FTE's	Seasonal/ Hourly FTE's	TOTAL (FTE's)
Recreation Department	3.00	5.89	9.25	18.14
Community Development (1)	0.28	0.00	0.00	0.28
Public Works Department	6.00	0.00	0.74	6.74
TOTAL	9.28	5.89	9.99	25.16

(1) JCD Estimate

OPERATIONS

It is important to note that many communities throughout the northwest are increasingly utilizing seasonal employees in an effort to meet peak demand needs and reduce operating costs.

The City operates on an annual budget prepared in the spring and adopted mid-year. Based on instructions from the Finance Department, each department files a budget proposal for the upcoming year. Then the finance director consolidates the estimates and develops a draft of the budget. This draft goes through the Mayor's and the City Manager's offices, who prepare the budget for approval by the City Council. The budget goes through phases of review until it is adopted and recorded for use in the fiscal year.

Described below is an analysis of the City's General Fund budget and the budget for parks and recreation services. In past years the park and recreation services budget has

averaged about 4.4% of the city's General Fund. However, this includes cemetery operations, which in most communities is not a city function. If this function were excluded from the budget, park and recreation services would receive approximately 3.7% of the City's general fund.

City Operating Budget

Listed below is a comparison of the budget allocations for park and recreation services over the last four years.

Table 18
Operating Budgets FY 1995/96-1998/99
City of Oregon City

Year	City Operating Budget (1)	Parks and Recreation Services Budget (1) (2)	% of Total
1995-96	$23,325,297	$1,031,186	4.4%
1996-97	$20,885,822	$1,173,265	5.6%
1997-98	$29,284,358	$1,283,523	4.4%
1998-99	$40,998,038	$1,244,929	3.0%

(1) Excludes capital outlay for new facilities
(2) Includes cemetery operations

As you can see from Table 18, the City budget has fluctuated over the last several years. The budget for parks and recreation services has reflected this change. Over the last three years, this has resulted in a lower proportion of resources for park and recreation services relative to the overall city budget. In the fiscal year 1996-97, park and recreation services accounted for 4.4% of the City's operating budget. For the current year, only 3.0% of the City's funds has been allocated for park and recreation services.

When compared to other communities of similar size in the region, the share of park services in Oregon City is about average. Typically, in communities that provide recreation services, the budget ranges from 3-5% of the total City operating budget. By excluding the cemetery operations, the total amount spent for park and recreation services is below this range.

Table 19
Operating Budget FY 1997/98
City of Oregon City

Year	City Operating Budget (1)	Parks and Recreation Services Budget (1)	% of Total
Oregon City, Oregon	$29,284,358	$1,283,523	4.4%

Lake Oswego, Oregon	$75,000,000	$5,300,000	7.1%
Tualatin, Oregon	$34,003,000	$1,139,900	3.4%
West Linn, Oregon	$30,007,000	$887,500	3.0%
Wilsonville, Oregon	$11,963,000	$499,800	4.2%

(1) Excludes capital outlay for new facilities

Departmental Expenditures

Table 20 below shows the expenditures for the three departments and their associated divisions that provides park and recreation services. As you can see, the Recreation Department receives a significant amount (60.1%) of the resources that are allocated for park and recreation services. Of this amount, nearly 50% of the total goes toward the operation of the Pioneer Community Center and the Municipal Pool. The remaining resources are used for strategic planning, park maintenance, cemetery maintenance, Carnegie Center operation and the provision of recreation programs.

Currently, park maintenance only receives 18.3% of the total operating budget. In most communities, the park maintenance operations (excluding cemetery operations) receives between 40%-60% of the total operating budget for park and recreation services. Based on these statistics, park maintenance is significantly under-funded.

Table 20
Expenditures by Department/Division FY 1997-1998
Park and Recreation Services, City of Oregon City

Item	1997/98 Expenditures (1)	Percent of Total
Recreation Department		
Pioneer Community Center	$338,954	26.5%
Carnegie Center	$106,309	8.3%
Municipal Pool	$243,125	19.0%
Recreation Programs	$80,906	6.3%
Subtotal	$769,294	60.1%
Community Development		
Administration (3)	$16,347	1.3%
Technical Services (4)	$11,102	0.9%
Subtotal	$27,449	2.1%
Public Works Department		
Park Maintenance	$233,686	18.3%
Cemetery Operations	$248,995	19.5%
Subtotal	$482,681	37.9%
TOTAL	$1,279,424	100.0%

Note: Percentages may vary due to rounding
(1) Excludes Capital Outlay for new facilities

The expenditures for the parks and recreation services are shown below. As can be seen from the table below, the greatest increase in expenditures has been a combination of salary/wages and employee benefits within the Recreation Department. Again, keep in mind that a majority of the costs are associated with the operation of the Pioneer Community Center and Municipal Pool. In contrast, capital outlay has only increased by 10.4%.

Table 21
Expenditures by Department/Major Categories – FY 1997/87 and FY 1998/99
Park and Recreation Services, City of Oregon City

Item	1997-98 Expenditures	1998-99 Budgeted Expenditures	Percent Increase
Recreation Department			
Salaries and Wages	$394,147	$510,672	29.6%
Employee Benefits	$143,080	$171,539	19.9%
Supplies	$181,902	173,360	-4.7%
Other Services/Charges	$50,165	$60,065	19.7%
Capital Outlays	$1,100	1,100	0.0%
Inter-fund Transfers	0	0	0%
Subtotal	$770,394	916,736	19.0%
Community Development			
Salaries and Wages	$18,989	$17,476	-8.0%
Employee Benefits	$8,460	$7,580	-10.0%
Supplies	$0	$0	0%
Other Services/Charges	$0	$0	0%
Capital Outlays	$0	$0	0%
Inter-fund Transfers	$0	$0	0%
Subtotal	$27,449	$25,056	-8.7%
Public Works Department			
Salaries and Wages	$215,128	$238,686	10.0%
Employee Benefits	$105,680	$109,948	4.0%
Supplies	$117,009	$117,793	0.6%
Other Services/Charges	$15,156	$22,906	51.1%
Capital Outlays	$153,000	$169,000	10.4%
Inter-fund Transfers	$29,708	$33,364	12.3%
Subtotal	$635,681	691,697	8.8%
TOTAL	$1,433,524	$1,633,489	13.9%

Department Revenues

Aside from local taxes, some parks and recreation services generate a considerable amount of revenue from other sources through fees and charges. This is primarily due to charges associated with the cemetery operation and the municipal pool. The table below compares departmental expenditures and revenues. It should be noted that some functions are not in a position to charge for services.

When compared to the total budget, revenues account for 55.3% of the total operating budget. For most communities, 50% or more is considered a good return. The resources for park and recreation services can be broken down by categories. Table 8 below shows the breakdown of revenues and expenditures by division, for 1997-98.

Table 22
Revenue/Expenditures by Department Division FY 1997/98
City of Oregon City

Item	1997/98 Revenues	1997/98 Expenditures (1)	Revenue as a Percent of Total
Recreation Department			
Pioneer Community Center (2)	$119,618	$338,954	35.3%
Carnegie Center	$50,445	$106,309	47.5%
Municipal Pool	$205,163	$243,125	84.4%
Recreation Programs	$25,940	$80,906	32.1%
Community Development (3)			
Administration	$0	$16,347	0%
Technical Services	$0	$11,102	0%
Public Works Department			
Park Maintenance	$55,532 (4)	$233,686	23.7%
Cemetery Operations	$250,995	$248,995	100.1%
TOTAL	$707,693	$1,279,424	55.3%

(1) Excludes Capital Outlay for new facilities.
(2) Includes intergovernmental and miscellaneous revenues
(3) Estimate by JCD: Assumes 6% of administration and 8% of GIS salaries/benefits
(4) Includes revenues from Clackamette Park campground and RV Area.

It should be noted that the Community Development Department (administration and GIS Services), the Park Maintenance, the Pioneer Community Center and the provision of Recreation Programs generate the least amount of revenue.

The Community Development Department, due to its nature, is not in a position to charge for services.

Typically, park maintenance operations generate revenue through park admissions, reservations and facility rentals. However, because a majority of the parks are under-developed and lack revenue-producing facilities, the opportunity for revenue generation is limited. This issue is compounded by the fact that revenues generated by the Clackamette Park camping and RV facilities are not used for park purposes but rather other non-park general fund appropriations.

While the Pioneer Community Center has a large amount of programmable space, it generates very little revenue. This is primarily attributed to policies that limit access and hours of availability. Recreation program revenue is limited, in part, due to the type and number of programs offered. In order not to duplicate services provided by the School District, the City only offers a few programs. Many of these are non or low revenue producers.

One means of analyzing revenue production is to compare operating costs on a per capita basis. The gross cost per capita is the total cost of the services divided by the number of persons in the service area. However, this is not necessarily the true cost to the taxpayer because it does not reflect the net cost after revenue is deducted. Since the parks and recreation services in Oregon City produces a fair amount of revenue from fees and charges, there is a significant difference between the gross and net cost per capita for services. Below is the gross cost per capita for park services.

When compared to other cities, Oregon City spends a slightly higher amount per capita for park and recreation services. However, because of the diversity of the park system and inclusion of revenue from the cemetery operation and the municipal pool, the gross and net cost of operation are significantly lower.

Table 23
Operating Budgets for Park and Recreation Services (FY 1997/98)
Selected Northwest Cities

City	Population	Operating Budget (1)	Gross Cost /Capita	Net Cost /Capita	Revenue Rate
Oregon City, Oregon	22,683	$1,279,424	$56.40	$25.21	**55.3%**
Lake Oswego, Oregon	34,280	$5,300,000	$145.61	$94.80	38.7%
Tualatin, Oregon	21,405	$1,139,900	$53.25	$50.45	5.3%
West Linn,	20,555	$887,500	$43.18	$34.23	16.7%

Oregon					
Wilsonville, Oregon	12,290	$499,800	$40.67	$33.34	18.0%

(1) Excludes capital outlay

Shown below is the cost per acre for park maintenance operations. As you can see, Oregon City spends approximately $2,147 per acre of developed parkland. This figure is extremely low compared to other communities of similar size.

In many communities throughout the northwest, agencies are spending as much as $7,000-8,000 per acre for parks maintenance.

Table 24
Maintenance Cost per Acre
Selected Cities

City	Parks Maintenance	Maintained Acres [1]	Cost per acre
Oregon City, Oregon	$234,686	109.28	$2,147
Lake Oswego, Oregon	$1,350,000	247.37	$5,457
Tualatin, Oregon	$576,800	106.00	$5,441
West Linn, Oregon	$291,500	73.09	$3,988
Wilsonville, Oregon	$256,000	66.71	$3,838

[1] Excludes open space and undeveloped park land
[2] Excludes capital outlay

The $2,147 per acre figure is extremely low. In addition to the low cost per acre, the large number of small mini-parks decreases the efficiency of the maintenance operations as well as increases the cost of personal service through increased travel time.

Cemetery Operations

Unlike most communities, Oregon City is responsible for the maintenance and/or operation of two cemeteries: 1) Straight Cemetery and 2) Mountain View Cemetery. The Straight Cemetery is a small cemetery located in the northern portion of the City off Clackamas River Drive. While this site was originally under the jurisdiction of the Water Department, it is now the responsibility of the Cemetery Division. Although it is no longer in operation, it does require routine maintenance and repairs.

In contrast, the Mountain View Cemetery is a larger cemetery located near the top of Newell Creek Canyon. This facility is still in operation and offers the sale of ground burial plots, crypts and niches. In the past, annual maintenance and repairs were funded through the plot sales, charges and other services. One of the problems with this approach is that there is a limited amount of space available for future burials and it is dependent upon sales. Once this land is exhausted, there is no opportunity to generate revenue to pay for the future operation and maintenance.

To address this problem, the City Commission established a Cemetery Endowment Fund in 1984 to pay for the perpetual care of the cemeteries. The current policy is to allocate 15% of plot sales and 5% of crypt and niche sales into the Endowment Fund.

Table 25
Cemetery Revenue
Oregon City

Year	Plots	Crypts	Niches
1994-95	$42,726	$32,920	$5,274
1995-96	$29,391	$33,808	$2,987
1996-97	$44,480	$17,438	$3,157
1997-98	$42,905	$17,626	$1,398

Currently, the Endowment Fund has a balance of roughly $230,000. Based on the current allocations and Fund balance, it will be many years before the Fund will generate sufficient interest to pay for the annual maintenance of the cemetery.

RECREATION PARTICIPATION

Listed below are the participation levels for programs that are offered through the Recreation Division.

Table 26
Recreation Participation
City of Oregon City

Programs	Participants	Participation Days	Percent of Total
Aquatics			
Lap Swim	NA	9,335	--
Instructional Swim/Lesson	5,116	53,461	--
Swim Team	NA	31,439	--
Recreation	NA	10,949	--
Water Exercise	NA	9,650	--
Rentals	NA	12,872	--
Subtotal		127,706	51.8%
Carnegie Center			
General Attendance	NA	24,000	--
Educational Programs	NA	270	--

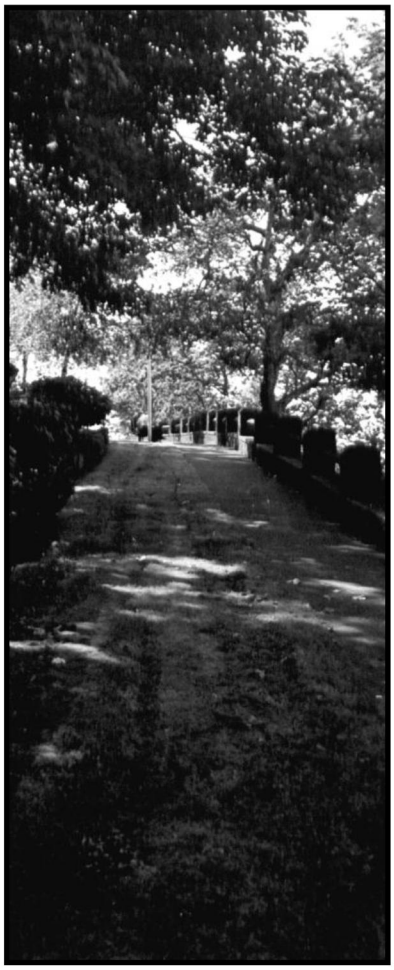
Special Events	1,180	1,180	--
Misc. (Sat. Java, First Friday)	NA	2,960	--
Rentals	NA	600	--
Subtotal		29,010	11.8%

Table 26 (Continued)

Programs	Participants	Participant Days	Percent of Total
Pioneer Center			
Facilities Use			
Recreation	NA	8,172	--
Trips	NA	744	--
Classes	NA	4,116	--
Meetings	NA	4,032	--
Services	NA	3,192	--
Lunch	NA	10,572	--
Rentals	NA	8,904	--
Outreach	NA	28,056	--
Transportation	NA	13,644	--
Subtotal		81,432	33.0%
Recreation			
Summer Program	NA	640	--
Special Events	NA	7,700	--
Subtotal		8,340	3.4%
TOTAL		246,488	100.0%

Note: Participant day is defined as one person conducting one recreation activity in one day.

The total number of participations in City sponsored recreation programs represents 10.8 occasions per capita. Keep in mind that this includes senior outreach program that includes participants from beyond the city limits. Roughly, 52% of the total participations originate from the aquatic programs at the Aquatic Center.



SECTION V

Demand Analysis

SECTION V

Demand Analysis

INTRODUCTION

This section summarizes the demand for recreation facilities based on input from the recreation survey, contacts with user groups and the community workshop meetings). For specific information on the recreation survey results and community workshop meetings, refer to Volume II

RECREATION SURVEY

A survey of public attitudes, recreation interests, and recreation participation characteristics was conducted in the Oregon City area in December of 1998. Overall, the response rate of the Oregon City survey was above average when compared to other surveys conducted by JC Draggoo & Associates.

Sample Design and Selection

A volunteer group (affiliated with youth soccer and basketball) distributed questionnaires to randomly selected households within the Oregon City Planning Area. Each member of the selected household aged ten and over was asked to fill out a questionnaire. Computed on an area-wide basis, 381 valid returns were needed to obtain a 95 percent confidence level. In Oregon City, the actual number of questionnaires returned was 498.

Listed below is a summary of the results:

Table 27
Summary of Survey Results 1998
Oregon City, Oregon

SURVEY SUMMARY	NUMBER
Number of Households Surveyed	244
Number of Questionnaires Distributed	871
Number of Questionnaires Returned	498
Return Ratio	57.2%

Based on the random sample method used, community-wide results were statistically accurate within an expected maximum error range of approximately five- percent (95 percent confidence interval). In other words, if the sample were randomly selected 100 times, it would be expected that for 95 times, the results would vary no more than five percent from the results if everyone in the city were surveyed. In cases where information was analyzed by the four geographical areas, the confidence level was lower, due to the smaller sample size. The four survey areas were:

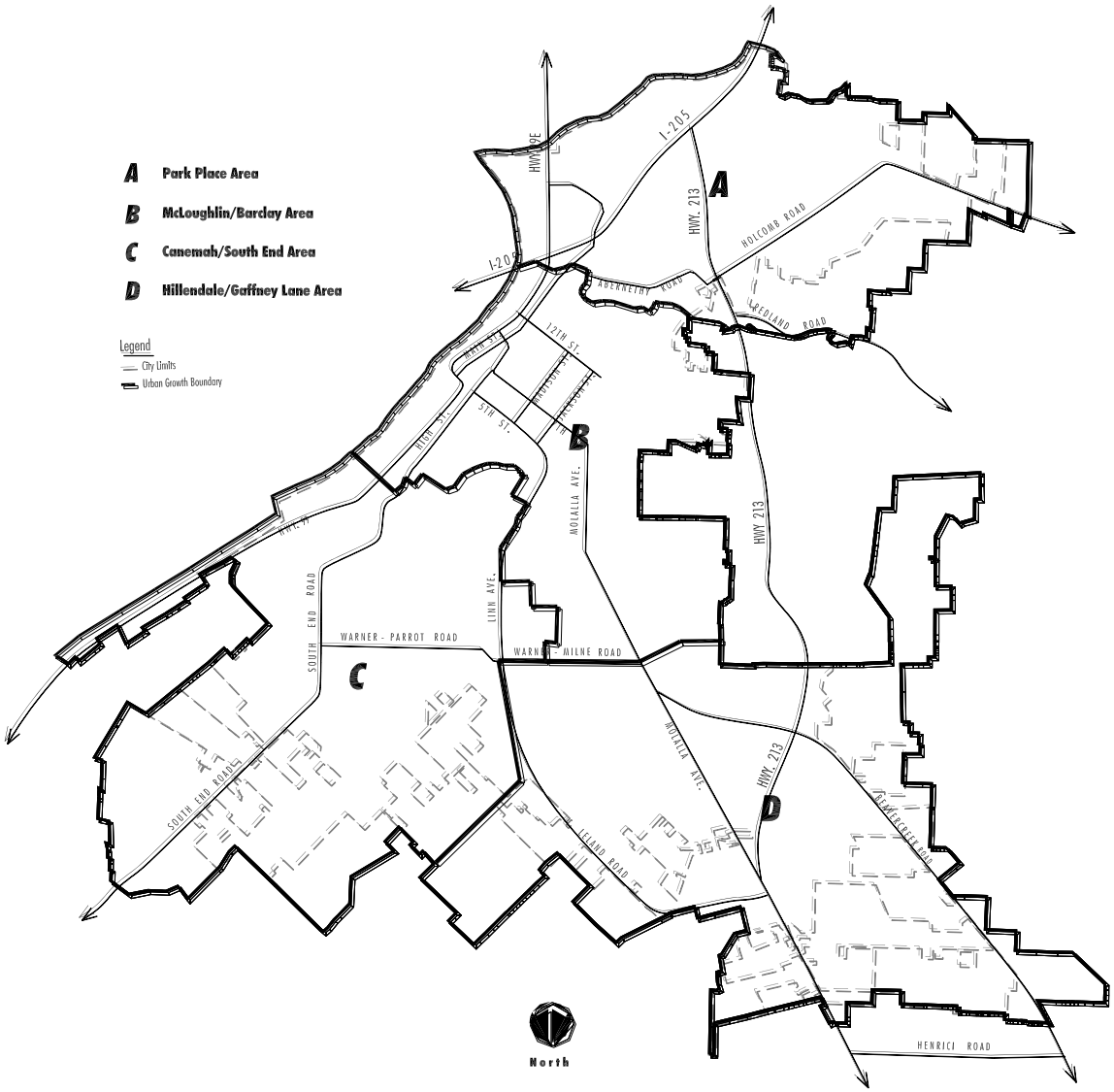


FIGURE 15
Survey Areas

Summary of Household Survey

Listed below is a summary of the recreation survey.

- In summary, there were 498 questionnaires returned from 244 households in the Oregon City area. This represented a return ratio of 57.2%.
- The highest percentage of the responses (40.8%) originated from Area C (Canemah/South End). The lowest percentage (6.8%) came from Area A (Park Place).
- Compared to the 1990 Census profile, there were a higher number of responses in the 10-14 and 45-54 age groups and a lower number of responses in the 18-24, 25-34 and 65+ age groups. However, if the sample percentages were adjusted by the change in the time increment, it would closely match the Census profile.
- Nearly 50% of the residents have lived in Oregon City for more than 11 years, with nearly a quarter of the residents residing in the City for more than 20 years.
- Clackamette Park is the most heavily used recreation area in the community (only 19.9% do not use the park). School Playgrounds/Gymnasiums and Chapin are the most frequently used recreation areas.
- On a scale of 1-10, with 10 being the highest, a majority of the respondents rated the upkeep and maintenance of the parks and cemetery between a 7 and 8.
- When asked what improvements are needed in the existing parks, the most common responses were: upgrade the playground equipment and restrooms; increase the level of development (add basketball courts, picnic areas, ballfields, tennis courts, trails, etc.), add additional support facilities; and improve security.
- The most common reason residents travel outside the City for recreation purposes is to participate in soccer, baseball and basketball.
- Most of the respondents rated the importance of open space very high. In fact, on a scale of 1-10, a majority of the respondents ranked open space between a 9 and 10. When asked what type of open space, "land along the Clackamas and Willamette Rivers" received the most support.
- Approximately 45% of the respondents cited "off-street paved trails for bicycling, walking, in-line skating, etc" as the preferred type of trail.

- When asked what type of facility was most needed, a swimming pool was the number one response. However, if the facilities were combined into generalized categories, "park facilities" was the number one response.

- "Riverfront parks" and an "indoor swimming pool" were cited as the most preferred from a pre-determined list of projects.

- 78.4% of the respondents were in favor of developing an indoor recreation center. When asked what components it should contain, a "multi-use gymnasium" and a "space for teen activities" received the most support.

- A slight majority of the respondents indicated a need for an indoor swimming pool. When asked what type of pool was preferred, an "indoor multi-purpose recreational pool" received the most support.

- Youth activities, particularly "after school activities" and "organized sports", were cited most frequently in terms of expanding the existing recreation program.

- "Maintaining existing parks, open space areas and trails" was by far the number one response, when asked where the City should focus its efforts.

- A slight majority of the respondents would be willing to finance a park and open space improvement program. 60.7% are willing to spend up to $50 annually.

- 74.3 % of the respondents felt that the City should budget money for beautification projects. "Street tree" and the "planting of annual flowers" received the most support.

- 60.8% supported the concept of forming a district to provide park and recreation services.

COMMUNITY WORKSHOP MEETING

One public workshop meeting was held in the Oregon City Area in November of 1998. The participants represented a mixture of City staff, Park Board Members and local citizens.

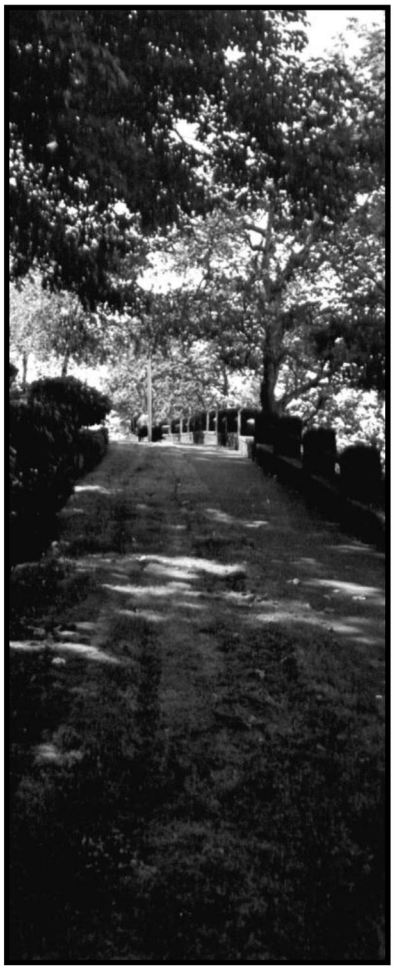
A group discussion format was used for this workshop. Participants were divided into groups averaging about 5-6 people and asked to respond to seven pre-determined questions.

Summary of Community Workshop Meeting

Listed below is a summary of the public workshop meeting.

- When asked what facilities were most needed in the Oregon City area, the most common responses were a skate park, open space areas and an indoor recreation center.
- Expanding the children's museum, summer programs and keeping the current programs were cited most often when asked what leisure services the City should provide.
- The groups varied in their rating of the existing park system. On a scale of 1-10 with 10 being excellent, the average maintenance rating was 4 and the average development rating was 3.
- When asked how the parks should be maintained, nearly all the groups indicated that the parks should be maintained at a higher level. Some of the groups preferred to see a few of the parks maintained at a higher level.
- Several of the groups felt that the City should offer regional facilities in addition to facilities for its own residents. A golf course and a softball/soccer complex were mentioned as possible facilities.
- When asked what type of park system they preferred, large parks containing a combination of sports fields and neighborhood facilities received the most support. However, several groups preferred the 3-5 acre multi-purpose neighborhood park.
- Most of the groups responded favorably when asked if they would support the concept of a regional park district to pay for the operation and development of major recreational facilities.
- When asked to vote on their favorite type of project, the construction of a multi-use indoor recreation center and the

development of a sports field complex received the most individual responses.



SECTION VI

Land and Facility Needs

SECTION VI

Land and Facility Needs

INTRODUCTION

One of the most important elements of the Parks and Recreation Master Plan is the assessment of park and facility needs. Quantifying these needs is difficult because many different variables influence recreation needs. Personal values, participation patterns, and willingness to pay for services vary widely from community to community. Consequently, what seems right for one community may not be appropriate for another. One of the problems associated with determining the needs is that overstating the demand can result in the development of facilities that are underutilized. Conversely, under-estimating the needs can result in overused facilities and a lack of available parkland.

This report discusses the park and facility needs for the Oregon City Planning Area. This encompasses the area within the current city limits as well as the land within the City's Urban Growth Boundary (UGB). The process for identifying needs was:

1. Evaluating the existing supply of recreation facilities (Section III)
2. A personal random household opinion survey of Oregon City residents (Summary of Comments in Section V)
3. A public workshop meeting for the general public (Summary of Comments in Section V)
4. Forecasting current park and facility needs utilizing various approaches

ALTERNATIVE APPROACHES TO IDENTIFYING NEEDS

There are several approaches to estimating needs for park and recreation facilities. They include the use of national standards, measurement of participation levels, user trend analysis, input from surveys and public meetings, goal setting and participation models. Since we used a combination of these, each is briefly described on the following pages.

National Standards

Standards were first created by a group of professionals who established an easily understood format of what "seemed to be right" based on their practical experience in the field. These standards were felt to be most useful if stated in quantifiable terms of acres or facilities per given population level, i.e., 10 acres of parkland per 1,000 population.

The most recognized standards were those published by the National Recreation and Park Association (NRPA). In 1983, they published the first edition titled "Recreation, Park and Open Space Standards". The problem with this approach was that communities were adopting the national standards without taking into account local conditions. The result was often standards that the agency could not possibly achieve.

In 1996, NRPA developed a new approach to assessing need based on a desired level of service or "LOS". This LOS is a way of accurately calculating the minimum amount of land to provide all of the recreation activities and facilities desired in the communities. LOS is still expressed in terms of acres per population, but is driven by needs facility based and land measured formulas.

Participation Levels Analysis

Recognizing the need to reflect local conditions, approximately 15 years ago JC Draggoo and Associates began measuring per capita participation levels in every community it studied. Participation level is measured in terms of number of occasions in a given 30-day period when that activity is in season. The activity level is then compared to other similar communities or with the NORTHWEST AVERAGE, which is the weighted average of the last 15 communities surveyed.

By comparing the subject community with the NORTHWEST AVERAGE, we can determine if participation is above or below average. This then gives us an indication as to whether the standard in Oregon City should be above or below average.

Trend Analysis

With this approach, extrapolating historical use statistics for each type of facility develops facility demand estimates. If local statistical information is used, the results can be reasonably accurate because they reflect use in the specific community. However, local conditions or current trends in recreation interests can influence the trend analysis approach. As an example, if one charts tennis playing over the last twenty years, a cycle of interest and level of play emerges. Also, operating conditions such as quality of the facility, its location, user fees and hours of operation can all play an important role in the level of use. We sometimes use this method to forecast team registration if the number of facilities remains constant.

Recreation Surveys

Recreation surveys can be conducted utilizing several different methods and approaches. These include mail-in, telephone and door to door surveys. Each type of survey process has both positive and negative attributes that include cost efficiency, return ratio, desired information and time frame. Using the survey approach, future facility needs are sometimes developed from survey information on user characteristics, participation patterns, opinions and perceived needs. If the questionnaires are drawn from a statistically valid sample, a good reliable sampling of information can be derived.

The difficulty with surveys is converting the information to quantifiable terms. As an example, if 1,000 persons expressed an interest in playing tennis, how many tennis courts will it take to satisfy that expressed need? It is also difficult in the survey approach to measure future recreation participation because it is impossible to accurately forecast how much use an individual would make of a facility if it were available.

Public Meetings

Some communities rely quite heavily on input from the general public to assess the needs. However, this approach by itself may not reflect the true community need because special interest groups often do not necessarily represent the true community's interest. On the other hand, the inability to encourage residents to attend a meeting in the first place is always a challenge with public meetings.

Goals

In some instances, community goals are expressed as the need without quantifiable or statistical analysis to support the goal. An example might be, "It is our goal to acquire as much natural open space as possible". Goals reflect a community's desire. While this approach is not the most ideal, in some instances it is the only option possible. In the above example, it would be very difficult to come up with a statistically valid standard such as "xx" acres per 1,000 population. It is a valid approach if the goal can be supported by a true evaluation of community values and desires.

Participation Models

Participation models are refined statistical formulas for establishing a quantifiable standard. They are based on actual participation characteristics taken from individual uses. When a large sample is taken, a fairly accurate statistical profile can be made.

The most accurate participation models are developed for a specific type of area or facility. Unfortunately, these models are very costly to develop because of the data needed and they usually only deal with one type of facility. However, based on studies of specific types of facilities over the years, we have developed participation models for such items as trails and swimming pools.

METHODOLOGY OF ASSESSING PARKLAND NEEDS

Developing a statement of land needs for park areas and open space is the most difficult of all types of needs analysis because it is dependent upon local values, availability of land, financial resources and desired service levels.

To determine specific land needs for the Oregon City planning area, several analytical methods were used. These included a comparison to other similar communities, results of the recreation survey, results of the public workshop meeting, national trends, financial feasibility, land availability and geographical deficiencies for parks and open space areas. It should be noted that even with all the statistical information available, a certain amount of subjective analysis and professional experience must be used to quantify the standards.

The existing ratio is the existing amount of parkland divided by the existing population. It is expressed in terms of acres per 1,000 population. The recommended standard is the desired amount of parkland expressed in terms of acres per 1,000 population. The ratio of park land or recreation facilities is based on a comparison with the existing population base. By developing a desired level of service (service area) and converting this to a desired standard of acres per population, one can determine future needs based on a future population target. For determining the existing ratio, the population within the existing city limits was used. Shown below is a comparison between the current and recommended standard for the various park types.

Table 28
Comparison of Current Ratio and Recommended Demand Standard
Park and Recreation Facilities

Recreation Area	Current Standard	Recommended Standard
Mini-Parks	0.31 Ac./1,000 Pop	0.00 Ac./1,000 Pop
Neighborhood Parks	1.12 Ac./1,000 Pop	1.71 Ac./1,000 Pop
Community Parks	1.46 Ac./1,000 Pop	2.27 Ac./1,000 Pop
Regional Parks	0.96 Ac./1,000 Pop	1.98 Ac./1,000 Pop
Linear Parks	0.22 Ac./1,000 Pop	0.70 Ac./1,000 Pop
Special Use Areas	3.10 Ac./1,000 Pop	3.89 Ac./1,000 Pop
Natural Open Space	7.10 Ac./1,000 Pop	10.25 Ac./1,000 Pop
Beautification Parks	0.00 Ac./1,000 Pop	0.10 Ac./1,000 Pop
Undeveloped Land	0.85 Ac./1,000 Pop.	None
TOTAL	15.12 Ac./1,000 Pop.	20.90 Ac./1,000 Pop.

PARKLAND NEEDS

The recreation survey revealed a number of issues affecting park and recreation services in Oregon City. These issues will affect the amount of parkland needed; the size, type and location of parks; and the number of sports fields.

Overall there are five prevailing features lacking in the park and recreation system in Oregon City. These include a shortage of "neighborhood" and "community" parks; the lack of an open space network, a shortage of sports fields; a lack of indoor facilities, such as a recreation center; and the absence of an off-street trail system.

One of the issues facing the community is that most sports groups do not recognize the boundaries of the Oregon City limits, meaning that teams and leagues encompass more than just the Oregon City area. As a result when calculating the need, we recognized that some teams playing in the Oregon City area actually live outside the community. By applying a ratio of resident and non-resident players, we determined how much demand was created by Oregon City players only. The question for Oregon City residents then *is what share of the total regional demand should the City assume?* Other issues and findings in the needs assessment were as follows:

Summary of Land Needs

- Because of the desire to discourage the development and maintenance of mini-parks, no further parks of this type are needed except where high-density residential development occurs or where private developers are willing to develop and maintain them.

- Based on a one-half mile service radius, 12 additional neighborhood parks are needed to serve the entire planning area (UGB). However, only three of these sites are needed to serve the population within the existing city limits.

- Based on a one-mile service area, there are a total of four additional community parks needed to serve the entire planning area (UGB). Two of these are needed to serve the existing Oregon City population.

- Special use areas are needed to accommodate the growing demand for specialized recreation activities such as indoor facilities and sports fields.

- Open space should be acquired and integrated into the overall park system. This can be done by preserving hillsides, creek corridors, floodplain areas (riverfront property) which would also serve as conduits for trails.

Table 29
Summary of Park Needs (1998)
Park and Recreation Facilities

Area or Facility	Existing Inventory	Year 1998 Demand	Additional Need
Mini-Parks	7.01 Ac.	0.0 Ac.	0.0 Ac.
Neighborhood Parks	25.36 Ac.	38.8 Ac.	13.4 Ac.
Community Parks	33.14 Ac.	51.5 Ac.	18.4 Ac.
Regional Parks	21.76 Ac.	44.9 Ac.	23.1 Ac.
Linear Parks	5.10 Ac.	15.9 Ac.	10.8 Ac.
Special Use Areas	70.26 Ac.	88.2 Ac.	17.9 Ac.
Natural Open Space	161.18Ac.	232.5 Ac.	71.3 Ac.
Beautification Area	0.00 Ac.	2.3 Ac.	2.3 Ac.
Undeveloped Land	19.70 Ac.	None	None

Table 30
Summary of Park Needs (2020)
Park and Recreation Facilities

Area or Facility	Existing Inventory	Year 2020 Demand	Additional Need
Mini-Parks	7.01 Ac.	0.00	0.00
Neighborhood Parks	25.36 Ac.	85.3	59.9
Community Parks	33.14 Ac.	113.2	80.1
Regional Parks	21.76 Ac.	98.8	77.0
Linear Parks	5.10 Ac.	34.9	29.8
Special Use Areas	70.26 Ac.	194.0	123.8
Natural Open Space	161.18Ac.	511.2	350.0
Beautification Area	0.00 Ac.	4.99	4.99
Undeveloped Land	19.70 Ac.	None	None

METHODOLOGY OF ASSESSING FACILITY NEEDS

Establishing needs for specialized facilities such as sport fields, trail systems, etc. was derived from several analytical approaches. This included an analysis of present recreation participation levels, needs expressed in the survey, input from user groups, from trends identified in national surveys, from play and practice time requirements of sport teams and from mathematical models developed over the years from other studies.

A problem with identifying sport needs in Oregon City is that most sports are managed by private organizations whose jurisdiction overlaps Oregon City and other surrounding communities. Because some teams who play in the community live outside Oregon City, facility demand was identified for the entire region and then reduced to reflect the number of resident players. This approach is based on the assumption that the City will meet the demand created by its own residents. If this assumption changes, then the demand for facilities will also change.

FACILITY NEEDS

Table 31
Comparison of Current Ratio and Recommended Demand Standard
Park and Recreation Facilities

Recreation Area	Current Standard	Recommended Standard
Baseball Fields	1 Field/1,418 Pop.	1 Field/1,200 Pop.
Softball Fields	1 Field/3,240 Pop.	1 Field/3,000 Pop.
Soccer Fields	1 Field/872Pop.	1 Field/900Pop.
Swimming Pools	152 Sq. Ft/1,000 Pop.	260 Sq. Ft/1,000 Pop.
Pathways and Trails	0.03 Miles/1,000 Pop.	0.75 Miles/1,000 Pop.

Summary of Facility Needs

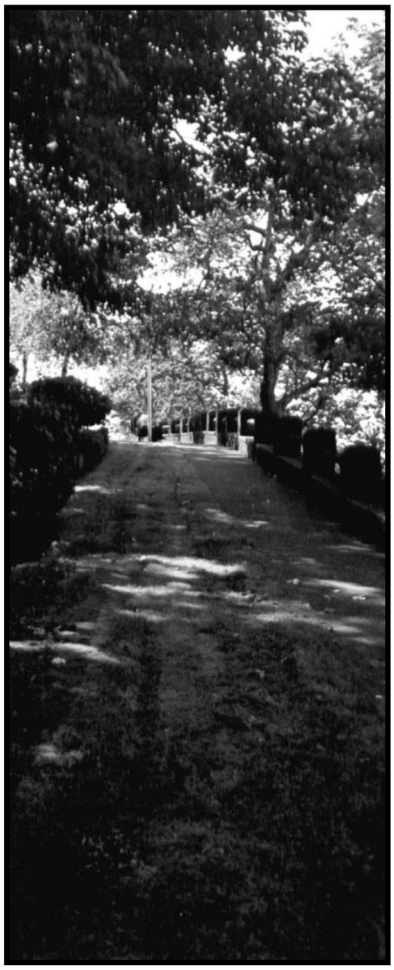
- Overall, there is a shortage of most types of sports fields.
- There is considerable interest in more trail facilities. The need for trails can be met by adding paved and unpaved trails along the Willamette and Clackamas Rivers and along Abernethy and Newell Creeks.
- There is a need and community support for an indoor recreation facility containing a gymnasium.
- There is a need for a new indoor pool.

Table 32
Summary of Park and Facility Needs (1998)
Park and Recreation Facilities

Area or Facility	Existing Inventory	Year 1998 Demand	Additional Need
Baseball Fields	16 Fields	19 Fields	3 Fields
Softball Fields	7 Fields	8 Fields	1 Field
Soccer Fields	26 Field	25 Fields	(1) Field
Swimming Pools	3,449 Sq. Ft.	5,886 Sq. Ft.	2,437 Sq. Ft.
Pathways and Trails	0.65 Miles	17.0 Miles	16.4 Miles

Table 33
Summary of Park and Facility Needs (2020)
Park and Recreation Facilities

Area or Facility	Existing Inventory	Year 2020 Demand	Additional Need
Baseball Fields	16 Fields	42 Fields	26 Fields
Softball Fields	7 Fields	17 Fields	10 Fields
Soccer Fields	26 Field	55 Fields	29 Fields
Swimming Pools	3,449 Sq. Ft.	12,968 Sq. Ft.	9,203 Sq. Ft.
Pathways and Trails	0.65 Miles	37.4 Miles	36.8 Miles



SECTION VII

Land and Facility Recommendations

SECTION VII

Land and Facility Recommendations

INTRODUCTION

This section of the Parks and Recreation Master Plan discusses the recommendations for specific lands and facilities. These recommendations are divided into the following categories:

Park Layout Plan	**VII-1**
Mini-Parks	**VII-6**
Neighborhood Park	**VII-12**
Community Park	**VII-27**
Regional Park	**VII-34**
Linear Park	**VII-38**
Special Use Areas	**VII-41**
Natural Open Space Areas	**VII-46**
Undeveloped Lands	**VII-50**
Pathways and Trails	**VII-51**
Specialized Recreational Facilities	**VII-56**
Indoor Recreation Facilities	**VII-59**
Sport Fields Facilities	**VII-60**

PARK LAYOUT PLAN

The Park Layout Plan is a graphic representation of the concept plan and shows the general location of where future parks and recreational facilities should be located in Oregon City. A map locating existing and proposed park sites, open space areas and trails, is shown on page VII-5. Some important notes about the Layout Plan are discussed below.

1. A letter of the alphabet and number (such as N-12) defines each site on the Layout Plan. The number is for site identification only and corresponds to text in this section. The letter represents the type of existing or proposed park and are identified as follows:

Symbol	Park Type
M	Mini Parks
N	Neighborhood Parks
C	Community Parks
R	Regional Parks
L	Linear Parks
SU	Special Use Areas
OS	Open Space Areas
U	Undeveloped

Land

2. On the Layout Plan, an asterisk illustrates proposed park sites. The intent is to only show a general location of where a park site should be located. The actual location will be determined based on land availability, acquisition cost and the property owner's willingness to sell.

3. The location and arrangement of the parks, open space areas and trails systems is designed to serve the entire Planning Area (area with UGB).

Overall Concept:

The ideal park system for a community is one made up of a hierarchy of various park types, each offering certain types of recreation and/or open space opportunities. Separately, each park type may serve only one basic function, but collectively they will serve the entire needs of the community. By recognizing this concept, Oregon City can develop a more efficient, cost effective and usable park system. In addition, this approach will help to reduce conflicts between park users and nearby neighbors.

The proposed park system for Oregon City centers around the premise that a community and/or neighborhood park will be located within convenient walking distance of most residents. This can be accomplished by upgrading and/or developing parks on school grounds, developing or expanding existing parks and acquiring additional land within areas designated for residential development. This core system of parks will provide the basic active and passive recreational opportunities. Supplementing these parks will be one regional park (i.e. Clackamette Park), several specialized recreation areas and numerous natural open space areas and trail corridors.

Other major additions to the park and open space system in the Oregon City area will include Metro's on-going acquisition efforts in the Newell Creek and Canemah Bluff areas. This will add a substantial amount of open space. Also, the Oregon Trail Foundation has plans to expand their facility.

The park, recreation and open space areas proposed in this plan are designed to achieve several objectives. These include:

1. **Provide an active neighborhood/community park type facility within walking distance of most residents of Oregon City.**

2. **Preserve and or/conserve open space corridors along creeks, urban drainage ways and steep hillsides.**

3. **Identify a network of off-street trails throughout the Oregon City area.**

4. **Provide land for specialized facilities such as sports fields and indoor recreation areas.**

It should also be noted that there are several opportunities to coordinate with other departments, agencies or jurisdictions in order to fulfill the objectives outlined in this plan. The School District has expressed a willingness to jointly develop neighborhood parks and sports fields on and/or adjacent to their properties. The City's Public Works Department has proposed several detention and drainage easement facilities. If designed for multi-purpose use, these projects could serve multiple functions as parks as well as trail corridors. Metro is currently acquiring and developing regional open space and trail corridors. Finally, private organizations such as the Oregon City Soccer Club and the Oregon Trail Foundation are also pursuing ways of expanding park and recreational opportunities.

The purpose of the table below is to provide a quick reference point for locating the discussion of specific park sites.

Table 34
Index of Individual Park Recommendations
Oregon City Planning Area

Site Number	Park Name	Page Number
EXISTING		
R-4	Clackamette Park	**VII-36**
N-5	Park Place Park	**VII-16**
SU-9	End of the Oregon Trail Interpretive Center (Kelley Field)	**VII-43**
SU-11	Sports Craft Landing	**VII-43**
SU-13	McLoughlin House and Barclay House	**VII-43**
N-14	Barclay Park	**VII-18**
N-15	Atkinson Park	**VII-18**
SU-17	Aquatic Center	**VII-44**
SU-19	DC Latrourette Park	**VII-44**
SU-20	Carnegie Center	**VII-45**
M-21	Senior Citizens Park	**VII-9**
SU-22	Ermatiger House	**VII-45**
SU-23	Pioneer Community Center	**VII-45**
L-24	McLoughlin Promenade	**VII-39**
N-29	Barclay Hills Park	**VII-20**
OS-30	Singer Creek Greenway	**--**
OS-32	Waterboard Open Space	**--**
U-31	Dement Park	**--**
N-34	Old Canemah Park	**VII-20**
N-36	Rivercrest Park	**VII-22**
M-37	Stafford Park	**VII-9**
M-38	Hazelwood Park	**VII-10**
M-39	Hartke Park	**VII-10**
U-44	Oak Tree Park	**--**
C-45	Chapin Park	**VII-31**
M-46	Shenandoah Park	**VII-11**

C-47	Hillendale Park	**VII-32**
N-52	Jesse Court Park	**VII-24**

Site Number	Park Name	Page Number
PROPOSED		
OS-1	Clackamette Heights Open Space	**--**
OS-2	Clackamas River Greenway	**--**
N-3	Holcomb School/Park	**VII-16**
C-6	Holcomb Road Park	**VII-30**
OS-7	Redland Road Open Space	**--**
N-8	Livesay Road Park	**VII-17**
OS-10	Willamette River Greenway	**--**
SU-12	Old Town Plaza	**VII-43**
OS-16	Abernethy Creek Greenway	**--**
C-18	City Park	**VII-30**
N-25	McLoughlin Park	**VII-19**
OS-26	Country Village Open Space	**--**
N-27	Country Village Park	**VII-19**
OS-28	Newell Creek Canyon	**VII-49**
OS-33	Coffee Creek Greenway	
N-35	Canemah Park	**VII-21**
N-40	King School/Park	**VII-22**
N-41	Gardiner School Park	**VII-23**
OS-42	Canemah Bluff Open Space	**VII-49**
N-43	Forest Ridge Park	**VII-23**
C-48	South End Park	**VII-32**
OS-49	Little Beaver Creek Greenway	**--**
N-50	Central Point Park	**VII-24**
OS-51	Central Point Greenway	**--**
L-53	Powerline Park	**VII-40**
OS-54	Mud Creek Greenway	**--**
N-55	Glenhaven Park	**VII-25**
OS-56	Caufield Creek Greenway	**--**
N-57	Caufield Park	**VII-26**
C-58	Moss Park	**VII-33**
N-59	Glen Oaks Park	**VII-26**
OS-60	Thimble Creek Greenway	**--**

[Park Layout Plan]

Mini Parks

Definition: Mini-parks, tot lots, or children's playgrounds are all small, single-purpose playlots designed primarily for use by small children. Because of their size, the facilities found at these sites are usually limited to a small open grass area, a children's playground and a picnic area. Sometimes, mini-parks contain a small multi-purpose court for basketball.

A nearby school playground, if appropriately designed and available for use, can sometimes serve this function.

Public Involvement /Assessment:

1. **Comparisons:** The service area for a typical mini-park is generally considered a 1/4-mile radius

   Ratios for mini-park land to population for similar cities in the immediate region range from 0.05-acres/1,000 population to 0.31-acres/1,000 population. Listed below is a summary of the mini-park service levels for selected cities in the immediate area.

Table 35
Existing Mini-Park Ratios
Selected Cities

City	Existing Ratio
Oregon City, Oregon	**0.31 Ac./1,000 Pop.**
Lake Oswego, Oregon	0.05 Ac./1,000 Pop.
Tualatin, Oregon	0.10 Ac./1,000 Pop.
West Linn, Oregon	0.13 Ac./1,000 Pop.
Wilsonville, Oregon	0.07 Ac./1,000 Pop.

   The current ratio in Oregon City is much higher (0.31 acres per 1,000 population) in comparison to other communities.

2. **Survey/Workshop Meeting:**. When compared to other park types (i.e. neighborhood), mini-parks were the least preferred type of park. The consensus was similar at the community workshop meeting. In fact, several respondents indicated that this type of park should be included as part of multi-use housing projects.

   Participants of the recreation survey identified the need for playground facilities and picnic areas. These types of activities are typically part of the design program for most mini-parks.

3. **Planning Advisory Committee:** The consensus among the advisory committee members was that the City should focus its efforts on developing other types of parks (neighborhood and community) and not develop mini-parks. The committee also recommended that the City consider disposing of the existing mini-parks, where feasible. However, this would occur after the local neighborhood was given the opportunity to assume maintenance and operation responsibilities for the site.

4. **Needs Assessment:** Because of their high cost to maintain and their limited potential, it was found that no need existed for this type of park.

Design and Development Policies:

1. General Land Use Guidelines:

a. Because of their size, limited recreational value and cost of operation, public parks of this type should be discouraged.

b. The development of this type of park should be encouraged as part of large private multi-family developments.

c. Mini-parks may be developed within single family subdivisions as long as they are owned and maintained by homeowners associations.

2. Site Selection Criteria:

a. While there is no size requirement for mini-parks, the minimum size should be at least 40,000 square feet in size (approximately 1 acre).

b. The site should be central to the area it serves.

c. The site should be flat and usable and have the ability to support active uses.

d. If possible, walking distance should not exceed one-quarter mile, and not require crossing of busy streets or other barriers.

3. Design and Development Standards:

a. Appropriate facilities include:

- Children's playground facilities
- Open grass play area
- Basketball court (half court)
- Picnic areas
- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

b. The site should be visible from adjoining streets and have at least 100-150 feet of street frontage.

Recommendations:

1. Summary of Recommendations:

Table 36
Summary of Mini-Park Recommendations
Oregon City Planning Area

Park Number	Site	Existing Acres/ Proposed Acres	Action	Estimate Cost of Action	Action Ranking
M-21	Senior Citizens Park	0.20	Transfer Ownership to Neighborhood or Dispose of Site	Negligible	High
M-37	Stafford Park	2.10	Transfer Ownership to Neighborhood or No Action (Retain for Possible Future Development)	Negligible/	High
M-38	Hazelwood Park	0.50	Dispose of Site	Negligible	High
M-39	Hartke Park	1.50	Transfer Ownership to Neighborhood or Dispose of Site	Negligible	High
M-46	Shenandoah Park	0.70	Dispose of Site	Negligible	High
	TOTAL	5.00		None	

2. Specific Improvements:

Senior Citizens Park **Site M-21**

Senior Citizen Park is an existing park that is located in the central portion of the McLoughlin Neighborhood. Land uses in the area are almost exclusively residential and consist primarily of older single-family homes. The site is situated at the southeast corner of 6th Street and Jefferson Street and essentially consists of a single residential lot. Facilities are limited to a small open play area and sub-standard restroom building.

Because of its limited size (0.20 acres), the site is not really suitable for park use. Because the adjoining properties are developed, there is no opportunity to expand the current site. While there is a need for a neighborhood park in this area, this particular site is too small to serve this function.

The issue here is what to do with the site. Based on the physical constraints of the site, the preferred solution would be to sell the site. However, this would depend upon deed restrictions and the City's regulations for historic districts. The other option would be to transfer the site to the adjoining neighbors who would manage it under a homeowners association.

Stafford Park **Site M-37**

Stafford Park is an existing park located in the central portion of the City, off Holmes Lane. This area consists of a mixture of residential, commercial, institutional uses and two reservoirs.

While this area lies within the service area of Rivercrest Park, that park is not adequately serving this area due to the presence of Linn Avenue. The street, which is a collector, acts as a barrier to the pedestrian and bicycle traffic. Crossing this barrier poses a safety concern, especially for young children. While neighborhood facilities are needed in this area, the population is not large enough to support the development of a legitimate neighborhood park.

Recognizing the limited recreational use of this park due to its size (2.10 acres), the dilemma here is what to do with the site. There appears to be three viable options. These include:

- Leave the site as it is and make no further improvements
- Improve the site with additional facilities
- Transfer the site to the local homeowners

Because some recreational facilities are needed in this area, the best solution would be to transfer the site to the adjoining neighbors who would, in turn, manage it under a homeowners association. However, this could be a difficult option if some of the property owners refused to become part of the association. Therefore, it appears that the most feasible solution is to remove the playground structure and maintain the site as an open grass area with no further improvements or facilities. At such a time, when the City has additional resources available, it is recommended that the City improve this site further and expand the facilities at this site. Once developed, it should have adequate off-street parking.

Hazelwood Park **Site M-38**

Hazelwood Park is an existing park that is located in the southwest portion of the City. The land uses in the area are almost exclusively residential and consist primarily of single-family homes. Facilities at this site include a playground and an open play area.

Chapin Park and Rivercrest Park are located in close proximity to this site. Because of this, this site is not needed to serve the immediate neighborhood. In addition, due to its size (0.50 acres) it has limited recreational potential even if were further developed. In an effort to eliminate the duplication of service and reduce maintenance costs, it is recommended that the City sell this site.

The City should first give the local neighborhood an opportunity to manage and maintain the site under a homeowners association.

Hartke Park **Site M-39**

Similar to Hazelwood Park, Hartke Park is an existing park located in the southwest portion of the City. Almost all of the immediate neighborhood is residential. Facilities at this site include a children's playground, open play area, two tennis courts and a basketball court. Most of the facilities at this site are in disrepair.

Again, because of the site's proximity to Chapin Park, this park is not needed to serve the immediate neighborhood. While the site is significantly larger than Hazelwood Park, it too has limited recreational potential. In an effort to eliminate the duplication of service and reduce maintenance costs, it is recommended that the City not invest any additional resources (labor or capital improvements) in this site.

It is recommended that the site be turned over to the adjoining homeowners or the neighborhood form an adopt-a-park program to fund the maintenance and operation of this site. If the property owners are reluctant or unwilling to assume operational and maintenance responsibilities, it is recommended that the site be sold. The proceeds from the sale of this site would be used to develop park facilities on or adjacent to King Elementary School.

Shenandoah Park **Site M-46**

Shenandoah Park is an existing park that is located in the South End Neighborhood. The immediate area is almost exclusively residential and consist primarily of single-family homes. The only facilities at this site are an open play area and playground.

The park lies approximately three blocks southeast of Chapin Park. Because of its close proximity to this park, the site is not needed to serve the immediate neighborhood. Due to its size (0.70 acres) and current level of development, it has limited recreational value.

It is recommended that that the site be turned over to the adjoining homeowners. Otherwise, it is recommended that the site be sold. The proceeds from the sale of this site would be used to develop additional park facilities at Chapin Park.

Neighborhood Parks

Definition: *Neighborhood parks are a combination playground and park designed primarily for non-supervised, non-organized recreation activities. They are generally small in size (about 5 acres) and serve an area of approximately one half-mile radius. Typically, facilities found in a neighborhood park include a children's playground, picnic areas, trails, open grass areas for passive use, outdoor basketball courts and multi-use sport fields for soccer, Little League baseball, etc.*

Public Involvement /Assessment:

1. **Service Areas:** The service area for a typical neighborhood-park is considered to be a 1/2-mile radius. Based on a service area analysis, many neighborhoods do not have access to this type of park.

   Comparisons: Ratios for neighborhood park land to population for cities in the local region range from 0.62-acres/1,000 population to 1.50 acres/1,000 population. Listed below is a summary of the neighborhoods park service levels for selected cities in the immediate area.

   Table 37
   Existing Neighborhood Park Ratios
   Selected Cities

City	Existing Ratio
Oregon City, Oregon	**1.12 Ac./1,000 Pop.**
Lake Oswego, Oregon	0.64 Ac./1,000 Pop.
Tualatin, Oregon	1.52 Ac./1,000 Pop.
West Linn, Oregon	0.67 Ac./1,000 Pop.
Wilsonville, Oregon	0.62 Ac./1,000 Pop.

   Oregon City is at the upper end of this range, with a ratio of 1.12 acres per 1,000 population.

2. **Survey/Workshop Meeting:** Compared to other types of parks, neighborhood parks was the second most preferred type of park area. Participants of the recreation survey identified the need for playground facilities, basketball courts, tennis courts and picnic areas. These types of facilities are often found in neighborhood parks.

   In the public workshop meeting, there was some support for the development of neighborhood parks

3. **Planning Advisory Committee:** The advisory committee members indicated that the City should provide neighborhood parks within convenient walking distance of most residences. To achieve this in areas where land is scare, the City should consider developing parks on or adjacent to school sites. This would maximize the use of public facilities as well as reduce the acquisition cost.

4. **Needs Assessment:** Based on the service area analysis, 12 additional neighborhood park sites are needed to cover the area within the Oregon City planning area. At an average size of 5 acres each, this is equivalent to 60 additional acres. Developing a neighborhood park on the Jesse Court site could satisfy one neighborhood's need.

Design and Development Policies:

1. General Land Use Guidelines:

a. Acquisition of land for neighborhood parks should occur in advance of their need.

b. A neighborhood park should be developed when the area it will serve reaches about 75% developed (measured by either acreage developed, or population accommodated).

c. Wherever feasible, neighborhood park acquisition should occur adjacent to elementary school sites.

2. Site Selection Criteria:

a. Under most conditions, neighborhood parks should be no smaller than about three acres in size, with optimum size being 5 - 7 acres. If located next to a school site, optimum park size may be reduced to 2 - 3 acres, depending upon the school facilities provided.

b. At least 75% of the site should be flat and usable, and provide space for both active and passive uses.

c. The site should be reasonably central to the neighborhood it is intended to serve.

d. If possible, walking or bicycling distance should not exceed one-half mile for the area it serves. Access routes should minimize physical barriers, and crossing of major roadways.

e. The site should be visible from adjoining streets.

f. Access to the site should be via a local residential street. The park should have at least 200 feet of frontage along the street. If located on a busy street, incorporate buffers and/or barriers necessary to reduce vehicular hazards.

g. Additional access points form the adjoining neighborhood should be provided. These should be at least 25 feet wide.

3. Design and Development Standards:

a. Appropriate facilities include:

- Unstructured open play areas and practice sports fields
- Children's playground (tot and youth)
- Basketball courts
- Tennis courts
- Picnic areas
- Shelter building (small)
- Trails and/or pathways
- Natural open space
- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

b. Parking Requirements: Minimum of three spaces per acre of usable active park area. If on-street parking is available, this standard can be reduced by one car for every 25 feet of available street frontage. Design should encourage access by foot or bicycle.

c. Active and noise producing facilities, such as tennis and basketball courts, should be located away from adjoining homes.

d. Portable restrooms are appropriate for this type of park.

The following are recommendations for existing and future neighborhood parks in the Oregon City area. The table on the following page summarizes the recommendations for neighborhood parks.

Recommendations:

1. Summary of Recommendations:

Table 38
Summary of Neighborhood Park Recommendations
Oregon City Planning Area

Park Number	Site	Existing Ac./ Prop. Ac.	Action	Estimate Cost (Planning/ Acq./ Dev.)	Action Ranking
N-3	Holcomb School/Park (P)	3.00	Planning/ Acquisition/ Development	$5,000/ $150,000 / $225,000	Plan. - High Acq.- High Dev. - Low
N-5	Park Place Park	6.50	Development	$150,000	Medium
N-8	Livesay Park (P)	5.00	Planning/ Acquisition/ Development	$10,000/ $250,000 / $375,000	Plan. - High Acq. - High Dev. - Low
N-14	Barclay Park	1.67	Expand and partnership with School District	$100,000	Upgrade - Low
N-15	Atkinson Park	5.60	Planning/ Development	$10,000/ $200,000	Plan. – High Dev. - Medium
N-25	McLoughlin Park (P)	3.00	Planning/ Acquisition/ Development	$150,000 / $225,000	Plan. - High Acq. - High Dev. - Low
N-27	Country Village Park (P)	5.00	Planning/ Acquisition/ Development	$250,000 / $375,000	Plan. - High Acq. - High Dev. - Low
N-29	Barclay Hills Park	6.76	Upgrade	$100,000	Upgrade - Low
N-34	Old Canemah Park	8.21	Upgrade	$100,000	Upgrade - Low
N-35	Canemah Park	0.34/3.00	Upgrade	$150,000	Upgrade - Low
N-36	Rivercrest Park	6.50	Upgrade	$50,000	Upgrade - Low
N-40	King School/Park (P)	3.00	Planning/ Acquisition/ Development	$5,000/ $150,000 / $225,000	Plan. - High Acq.- High Dev. - Low
N-41	Gardiner	5.00	Planning/	$5,000/	Plan. -

	School/Park (P)		Acquisition/ Development	$250,000 / $375,000	High Acq.- High Dev. - Low
N-43	Forest Ridge Park (P)	5.00	Planning/ Acquisition/ Development	$10,000/ $250,000 / $375,000	Plan. - High Acq.- High Dev. - Low
N-50	Central Point Park (P)	5.00	Planning/ Acquisition/ Development	$10,000 $250,000 / $375,000	Plan. - High Acq.- High Dev. - Low
N-52	Jesse Court Park (portion of site)	13.50	Planning/ Development	$15,000/ $562,500	Plan. – High Dev. - Medium
N-55	Glenhaven Park (P)	5.00	Planning/ Acquisition/ Development	$10,000/ $250,000 / $375,000	Plan. - High Acq.- High Dev. - Low
N-57	Caufield Park (P)	5.00	Planning/ Acquisition/ Development	$10,000/ $250,000 / $375,000	Plan. - High Acq.- High Dev. - Low
N-59	Glen Oaks Park (P)	5.00	Planning/ Acquisition/ Development	$10,000/ $250,000 / $375,000	Plan. - High Acq.- High Dev. - Low
	TOTAL	101.08		7,637,500	

(P) – Proposed Site
Assumes Acquisition @ 50,000/Acre; Assumes Development @ 75,000/Acre
Allowances are given for Park Updrades

2. Specific Improvements:

Holcomb School/Park (Proposed) Site N-3

This proposed park site is located in the Park Place neighborhood, north of Holcomb Road. This area is currently outside the existing City limits, but lies immediately adjacent to the City limits and is within the City's urban growth boundary. While this land is sparsely developed, the City's Comprehensive Plan has identified this area as residential. The terrain in this area is varied, with mixture of gentle slopes and steep hillsides. Due to the topography, site selection will be extremely critical and require coordination on behalf of the City, County and School District.

It is recommended that a neighborhood park site (approximately 5 acres) be acquired in this area to serve this future neighborhood. If possible, this site should be located partially on or adjacent to Holcomb Elementary School. If this were to occur, a smaller site (approximately 3 acres) would permissible. This would not only make efficient use of public lands, but would reduce the cost for acquisition. This park should also be linked to the proposed Clackamette Height Open Space corridor (OS-1) and Trail (T-1) via a trail connection. Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop and portable goal (practice use only)
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Park Place Park Site N-5

This site is an existing 6.5-acre park located in the central portion of the Park Place neighborhood. The surrounding area is partially developed and consists mostly of single-family residential units.

Until recently, this area of the City was one of the few neighborhoods that did not have access to park and recreational facilities. Through a combination of City resources and grants, a neighborhood park was recently developed in this area. In 1995, the City prepared a master plan for the long-range development of this site, which included a three-stage implementation program. The first phase of development was completed in1997. This included a playground area, an open play area, restroom

building, pathways, parking area and landscaping. There is also a park host located on site.

Subsequent phases for park development are scheduled and will include:

Phase II

- Picnic Area and Shelter
- Basketball Court
- Tennis Court
- Additional Play Equipment
- Additional Parking

Phase III

- Picnic Area Improvements
- Natural Area Improvements
- Site Amenities

It is recommended that the City continue to implement the *Site Master Plan* with the following modifications.

- Additional parking for this site is not needed. Because this site is intended to serve as a neighborhood park, it should promote access and use via walking and bicycling rather than vehicular transportation.

With the eventual development of Phases II & III, the park host site will be lost. The City should re-evaluate the need for this space and its impact on the site as a whole. It is also recommended that this site be connected to the proposed Clackamette Heights Open Space corridor (OS-1) and Trail (T-1).

Livesay Road Park (Proposed) Site N-8

This proposed park site is located in the northeast portion of the City, off Livesay Road. This area is currently outside the existing City limits, but within the City's urban growth boundary. This portion of the planning area is sparsely developed and is primarily a rural residential area. The terrain in this area is varied, with mixture of gentle slopes and steep hillsides. Because of the terrain and existing development pattern, the City and Clackamas County need to coordinate their efforts in order to insure a suitable site is acquired.

It is recommended that a neighborhood park site be acquired in this area to serve this future neighborhood. This park should also be linked to the Redland Road Open Space corridor (OS-7) and Clackamas Heights Trail (T-1).

Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop and portable goal (practice use only)
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Tennis court
- Picnic area with shelter building
- Paved internal pathway system

Barclay Park Site N-14

Barclay Park is an existing park that is located in the north end of the McLoughlin neighborhood. The immediate area consists of a mixture of residential, office and commercial uses. Barclay Elementary School lies adjacent to the park on the east. Facilities at the site are limited to a small open play area.

It is recommended that the City partnership with the School District to expand the recreational opportunities at this site.

Atkinson Park Site N-15

Atkinson Park is a 5.6-acre existing park site located near the northern edge of the McLoughlin neighborhood. While the area immediately north of the site is considered unbuildable, the remaining areas are completely developed and consist of single-family residential homes.

The site is ideally situated for a neighborhood park, however it lacks adequate facilities. Over the years, the site has deteriorated to a point where it will take a significant amount of public investment to upgrade and revitalize this park. The existing facilities at the site include a playground, an open play area, picnic shelter and non-functioning restroom building. This site also contains the Buena Vista House.

Aside from the lack of development and maintenance the park receives, there is another operational problem associated with this site. Because the park is located on a knoll in the City, visibility up into the site from the surrounding streets is extremely poor. This is further compounded by the presence of the Buena Vista House, which further blocks the view. The fact that one can drive up into the site and be unseen, creates a concern for personal safety and vandalism.

Prior to investing any additional resources in this site, it is recommended that a park site master plan be prepared for this site. As part of this plan, it is recommended that the Buena Vista House be relocated to another site and the whole issue of automobile access be revisited. At a minimum, the redevelopment of this site should include:

- Viewpoints
- Multi-use grass area
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

This park should also be linked to the Abernethy Creek Greenway (OS-16) and Trail (T-4).

McLoughlin Park (Proposed) Site N-25

This proposed park site is located in the southern portion of the McLoughlin neighborhood. This portion of the City is heavily developed and consists of older single-family homes. This is also one of the few areas in the City that lacks adequate neighborhood park facilities.

As a result, it is recommended that the City acquire and develop a neighborhood park to serve this area of the City. Because the level of development in this area is extremely high, it is unlikely that the City will be able to acquire a five-acre site. As a compromise, it is recommended that a three-acre neighborhood park site be acquired in this area. Even by reducing the size, it may be difficult to find a suitable site.

If the City is unable to locate a site, there may be some opportunity to work out a use agreement with St. John Church to upgrade facilities on their playground site or expand the use of the south side of the McLoughlin Promenade.

Country Village Park (Proposed) Site N-27

This proposed park site is located in the east portion of the planning area, off Country Village Lane. This area is well outside the existing City limits, but within the City's urban growth boundary. This area houses a large mobile home park. The terrain consists of a mixture of gentle slopes and steep hillsides. As a result, acquiring a site in this area will require a coordinated effort on behalf of the City.

It is recommended that a neighborhood park site be acquired in this area to serve this neighborhood. This park should also be linked to the Country Village Open Space corridor (OS-26) and the Thimble Creek Trail (T-6) via a trail connection. Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop (practice field only)
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Tennis court
- Paved internal pathway system

Barclay Hills Park **Site N-29**

Barclay Hills Park is an existing park site located in the eastern portion of the City. The immediate area is moderately developed and is continuing to grow with the addition of new housing units along the Bluff overlooking Newell Creek Canyon. Facilities at the site consist of a playground, a basketball court and a small open play area.

It is recommended that the site be upgraded and expanded to include additional development. This should include:

- Pathways/trails
- Picnic facilities and shelter building
- Tennis court
- Landscaping
- Installation of an irrigation system
- Street improvements along Barclay Hills Drive

Since the park abuts the proposed Newell Creek Canyon Open Space area, there are numerous opportunities to connect this site with that area. It is recommended that the City coordinate the planning and development of trail linkages with Metro's Refinement Plan for this area.

Old Canemah Park **Site N-34**

Old Canemah Park is an existing park site located in the historic Canemah District along the west portion of the City. This is an established neighborhood and consists of single homes. The terrain in this area consists of moderate to steep hillside that overlook the Willamette River. Facilities are limited to a small parking area and picnic facilities.

It is recommended that the site be upgraded and expanded to include additional development. This should include:

- Open play area
- Playground area
- Paved court area
- Landscaping

Canemah Park (aka Canemah Children's Playground)Site N-35

Canemah Park is an existing 0.34 acre park site located in the historic Canemah District along the west portion of the City. This is an established neighborhood and consists of single homes. The terrain in this area consists of moderate to steep hillside that overlook the Willamette River. This neighborhood is somewhat separated from the rest of the community and thus needs its own recreation area. The current park is limited in both size and facilities and includes a children's playground, open play area and a basketball court.

There are two suggested approaches to meeting park needs in this neighborhood. The first option is to explore the feasibility of acquiring additional land south of the park. This would then create a park large enough to develop a typical neighborhood park. The site could then also serve as a trailhead for the Canemah Bluff Open Space and Trail System (OS-42 and T-7).

Under this option improvements should include:

- Develop a dedicated picnic area
- Construct an internal paved pathway system for ADA access
- Add landscaping and trees
- Add a multi-purpose field
- Add a trailhead and support facilities
- Provide parking area

The second option is to attempt a trade with Metro. This agency recently acquired land to the south for open space. Part of this land is would be suitable for a neighborhood park. As a trade, the City could offer land in the Newell Creek.

Rivercrest Park **Site N-36**

Rivercrest Park is an existing park site situated in the Rivercrest neighborhood, near the central portion of the City. The immediate area surrounding this site is entirely developed and consists of single-family homes.

Because of its size, level of development and location, it is one of the most heavily used parks in the City. Facilities at the site include a playground, multi-use field, two tennis courts, basketball court, restroom building, wading pool, picnic area, horseshoe pits and parking area.

While most of the facilities are in good condition, there are some modifications and recommended improvements for this site. These include:

- Construct an internal paved pathway system for ADA access
- Upgrade picnic shelter building
- Update playground equipment to include youth and tot equipment
- Renovate multi-use field
- Resurface tennis courts and basketball court
- Add support facilities

King School/Park (Proposed) **Site N-40**

This proposed park is located in the north portion of the South End Neighborhood. This area is mostly developed with single-family residential homes. As a result, there is very little land available for a park site. While there are two small mini-parks in the vicinity, neither of these facilities is meeting the neighborhood park needs.

King Elementary School, which is fairly central to the neighborhood, offers some opportunity for recreational and open space use. It is recommended that a neighborhood park site be developed on or adjacent to King Elementary School. This would not only make efficient use of public lands, but also would eliminate the cost of acquisition and reduce the overall cost of development.

Possible facilities for this proposed park site should include:

- Multi-use grass area
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Gardiner School/Park (Proposed) Site N-41

This proposed park site is located in the central portion of the community, adjacent to Gardiner Middle School. This area is fairly well developed with a mixture of multi and single-family residential units. As a result, there is very little land available for park development.

It is recommended that a neighborhood park site be acquired in this area to serve this neighborhood. If possible, this site should be located partially on or adjacent to Gardiner Middle School. This would not only make efficient use of public lands, but would reduce the overall cost of acquisition and development.

Possible facilities for this proposed park site should include:

- Youth baseball field
- Soccer field
- Multi-use grass area (additional practice space only)
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Forest Ridge Park (Proposed) Site N-43

This proposed park site is located in the southern portion of the planning area, west of South End Road. This area is currently outside the existing City limits, but within the City's urban growth boundary. The terrain in this area is fairly level which offers a number of opportunities for development, including housing. In fact, this area is an emerging residential area. For this reason, it is critical that the City acquire parkland prior to its actual need. This will require coordination between the City and Clackamas County. This park should be linked to the Canemah Bluff Open Space corridor (OS-42) and Trail (T-7).

Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop and portable goals (practice use only)
- Tennis court
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Central Point Park (Proposed) Site N-50

Similar to the proposed Forest Ridge site, this proposed park site is located in the southern portion of the planning area, but east of South End Road. This area currently lies adjacent to the existing City limits, but within the City's urban growth boundary. Like most of the south end neighborhoods, the terrain is fairly level which offers a number of opportunities for development. Currently, the only recreational opportunities in the area are located at McLoughlin Elementary School. For this reason, it is critical that the City acquire a park as soon as possible. This will require coordination between the City and Clackamas County.

It is recommended that a five-acre neighborhood park site be acquired in this area to serve this neighborhood. This park should also be linked to the Central Point Greenway (OS-51) and Central Point Trail (T-12).

Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop and portable goals (practice use only)
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Jesse Court Park Site N-52

Jesse Court Park is an existing undeveloped park located off Jesse Court in the southern portion of the City. This site was recently acquired from the School District and is intended to serve the immediate area when developed.

Currently, there is no master plan outlining the future use of this site. There has been some discussion about developing a sports complex on this site, but there is also a need for a neighborhood park in this area. As a result, it is recommended that approximately three-acres be developed for passive use and the remainder be developed into sport fields. However, because of its limited street frontage and the fact that it is surrounded by residential homes, care must be given that the park does not impact the neighborhood from traffic or noise.

This park should also be linked to the Mud Creek Greenway (OS-54) and Trail (T-13).

Prior to any development occurring, it is recommended that a park site master plan be prepared. Possible facilities for this proposed park site should include:

- Youth baseball fields (2 -3)
- Soccer fields
- Multi-use grass area
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Tennis courts (2)
- Paved internal pathway system

Glenhaven Park (Proposed) Site N-55

This proposed park site is located in the Gaffney Lane neighborhood, north of Glenhaven Court. This area is located outside the city limits, but located in a county "island". The immediate area is moderately developed and consists of residential homes. Consequently, there are very few areas available for park development. The only recreational opportunities in the area are located at Gaffney Lane Elementary School. For this reason, it is critical that the City acquire a park as soon as possible. This will require coordination between the City and Clackamas County.

It is recommended that a five-acre neighborhood park site be acquired in this area to serve this future neighborhood. This park should also be linked to the Caufield Creek Greenway (OS-56) and Trail (T-14). Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop and portable goals (practice use only)
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Caufield Park (Proposed) Site N-57

This proposed park site is located off Caufield Road. While this land is currently undeveloped, it has been identified in the City's Comprehensive Plan as a location for residential development. The area is relatively level, which offers several options for the eventual development of recreational facilities.

It is recommended that a five-acre neighborhood park site be acquired in this area to serve this future neighborhood. This park should also be linked to the Caufield Creek Greenway (OS-56) and Trail (T-14). Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop and portable goals (practice use only)
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Glen Oaks Park (Proposed) Site N-59

This proposed park site is located in the southeast portion of the planning area, south of Glen Oaks Road. This area is currently outside the existing City limits, but within the City's urban growth boundary. The terrain in this area is fairly level which offers a number of opportunities for development, particularly residential housing. For this reason, it is critical that the City acquire the land prior to its actual need. This will require coordination between the City and Clackamas County.

It is recommended that a five-acre neighborhood park site be acquired in this area to serve this neighborhood. This park should also be linked to the Caufield Creek Greenway (OS-56), Thimble Creek Greenway (OS-60) and Beaver Ridge Trail (T-15). Possible facilities for this proposed park site should include:

- Multi-use grass area with a backstop and portable goals (practice use only)
- Tennis court
- Children's playground (tot lot and youth equipment)
- Multi-use paved court for basketball, volleyball, etc.
- Picnic area with shelter building
- Paved internal pathway system

Community Parks

***Definition**: A community park is planned primarily to provide active and structured recreation opportunities. In general, community park facilities are designed for organized activities and sports, although individual and family activities are also encouraged. Community parks serve a much larger area and offer more facilities. As a result, they require more in terms of support facilities such as parking, restrooms, covered play areas, etc. Community parks usually have sport fields or similar facilities as the central focus of the park. Their service area is roughly a 1-mile radius. Optimum size is between 20 to 30 acres.*

Public Involvement /Assessment:

1. **Service Area:** The service area for a typical neighborhood-park is generally considered a 1-mile radius. Based on a service area analysis for Oregon City, many areas do not have access to this type of park.

   Comparisons: Ratios for community park land to population for cities in the region range from 1.46-acres/1,000 population to 6.20 acres/1,000 population. Listed below is a summary of the community park service levels for selected cities in the immediate area.

   Table 39
   Existing Community Park Ratios
   Selected Cities

City	Existing Ratio
Oregon City, Oregon	**1.46 Ac./1,000 Pop.**
Lake Oswego, Oregon	2.78 Ac./1,000 Pop.
Tualatin, Oregon	2.59 Ac./1,000 Pop.
West Linn, Oregon	1.53 Ac./1,000 Pop.
Wilsonville, Oregon	6.20 Ac./1,000 Pop.

   Oregon City is at the lower end of this range, with a ratio of 1.46 acres per 1,000 population.

2. **Survey/Workshop Meeting:** Participants of the recreation survey identified the need for sports fields, shelter buildings, restrooms, new or upgraded playground facilities, basketball courts, tennis courts and picnic areas. These types of facilities are often found in community parks. Compared to other park types, community parks were the most preferred type of park area.

Participants of the public workshop meetings preferred this type of park to other park types such as neighborhood and mini-parks.

3. **Planning Advisory Committee:** The advisory committee recommended that the City provide community parks within a mile-radius of most residences.

4. **Needs Assessment:** The needs assessment identified a need for an additional 80 acres of land. This would accommodate enough land for four additional community park sites.

Design and Development Policies:

1. General Land Use Guidelines:

a. Because of their size, the acquisition of community parkland should occur far in advance of its need.

b. A community park should be constructed when the area it will serve reaches about 50% developed (measured by either acreage developed, or population accommodated).

c. Wherever feasible, community park acquisition should occur adjacent to junior and high schools sites.

2. Site Selection Criteria:

a. Minimum size should be 15 acres with the optimum being about 20-30 acres.

b. At least two-thirds of the site should be available for active recreation use and adequate buffers of natural open space should separate active use areas from nearby homes.

c. If possible, walking or bicycling distance should not exceed two miles for the area it serves.

d. The site should be visible from adjoining streets and have a minimum of 200' of street frontage.

- Access should be via a collector or arterial street.

3. Design and Development Standards:

a. Appropriate facilities include:

- Designated sport fields - softball, baseball, soccer, etc.
- Tennis courts (2 or 4)
- Sand or grass volleyball courts
- Open multi-use grass area

- Children's playground (tot and youth)
- Restrooms
- Picnic area
- Picnic shelters (various sizes)
- Group picnic facilities
- Trails/pathway systems
- Outdoor basketball courts
- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

b. Parking requirements: dependent upon facilities provided. Require 50 spaces per ballfield plus 5 spaces per acre of active use area.

c. Permanent restrooms are appropriate for this type of park but should be located in areas that are highly visible and near public streets.

Recommendations:

1. Summary of Recommendations:

Table 40
Summary of Community Park Recommendations
Oregon City Planning Area

Park Number	Site	Existing Acres/ Proposed Acres	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
C-6	Holcomb Road Park (P)	20.00	Planning/ Acquisition/ Development	$20,000/ $1,000,000/ $2,000,000	Plan. - High Acq.- High Dev. - Low
C-18	City Park (P)	20.00	Planning/ Acquisition/ Development	$20,000/ $1,000,000/ $2,000,000	Plan. - High Acq.- High Dev. - Low
C-45	Chapin Park	17.50	Planning/ Upgrade	$5,000 $75,000	Plan. - High Upgrade - High
C-47	Hillendale Park	15.64	Upgrade	$125,000	Upgrade - High
C-48	South End Park (P)	20.00	Planning/ Acquisition/	$20,000/ $1,000,0	Plan. - High

			Development	00/ $2,000,000	Acq.- High Dev. - Low
C-58	Moss Park (P)	20.00	Planning/ Acquisition/ Development	$20,000/ $1,000,000/ $2,000,000	Plan. - High Acq.- High Dev. - Low
	TOTAL	113.14		$12,210,000	

P – Proposes Site
Assumes Acquisition cost at $50,000/Acre
Assumes Development cost at $100,000/Acre
Allowance is given for Park Updrades

2. Specific Improvements:

Holcomb Road Park (Proposed) Site C-6

This proposed park site is located in the northern portion of the City, south of Holcomb Road. Currently, this area is lacking community park facilities. In fact, the only area that contains any recreational facilities is at Park Place Elementary School.

While the immediate area is sparsely developed, the terrain consists of gentle to steep slopes. Based on these factors and the size requirements, it is critical that the City acquire a park as soon as possible.

It is recommended that a 20-acre community park site be acquired in this area to serve the north portion of the City. This park should also be linked to the Redland Road Open Space Corridor (OS-7) and Trail (T-1). Possible facilities for this proposed park site should include:

- Softball fields (2)
- Baseball fields (2)
- Soccer fields (2)
- Tennis courts (2 or 4)
- Sand or grass volleyball courts
- Open multi-use grass area
- Children's playground (tot and youth)
- Restrooms
- Picnic areas with shelters (various sizes)
- Group picnic facilities
- Trails/pathway systems
- Outdoor basketball courts
- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

City Park (Proposed) Site C-18

This proposed park site is located in the central portion of the City which is lacking in community park facilities. While the Oregon City High School fulfills some of this need, it lacks the diversity of facilities typically found in a community park.

One of the problems with meeting the community park needs in this area is that it is highly developed and available land is lacking. Based on these factors and the size requirements, it is unlikely that the City will be able to acquire a site suitable for a community park. The question, then, is how to provide community park services to residents of this portion of the community.

One option involves the Oregon City School District. The school district has expressed a desire, in the long term, to eventually move the high school to another location. If this were to occur, there would be the opportunity to re-develop a portion of this site for park and recreation uses.

It is recommended that a community park site be acquired in this area to serve the central portion of the City. Possible facilities for this proposed park site could then include:

- Sport fields
- Tennis courts
- Sand or grass volleyball courts
- Open multi-use grass area
- Children's playground (tot and youth)
- Restrooms
- Picnic areas with shelters (various sizes)
- Trails/pathway systems
- Outdoor basketball courts
- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

Chapin Park **Site C-45**

Chapin Park is a 17.5 acre park located in the South End neighborhood. The site contains four ballfields, two soccer fields, picnic area, playground, restroom building, and old exercise course, pathway system and parking facilities. The site also contains a park host site.

While most of the facilities are in good condition, there are some modifications and recommended improvements for this site. One of the most serious problems is the drainage pattern that floods the playground and portions of the playfields. Parking is also another serious problem. When the sport fields are in use, people park along all of the adjoining residential streets and occasionally in private driveways. Proposed Improvements should include:

- Modify the drainage pattern
- Extend the internal paved pathway system for ADA access
- Add more off-street parking
- Renovate multi-use field (upgrade irrigation system).
- Add another soccer field
- Add a basketball court.
- Add picnic shelter
- Add support facilities

In order to address the deficiencies in this park, it is recommended that a master plan be prepared for this site.

Hillendale Park **Site C-47**

Hillendale is a 15.64 acre park located in the Hillendale neighborhood. The site contains a baseball field, soccer field, picnic area, playground, two tennis courts, restroom building, pathway system and parking facilities. The site also contains a park host site.

While most of the facilities are in fair condition, there are some modifications and recommended improvements for this site. These include:

- Upgrade soccer field
- Update the playground
- Renovate shelter building
- Expand irrigation system and pathways
- Add basketball court
- Add support facilities

South End Park (Proposed) **Site C-48**

This proposed park site is located in the southwest portion of the City, off South End Road. Currently, this area lies outside the city limits, but within the City's urban growth boundary. This portion of the planning area does not have access to community park facilities. In fact, the only active recreational facilities are located at McLoughlin Elementary School.

Because this area is experiencing increased growth and the supply of developable land is limited, it is critical that the City acquire a park as soon as possible.

It is recommended that a 20-acre community park site be acquired in this area to serve the southwest portion of the City. This park should also be linked to the Little Beaver Green Trail. Possible facilities for this proposed park site should include:

- Softball Fields (2)
- Baseball Fields (2).
- Soccer Fields (2-4)
- Tennis courts (2 or 4)
- Sand or grass volleyball courts
- Open multi-use grass area
- Children's playground (tot and youth)
- Restrooms
- Picnic areas with shelters (various sizes)
- Group picnic facilities
- Trails/pathway systems
- Outdoor basketball courts

- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

Moss Park (Proposed) **Site C-58**

This proposed park site is located in the southeast portion of the City, north of Glen Oaks Road. This portion of the planning area does not have access to community park facilities, although Clackamas Community College and Oregon City High School - Moss Campus are in close proximity.

Because this area is experiencing increased growth and the supply of developable land is decreasing, it is critical that the City acquire a park site as soon as possible. It is recommended that a 20-acre community park site be acquired in this area to serve the southeast portion of the City. It should also be noted that the Caufield Basin Stormwater Master plan identifies the acquisition of two detention basins in this area. If the City incorporated these facilities into the proposed park site, a smaller park may be acquired. There also may be an opportunity to acquire a site adjacent to the Moss campus or Clackamas Community College. If this were to occur, a smaller site would be permissible.

This park should also be linked to the Caufield Creek Trail. Possible facilities for this proposed park site should include:

- Softball Fields (2)
- Baseball Fields (2).
- Soccer Fields (2-4)
- Tennis courts (2 or 4)
- Sand or grass volleyball courts
- Open multi-use grass area
- Children's playground (tot and youth)
- Restrooms
- Picnic areas with shelters (various sizes)
- Group picnic facilities
- Trails/pathway systems
- Outdoor basketball courts
- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

Regional Parks

Definition: Regional parks are parks that are designed to serve the entire community and area beyond. Generally, they provide a wide variety of specialized facilities such as sports fields, indoor recreation facilities, large picnic areas, etc. Because of their size and facilities offered, they require more in terms of support facilities such as parking, restrooms, play areas, etc. Their service area usually exceeds 5-mile radius. They usually exceed 50 acres in size and should be designed to accommodate large numbers of people.

Public Involvement /Assessment:

1. **Existing Conditions:** Currently, there is only one regional park in the Oregon City area. This site is located at the confluence of the Willamette and Clackamas Rivers. The service area for a regional park is considered to be the entire community and beyond.

2. **Survey/Workshop Meeting**: Participants of the recreation survey identified the need for boating facilities and fishing opportunities. These types of facilities are often found in regional parks.

   Some of the participants of the public workshop meeting indicated that the City should provide regional facilities, especially with private sector involvement.

3. **Planning Advisory Committee:** Although the advisory committee did not specifically address the issue of regional parks, they identified the need for facilities that are regional in nature, such as an indoor pool, indoor recreation center and sports complex.

4. **Needs Assessment:** The needs assessment identified a need for an additional 77 acres of land. If the Clackamette Cove property were dedicated for this purpose, it would satisfy the additional need.

Design and Development Policies:

1. General Land Use Guidelines:

a. Because of their size, the acquisition of regional parkland should occur far in advance of its need.

2. Site Selection Criteria:

a. Minimum size should be about 50-75 acres with the optimum being about 100 acres or more.

b. At least 50% of the site should be developed and adequate buffers of natural open space should separate active use areas from nearby homes.

c. Site selections should take into consideration the varied topography and natural physical features such as lakes, rivers, vistas, wooded areas, etc..

d. Access to the site should be via a collector or arterial street.

3. Design and Development Standards:

a. Appropriate facilities include the following:

- Single-purpose specialized facilities (e.g. camping areas, special landscaped features, etc.)
- Water-related facilities
- Formal and informal sport fields - softball, baseball, soccer, etc.
- Sand or grass volleyball courts
- Open multi-use grass area
- Children's playground (tot and youth)
- Permanent Restrooms
- Picnic area
- Picnic shelters (various sizes)
- Group picnic facilities
- Trails/pathway systems
- Site amenities (picnic tables, benches, bike racks, drinking fountains, trash receptacles, etc.)

b. Parking requirements: dependent upon the activities proposed.

c. Intensive use areas should be adequately buffered from adjacent residential areas.

d. Permanent restrooms are appropriate for this type of park but should be located in areas that are highly visible.

e. It is desirable to have an appropriate balance of active and passive recreational facilities and areas retained in their natural state to provide opportunities for picnicking, walking, riding, boating and various types of passive recreation.

f. Water-oriented activities within the regional park should occur whenever possible.

Recommendations:

1. Summary of Recommendations:

Table 41
Summary of Regional Park Recommendations
Oregon City Planning Area

Park Number	Site	Existing Acres/ Proposed Acres	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
R-4	Clackamette Park	21.76/ 77.23	Planning/ Acquisition/ Development	$30,000/ $0 $5,500,000	Plan. - High Acq. – Low Dev. – High
	TOTAL	98.99		$5,530,000	

Allowance for Development

2. Specific Improvements:

Clackamette Park **Site R-4**

Clackamette Park is an existing 21.76 acre site located at the confluence of the Willamette and Clackamas Rivers. Because of its location and the type of facilities, City residents as well as people throughout the region extensively use the site. Facilities at the site include a campground, playground area, shelter building, horseshoe pits, picnic areas, boat launch, swimming beach, pathways, restroom building and parking facilities.

While overall, the facilities are in good condition, there are a number of operational problems associated with the site. First and foremost, is the site probability to frequent flooding. Because the entire area is within the 100 year floodplain, siting and placement facilities must recognize that the site is subject to frequent flooding. After the 1996 floods, the City received grants to upgrade and repair many of the facilities including the boat launch, swimming beach, parking areas and restroom building.

Another problem with the site relates to the development level and location of the RV campground. While the development level of the campground is a concern, the

main problem is with its proximity to the entrance of the park. Because the campground is underdeveloped, it does not create a pleasing sense of entry into the park.

Prior to investing any additional resources in the campground area, it is recommended that City re-visit the park site master plan for this site. Some consideration should be given to vacating a portion of Clackamette Drive and Main Street, in an effort to improve the sense of arrival and entry into the park and tie into the recently acquired land on the east side of McLaughlin Blvd (see discussion below).

The City recently acquired approximately 64 acres of land east of McLoughlin Blvd. adjacent to Clackamette Park known as the Clackamette Cove Property. In addition, the City has the option to purchase another 13 acres of land.

This new property offers a number of recreation opportunities. The center portion was quarried for gravel creating a lake of approximately 25 acres. Surrounding the lake is a strip of land ranging as narrow as 50' along the Clackamas River to over 600' on the east side. The lake creates excellent waterfront access as well as direct access to the River. Most of the site is subject to occasional flooding but some areas lie above the 100 year flood plain. On-site grading will be permitted but the importation of additional fill is restricted.

The City has not made a determination as to how this property should be used. A portion at the north end is above the flood plain and has been suggested for some type of residential development. The regional sewage agency has also expressed an interest in land in this general area.

However, it is our opinion that a major portion of the site should be reserved for recreation use. It offers many different recreation opportunities that are not found anywhere else in the community. However, because of the interest by several different agencies for use of this property, the City should embark immediately on a master planning process.

Possible recreational facilities that would be very appropriate for this site include:

- Sports Field Complex
- Swimming beach
- Boating facilities
- Waterfront trails
- Waterfront commercial and concession areas
- Paddleboat rentals, etc.
- Urban fish and wildlife viewing areas

Linear Parks

Linear parks are developed landscaped areas and other lands that follow linear corridors such as abandoned railroad right-of-ways, powerlines and other elongated features. This type of park usually contains trails, landscaped areas, viewpoints and seating areas.

Public Involvement /Assessment:

1. **Existing Conditions:** Currently, McLoughlin Promenade is the only linear park in the Oregon City area.

   Depending upon the function it serves, the service area for a linear park varies widely. However, in a community the size of Oregon City's, linear parks are generally considered to be community wide.

2. **Survey/Workshop Meeting:** Participants of the recreation survey identified the need for bike paths and walking trails. These are elements that are typically found within linear parks.

   Respondents of the workshop meeting did not specifically identify the need for linear parks. However, they did express a need for pathways and trails.

3. **Planning Advisory Committee:** The Advisory Committee did not address the need for additional linear parks.

4. **Needs Assessment:** The needs assessment identified a need for an additional 30 acres of land. This would accommodate enough land for the extension of the existing linear park and/or the development of a new site.

Design and Development Policies:

1. General Land Use Guidelines:

a. Because of the shape, configuration and potential for high use, noise and use impacts on adjacent property must be taken into consideration.

2. Site Selection Criteria:

a. Linear parks should generally follow utility lines, railways or other linear corridors.

b. Linear parks should be at least 50-75 wide. Optimum width should be 100 feet wide.

3. Design and Development Standards:

a. Activities are generally passive in nature.

b. Paved pathways should be designed to accommodate maintenance and patrol vehicles

c. Where general public use is promoted, fences, adequate setbacks and/or other features to control access should protect adjoining uses.

Recommendations:

1. Summary of Recommendations:

Table 42
Summary of Linear Park Recommendations
Oregon City Planning Area

Park Number	Site	Existing Acres/ Proposed Acres	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
L-24	Mcloughlin Promenade	5.89/5.00	Upgrade/ Acquisition	$100,000 / $250,000	Upgrade. - Med Acq. – Low
L-53	Powerline Park	25.00	Planning/ Acquisition/ Development	$5,000/ $375,000 $750,000	Plan.- Low Acq. - Low Dev. - Low
	TOTAL	35.89		$1,480,000	

Assumes Acquisition cost at $15,000/Acre within utility corridor; $50,000 outside
Assumes Development cost of 30,000/Acre

2. Specific Improvements:

McLoughlin Promenade Site L-24

McLoughlin Promenade is an existing 5.1-acre park located on the bluffs overlooking the Willamette River. The site

provides spectacular views of the downtown and the Willamette City Falls. Facilities at the site include a promenade, seating areas, viewpoints and historical markers.

While most of the facilities are in fair condition, there are some modifications and recommended improvements for this site. These include:

- Upgrade wall
- Develop additional access points and parking areas
- Add restroom building

Powerline Park (Proposed) Site L-53

This proposed park site is located along the high-voltage transmission line that stretches form Beavercreek Road to the Jesse Court site.

It is recommended that the City acquire an easement for public access of approximately 30 acres for a linear park. Possible facilities for this proposed park site should include:

- Pathway/Trail
- Seating Areas
- Trailhead Facilities
- Parking areas

Special Use Areas

Special Use Areas: *Special use areas are miscellaneous public recreation areas or land occupied by a specialized facility. Some of the uses that fall into this classification includes unique single purpose recreational areas/facilities, community gardens, building sites, sports complexes, cultural areas, etc.*

Public Involvement /Assessment:

1. **Existing Conditions:** Excluding the two cemetery sites, there are 9 special use areas in the Oregon City planning area.

   Depending upon the function it serves, the service area for a special use area varies widely. However, in a community the size of Oregon City's, special use areas are generally considered to be community wide.

2. **Survey/Workshop Meeting:** Participants of the recreation survey identified the need for a swimming pool, a skateboard park, indoor recreation center, gymnasium, in-line skating area, and sports fields. All of these facilities, if located independently, would fall under the special use category.

   Respondents of the workshop meeting identified the need for skate park, indoor recreation center and an indoor swimming pool.

3. **Planning Advisory Committee:** The Planning Advisory Committee did not discuss the need for a specific special use area. However, the need for a sports complex, indoor recreation center and swimming pool were discussed. If located independently, these sites would fall under this category. In addition, there was some concern over the cost associated with the development of these facilities and the overall tax impact on the community.

4. **Needs Assessment:** The needs assessment identified a need for an additional 124 acres of land (including 82 acres of land proposed by the Oregon Trail Foundation for the expansion of their facility). This would accommodate enough land for a sports field complex, recreation/aquatic center and skateboard area.

Design and Development Policies:

1. General Land Use Guidelines:

a. Dependent upon the type of facilities proposed.

2. Site Selection Criteria:

1. Prior to the addition of any special use area, the City should prepare a detailed feasibility and cost/benefit

analysis for each proposed site being considered.

2. Size and location of facility will be dependent upon the function of the facility being considered.

3. Design and Development Standards:

a. Design criteria will depend upon the facilities and activities proposed.

b. Parking requirements: dependent upon the activities offered.

Recommendations:

1. Summary of Recommendations:

Table 43
Summary of Special Use Area Recommendations
Oregon City Planning Area

Park Number	Site	Existing Acres/ Proposed Acres	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
SU-9	End of the Oregon Trail Interpretive Center (2)	8.40/82.00	No Action	None	Low
SU-11	Sport Craft Landing	2.00	Minor Improvements	$30,000	Low
SU-12	Old Town Plaza (P)	2.00	Planning/ Acquisition/ Development	$15,000/ $200,000 $200,000	Plan.- Low Acq. - Low Dev. - Low
SU-13	McLoughlin/Barclay Houses	0.80	Minor Improvements	$10,000	Low
SU-17	Aquatic Center	1.33	Upgrade	$300,000	Medium
SU-19	DC Latourette Park	0.80	Upgrade	$75,000	Medium
SU-20	Carnegie Center	1.30	Minor Improvements	$25,000	Low
SU-22	Ermatinger House	0.25	Minor Improvements	$10,000	Low
SU-23	Pioneer Community Center	0.80	Upgrade	$200,000	High
Unspecified (1)	Indoor Recreation Facility Site	8.00	Planning/ Acquisition/	$40,000/ $400,000	Plan.- High Acq. - High

Unspecified (1)	Sports Complex	30.00	Planning Acquisition/	$15,000 $1,500,000	Plan.- High Acq. - High
Unspecified (1)	Skate Park	2.0	Planning/ Acquisition	$5,000 $100,000	Plan.- High Acq. - High
	TOTAL	157.68			

P-Proposed Facilities
Assumes Acquisition cost at $100,000/Acre for Downtown Plaza
Assumes Acquisition cost at $50,000/Acre fo all other sites
Assumes Development cost of $100,000/Acre

(1): See sections on specialized facilities section and sports facilities for development costs
(2) Previously known as Kelley Field

2. Specific Improvements:

End of Oregon Trail Interpretive Center **Site SU-9**

Formerly the location of the Kelly Sport Fields, this existing 8.40-acre site is located in the north portion of town adjacent to the County Maintenance Shops. While the City owns and maintains the site, the Oregon Trail Foundation operates the museum. Facilities at the site include interpretive building and parking areas.

The Oregon Trail Foundation recently completed a master plan for the expansion of their facility. Their expansion plans calls for utilization of the adjacent landfill site for a living history area, amphitheater, education facility and a regional visitor's center. There is also another proposal for the use of the landfill site for commercial use.

Sports Craft Landing **Site SU-11**

This existing 2.0-acre site is located along the banks of the Willamette River up from Clackamette Park. The marina and boat ramp is leased to a private operator. The parking lot is maintained by the City. The leased portion is due to expire in the near future. Because of its prime location and the fact that it is only one of two public waterfront areas in Oregon City, the City should explore other options for use of this land. One possibility would be to develop this area into a waterfront promenade with appropriate commercial uses.

Old Town Plaza **Site SU-12**

This proposed park site is located the Historic Downtown area of Oregon City. The City has recently developed a plan for the redevelopment of the downtown area, which has included a park.

- It is recommended that this site serve as civic square and plaza for the historic downtown.

McLoughlin House and Barclay House **Site SU-13**

The McLoughlin and Barclay Houses are located on 0.80 acres overlooking the Willamette River. These two historic homes (now museums) are managed by private organizations while the City maintains the grounds. Overall, the sites are in good condition and only require minor improvements.

Aquatic Center **Site SU-17**

The Aquatic Center is located in the McLoughlin neighborhood, adjacent to the Oregon City High School – Jackson Campus. Due to its location, it is heavily used by the high school as well as by residents from the City and the surrounding areas. Facilities include a 14-meter by 25-meter indoor pool, a wading pool, meeting space and a small parking areas.

While there are a number of problems associated with the current facility, most are associated with the fact that it has long passed its expected economic life. This coupled with the lack of adequate maintenance has caused the facility to deteriorate to a point where it will take a significant amount of public investment to upgrade and revitalize this facility. Before any more major capital expenditures are made, a feasibility study should be made. This would include an evaluation of the existing facility, a site selection analysis and development alternatives.

In the long term, a new indoor swimming pool is needed. However, this site is not the preferred choice due to the lack of parking, the fact that it rests in the middle of a residential neighborhood, and the site is too small. Please refer to page VII-61 for discussion on a new facility and possible locations.

DC Latourette Park **Site SU-19**

DC Latourette Park is an existing 0.80-acre park located in the center of the McLoughlin neighborhood. Rock retaining walls are located on three sides while it opens to the street on the fourth side. The site is essentially an outdoor sports court containing two tennis courts and a basketball court. The existing courts are in very poor shape and virtually unplayable.

There are two issues associated with this site: 1) there is a need for a neighborhood park in this neighborhood, and 2) the site in its current condition is not meeting any recreation needs of the area. Considering these issues, there are basically two options: Sell the site or improve the site.

While the best solution would be to sell the site, deed restrictions and neighborhood opposition may prevent this action from occurring. Therefore, the most feasible solution is to upgrade the site. Again, there are two options that should be considered:

Option 1

- Remove all of the paved surfaces and develop into a mini-park

Option 2

- Remove one court and develop open grass and small picnic area
- Upgrade second tennis court to include a colorcoat surface
- Upgrade basketball court and colorcoat surface
- Repair perimeter wall and fencing
- Improve park entrance with trees and landscaping
- Add support facilities

Regardless of the option, it is also recommended that the City do an evaluation and analysis of the perimeter walls.

Carnegie Center **Site SU-20**

The Carnegie Center is a 1.30-acre site located in the middle of the McLoughlin neighborhood. The building was once the City Library but has since been converted into a cultural arts facility. The building contains an art center, children's area and coffee shop. Facilities at the site include a wading pool, playground and pathway system. Overall, the site is in good condition and only requires minor improvements.

It is recommended that, once a neighborhood park is located to serve this area, the playground and wading pool be removed from this site. In their place, it is recommended that the City develop facilities that enhance the cultural activities at the Carnegie Center. This could include a small plaza area, fountains, outdoor display space, gazebo, etc.

Ermatinger House **Site SU-22**

The Ermatinger House sits on 0.25 acres and is one of the oldest buildings in Oregon. Currently it is being used as a museum. Overall, the site is in good condition and only requires minor improvements.

Pioneer Community Center **Site SU-23**

The Pioneer Community Center is a building used primarily for senior-related activities and services. Aside from the center, facilities at the site consist of a peace garden, pathway system and parking area. Overall, the site is in good condition and only requires minor improvements.

There is also some opportunity to expand the recreational opportunities at this facility. While the main level of the building is extensively used, the basement is underutilized

because of past water leaks. See further discussion on Senior programs on page VIII-3.

Natural Open Space/Greenways

Generally, natural open space is defined as undeveloped land primarily left in its natural form with passive recreation use as a secondary objective. This type of land often includes wetlands, hillsides or creek corridors. In some cases, environmentally sensitive areas are considered as open space and may include wildlife habitats or unique and/or endangered plant species.

Public Involvement /Assessment:

1. **Existing Conditions:** In the Oregon City area, there are six existing sites that fall under the natural open space area category.

2. **Survey/Workshop Meeting:** Participants of the recreation survey identified the need to preserve land along the Willamette and Clackamas Rivers, wildlife and vegetation habitats and scenic areas as natural open space. Trails and pathways were cited as a needed recreation facility. Open space corridors often function as conduits for pathway and trail development.

   Respondents of the workshop meeting identified the need for open space.

3. **Planning Advisory Committee:** The Planning Advisory Committee discussed the need for open space areas but did not consider it to be a high priority.

4. **Needs Assessment:** The needs assessment identified a need for an additional 250 acres of natural open space. Much of this land can be found in the Canemah Bluff and Newell Canyon areas, which are Metro's target areas.

Design and Development Policies:

1. General Land Use Guidelines:

a. The City's comprehensive plan also contains policies for protection of steep hillsides and wetlands.

b. The City should consider other ways of prerserving natural open space besides outright purchase such as acquiring conservation easements, initiation of tree cutting ordinances, land trades, etc.

2. Site Selection Criteria:

a. Emphasis in acquisition should be for those areas

offering unique features or have the potential to be lost to development.

b. Areas that will be difficult or impossible to develop should have a lower priority of acquisition. However, where open space areas are also used for trail corridors, higher priorities should be considered.

c. Future open space areas acquired as part of urban development, should be owned and maintained by the City.

d. An analysis should be made to determine if unique qualities and conditions exist that warrant the open space designation.

e. Prohibiting urban development should not be a reason for acquiring open space.

3. Design and Development Standards:

a. Improvements should be kept to a minimum, with the natural environment, interpretive and educational features emphasized.

b. These types of areas should be managed and maintained for a sense of solitude, separation or environmental protection.

c. Parking and overall use should be limited to the numbers and types of visitors the area can accommodate, while retaining its natural character and the intended level of solitude.

d. Where feasible, public access and use of these areas should be encouraged, but environmentally sensitive areas should be protected from overuse.

Recommendations:

1. Summary of Recommendations:

Table 44
Summary of Open Space Recommendations
Oregon City Planning Area

Park Number	Site	Existing Acres/ Proposed Acres	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
OS-1	Clackamas Heights Open Space (P)	NA	Preserve Land though Land Use Process	Negligible	Medium
OS-2	Clackamas River Greenway (includes River Access Trail and High Rock Site) (P)	3.53/NA	Acquire Land/Preserve Land though Land Use Process	$500,000	High
OS-7	Redland Road Open Space (P)	NA	Preserve Land though Land Use Process	Negligible	Medium
OS-10 (1)	Willamatte River Greenway (P)	NA	Acquire Land/Preserve Land though Land Use Process	$1,000,000	High
OS-16	Abernethy Creek Greenway (P)	NA	Preserve Land though Land Use Process	Negligible	High
OS-26	Country Village Open Space (P)	NA	Preserve Land though Land Use Process	Negligible	Low
OS-28	Newell Creek Canyon	81.43/370.00	Assist Metro/Preserve Land though Land Use Process	Negligible	High
OS-30	Singer Creek Greenway	11.03/NA	Preserve Land though Land Use Process	Negligible	High
OS-32	Waterboard Open Space	19.30/NA	Preserve Land though Land Use Process	Negligible	High
OS-33	Coffee Creek Greenway	8.21/NA	Preserve Land though Land Use Process	Negligible	Medium
OS-42	Canemah Bluff Open Space	37.04/390.00	Assist Metro/Preserve Land though Land Use	Negligible	High

			Process		
OS-49	Little Beaver Creek Greenway	NA	Preserve Land though Land Use Process	Negligible	Medium
OS-51	Central Point Greenway	NA	Preserve Land though Land Use Process	Negligible	Medium
OS-54	Mud Creek Greenway	NA	Preserve Land though Land Use Process	Negligible	Medium
OS-56	Caufield Creek Greenway	NA	Preserve Land though Land Use Process	Negligible	Medium
OS-60	Thimble Creek Greenway	NA	Preserve Land though Land Use Process	Negligible	Low
	TOTAL	NA		$1,500,000	

Assumes Allowance for acquisition of land along Willamette and Clackamas River

(1) Also includes the Boom Property which was acquired with SDC's

The table on the previous page identifies the proposed open space areas. However, there are two areas that warrant a better description.

Newell Creek Canyon Open Space (Proposed) Site OS-28

The proposed Newell Creek Canyon open space area stretches from Beaver Creek Road to Redland Road. Highway 213 bisects this site into an east and west portion.

This site is one of several open space projects identified by Metro as part of the Greenspaces Program. While the initial objective was to acquire over 900 acres of land, the study area was refined to include 370 acres of forested lands, wildlife habitat areas and wetlands.

Currently, Metro has acquired approximately 127 acres of land in this area and is in the process of acquiring additional properties. The City, County and State have substantial holdings of land in this area.

It is recommended that the City work cooperatively with Metro and the jurisdictions to preserve this area as regional open space and trails corridor. The proposed Newell Creek Trail Loop (T-5) passes through a portion of this area.

Canemah Bluff Open Space (Proposed) Site OS-42

The proposed Canemah Bluff open space area stretches from the Canemah neighborhood south along the bluff overlooking the river.

This is the second of two open space projects in Oregon City identified by Metro as part of the Greenspaces Program. While the initial objective was to acquire over 600 acres of land, the study area was refined to include 390 acres of steep cliffs, historic and cultural areas and wildlife habitat areas.

Currently, Metro has acquired approximately 61 acres of land and is in the process of acquiring additional properties. The City also owns a small parcel of land known as the Madrona site that will be included in this area.

It is recommended that the City work cooperatively with Metro and the jurisdictions to preserve this area as regional open space and trails corridor. The proposed Canemah Bluff Trail (T-7) passes through a portion of this area.

Undeveloped Land

This is land that is undeveloped and has not been designated for a specific park use at this time.

Public Involvement /Assessment:

1. **Existing Conditions:** There are several parcels of land that are currently undeveloped and have not been designated for any purpose. These are listed in the table below:

Recommendations:

1. Summary of Recommendations:

Table 45
Summary of Trail Recommendations
Oregon City Planning Area

Park Number	Site	Existing Acres/ Proposed Acres	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
U-31	Dement Park	0.07	Dispose of Site	Negligible	High
U-44	Oak Tree Park	0.50	Dispose of Site	Negligible	High

Trails and Pathways

Trails and pathways are designed to provide walking, bicycling, and other non-motorized recreational opportunities. By providing linkages to other areas and facilities, they can provide non-vehicular options for travel throughout the community. Trails can be designed for a single or multiple types of users. The trails and pathways emphasized here are those that are recreational and multiple use in nature. Bike routes with more emphasis on transportation are not included in this definition.

Trails may be either unsurfaced or treated with a variety of hard surfacing materials including concrete, asphalt or granite chips. Unsurfaced trails may be left in their natural condition or supplemented with gravel, bark chips, sand or other material. Surfacing will be dependent upon the soil type, slopes, type of use and amount of use.

Public Involvement /Assessment:

2. **Existing Conditions:** There are no trails of any substantial length in the City. A few of the existing parks have trails.

3. **Survey/Workshop Meeting:** Both the survey and workshop meeting revealed strong support for a trails system. Trail related activities such as walking, hiking, etc. are one of the top recreation activities in Oregon City.

4. **Planning Advisory Committee:** The Planning Advisory Committee supported the notion of developing a Citywide off-street trail system.

5. **Needs Assessment:** The needs assessment identified a need for 37 miles of trails at buildout.

Design and Development Policies:

1. General Land Use Guidelines:

a. The following guidelines, site selection criteria and development standards apply to trails and pathways that are recreational in nature. Policies related to pathways that are transportation oriented are found in the City's transportation plan.

b. Developers should be encouraged to provide pathways within their proposed developments to link with the city's overall trail system.

c. Trails easements or dedications need to be secured in

order to complete
trail segments and
the overall network.

2. Site Selection Criteria:

a. The primary purpose of recreation trails is to provide a recreation experience. Transportation to other parts of the community should be a secondary objective.

b. Whenever possible, recreation pathways and trails should not be part of a street roadway.

c. Recreation trails should be interesting to the user and maximize the number and diversity of enjoyable viewing opportunities.

d. Trails should be looped and interconnected to provide a variety of trail lengths and destinations. They should link various parts of the community, as well as existing park sites.

e. Trails should be located and designed to provide a diversity of challenges. Enhance accessibility wherever possible, with high priority given to nature trails and loop or destination opportunities on portions of trails near staging areas.

f. Where routes use existing streets, the pathway should be designed to minimize potential conflicts between motorists and trail users

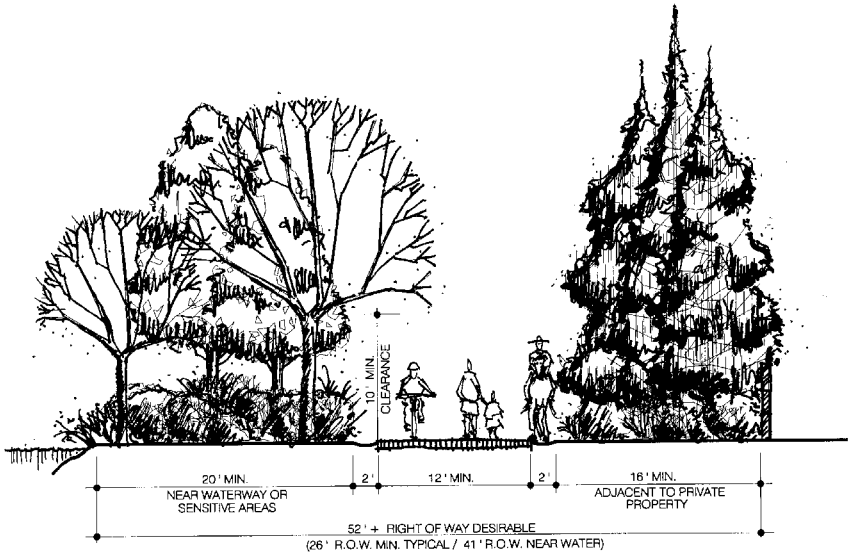
g. Trails should be developed throughout the community to provide linkages to schools, parks, and other destination points. Each proposed trail should be reviewed on a case by case basis to determine if it should be part of the city's park and recreation system.

3. Design and Development Standards:

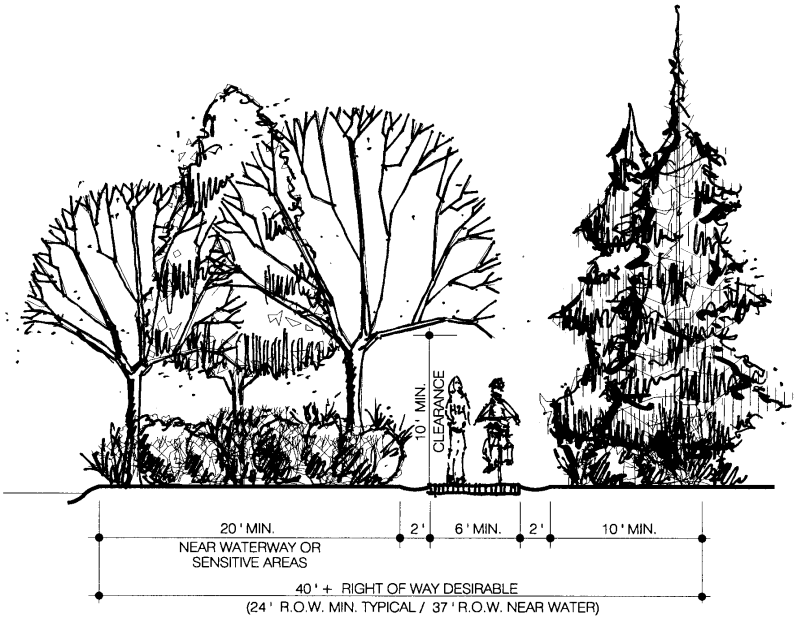
a. Trail alignments should take into account soil conditions, steep slopes, surface drainage and environmentally sensitive lands.

b. Trails should be planned, sized, and designed for multiple uses, except for dedicated nature trails, and/or areas that cannot be developed to the standard necessary to minimize potential user conflicts.

c. Centralized and effective staging areas should be provided for trail access. They should include parking, orientation and information, and any necessary specialized unloading features. Primary trailheads should have restrooms and trash receptacles; secondary trailheads might only have some parking and signage.



Multi-Purpose Trail



Off-Street Hiking Trail

Recommendations:

1. Summary of Recommendations:

In this plan, *recreational* trails and pathways are emphasized. The primary purpose of this trails system is to provide recreational walking, bicycling and hiking opportunities. That is not to say that these same trails may also meet some transportation needs as well.

Table 46
Summary of Trail Recommendations
Oregon City Planning Area

Park Number	Site	Existing Propose Length (in Miles)	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
T-1	Clackamette Heights Trail	2.41	Planing Development (unpaved)	$5,000/ $127,000	
T-2	Clackamas River Trail	2.39	Planning Development (paved)	$5,000/ $285,000	
T-3	Willamette River Trail	1.26	Planning/ Development (paved)	$5,000/ $150,000	
T-4	Abernethy Creek Trail	1.86	Planing Development (paved)	$5,000/ $220,000	
T-5	Newell Creek Trail Loop	4.40	Planing Development (unpaved)	$5,000/ $230,000	
T-6	Thimble Creek Trail	4.96	Planing Acquire Easement Development (unpaved)	$5,000/ $75,000 $260,000	
T-7	Canemah Bluff Trail	3.16	Planing Development (unpaved)	$5,000/ $170,000	
T-8	Waterboard Trail	2.20	Planing Development (unpaved)	$5,000/ $120,000	
T-9	Singer Greek Trail	1.57	Planing Development (paved)	$5,000/ $185,000	
T-10	Powerline Trail	1.60	Planing Development (paved)	$5,000/ $190,000	
T-11	Little Beaver Creek Trail	1.45	Planing Acquire Easement Development (unpaved)	$5,000/ $42,000 $78,000	
T-12	Central Point	0.67	Planing	$5,000/	

	Trail		Acquire Easement Development (unpaved)	$20,000 $35,000	
T-13	Mud Creek Trail	0.69	Planing Acquire Easement Development (unpaved)	$5,000/ $20,000 $36,000	
T-14	Caufield Creek Trail	2.65	Planing Acquire Easement Development (unpaved)	$5,000/ $120,000 $140,000	
T-15	Beaver Ridge Trail	5.55	Planing Acquire Easement Development (unpaved)	$5,000/ $43,000 $265,000	
	TOTAL	36.8		2,886,000	

Assumes Development @
$22.50/LF (paved) $10.00/ LF (unpaved); Assumes Acquisition @ 15,000/Acre

[Recreation Trails Plan

SPECIALIZED RECREATIONAL FACITLIIES

Specialized Facilities: *This would include unique facilities such as playground areas, skateboard parks, group picnic facilities, etc..*

Public Involvement /Assessment:

1. **Existing Conditions:** There is no standard for specialized facilities.

2. **Survey/Workshop Meeting:** The recreation survey and workshop meeting revealed the need for specialized types of recreation facilities. Some of these included a skateboard area, a large playground and group picnic facilities.

3. **Planning Advisory Committee:** Considering the interest in these facilities, the Planning Advisory Committee recommended that the City develop some of these types of facilities.

4. **Needs Assessment:** Each of these items has considerable community support. Each one of these features could be accommodated in the existing park system.

Design and Development Policies:

1. Site Criteria:

a) Prior to the development of any specialized recreation facility listed in this section, a detailed cost benefit analysis and maintenance impact should be prepared.

Recommendations:

1. Summary of Recommendations:

Table 47
Summary of Specialized Facilities
Oregon City Planning Area

Park Number	Site	Size	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
--	Skate Area	NA	Planning/Development	$100,000	High
--	Group Picnic Area	NA	Development	$100,000	Medium

--	Adventure Playground	NA	Development	$75,000	Low
--	Beautification Areas	NA		$25,000	Low
	TOTAL			$300,000	

2. Specific Recommendations:

SKATE AREA

Some interest exists in Oregon City for a skateboarding and in-line skating facility. Rollerblade hockey is also becoming popular as a competitive sport. By giving the youth a place to play, it will relieve other places that are less desirable. However, finding a suitable location where neighbors will not object is not easy. The ideal location is a place where the site is visible from the street, has public transportation nearby and is far enough way from neighbors to mitigate the noise.

Many communities are building these types of facilities at costs that usually exceed $100,000. Among the features a site should contain are:

- A rollerblade hockey rink
- Inline skate area with jumps and ramps
- A small shelter building
- Nearby restroom building

Because of potential noise from this type of activity and the nature of the user group, the selected site should be very public and some distance from homes. The City has identified a potential site in Clackamette Park.

GROUP PICNIC AREA

Clackamette Park is currently the only park that has facilities oriented toward large groups. However, this site does not have adequate parking for large groups.

Aside from meeting the need for large groups, these types of facilities can generate significant revenue. A group picnic area usually requires a large site in order for the group to be separated from the rest of the park. It is recommended that this element be incorporated into the proposed expansion of Clackamette Park (Clackamette Cove Site).

This facility should contain 1-2 large shelter buildings equipped with BBQ's and an outdoor patio area. In order to insure some privacy, this area should be somewhat separated from the other parts of the park by trees and landscaping.

ADVENTURE PLAYGROUND

Because most of the children's playgrounds are basic and not very imaginative, it is recommended that a special playground be developed that contains a wide variety of children's play facilities. It should be unique enough to warrant a drive half way across town to visit it and hold a child's attention for several hours. Sometimes these types of facilities are built as part of a community-wide "building party", where donations of labor and materials is predominant. A possible location is Clackamette Cove site or possibly one of the future community park sites. Another potential use associated with an adventure playground would be a children's museum.

CITY BEAUTIFICATION AREAS

Beautification areas are primarily landscaped plots of land that are maintained by a municipality and/or private groups but do not serve a recreation purpose. Most commonly these areas consist of entrance features, street triangles, annual flower plots and other landscape areas.

While these types of projects are a worthwhile effort to improve the appearance of the community, they can become very costly to maintain if the local municipality must assume responsibility. Often a private group will agree to maintain an area but after a period of time stops the effort. This then places the City in a difficult position of being forced to assume maintenance responsibility. Therefore, the following policies should be adopted by the City related to beautification projects.

1. The primary responsibility of installation and maintenance of beautification projects should be left to private groups. The City should make public land available to these groups when assurances can be made that they will be adequately maintained.

2. Only highly visible sites should be selected for beautification projects. The community must be selective in the areas it chooses to beautify.

3. Sites should be larger than 3,000 square feet. Smaller sites should be considered only when unique conditions exist and the maintenance cost can be justified.

4. Street beautification should have its own budget and not be part of the overall Parks and Recreation budget.

INDOOR RECREATIONAL FACILITIES

1. Summary of Recommendations:

Table 48
Summary of Indoor Recreational Facilities
Oregon City Planning Area

Park Number	Site	Size	Action	Estimate Cost (Planning/ Acquisition/ Development)	Action Ranking
--	Recreation Center	--	Planning/ Development	$30,000/ $2,500,000	High
--	Indoor Pool	--	Planning/ Development	$35,000/ $3,000,000	Moderate
	TOTAL			$5,500,000	

2. Specific Recommendations:

INDOOR RECREATION/AQUATIC CENTER

The recreation survey indicated strong support for indoor recreation space such as a recreation center and/or swimming pool. More and more Northwest communities are offering these types of facilities because of the long winters and need to provide more indoor recreation opportunities. If designed correctly recreation centers can offer a wide variety of community and youth activities at a reasonable cost. To generate maximum revenue many centers offer community event space as well as areas for recreation and swimming activities. Most progressive community centers now provide rooms for receptions, meetings, large group gatherings and trade shows as well.

While the public would like to see a recreation/aquatic complex, the issue is whether the community feels it can afford such a facility. There is a need for additional indoor recreation space, particularly gymnasium space.

In the long term, the City will need to replace its existing indoor swimming pool. At that time consideration should also be given to developing a multi-tank leisure pool with some additional recreation spaces at a new location. Facilities that should be considered include:

- Multi-purpose gymnasium

- Space for teen activities (game room, etc.)
- Small fitness area (aerobics, exercise, etc.)
- Multi-purpose reception room
- Meeting/classrooms (2-3)
- Indoor lap pool (25 yard, 6-8 lane)
- Warm water teaching pool

While there are a number of possible locations for this type of facility, it is recommended that it be central to the community and have good access. It is recommended that in the short-term, the City prepare a feasibility and site selection study.

SPORTS FIELD FACILITIES

1. **Needs Assessment:** Based on the Recreation Needs Assessment, the following sport fields were needed:

Table 49
Existing and Future Needs
Oregon City Planning Area

Field Type	Existing Fields	Additional Need 1998	Additional Need 2018
Baseball Fields	16	3	26
Softball Fields	7	1	10
Soccer Fields	26	(1)	29

The above needs are based on normal amounts of league play and practice and reflect demand based on Oregon City residents only. However, many sports teams in the Oregon City area originate outside the city. In addition, many of the existing fields are only marginal in playing quality.

Recommendations:

SPORTS COMPLEX (Proposed)

Youth and adult field sports are an important recreation activity in Oregon City. To date, the City has not been actively involved in developing sports fields or offering sports programs. Because of this, many private organizations such as the Oregon City Youth Sports, Oregon City Softball Association and Oregon City Soccer Club have had to use school facilities and assist in the improvements to existing fields.

It is recommended that the City strive to provide enough quality facilities to satisfy the need for games and competitive play only. This includes games for softball, baseball and soccer. Practice should occur at school district fields or neighborhood parks.

Considering the City is deficient in all types of sports fields, it is recommended that a site be located that will meet a wide array of sport field uses. By utilizing a multi-use design, several types of field sports could be located on the same field.

Table 50
Recommendation of Sports Fields Allocation
Oregon City Planning Area

	Existing Field Allocation			Proposed Field Allocation		
	Baseball	Softball	Soccer	Baseball	Softball	Soccer
Clackamas Community College	1	2	3	2	2	3
Oregon City High – Jackson	1	1	2	1	1	2
Oregon City High – Moss	1	1	1	1	1	2
Gardiner Middle School		1	2		1	2
King Elementary	2		2	2		2
Mount Pleasant Elem.	2		1	2		1
Park Place Elementary	1		1	2		1
Holcomb Elem.	1		2	2		2
Barclay Park				1		1
Gaffney Lane Elem.	1		2	1		2
McLoughlin Elem	1		2	2		2
Eastham Elem	1		1	1		1
Chapin Park	2	2	3	2	2	3
Hillendale Park	1		2	1		2
Rivercrest Park	1		1	1		1
St John (Private)			1			1
Holcomb School/Park (P)				1		1
Livesay Park (P)				1		1
Country Village Park (P)				1		1
Barclay Hills Park				1		1
Canemah Park				1		1
Gardiner School/Park (P)				1		1
Forest Ridge Park (P)				1		1
Central Point Park (P)				1		1
Jesse Court Park (portion of site)				2		1
Glenhaven Park (P)				1		1
Caufield Park (P)				1		1
Glen Oaks Park (P)				1		1
Holcomb Road Park				2	2	2
South End Park				2	2	2
Moss Park				2	2	2
Soccer Complex						6
Sports Complex Site				2	4	4

Total	16	7	26	42	17	55

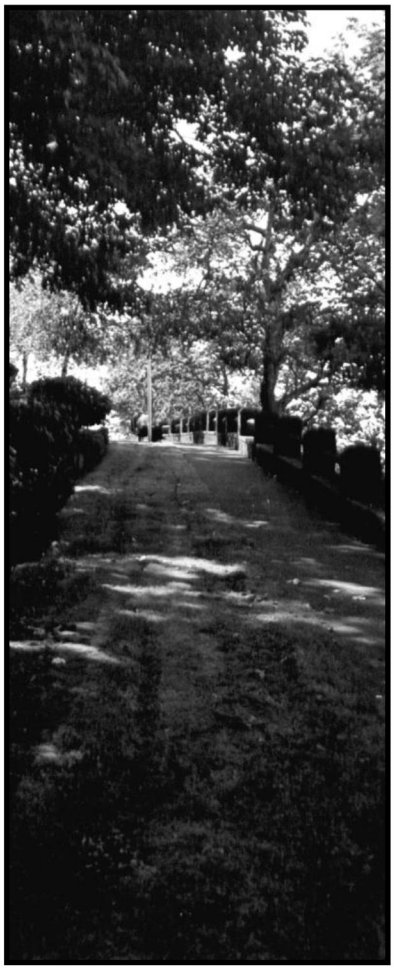
For example, youth baseball and softball could possible use the same field if it contained a skinned infield. Soccer can be played on the outfields of softball fields during the off-season.

It is recommended that a 30 acre site be acquired for a sports field complex. Because of lights, noise and traffic, the site should be located away from heavy residential areas. Possible locations include:

- Clackamette Cove Site
- Outside City's UGB
- Landfill Site

SOCCER COMPLEX (Proposed)

This proposed site is located adjacent to the golf course on land owned by the Oregon City School District. The Oregon City Soccer Club, who is leasing the site, is in the process of developing six fields on this property.



SECTION VIII

Management and Operational Recommendations

SECTION VIII

Management and Operational Recommendations

ORGANIZATION STRUCTURE

The management of park and recreation services in Oregon City is divided between four different divisions in City Hall. One of the major problems with this approach is that no one department is responsible for the program and each unit must find financial support on its own. Without one advocacy group to press park and recreation issues, each unit must operate on its own. The result has been that over the years, park and recreation services is receiving a smaller portion of the total city-operating budget.

To offset this trend, it is recommended that all of the services related to parks and recreation be combined into one department called the Park and Recreation Department. This reorganization will have several advantages including, 1) the total cost of park and recreation services can be easily tracked because it will be in one budget, 2) combining all of the interests into one advocacy group will create a stronger support base, 3) a department head with a professional background in park and recreation services can be more effective 4) there will be more interest in sharing resources between the various functions. A recommended organizational chart is shown below.

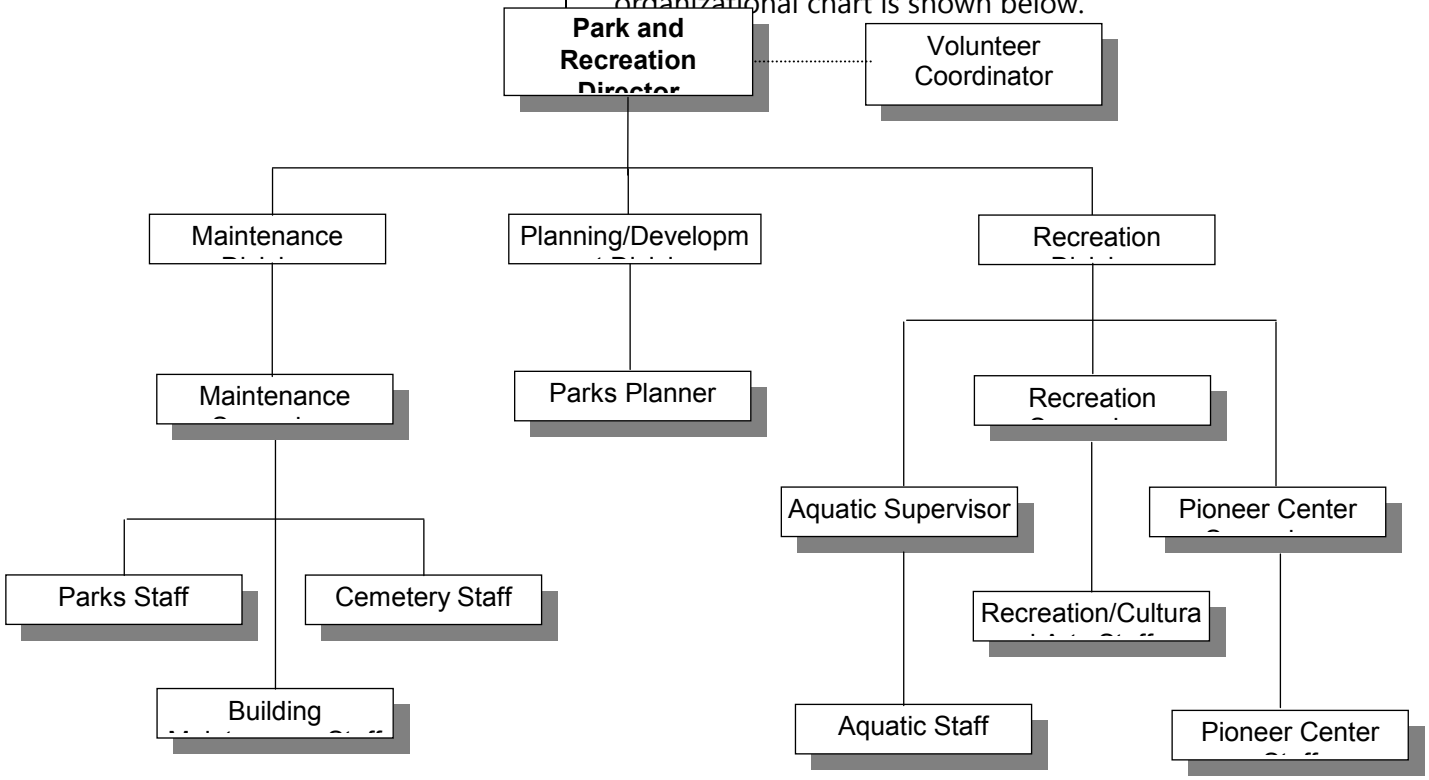


FIGURE 17
Proposed Organizational

1. **Park and Recreation Advisory Committees and Boards:** There are no less than four advisory committees that deal with park and recreation issues. These include the Park and Recreation Advisory Board that deals primarily with park issues, the Planning Commission that deals with park land acquisition, the Pioneer Community Center Advisory Board that recommends policies related to the senior center, and the Rate and Fee Committee that reviews all rate increase proposals.

   It is recommended that the Park and Recreation Advisory Board be given the advisory responsibility for all policies, related to park and recreation issues including operations at the Pioneer Community Center. In addition, this Board must establish a clear set of guidelines as to what issues they will address and which ones are more appropriate for the City Commission.

OPERATIONS

1. **Update System Development Charges:** System development charges are fees charged to residential developers for the impacts their projects have on the park system. In concept, the fees collected should pay for all costs of new park development created by population growth. However, the current fee rate does not reflect this actual cost. As a result, the City must subsidize this cost or be willing to accept a lower quality park system. While it is up to the City Commission to make this judgment call, it is recommended that the fee schedule be raised to more reflect the actual cost. Currently, the City charges $995 per unit for single family units and $500 for multi-family units. Most communities are trying to set a fee schedule that more reflects the true cost. Oregon City should do this as well.

2. **Fees and Charges:** The City has made major efforts to produce maximum amounts of revenue from its fees and charges. Since recreation programs and the rental of facilities are major sources of revenue for the Department, revenue policies and goals should be established. The existing revenue rate for the City sponsored park and recreation services is quite good when compared to other cities.

   The most common method is to set a deficit rate given in terms of a ratio between cost of service and revenue produced from fees and charges. Within a program, the fees often vary depending upon the type of user. Listed on the next page is the existing and recommended level.

Table 51
Existing and Proposed Revenue Rates
Oregon City Park and Recreation Program

Program/Service	Existing	Proposed
Pioneer Community Center	35.3%	50%
Carnegie Center	47.5%	50%
Aquatic Center	84.4%	85%
Recreation Programs	32.1%	80%
Park Maintenance	23.7%	25%

3. **Non Resident Fees:** Currently, parks and recreation services are funded through the City's general fund, which comes from property taxes. Since non-residents don't pay for the operation and provision of services, it is recommended that these individual pay a surcharge to use City facilities. This would apply to recreation programs, sports fields, aquatics, senior services and admission to City facilities such as the Carnegie Center.

4. **Pioneer Community Center**: The Pioneer Community Center is primarily used for senior activities. The advisory committee recently went through an extensive strategic planning process, which dealt with goal setting and management approaches.

   The concern with the Center is its low revenue rate from operations and the fact that it is used primarily for senior activities only. While the committee set goals for the operation, the City Commission needs to set goals for revenue rate and encourage more general public use of the facility.

ADMINISTRATION/ MANAGEMENT

1. **Marketing Plan:** As the department grows and more services are offered, it will become important to maintain public awareness and actually encourage participation in new programs and services. This marketing effort will require due diligence if the Department is to grow.

2. **Annual Report & Goals:** The Department should prepare an annual report describing the activities, participation levels and changes in operation that occurred over the past year, as well as goals for the following year. It should be prepared in a professional manner and widely distributed. In addition to providing basic information about the Department, it is a very useful public relations document and effective at budget time.

3. **Public Relations:** All of the staff within the Department should be encouraged to reflect the importance of good public relations. This is especially true for the people who have contact with the public on a daily basis.

4. **Tracking Complaints:** It is very important that when a comment, suggestion or complaint is received that a follow-up procedure is initiated. Equally important, a call should be made back to the individual involved to explaining the action taken and the reason for it. To see that this process occurs, the Department should develop a tracking system that follows the complaint all of the way through to resolution.

5. **Guide to City Parks:** The City should develop a comprehensive guide to parks and other facilities in the area, stating locations, facilities within the parks, times the parks are open, fees to use facilities, as well as regular programs. This document should be widely distributed to the public. As the scope of park services grows, this document should be regularly updated.

6. **Use of Volunteers:** In an effort to reduce staff time, it is recommended that the City encourage more volunteerism. Volunteers can be used in a variety of ways such as offering recreation programs, assisting in special events, conducting minor maintenance duties, assisting in administrative tasks, etc.

7. **Establish Adopt a Park Program:** To gain more ownership, pride and local upkeep, it is recommended that the City initiate an "Adopt-A-Park" Program. This is an informal agreement with a neighborhood or service club to perform and assume certain responsibilities and duties. These may include limited maintenance tasks, such as litter pick-up, watching for and reporting vandalism or other inappropriate behavior, or hosting neighborhood activities.

8. **Recognizing Volunteers**: Aside from boards and commissions, there are many volunteers who help in providing park and recreation services in Oregon City. These volunteers include those who work in the Pioneer Center, those who help in special events, private sport groups and even neighborhood groups who help to improve their local park. These volunteers should be recognized for their work and encouraged to continue their effort.

RECREATION PROGRAMS

Some suggestions for expanding and improving the current program are listed below:

1. **Additional Recreation Programs**: Recreation programs offer the greatest benefit and serve the most users for the money spent. The recreation survey revealed strong support in the community for recreation programs and services. While the School District is also offering programs in certain areas, there is still an unmet need. Because of the favorable cost/benefit ratio of recreation programs, it is recommended that the City continue to expand its recreation program. Some possible areas in which new services and programs should be offered are:

    - After-School Programs
    - Organized Sports (recreation level only; clinics; sports camps)
    - Children's Program
    - General Interest Classes
    - Cultural Arts Programs
    - Outdoor Pursuits
    - Special Events (art festivals, park concerts, etc.)

    There is also some opportunity to coordinate programs with other organizations:

    - Clackamas Community College (interpretive programs, performing arts, fine arts)
    - Oregon City School District, Gladstone School District (organized sports, cultural arts, general recreation programs)

    To better serve all residents, the City should continually develop and try out new programs and seek new locations to offer them. While new programs sometimes have low registration, the City should continue to explore new areas of interest. By placing a minimum number of registrants for a specific class, the City can cancel programs that have a low enrollment. This will reduce the financial risk of an aggressive recreation program.

2. **Offer Innovative Programs** : The Recreation Division should continue to seek out new and innovative recreation programs. This will assure continued interest and participation in the overall program.

3. **Joint Ventures with Adjoining Cities/Organizations:** There are economies of scale in offering recreation programs. For example the net cost of offering a comprehensive recreation program to 2-3 cities would

be no more than for one individual city. With this in mind, it is recommended that Oregon City offer programs, for a fee, to Gladstone and County residents. This policy

should only be maintained as long as there are spaces and instructors to meet the demand.

Other reasons for forming joint partnerships Include:

- insures adequate program participation
- enables sharing of registration duties and costs
- enables the publication of one activity guide
- fosters cooperation between communities
- reduces the amount of staff needed per event

4. **Program Costs and Revenues**: The City should continue to and refine the system of tracking all costs and revenue for each program with a yearly evaluation of the merits of offering this program, or to determine ways of making programs more profitable or less deficient.

5. **Goals for Revenue Production:** While maximum revenue should not be the primary goal of a recreation program, it should run at an efficient level. Goals should be set each year for the amount of revenue to be produced for each major type of program activity.

6. **Build a Support Base:** By expanding the recreation program, the Park and Recreation Department will create a support base for an even bigger and better programs and facilities.

MAINTENANCE

As the City grows and additional facilities developed, it will be important to develop overall policies for the department regarding maintenance. At the current time Oregon City has one of the lowest maintenance budgets on a per acre basis than any other city of its size. Taking a low budget approach to maintenance eventually results in the deterioration of the system. Slowly, maintenance is falling further behind and as a result, the park system is sinking into disrepair. In addition, the lack of preventative maintenance is now becoming apparent in the parks. Because facilities are not properly maintained, some have gone to the point where they cannot be salvaged. To change this downhill slide, three actions must occur: First, existing facilities must be brought up to an acceptable level. Second, a different approach to maintenance on a limited budget must occur. Third, preventative maintenance tasks must be initiated. These recommendations and others are described below.

Park Maintenance

1. **Maintenance Funding:** An ongoing problem with the park system in Oregon City is the lack of an adequate budget. This will only be compounded as new park sites are brought on line. It is recommended that the City establish a minimum amount per acre for developed parks and natural open space areas. The

recommended goal is shown in the table on the next page.

Table 53
Recommended Maintenance Dollars for Various Park Types
Oregon City Park and Recreation Program

Areas	Amount Per Acre
Developed Park Land	$4,000
Natural Open Space Areas	$30

2. **Dedicated Park Maintenance Personnel:** Based on the earlier recommendation that all park and recreation services be combined into one department, this means that park maintenance should be removed from Public Works and moved into the new department. At this point, training and specialization of specific maintenance tasks should occur. As a result, tracking maintenance costs will be easier and employees will be more knowledgeable about the park system and the maintenance duties.

3. **Seasonal Employees**: The City can hire seasonal employees for about a third of the cost of full time personnel. Seasonal employees are usually more available during the summer which is also the time of greatest maintenance demand. Because of this fact, about one third to one half of the maintenance crew should be made up of seasonal employees.

4. **Develop Labor Saving Opportunities**: Proper design standards and use of correct equipment can substantially reduce the amount of time and labor needed to maintain a park system. As new parks are developed and existing ones rehabilitated, considerations for maintenance should have a high priority. Some examples of labor saving devices are:

    - Use of curbs and mowing strips to reduce hand mowing
    - Reduction of high-maintenance plant materials
    - Design of mowing areas that permit the use of larger mowers
    - Installation of automatic irrigation systems
    - Elimination of drainage problems
    - Correct location of restrooms to discourage vandalism

    Other design factors such as spacing between trees, correct selection of plant materials, paving, etc. all contribute to easier maintenance. The staff should review all park development projects with the maintenance staff to assure that the design meets basic maintenance requirements.

5. **Consistency of Design and Materials:** While "original" designs of facilities may make for an interesting park system, it is also a very costly option because of the cost of design and original construction. For some items such as restrooms, irrigation systems, playground equipment, etc., the use of standard equipment is highly recommended.

   The consistent use of similar materials and products should also be encouraged because it reduces the amount of inventory for replacement parts. Also, using products with a known track record reduces the potential of poor service.

6. **Tracking Cost:** As the Department grows, it will be important to track maintenance cost by facility and activity. This information is important for future design projects as well as alerting the Department to specific maintenance problems.

7. **Performance Standards:** Another step in maintenance management should be to develop performance standards for the various maintenance functions. This will clarify job responsibilities and expectations, and provide time-management guidelines. It is a useful tool for budgeting as well and can help acquaint seasonal employees or part-time community service workers with staff expectations.

Building Maintenance

In the past to save money, each facility manager, i.e., Carnegie Center manager, swimming pool manger etc., were given the responsibility to maintain and be responsible for major repairs. The problem with this approach is that most facility managers are not trained nor do they understand building repairs or cost ramifications. The result has been repairs that were not needed or resulted in excess costs.

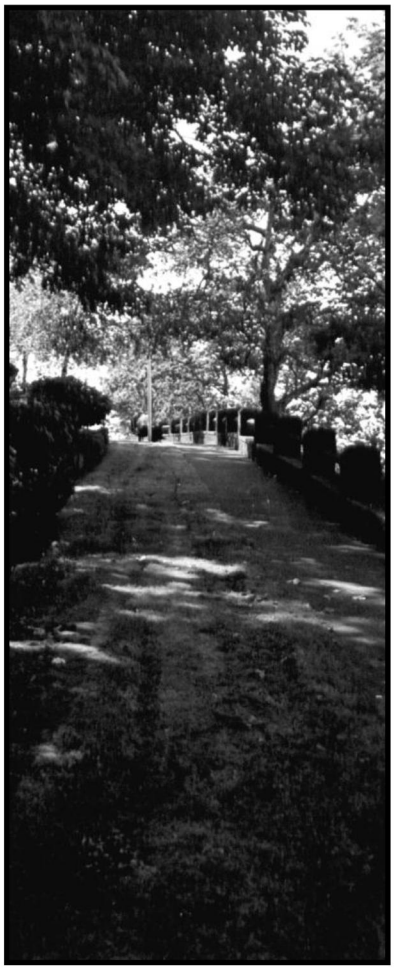
To offset this problem, it is recommended that the Park Maintenance Division be given the responsibility to oversee all building maintenance and repairs.

PROVISIONS OF RESTROOMS

The Planning Advisory Committee felt that public restrooms should be located in most parks. The problem with this idea is their cost to build and maintain. They are also a constant source of vandalism. To meet restroom needs and minimize the cost, it is recommended that the following polices apply to restroom buildings in parks.

1. Full service restrooms should be constructed in community parks or other sites that generate a considerable number of visitors on a daily basis.

2. Portable restrooms should be located in most neighborhood parks. These facilities would be located within a solid shell and designed with some type of architectural treatment.



SECTION IX

Implementation

SECTION IX

Implementation

INTRODUCTION

This section of the report identifies methods for funding park and facility improvements. The specific strategy identifies actions that should occur as well as potential sources of funding. The summary of this planning process is shown in two alternative six-year capital improvement plans identified in Tables 55 and 57. Each of the alternatives is based on a different level of funding and commitment by the City. Some of these funding sources are new to the City whereas others have been utilized in the past.

PROJECT PRIORITIES

The following criteria are recommended for prioritizing projects in the capital improvement plan. They are listed in terms of the highest priority first.

1. **Park upgrade**: Upgrading existing parks should have the highest priority because of the importance of salvaging the park system before it deteriorates futher.

2. **Acquisition of Parkland:** The acquisition of future park sites should have a high priority because it is critical to preserve land while it is still available.

3. **Expanding Recreation Programs:** The expansion of the recreation program should have a medium priority because of the favorable cost/benefit ratio and the community good will it generates.

4. **Development of an indoor swimming pool and recreation center:** Development of indoor recreation space should have a relatively high priority because of the need to replace the swimming pool and desire for additional indoor recreation space.

5. **Development of Sports Fields:** The development of sports fields should have a relatively high priority because of the need and poor condition of existing facilities.

6. **Development of Park Sites:** New park development should have a medium priority. Those neighborhoods that do not have convenient access to a park should be given the first priority.

7. **Development of Trails:** Trail development should be a medium to low priority.

8. **Preservation of Open Space:** The preservation of natural open space should have a low priority because in most instances this land cannot be developed because of environmental constraints.

FUNDING SOURCES

The following are possible funding sources for acquiring, developing and maintaining parks and other recreational areas.

1. **City General Fund:** This source comes from the City's annual operating budget. Up to this point, little has been budgeted for capital projects.

2. **Capital Projects Fund:** This fund is usually part of a City's General Fund and is designed to allocate a certain amount for capital projects.

3. **Special Serial Levy:** This is a property tax assessment that can be used for the construction and/or operation of park facilities. This type of levy is established for a given rate for 1-5 years and requires a simple majority of voter approval. The advantage of this type of levy is that there are no interest charges. However, because of Measure 5, this type of levy has become difficult to pass in Oregon because it affects the $10 tax limitation of all taxing agencies in the area.

4. **General Obligation Bond:** These are voter-approved bonds with the assessment placed on real property. The money can only be used for capital improvements and not maintenance. This property tax is levied for a specified period of time (usually 20-30 years). Passage requires a majority approval by the voters. This type of property tax does not affect the overall tax limitation as described in a special serial levy. One disadvantage of this type of levy is the interest costs.

5. **Revenue Bonds:** These bonds are sold and paid from the revenue produced from the operation of a facility.

6. **HUD Block Grants:** Grants from the Federal Department of Housing and Urban Development are available for a wide variety of projects. Most are distributed in the lower income areas of the community. Grants can be up to a 100%.

7. **System Development Charges:** System Development Charges are fees imposed on new development caused by impacts on the City's infrastructure. Park SDC's can only be used for parkland acquisition and/or development. Oregon City has this type of charge in place but it is low when compared to actual impact. This amount collected does not come close to reflecting the true cost impacts of new housing on the park system. Typically, cities in Oregon run in the $1,000 range with some as high as $3,000 per single family household. The current rate in Oregon City is $995.

8. **Certificates of Participation:** This is a lease-purchase approach in which the City sells Certificates of Participation (COP's) to a lending institution. The City then pays the loan off from revenue produced by the facility or from its general operating budget. The lending institution holds title to the property until the COP's are repaid. This procedure does not require a vote of the public.

9. **Donations:** The donations of labor, land or cash by service agencies, private groups or individuals is a popular way to raise small amounts of money for specific projects. Such service agencies as the Kiwanis, Rotary, etc., often fund small projects such as playground improvements.

10. **Public Land Trusts:** Private land trusts such as the Trust for Public Land, Inc. and the Nature Conservancy will acquire and hold land for eventual acquisition by a public agency.

11. **Lifetime Estates:** This is an agreement between a landowner and the City that gives the owner the right to live on the site after it is sold.

12. **Exchange of Property:** An exchange of property that is between a private landowner and the City can occur. For example, the City could exchange an unneeded water reservoir site for a potential park site currently under private ownership.

13. **Joint Public/Private Partnership:** This concept is relatively new to park and recreation agencies. The basic approach is for a public agency to enter into a working agreement with a private corporation to help fund, build and/or operate a public facility. Generally, the three primary incentives that a public agency can offer is free land to place a facility (usually a park or other piece of public land), certain tax advantages and access to the facility. While the public agency may

have to give up certain responsibilities or control, it is one way of obtaining public facilities at a lower cost.

14. **Private Grants and Foundations:** Private grants and foundations provide money for a wide range of projects. They are sometimes difficult to find and equally difficult to secure because of the open competition. They usually fund unique projects or ones of extreme need.

15. **Urban Forestry Grants:** There are several funding grant programs that provide money for urban forestry projects. One is funded by the U.S. Small Business Administration and provides grants to purchase and plant trees. This program sometimes funds urban street tree planting programs.

16. **Intermodal Surface Transportation Efficiency Act (ISTEA):** Over the years, Oregon has received considerable revenue for trail related projects. Originally called The *Intermodal Surface Transportation Efficiency Act* (ISTEA), it funded a wide variety of transportation related projects. In 1998 this program was modified some and is now referred to as TEA21. For 1998, Oregon was allotted $488,723. The Oregon Department of Parks and Recreation administer this program. The money can be used for both maintenance and capital construction.

17. **National Tree Trust:** National Tree Trust provides trees through two programs: America's Treeways and Community Tree Planting. These programs require that trees be planted by volunteers on public lands. Additionally, the America's Treeway program requires 100 seedlings minimum to be planted along public highways.

18. **State Bicycle Funds:** This is revenue from state gas taxes that are distributed to each city for the development of bicycle lanes. For Oregon City, the amount received is minimal.

19. **Urban Renewal Agency**: The City currently has two urban renewal areas; Hilltop and Downtown. Revenue for improvements come from both tax increment financing and a levy. The acquisition of the Cove Property was paid with urban renewal funds.

FINANCING STRATEGY

The cost to implement all of the improvements identified in *Section VII, Land and Facility Recommendations* could easily exceed $20 million, excluding the additional operational and maintenance costs. This is a significant investment and one that is more than Oregon City can financially afford at this time.

In the recent past, the City has not demonstrated its interest in funding either park development or its maintenance. One current train of thought is to do nothing and wait until the economic climate looks better. However, waiting will only send the park system into further disrepair, miss opportunities to buy park land while it is available, and send the city farther behind in meeting its park and facility needs.

There has been considerable discussion in the development of this plan about the feasibility of creating a special service district to fund park development and maintenance. However, some may view this approach as a method of relieving the city of its park and facility obligation. At the same time, these same people must vote on the formation of a service district. While city residents may support this concept, non-residents who are included in the proposed district would probably oppose it. That is, unless there was some proposal that would benefit them.

The recommendations for park and facility improvements found in the previous section of this document can be divided into two basic categories: those that are regional in nature and those that primarily affect local residents. Facilities affected by these two categories are as follows:

Regional Facilities

- Indoor recreation center
- Indoor swimming pool
- Regional sport fields
- Recreation programs
- Senior programs

Local Facilities

- Land acquisition (neighborhood, community parks and open space)
- Park development
- Park improvements
- Trail connectors

It is our conclusion and recommendation that regional facilities should be funded by everyone living within the urban area of Oregon City and city residents should fund local facilities. Based on this thought, the following funding sources should be used for financing park and facility needs. These regional and local facilities could be as follows:

Regional Facilities:

- Formation of a County Service District: This approach suggests the formation of a county service district to fund the acquisition and development of regional recreational facilities: A general obligation bond would pay for the capital development. The tax base of the district would pay for the cost of operation and maintenance. (Alternative A only)

A modification of the above approach would be to investigate the feasibility of annexing to the North Clackamas Park and Recreation District. This has the advantage of utilizing a taxing district that is already in place. Also, there is economy in operations.

Local Facilities:

- Four Year Serial Levy: Initiate a four year serial levy for city residents to pay for park and recreation facility renovation: (Alternative A only)

- System Development Charges: Increase the SDC rate: The County should collect fees in the like amount to be used to acquire land outside the city limits but within the urban growth boundary.

- Capital Facilities Fund: An annual amount should be dedicated to the City's Capital Facilities Fund for park improvements.

- Other Sources: Seek grants and other funding sources: It is assumed that HUD Block Grants could be used to upgrade and develop parks in the lower incomes areas of the city. ISTEA funds should be used for trail development.

CAPITAL FACILITES PLAN

Based on these funding sources, two optional park improvement programs are proposed. Alternative A utilizes the formation of a park and recreation service district to finance regional facilities and a city-wide serial levy to purchase land and upgrade existing park. Alternative B assumes that County residents would not participate in the funding program and no funding would occur for regional facilities. Local improvements would continue to occur using traditional sources such as SDC's, capital outlay and grants. Each of these options are described on the following page.

Alternative A

Funding: The major component of this financing strategy is the formation/funding of a service district for regional facilities and the passage of a Serial Levy for local park and facility improvements. The specific amount of the bond will be based on the amount the City wishes to spend.

Regional: As mentioned above, the recommended major funding mechanism for park and facility improvements in Oregon City area should be a general obligation bond. An assessment of $0.22 per 1,000 assessed valuation would raise approximately $7 million. This is based on an assessment of all property within the Oregon City School District and the Oregon Trail School District.

Local: A serial levy in the amount of $360,000 annually for four years is proposed. This amount will cost local taxpayers about $0.35 per $1,000 assessed valuation. In addition to passing a serial levy, the funding strategy also recommends that the City allocate $30,000 annually out of the City's General Fund for park capital improvements projects. The City also expects to receive about $150,000 annually through SDC fees. Other sources of revenue include grants, donations and volunteer labor. Listed below, is a summary of the recommended funding mechanisms for Alternative A.

Table 54
Summary of Funding Sources (Six Years)
Alternative A

Funding Source	Amount
Regional	
General Obligation Bond *	$9,700,000
Local:	
Serial Levy ($360,000 for 4 years.**)	$1,380,000
SDC's ($150,000 annually)	$900,000
Park Capital Facilities Fund ($30,000 annually)	$180,000
Grants	$10,000
Miscellaneous Sources	$35,000
Total Revenue	$12,205,000

* GO Bond based on a 20-year bond financed at an interest rate of 5%, the first year tax rate would be about $0.22 per $1,000 assessed valuation.

** Serial Levy based on a rate of 0.35 per year, for a typical $150,000 home the tax impact will be roughly $52 annually.

Expenditures: Listed below is a description of the recommended capital improvement projects in Oregon City based on the funding sources identified above.

Regional: Development and operation of a multi-use indoor recreation/aquatic center and sports field complex.

Estimated Cost Impact $9,500,000

Local:

1. Land Acquisition for future park and recreational facilities: This would consist of acquiring land for future neighborhood and community parks. This would consist of one community park and 4 neighborhood parks.

   Estimated Cost Impact $2,000,000

2. Renovation and improvement of existing park sites. This would include upgrading and/or renovating nine existing park sites. Improvements would consist of developing picnic areas, adding new playground equipment, constructing basketball courts, developing pathways/trail, and adding site amenities and landscaping.

   Estimated Cost Impact $705,000

Total Estimated Cost Impact **$12,205,000**

Table 55
Suggested Six Year Capital Facilities Plan (Alternative A)
Park and Recreation Improvements

Project Name	Site #	Cost $ (1999)	Action
Park Upgrades			
Park Place Park	N-5	$140,000	Upgrade
Atkinson Park	N-15	$10,000	Master Plan
Latourette Park	SU-19	$75,000	Upgrade
McLoughlin Promenade	L-24	$50,000	Upgrade
Rivercrest Park	N-36	$40,000	Upgrade
Chapin Park	C-45	$75,000	Upgrade
Hillendale Park	C-47	$115,000	Upgrade
SUBTOTAL		$505,000	
Land Acquisition			
Gardnier School/Park	N-41	$250,000	Acquisition
Forest Ridge Park	N-43	$250,000	Acquisition
Glenhaven Park	N-55	$250,000	Acquisition
Caufield Park	N-57	$250,000	Acquisition
South End Park	C-48	$1,000,000	Acquisition
SUBTOTAL		$2,000,000	
Indoor Facilities			
Aquatic/ Center		$7,000,000	Acquisition/ Development
SUBTOTAL		$7,000,000	
Sports Facilities			
Sports Complex		$2,500,000	Development
Misc. Field Improve.		$200,000	Development
SUBTOTAL		$2,700,000	
TOTAL COST		$12,205,000	

Alternative B

Funding: The major components of this alternative are the allocation of funds from the City's General Fund and park SDC's.

Regional: No regional facilities are provided under this alternative.

Local*:* The funding strategy recommends that the City allocate $50,000 annually out of the City's General Fund for park capital improvements projects. The City also expects to receive about $170,000 annually through SDC fees. Other sources of revenue include grants, donations and volunteer labor. Listed below is a summary of the recommended funding mechanisms for park and facility improvements.

Table 56
Summary of Funding Sources (Six Year)

Funding Source	Amount
Regional	
None	
Local:	
System Development Charges ($150,000 annually)	$900,000
Park Capital Facilities Fund ($50,000 annually)	$420,000
Grants	$50,000
Miscellaneous Sources	$55,000
Total Revenue	$1,425,000

Expenditures: Listed below is a description of the recommended capital improvement projects in Oregon City based on the funding sources identified above.

Local:

1. Upgrade and development of sports fields

   Estimated Cost Impact $275,000

2. Land Acquisition for future park and recreational facilities: This would consist of acquiring land for future neighborhood parks. This would include three neighborhood parks.

   Estimated Cost Impact $750,000

3. Renovation and improvement of existing park sites. This would include upgrading and/or renovating existing park sites.

Estimated Cost Impact	$400,000
Total Estimated Cost Impact	**$1,425,000**

Table 57
Suggested Six Year Capital Facilities Plan (Alternative B)
Park and Recreation Improvements

Project Name	Site #	Cost $ (1999)	Action
Park Upgrades			
Park Place Park	N-5	$150,000	Upgrade
Rivercrest Park	N-36	$50,000	Upgrade
Chapin Park	C-45	$75,000	Upgrade
Hillendale Park	C-47	$125,000	Upgrade
SUBTOTAL		$400,000	
Land Acquisition			
Gardnier School/Park	N-41	$250,000	Acquisition
Forest Ridge Park	N-43	$250,000	Acquisition
Caufield Park	N-57	$250,000	Acquisition
SUBTOTAL		$750,000	
Sports Facilities			
Misc. Field Improve.		$275,000	Development
SUBTOTAL		$275,000	
TOTAL COST		$1,425,000	

ALL PROJECTS

Table 58
All Projects
Park and Recreation Plan

	Facility	Planning	Acquisition	Development	Major Upgrade	Minor Improve.	Other
	Mini Parks						
M-21	Senior Citizens Park						X
M-37	Stafford Park						X
M-38	Hazelwood Park						X
M-39	Hartke Park						X
M-46	Shanendoah Park						X
	Neighborhood Parks						
N-3	Holcomb School/Park (P)	X	X	X			
N-5	Park Place Park			X		X	
N-8	Livesay Park (P)	X	X	X			
N-14	Barclay Park	X	X				
N-15	Atkinson Park	X			X		
N-25	McLoughlin Park (P)	X	X	X			
N-27	Country Village Park (P)	X	X	X			
N-29	Barclay Hills Park				X		
N-34	Old Canemah Park	X			X		
N-35	Canemah Park	X		X	X		X
N-36	Rivercrest Park					X	
N-40	King School/Park (P)	X	X	X			
N-41	Gardiner School/Park (P)	X	X	X			
N-43	Forest Ridge Park (P)	X	X	X			
N-50	Central Point Park (P)	X	X	X			
N-52	Jesse Court Park (portion of site)	X		X			
N-55	Glenhaven Park (P)	X	X	X			
N-57	Caufield Park (P)	X	X	X			
N-59	Glen Oaks Park (P)	X	X	X			
	Community Parks						
C-6	Holcomb Road Park (P)	X	X	X			
C-18	City Park (P)	X					X
C-45	Chapin Park					X	
C-47	Hillendale Park				X		
C-48	South End Park (P)	X	X	X			
C-58	Moss Park (P)	X	X	X			
	Regional Parks						
R-4	Clackamette Park	X		X			X

(P) = Proposed

Table 58 (Continued)

	Facility	Planning	Acquisition	Development	Major Upgrade	Minor Improve.	Other
	Linear Parks						
L-24	Mcloughlin Promenade	X	X	X	X		
L-53	Powerline Park	X	X	X			
	Special Use Areas						
SU-9	End of the Oregon Trail Interpretive Center						X
SU-11	Sport Craft Landing					X	
SU-12	Old Town Plaza (P)	X	X	X			
SU-13	McLoughlin/Barclay Houses					X	
SU-17	Aquatic Center						X
SU-19	DC Latourette				X		
SU-20	Carnegie Center					X	
SU-22	Ermatinger House					X	
SU-23	Pioneer Community Center				X		
	Open Space Areas/Greenways						
OS-1	Clackamas Heights Open Space (P)	X					
OS-2	Clackamas River Greenway (P)	X	X				
OS-7	Redland Road Open Space (P)	X					
OS-10	Willamatte River Greenway (P)	X	X				
OS-16	Abernethy Creek Greenway (P)	X					
OS-26	Country Village Open Space (P)	X					
OS-28	Newell Creek Canyon	X					X
OS-30	Singer Creek Greenway	X				X	
OS-32	Waterboard Open Space	X				X	
OS-33	Coffee Creek Greenway	X				X	
OS-42	Canemah Bluff Open Space	X					X
OS-49	Little Beaver Creek Greenway	X					X
OS-51	Central Point Greenway	X					
OS-54	Mud Creek Open Space	X					
OS-56	Caufield Creek Greenway	X					X
OS-60	Thimble Creek Greenway						

(P) = Proposed

Table 58 (Continued)

	Facility	Planning	Acquisition	Development	Major Upgrade	Minor Improve.	Other
	Pathways/Trails						
T-1	Clackamette Heights Trail	X		X			
T-2	Clackamas River Trail	X		X			
T-3	Willamette River Trail	X		X			
T-4	Abernethy Creek Trail	X		X			
T-5	Newell Creek Trail Loop	X					X
T-6	Thimble Creek Trail	X	X	X			
T-7	Canemah Bluff Trail	X					X
T-8	Waterboard Trail	X		X			
T-9	Singer Greek Trail	X		X			
T-10	Powerline Trail	X		X			
T-11	Little Beaver Creek Trail	X	X	X			
T-12	Central Point Trail	X	X	X			
T-13	Mud Creek Trail	X	X	X			
T-14	Caufield Creek Trail	X	X	X			
T-15	Beaver Ridge Trail	X	X	X			
	Specialized Facilities						
--	Skate Area	X		X			
--	Group Picnic Area	X		X			
--	Adventure Playground	X		X			
--	Beautification Areas	X		X			
	Indoor Recreation Facilities						
--	Recreation Center	X		X			
--	Indoor Pool	X		X			
	Sports Facilities						
--	Sports Complex	X		X			
--	Soccer Complex			X			
	Cemeteries						
--	Mountain Veiw Cemetery	X		X			X
--	Straight Cemetery						X

(P) = Proposed

PARKS AND RECREATION MASTER PLAN
OREGON CITY, OREGON

Summary Report

INTRODUCTION

Oregon City has long been at the edge of the Portland metropolitan area and watched other communities grow. Now it is part of that population growth and with it comes the demand for additional services.

Over the years Oregon City has managed to keep up with the demand for parks and recreation facilities but in recent times financial constraints have curtailed its ability to develop new facilities or even maintain its present inventory. Now with new population growth there is even more pressure placed on the existing system.

Until now, the City has been able to forgo the needs of park and recreation services and instead has placed its emphasis on other services. This process of deferring park maintenance and park improvements has created a situation where a significant amount of money will be needed to bring the park system up to an acceptable level.

Added to the deferred maintenance issue is the need for more sport fields. Private sport groups have been very active in using their own resources to upgrade sport fields in Oregon City, but without additional land for field expansion, are restricted to the existing field inventory. This has created overuse of existing fields and in some cases adversely impacted the adjacent neighborhood.

One of the reasons that park and recreation services have not received its share of public financial support is that responsibility and accountability is divided between many departments and advisory boards. There has not been one single combined voice advocating the need for park and recreation services.

The Park and Recreation Master Plan takes a comprehensive look at park and facility needs in Oregon City and prescribes an approach to meeting these needs. While there are solutions to financing new improvements to the park system, the critical issue will be to determine how these new improvements can be maintained. Both of these issues, constructing new facilities and finding new money for their maintenance, will require support of city residents in the form of tax supported measures. The time of decision is now; whether to continue to defer meeting the needs of park and recreation services or whether to meet the needs while land is still available.

EXISTING PARK AND FACILITY INVENTORY

Park and Facilities	Acres	# Sites
Mini Parks	7.0	7
Neighborhood Parks	25.4	4
Community Parks	33.1	2
Regional Parks	21.8	1
Special Use Areas	70.3	11
Linear Parks	5.1	1
Natural Open Space	159.4	7
Undeveloped Park Land	19.2	7
TOTAL	341.3	40
Facilities		
Baseball Fields		7
Softball Fields		12
Multi-use Backstops		9
Soccer Fields		11
Tennis Courts		15
Indoor Swimming Pool		1

PROPOSED NEW PARK FACILITIES

Area 1 (Hazel Grove, Tower Vista, South End Neighborhoods)

Neighborhood Parks	4
Community Parks	1
Natural Open Space	2

Area 2 (Hillendale, Gaffney Lane, Thayer neighborhoods)

Neighborhood Parks	3
Community Parks	1
Linear Parks	1
Natural Open Space	3

Area 3 (Barclay Hills, Rivercrest, Canemah, Falls View Neighborhoods)

Neighborhood Parks	3
Natural Open Space	4

Area 4 (McLoughlin, Park Place Neighborhoods)

Neighborhood Parks	3
Community Parks	2
Special Use Areas	1
Natural Open Space	5

RECOMMENDED PARK GUIDELINES

- A neighborhood or community park should be located within walking distance (about a half mile) of most neighborhoods. In places where little vacant land exists for a park site, the City should partner with the School district to develop recreation facilities on school playgrounds.
- The City should preserve natural open space corridors along creeks, urban drainage ways and steep hillsides.
- Because of their limited recreational and open space value, future mini-parks should be discouraged. Where existing mini-parks are found within the service area of a neighborhood or community park, the mini-park should be sold unless the local neighborhood is willing to assume its maintenance responsibilities.
- Under most conditions, neighborhood parks should be no smaller than 3 acres with the optimum being 5-7 acres.
- A portion of Clackamette Cove should be reserved for active and passive recreation use. A master plan should soon be developed for the site to resolve uses and configurations.

SPECIALIZED FACILITIES

Indoor Recreation/Aquatic Center

Because the existing pool is nearing the end of its economic life, plans should soon be made for replacing this facility. Suggested activity spaces include:

- 25 yard competitive tank
- leisure pool element
- small gymnasium
- other meeting and activity spaces

Sport Fields

There is a current shortage of sport fields in Oregon City, but more important, many of them are in poor condition or substandard in size or configuration. By the year 2020 Oregon City will need an additional:

- 26 baseball fields
- 10 softball fields
- 29 soccer fields

Other Recommended Facilities

- Skateboard Park
- Group Picnic Area
- Adventure Playground

MANAGEMENT AND OPERATION RECOMMENDATIONS

General Management Recommendations

- Create a Parks & Recreation Department who will be responsible for all aspects of leisure services in Oregon City
- Assign the Parks and Recreation Advisory Board all advisory functions related to leisure services.
- Keep the Pioneer Community Center under the jurisdiction of the newly formed Parks and Recreation Department.
- Encourage more general public use of the Pioneer Community Center.
- Create an advocacy group to promote leisure services in the community.
- Expand the number of recreation programs offered by the City.

Park Maintenance

- Move park maintenance functions under the newly formed Parks and Recreation Department.
- Establish a higher and more stable funding program for park maintenance.
- Assign building maintenance to the Park Maintenance Division.

FINANCING STRATEGY

The Plan recommends facilities and programs for Oregon City based on the need for the next 20 years. It is expected that the city population will have reached 50,000 by then. Land will need to be acquired while it still is available and sport facilities and other facilities should be developed on a continuing basis.

The park and facility improvements recommended in the Plan can be divided into two categories; those that are regional in nature and those that primarily serve the local community. These include:

Regional Facilities and Programs

Indoor Recreation Center
Sports Field Complex
Regional Parks
Senior Program

Community Facilities and Programs

Neighborhood and Community Parks
Most Trail Development
Recreation Programs
League and Practice Fields

Because some of the facilities and programs are regional in nature it is recommended that a regional service district be formed to pay for the construction and operation of these types of facilities. It might also be possible for the Oregon City area to annex to the existing North Clackamas Park and Recreation District.

To fund local community facilities and programs, four sources of revenue are recommended:

- A four year serial levy to pay for existing parks upgrades and improvements.
- Update the System Development Charges to pay for new park land acquisition and development.
- Create a Capital Facilities Fund out of the City's General Fund to finance long term park improvements.
- Seek grants and other outside funding sources.

DEVELOPMENT OPTION A

Funding Sources

Regional	
General Obligation Bond *	$9,700,000
Local:	
Serial Levy ($360,000 for 4 years.**	$1,380,000
SDC's ($150,000 annually)	$900,000
Park Capital Facilities Fund ($30,000 annually)	$180,000
Grants	$10,000
Miscellaneous Sources	$35,000
Total Revenue	$12,2505,000

* GO Bond based will cost approximately $0.22 per $1,000 assessed valuation.

** Serial Levy based on a rate of 0.35 per $1,000 assessed valuation

Recommended Projects

Project Name	Cost $ (1999)
Park Upgrade	
Park Place Park	$140,000
Atkinson Park	$10,000
Latourette Park	$75,000
McLoughlin Promenade	$50,000
Rivercrest Park	$40,000
Chapin Park	$75,000
Hillendale Park	$115,000
SUBTOTAL	$505,000
Land Acquisition	
Gardnier School/Park	$250,000
Forest Ridge Park	$250,000
Glenhaven Park	$250,000
Caufield Park	$250,000
South End Park	$1,000,000
SUBTOTAL	$2,000,000
Indoor Facilities	
Aquatic/ Recreation Center	$7,000,000
SUBTOTAL	$7,000,000
Sports Facilities	
Sports Complex	$2,500,000
Misc. Field Improve.	$200,000
SUBTOTAL	$2,700,000
TOTAL COST	$12,205,000

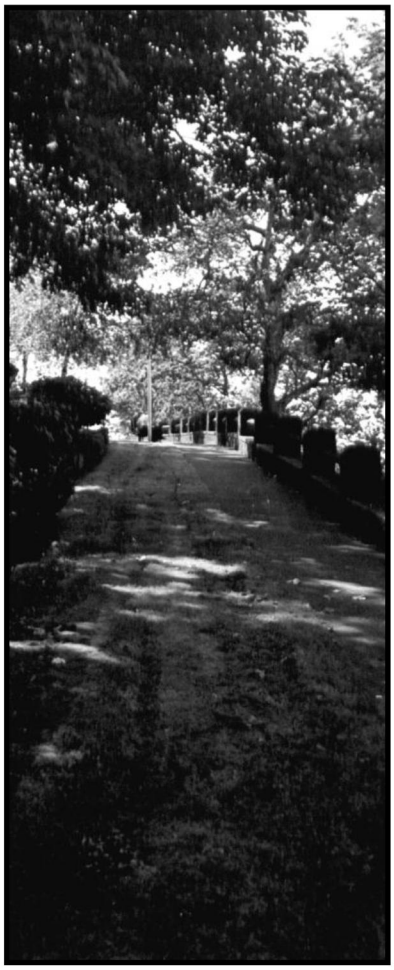
DEVELOPMENT OPTION B

Funding Sources

Regional	
None	
Local:	
System Development Charges	$900,00
($150,000 annually)	0
Park Capital Facilities Fund	$420,00
($50,000 annually)	0
Grants	$50,000
Miscellaneous Sources	$55,000
Total Revenue	$1,425,000

Recommended Projects

Project Name	Cost $ (1999)
Park Upgrade	
Park Place Park	$150,000
Rivercrest Park	$50,000
Chapin Park	$75,000
Hillendale Park	$125,000
SUBTOTAL	$400,000
Land Acquisition	
Gardnier School/Park	$250,000
Forest Ridge Park	$250,000
Caufield Park	$250,000
SUBTOTAL	$750,000
Sports Facilities	
Misc. Field Improve.	$275,000
SUBTOTAL	$275,000
TOTAL COST	$1,425,000



APPENDIX

APPENDICIES A, B &C

APPENDIX

APPENDIX A

Aquatic Center

Location: Clackamas County, lies within Oregon City city limits: bordered by 13th Street on the north, Jackson Street on the east, 12th Avenue on the south and John Quincy Adams on the west.

Size: 1.33 Acres

Ownership: City of Oregon City

Status: Developed

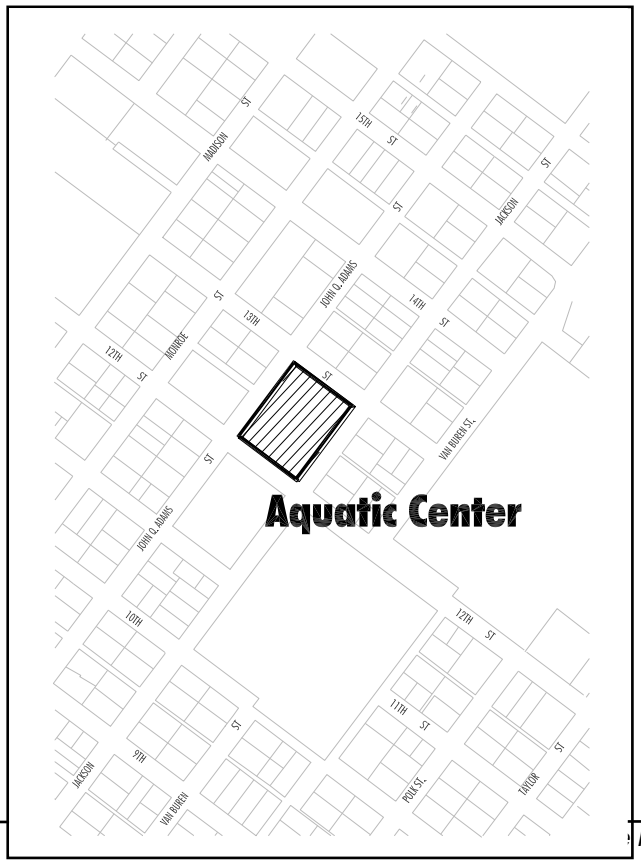
Existing Facilities: Indoor swimming pool (25m x 14m), outdoor wading pool, meeting space (64' x 42); parking area

Deficiencies: Lack of parking; condition of the structure

Planned Improvements: Install signage; tree/landscape evaluation; building renovation

Comments: This site lies adjacent to the Oregon City High School. Currently, the building is in very poor condition.

Site Location:



Atkinson Park

Location: Clackamas County, within Oregon City city limits; located at the corner of Jackson Street and 16th Street.

Size: 5.60 Acres

Ownership: City of Oregon City:

Status: Developed (under-developed)

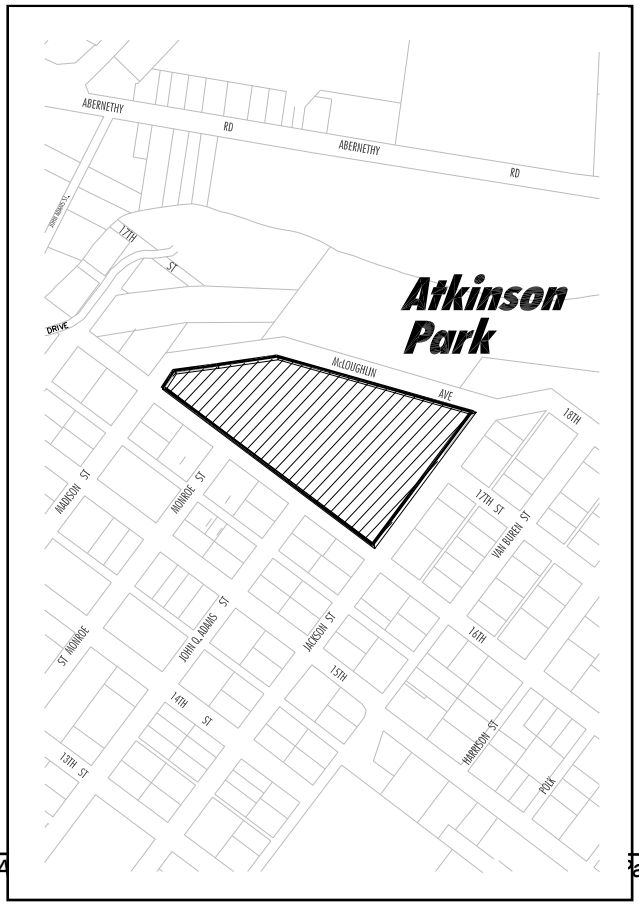
Existing Facilities: Clubhouse building (Buena Vista House), playground, picnic shelter (1 BBQ), natural area, open play area, restroom building, maintenance access road

Deficiencies: Facilities are old and need to be replaced, visibility into the site is poor due to the terrain and the location of the Buena Vista Clubhouse; ADA accessibility; restroom building is not functional

Planned Improvements: Develop parking area, rehabilitate Buena Vista Clubhouse and restroom building, re-roof picnic shelter; install signage, picnic tables, and perimeter park fencing; develop ADA accessible pathway and natural trails; construct park host site; tree/landscaping evaluation.

Comments: This park has a nice setting at the top of a small knoll in the north portion of town. The City should consider developing a master plan for this site.

Site Location:



Barclay Park

Location: Clackamas County, lies within Oregon City city limits; located at the corner of John Adams Street and 12th Street.

Size: 1.67 Acres

Ownership: City of Oregon City

Status: Partially developed

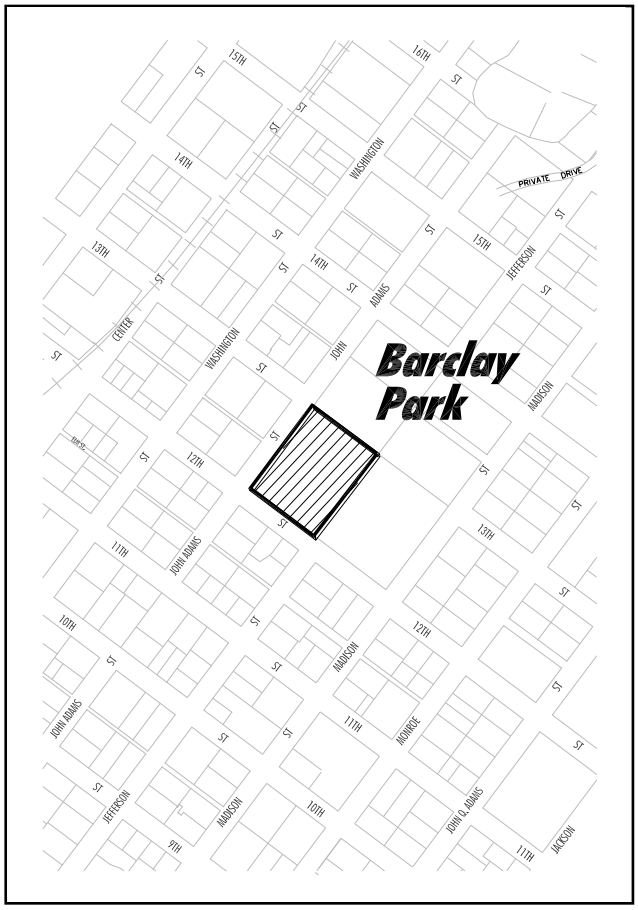
Existing Facilities: Open play area

Deficiencies: Lack of development and parking; ADA accessibility; minor turf improvements; street improvements

Planned Improvements: Install picnic shelter building, playground equipment and signage; tree/landscaping evaluation.

Comments: This is a small park located adjacent to Barclay Elementary School. The City should consider developing a master plan for this site.

Site Location:



Barclay Hills Site

Location: Clackamas County, within Oregon City city limits: located off Whitman Way

Size: 1.00 Acres

Ownership: City of Oregon City:

Status: Undeveloped

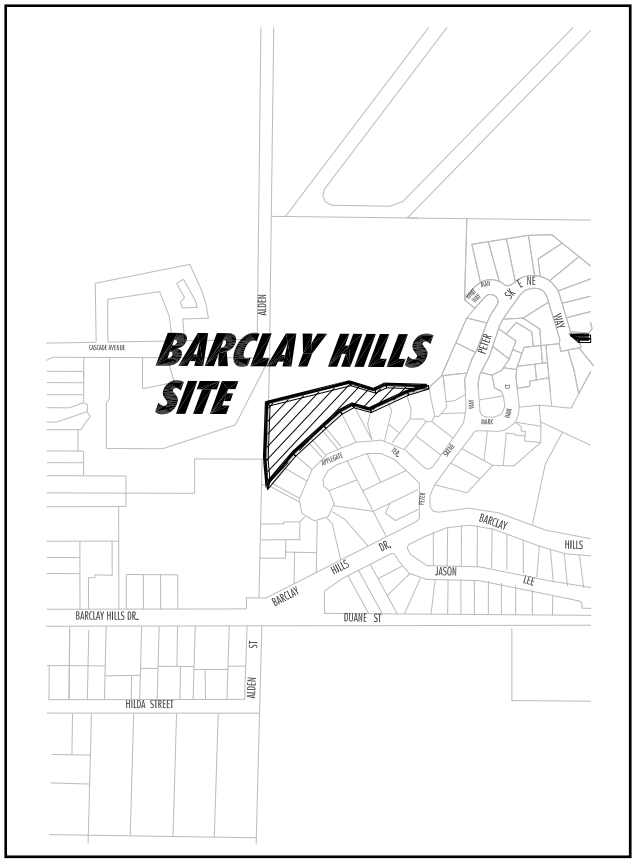
Existing Facilities: None

Deficiencies: None

Planned Improvements: Unknown

Comments: This parcel is a small wooded area that is part of the Barclay Hills development. It is not contiguous to Barclay Hills Park.

Site Location:



Barclay Hills Park

Location: Clackamas County, lies within Oregon City city limits; located off Barclay Hills Drive

Size: 6.76 Acres

Ownership: City of Oregon City

Status: Developed

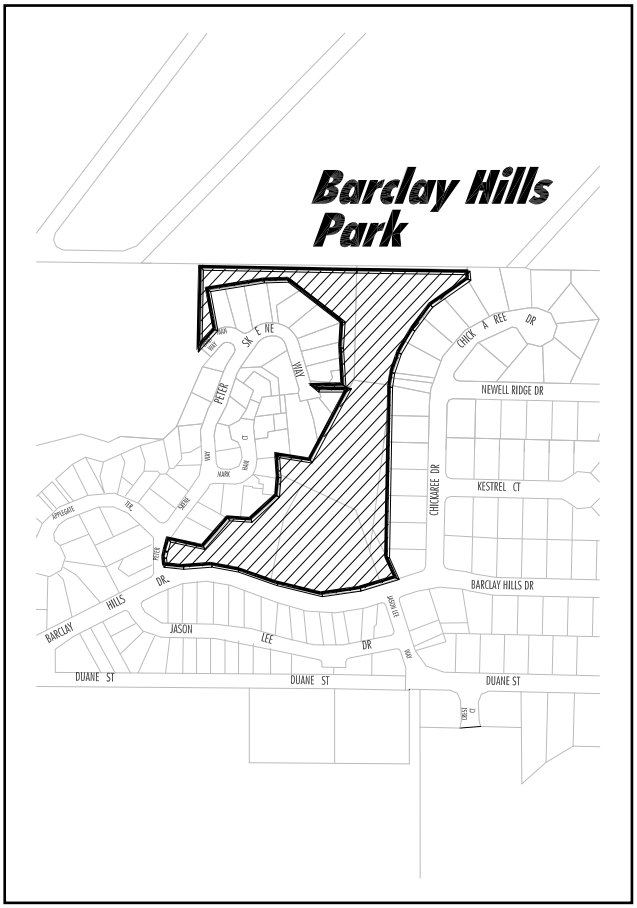
Existing Facilities: Playground area (3), open play area, basketball court, natural area

Deficiencies: Pathways and site amenities; ADA accessibility; street improvements; lack of parking

Planned Improvements: Rehabilitate playground (FY 98), install drinking fountain (FY 98), develop trails (FY 03), install irrigation system and signage, picnic tables and benches; tree/landscape evaluation

Comments: This is one of the newest parks in the City. It provides a mixture of active and passive recreational opportunities.

Site Location:



Camemah Park

Location: Clackamas County, lies within Oregon City city limits; located at the terminus of 4th Avenue.

Size: 0.34 Acres

Ownership: City of Oregon City

Status: Developed

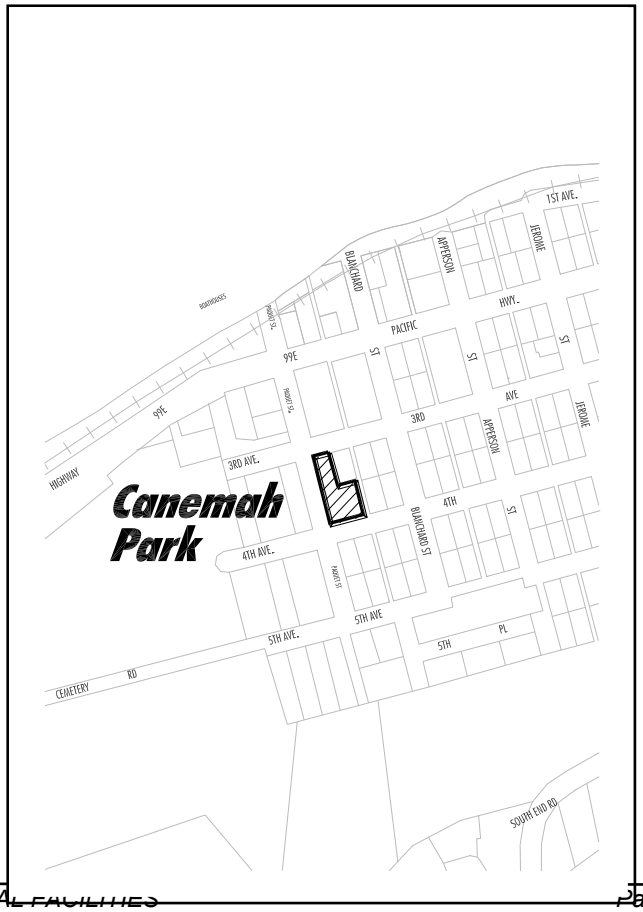
Existing Facilities: Playground area, basketball court, open play area, picnic area (1 table), pathways

Deficiencies: Pathways and site amenities; ADA accessibility; turf improvements, street improvements

Planned Improvements: Renovate playground equipment; upgrade irrigation system; prepare site survey

Comments: This site is located in the Canemah district. Although this site is relatively small, there may be some opportunity to expand the recreational opportunities at this park. Recently, Metro has acquired land to the south as part of the Canemah Bluff project. Some of this land could be utilized for passive uses. The City should consider developing a master plan for this site.

Site Location:



Carnegie Center

Location: Clackamas County, lies within Oregon City city limits; bordered by 7th Street on the north, Jefferson Street on the east, 6th Street on the south and John Adams Street on the west.

Size: 1.30 Acres

Ownership: City of Oregon City

Status: Developed

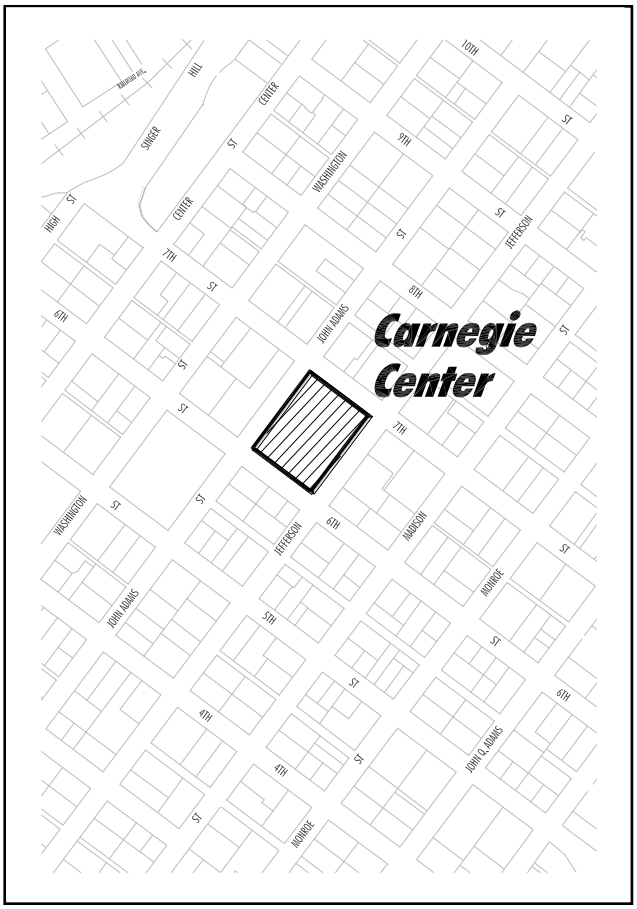
Existing Facilities: Arts Center, wading pool, playground, pathway

Deficiencies: ADA accessibility; play equipment is old and needs to be replaced; pathways need resurfacing

Planned Improvements: Renovate building; install signage, picnic tables and benches; tree/landscape evaluation

Comments: The Carnegie Center building was at one time the old City Library. Some consideration should be given to relocating the playground area/ wading pool and developing facilities that enhance the activities that occur at the Carnegie Center.

Site Location:



Chapin Park

Location: Clackamas County, within Oregon City city limits. located off Warner Parrott Road

Size: 17.50 Acres

Ownership: City of Oregon City

Status: Developed

Existing Facilities: Playground (youth and tot), picnic area, youth baseball/softball fields (2), softball fields (2), soccer field (overlay), restroom, parking area (65 spaces plus 2 handicapped), exercise course, restroom, pathway and caretaker.

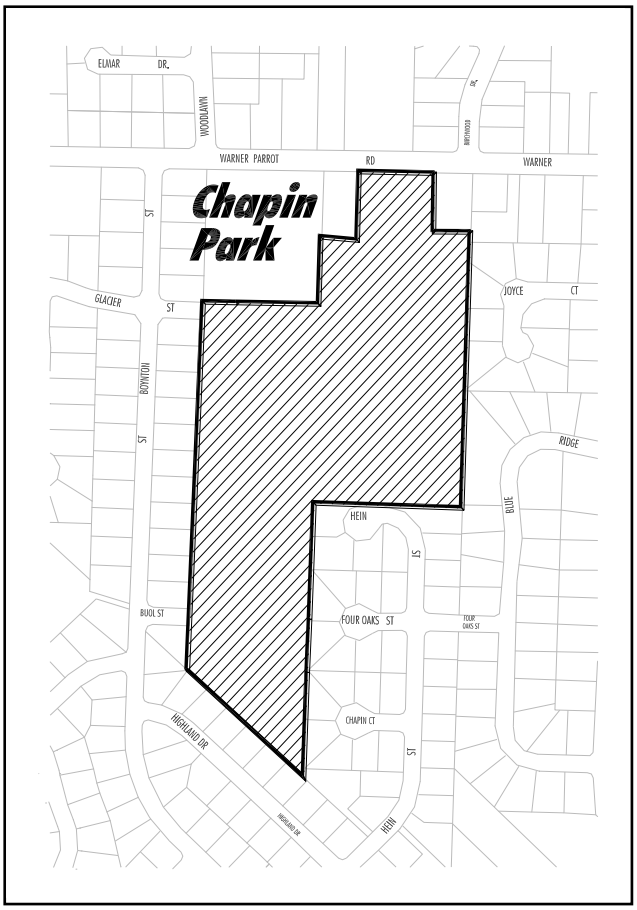
Deficiencies:

Planned Improvements: Trees and landscaping, paved courts, picnic areas; ADA accessibility

Comments: Update park master plan (FY 98);install picnic shelter (FY99), upgrade irrigation system (FY99), develop south trail loop (FY99), develop half court basketball (FY00), upgrade restroom

While this site functions as a community park, it provides most of the sports field opportunities in the City.

Site Location:



Charman & Linn Site

Location: Clackamas County, within Oregon City city: located at the intersection of Charman Street and Linn Avenue

Size: 0.60 Acres

Ownership: Clackamas County; managed by the City of Oregon City

Status: Undeveloped

Existing Facilities: None

Deficiencies: Physical location

Planned Improvements: None

Comments: This site is essentially a street triangle and has very limited recreational value. The site is heavily wooded.

Site Location:

Clackamette Park

Location: Clackamas County, lies within Oregon City city limits: located at the intersection of Clackamette Drive and Main Street.

Size: 21.76 Acres

Ownership: City of Oregon City

Status: Developed

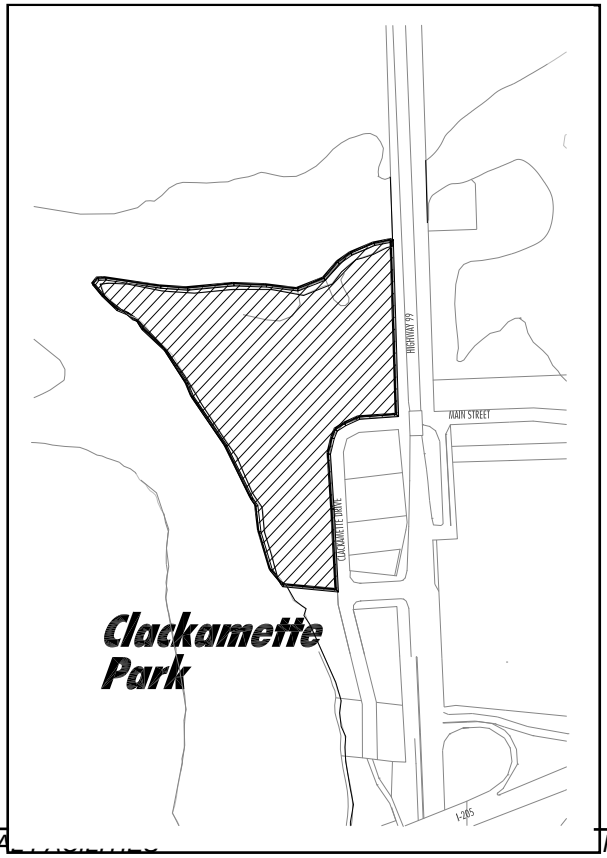
Existing Facilities: Boat launch (2 lane), boat trailer parking (43 plus 2 handicapped spaces), parking area 49 plus 1 handicapped space), swimming beach, restroom building, picnic area (2 area - 11 tables), shelter buildings (2 - 19 tables plus 4 BBQ's), campground (38 spaces), open play area, playground area, horseshoe pits (12 uncovered, 8 covered), pathways

Deficiencies: Minor turf improvements and landscaping, campground improvements; ADA accessibility; street improvements

Planned Improvements: Construct multi-purpose building (FY 98); install signage, picnic tables, fishing pier, and playground equipment; tree/landscape evaluation

Comments: This park is located at the confluence of the Willamette and Clackamas Rivers. The site provides the only boat access along the Clackamas River. The boat launch and pathway were recently upgraded to improve access to and along the river.

Site Location:



D.C. Latourette Park

Location: Clackamas County, lies within Oregon City city limits: bordered by 11th Street on the north, Monroe Street on the east, 10th Street on the south and Madison Street on the west.

Size: 0.80 Acres

Ownership: City of Oregon City

Status: Developed

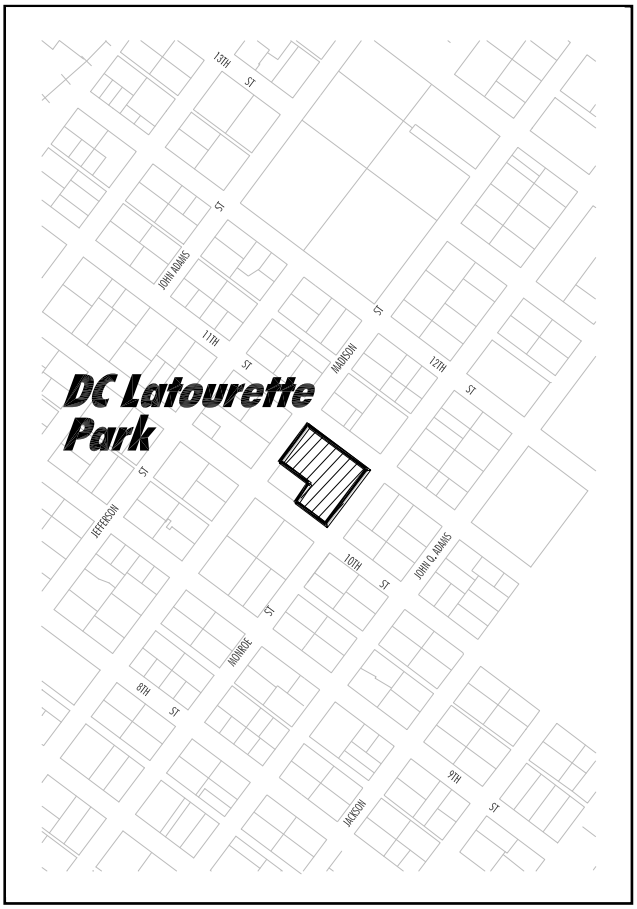
Existing Facilities: Basketball court (2 half courts with wall), tennis courts (2)

Deficiencies: Courts are uneven and not color coated, perimeter fencing is damaged, interior rock walls are deteriorating; ADA accessibility

Planned Improvements: Install signage and picnic tables; resurface tennis courts, site improvements, slope stabilization

Comments: This site is essentially an outdoor court complex.

Site Location:



Dement Park

Location: Clackamas County, lies within Oregon City city limits: located at the corner of Jersey Lane and Charman Street.

Size: 0.07 Acres

Ownership: City of Oregon City

Status: Partially Developed

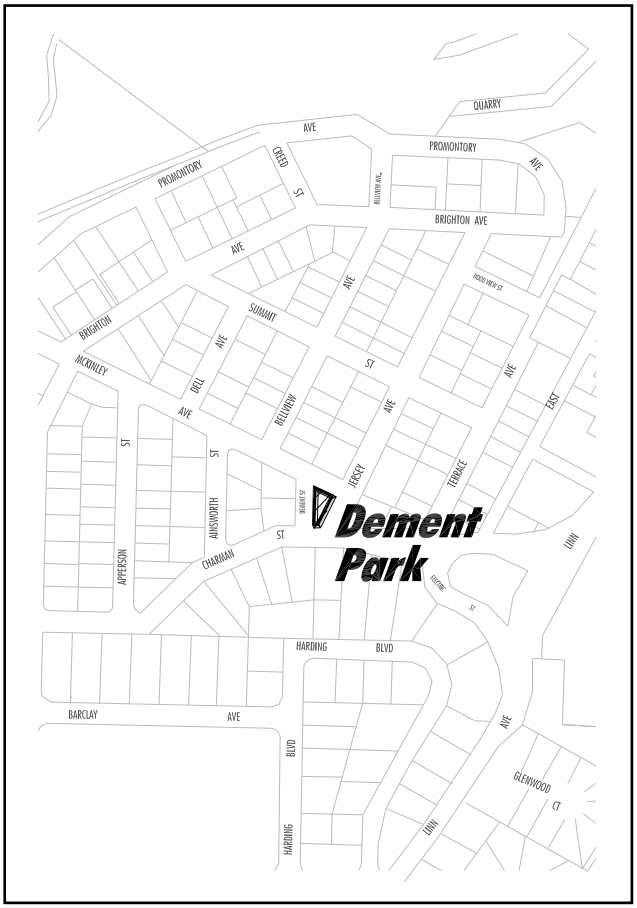
Existing Facilities: Open play area, bus shelter (small)

Deficiencies: Lack of development; ADA accessibility

Planned Improvements: Install signage and picnic tables; tree/landscape evaluation

Comments: This is a small park site that is bordered by streets and unimproved road ROW's. If the adjacent right-of-way is calculated into the site acreage, it would total 0.41 acres. Some considerations should be given to developing a park site mater plan for this site.

Site Location:



End of Oregon Trail Interpretive Center and Historical Site

Location: Clackamas County, lies within Oregon City city limits: located off Washington Street, south of Abernethy Road.

Size: 8.40 Acres

Ownership: City of Oregon City: Leased to the End of the Oregon Trail Foundation

Status: Developed

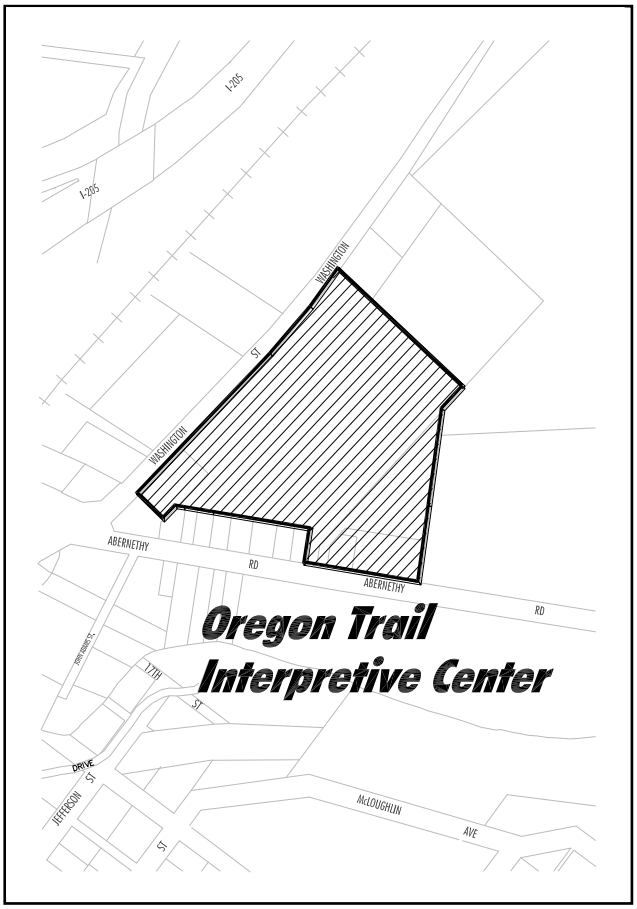
Existing Facilities: Museum (3 structures), parking area (___ plus 7 handicapped and 12 bus spaces)

Deficiencies: None

Planned Improvements: Unknown

Comments: This site was formerly known as Kelly Field. Now, the site is location of the Oregon Trail Interpretive Center.

Site Location:



Ermatinger House

Location: Clackamas County, lies within Oregon City city limits: located at the corner of 5th Street and John Adams Street.

Size: 0.25 Acres

Ownership: City of Oregon City

Status: Developed

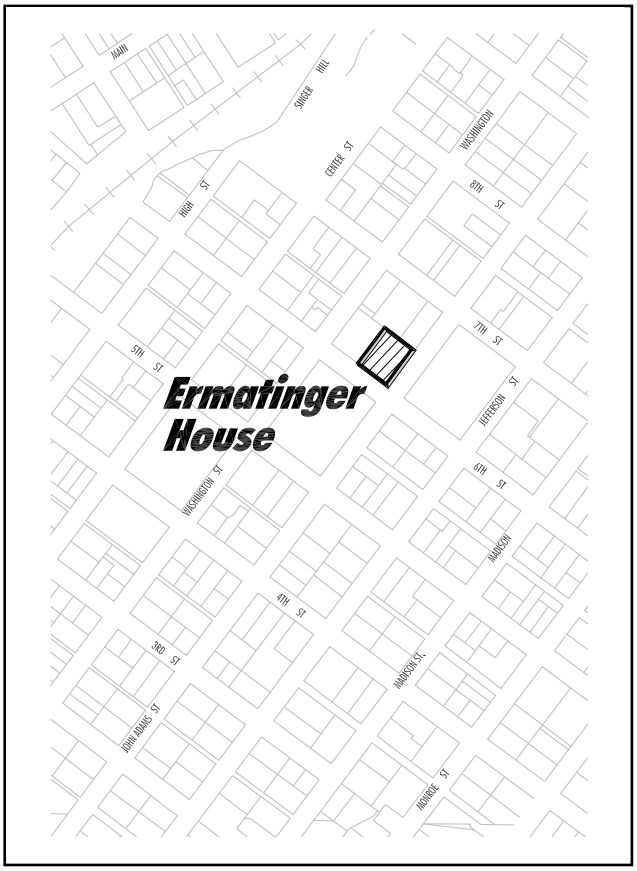
Existing Facilities: Museum, parking area (small)

Deficiencies: ADA accessibility

Planned Improvements: Install signage

Comments: This is one of the oldest buildings in the State of Oregon.

Site Location:



Hartke Park

Location: Clackamas County, lies within Oregon City city limits: located off Hartke Loop.

Size: 1.50 Acres

Ownership: City of Oregon City

Status: Developed

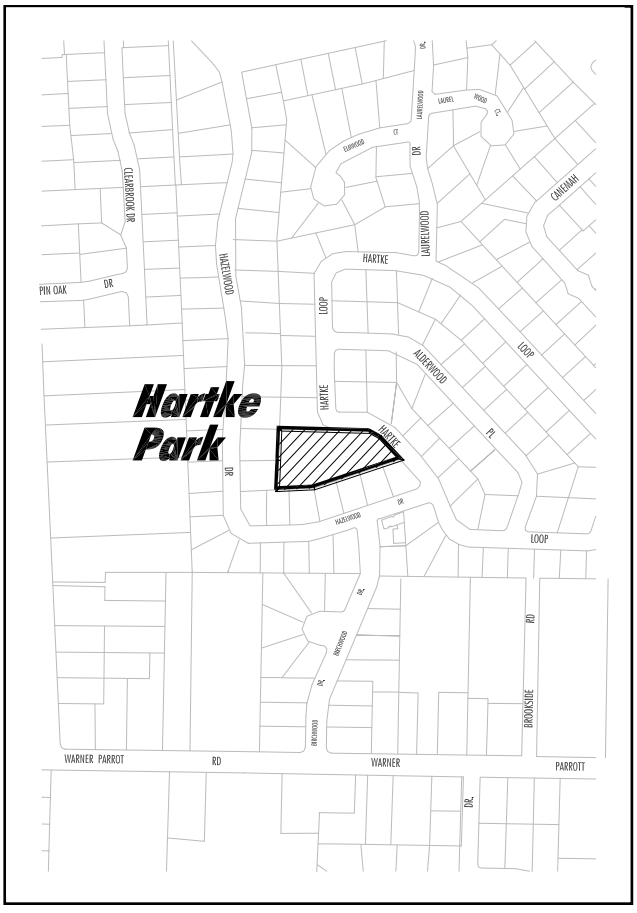
Existing Facilities: Playground area, open play area, tennis court (2), basketball court

Deficiencies: Tennis/basketball courts are unfinished, playground is old; ADA accessibility; street improvements

Planned Improvements: Install irrigation system, signage and picnic tables; upgrade playground equipment; resurface tennis courts; repair/resurface pathways; tree/landscape evaluation

Comments: This one of two small parks that serves the immediate subdivision. Both are located in close proximity to one another.

Site Location:



Hazelwood Park

Location: Clackamas County, lies within Oregon City city limits: located at the corner of Hartke Loop and Laurelwood Drive

Size: 0.50 Acres

Ownership: City of Oregon City

Status: Developed

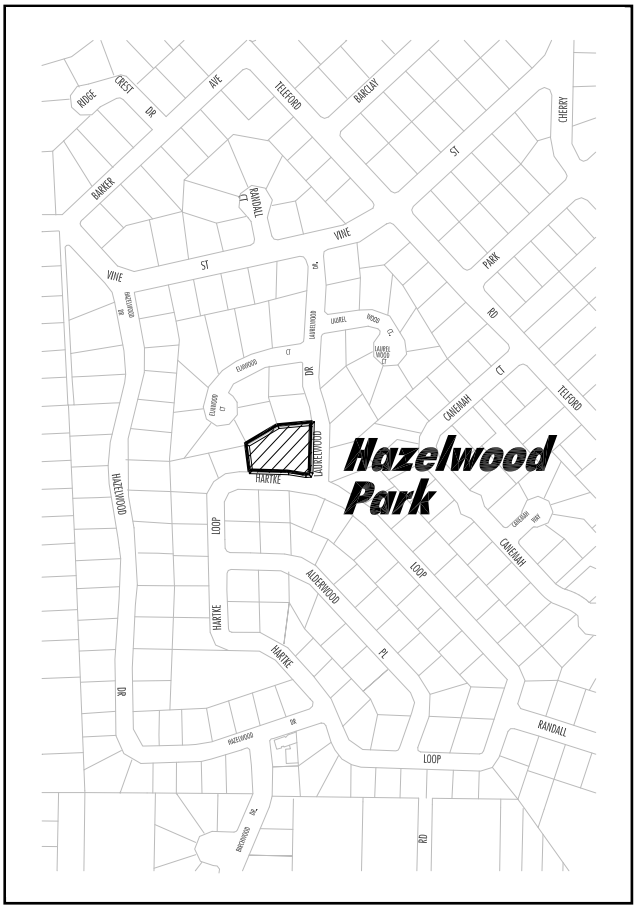
Existing Facilities: Playground area, open play area; picnic area (1 table)

Deficiencies: Lack of development; ADA accessibility; street improvements

Planned Improvements: Upgrade irrigation system, signage and picnic tables; upgrade playground equipment; tree/landscape evaluation

Comments: This is one of two small parks that serves the immediate subdivision. Both are located in close proximity to one another.

Site Location:



High Rocks Site

Location: Clackamas County, lies within Oregon City city limits; located off Bridgeview Lane.

Size: 2.30 Acres

Ownership: Various ownership; managed by the City Oregon City

Status: Undeveloped

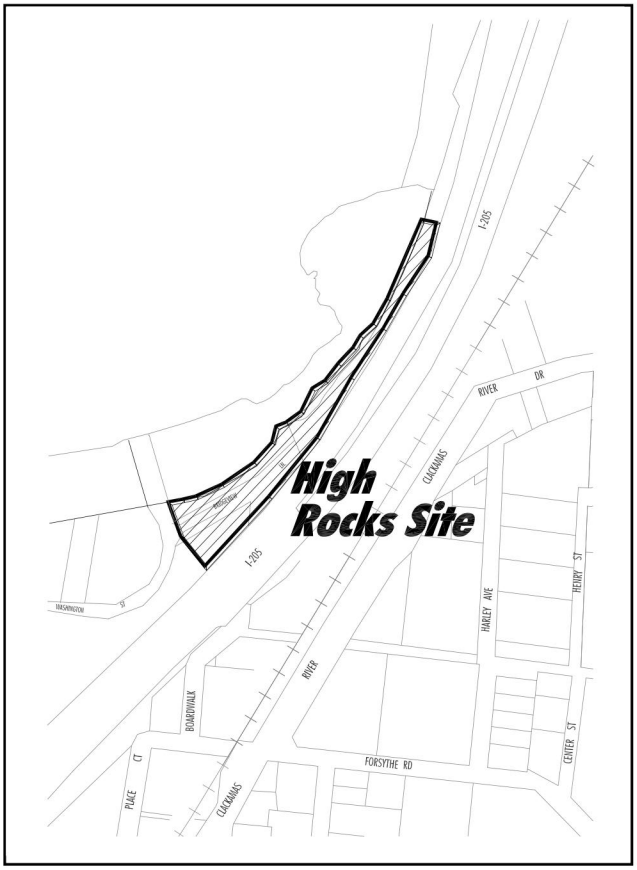
Existing Facilities: Informal swimming area

Deficiencies: Lack of access; ADA accessibility; litter/debris

Planned Improvements: Install signage

Comments: This site is a popular swimming area during the summer months.

Site Location:



Hillendale Park

Location: Clackamas County, within Oregon City city limits; located off Clairmont Way

Size: 15.64 Acres

Ownership: City of Oregon City

Status: Developed

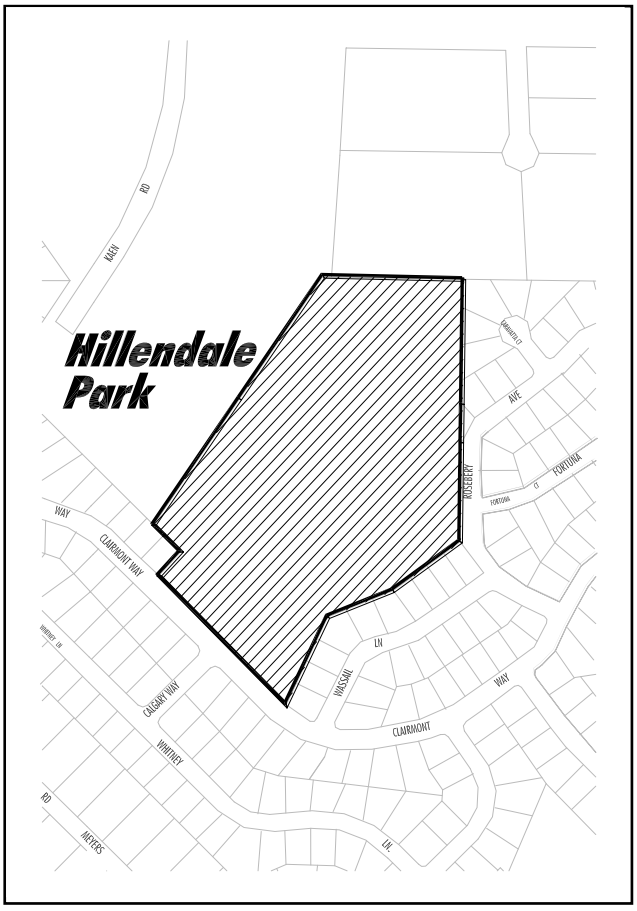
Existing Facilities: Softball field, restroom, picnic shelter (10 tables), soccer field, tennis courts (2), playground (tot/youth), pathway, parking area (39 plus 1 handicapped space), portable restroom

Deficiencies: Minor turf improvements

Planned Improvements: Develop T-ball field and new parking area (FY 98); upgrade soccer field (FY98);upgrade playground equipment and develop north trail (FY00);expand irrigation system; install signage and picnic tables; screen outflow pond

Comments: Some consideration should be given to developing a master plan for the development of the north portion of this site.

Site Location:



Jesse Court Site

Location: Clackamas County, located outside the Oregon City city limits: located off Jessie Avenue, north of Leland Road.

Size: 13.50 Acres

Ownership: Oregon City School District

Status: Undeveloped

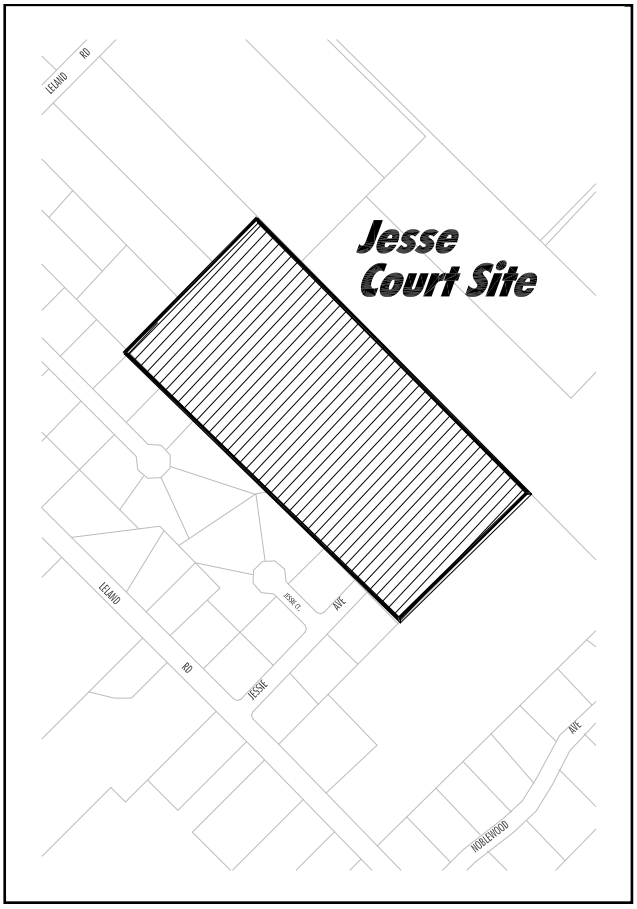
Existing Facilities: None

Deficiencies: Limited access

Planned Improvements: Development

Comments: The City is currently working with the school district to develop this site.

Site Location:



Madrona Drive Site

Location: Clackamas County, within Oregon City city limits; located north of Madrona Drive

Size: 1.10 Acres

Ownership: City of Oregon City

Status: Undeveloped

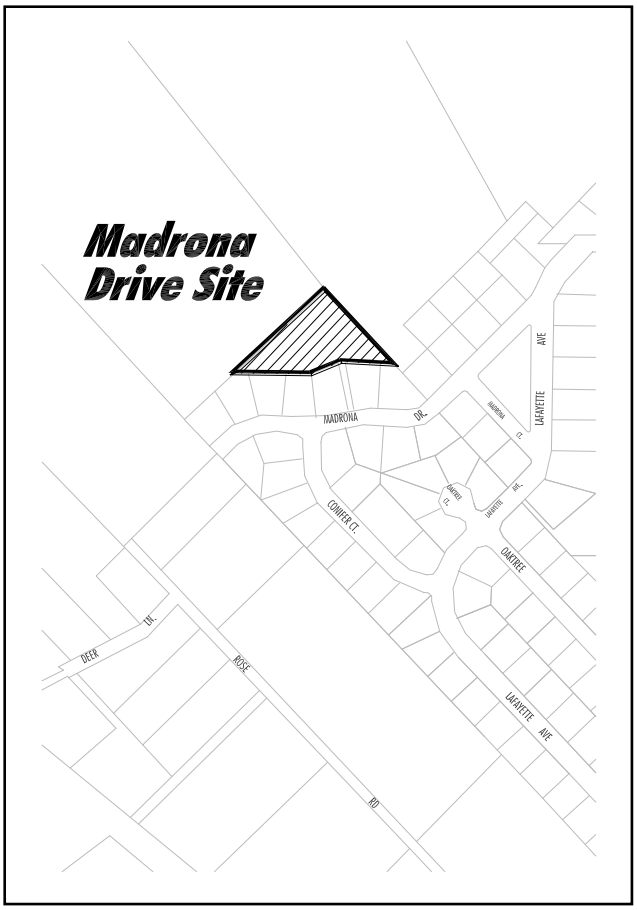
Existing Facilities: None

Deficiencies: Access and visibility

Planned Improvements: Install signage

Comments: Currently, there is no access to this site (land-locked).

Site Location:



McLoughlin & Barclay House

Location: Clackamas County, within Oregon City city limits: located off Center Street

Size: 0.80 Acres

Ownership: City of Oregon City ; buildings are owned and maintained by a private organization.

Status: Developed

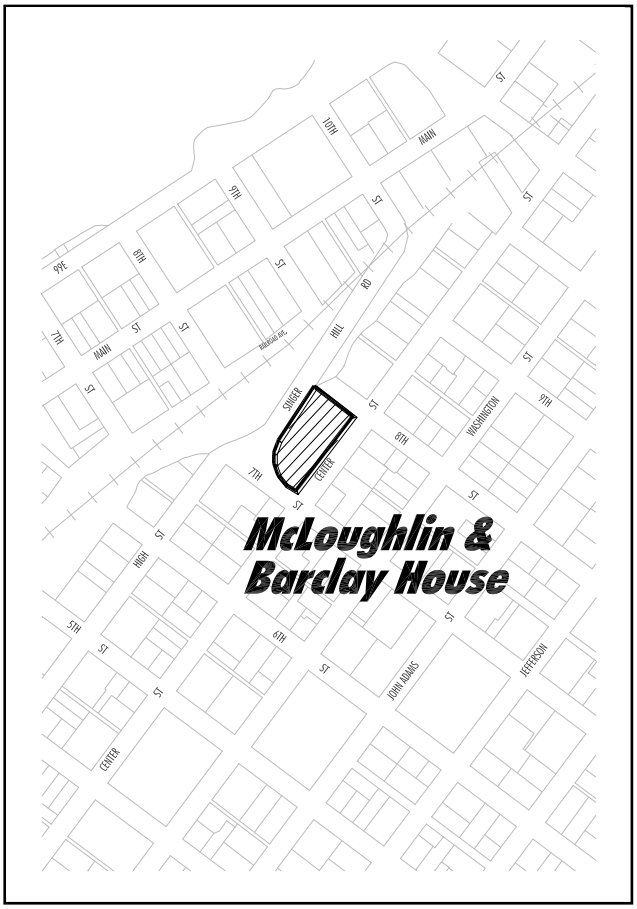
Existing Facilities: Museum

Deficiencies: ADA accessibility

Planned Improvements: Install signage and new walkways; site work; tree/landscape evaluation

Comments: The McLoughlin House and Barclay House are historic homes located in downtown Oregon City.

Site Location:



McLoughlin Promenade

Location: Clackamas County, within Oregon City city limits; located between S. 1st Street and 7th Street, west of High Street

Size: 5.10 Acres

Ownership: City of Oregon City

Status: Developed

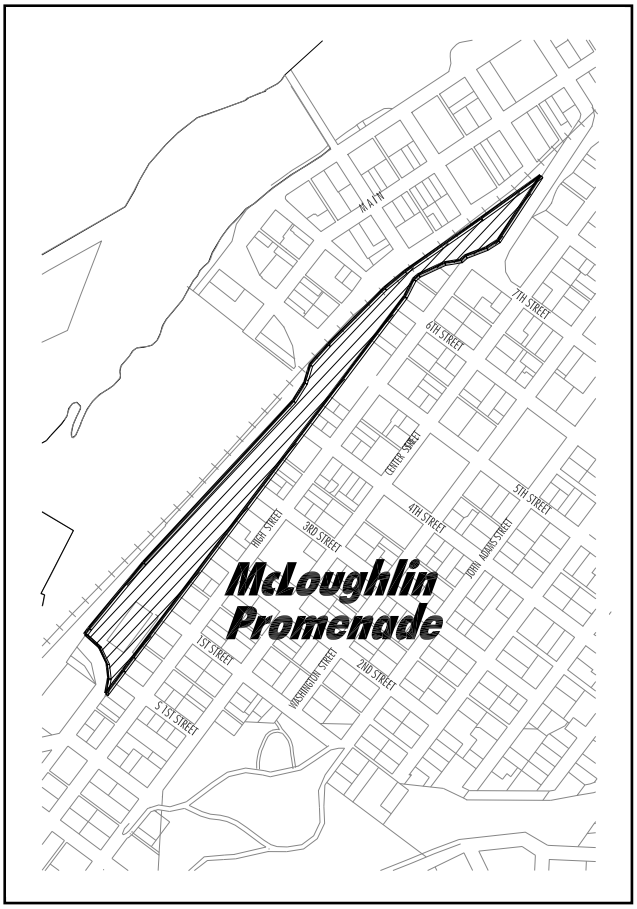
Existing Facilities: Viewpoints, pathways

Deficiencies: None

Planned Improvements: Site survey and develop new access points (FY03); install signage and picnic tables; tree/landscape evaluation

Comments: This site provides a nice setting and offers excellent view of the Willamette River. The promenade connects with the historic municipal elevator.

Site Location:



Mt. View Cemetery

Location: Clackamas County, within Oregon City city limits; located east of Molalla Avenue off of Hilda Street.

Size: 54.00 Acres

Ownership: City of Oregon City:

Status: Partially Developed

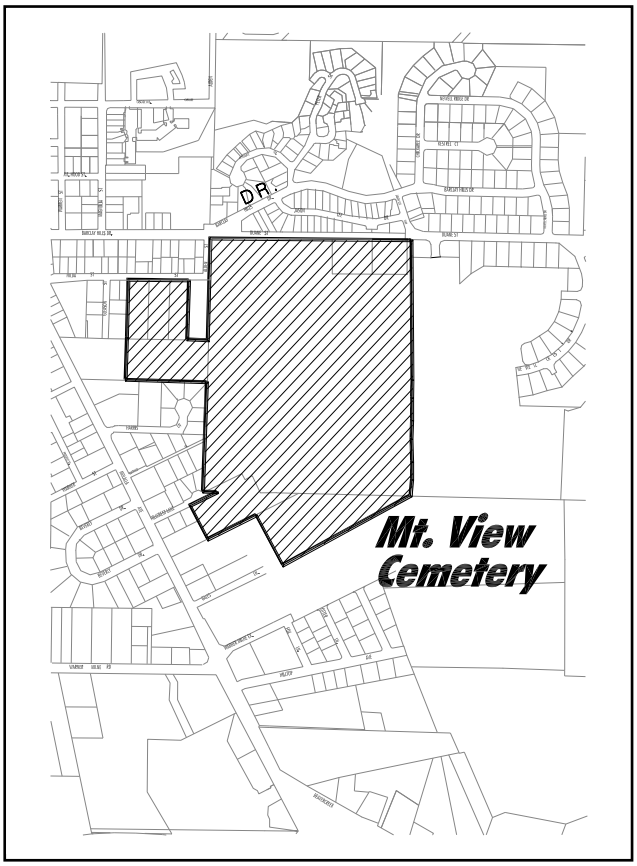
Existing Facilities: Burial plots

Deficiencies: None

Planned Improvements: Burial plot expansion

Comments: This is the largest of two City owned and maintained cemeteries.

Site Location:



Oak Tree Park

Location: Clackamas County, within Oregon City city limits; located at the northwest corner of South End Street and Oak Tree Avenue

Size: 0.50 Acres

Ownership: City of Oregon City

Status: Undeveloped

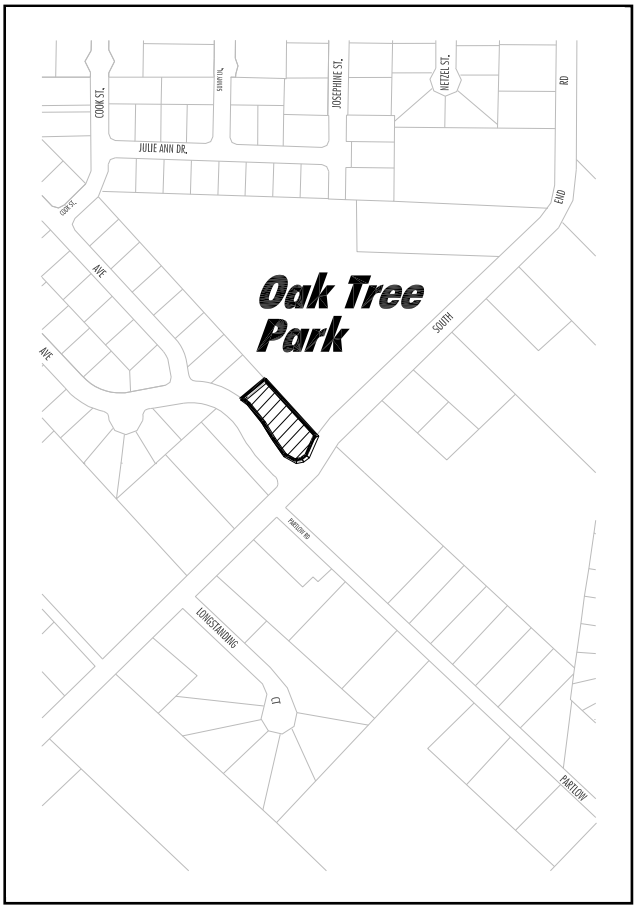
Existing Facilities: None

Deficiencies: Size and location

Planned Improvements: Develop tree park (FY03); install signage

Comments: This is a small park site located at the entrance of the Oak Tree Subdivision. Because of its size and location, it has very limited recreational value. Some consideration should be given to disposing of this site.

Site Location:



Old Canemah Park

Location: Clackamas County, within Oregon City city limits: located off 3rd Avenue, between South End Road and McLoughlin Boulevard.

Size: 8.21 Acres

Ownership: City of Oregon City

Status: Partially developed

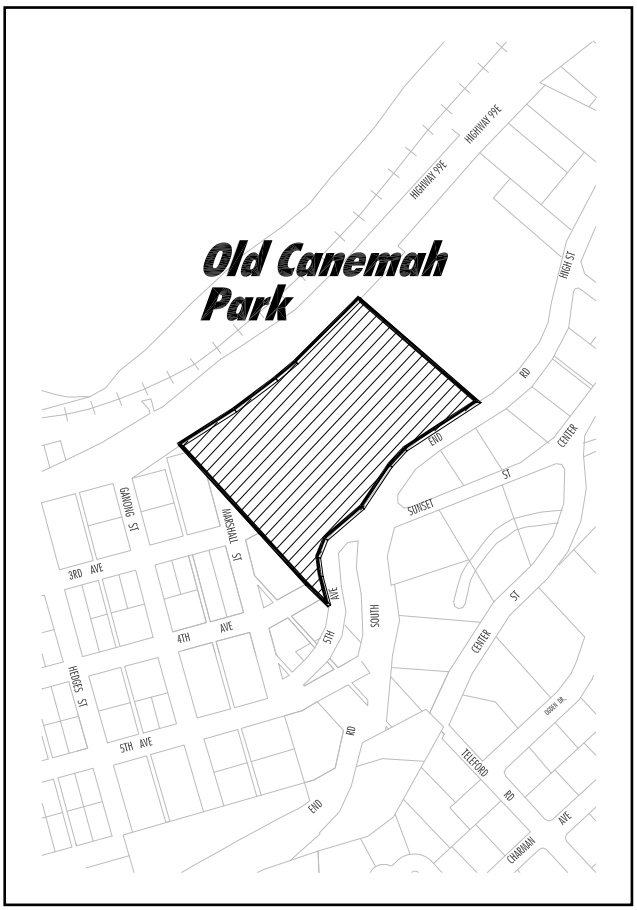
Existing Facilities: Picnic area (3 tables), pathways, parking area, natural area

Deficiencies: Access and visibility are limited; parking area is too small, excessive under-brush

Planned Improvements: Install signage and picnic tables; construct meeting hall; tree/landscape evaluation

Comments: This site offers views of the Willamette River and the surrounding area. The terrain consists of moderate to steep hillsides.

Site Location:



Park Place Park

Location: Clackamas County, lies within Oregon City city limits; located off South Front Avenue and Cleveland Avenue

Size: 6.50 Acres

Ownership: City of Oregon City

Status: Partially developed

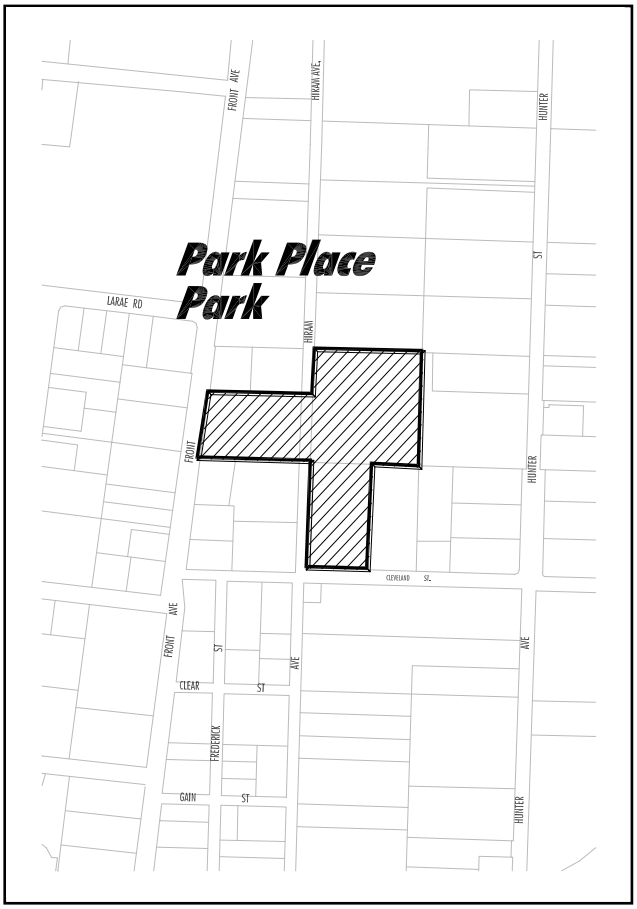
Existing Facilities: Playground area (tot & youth), open grass area, restroom building, pathways, parking area (10 plus 1 handicapped space), caretaker

Deficiencies: Lack of development; street improvements

Planned Improvements: Complete Phase II Construction - picnic shelter, picnic area, parking lot, basketball court, tennis court, playground equipment (FY01); Complete Phase III Construction (FY 02); install signage and picnic tables; tree landscape evaluation

Comments: This park is the newest addition to the Oregon City park system. Subsequent phases will provide additional facilities to this park.

Site Location:



Pioneer Community Center

Location: Clackamas County, lies within Oregon City city limits: bordered by 6th Street on the north, John Adams on the east, 5th Street on the south and Washington Street on the west.

Size: 0.80 Acres

Ownership: City of Oregon City:

Status: Developed

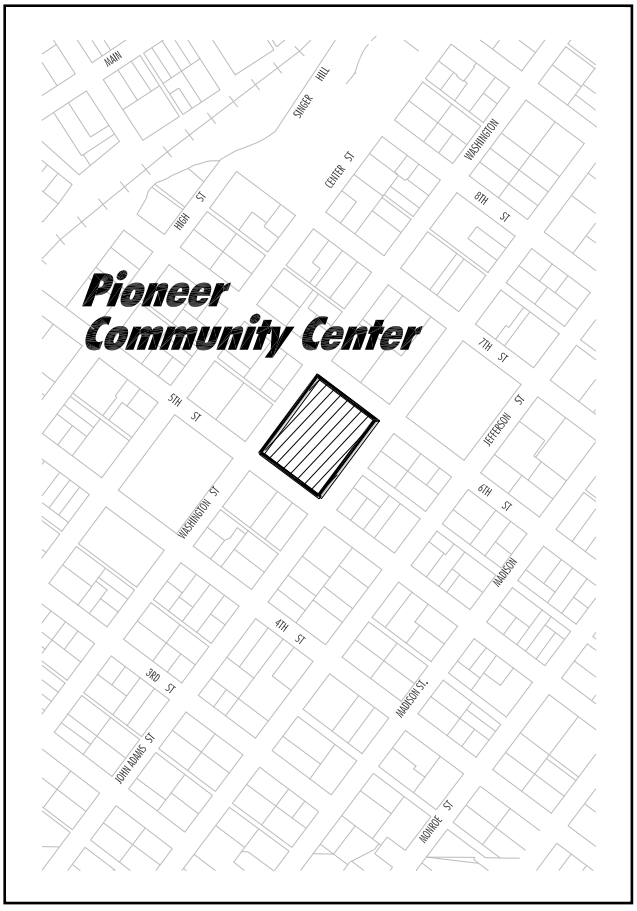
Existing Facilities: Senior Center, peace garden, pathway, parking area (10 spaces)

Deficiencies: None

Planned Improvements: Install signage and picnic tables; tree/landscape evaluation.

Comments: This facility contains the Oregon City Senior Center. This site also contains a sister city (Tateshina, Japan) peace garden.

Site Location:



River Access Trail

Location: Clackamas County, lies within Oregon City city limits: located north of S.E 82nd Drive.

Size: 1.23 Acres

Ownership: City of Oregon City:

Status: Developed

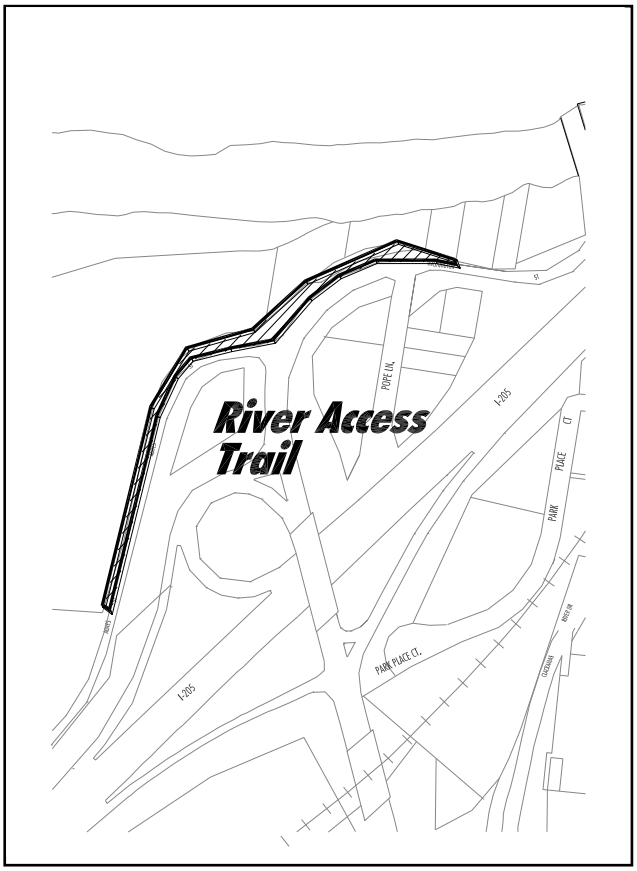
Existing Facilities: Pathway, parking area (10 spaces)

Deficiencies: Lack of visibility; site amenities; street improvements

Planned Improvements: Acquire land and expand trail system (FY03); install signage; tree/landscape evaluation

Comments: This linear site parallels SE 82nd Drive and extends from the Water Treatment Plant on the west to the area west of the High Rock site

Site Location:



Rivercrest Park

Location: Clackamas County, within Oregon City city limits; bordered Brighton Avenue on the west, Barclay Avenue on the north, Harding Boulevard on the east and Park Avenue on the south.

Size: 6.50 Acres

Ownership: City of Oregon City:

Status: Developed

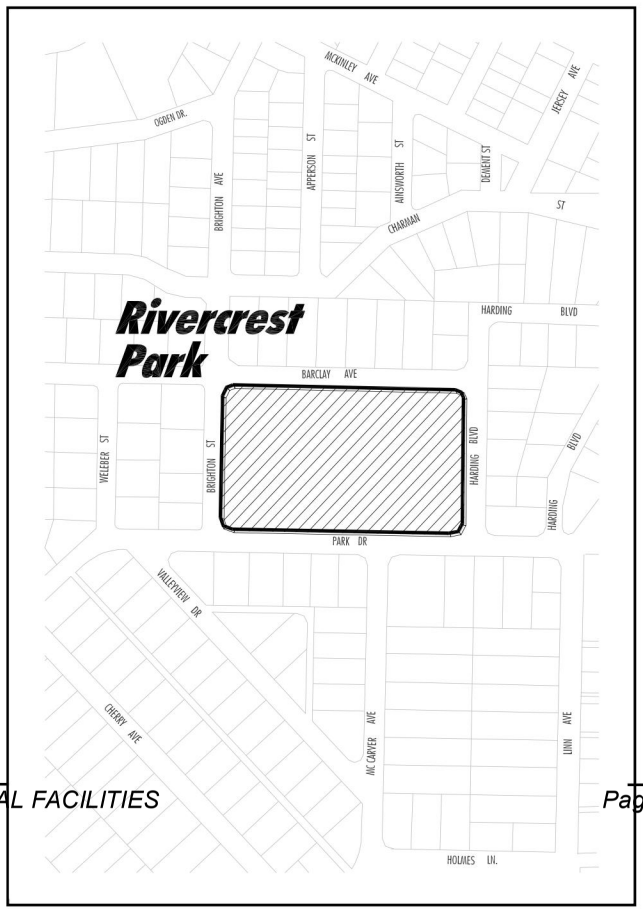
Existing Facilities: Playground, multi-use backstop, wading pool, tennis courts (2), basketball court, open play area, picnic area (9 tables plus 2 BBQ's), picnic shelter, restroom building, horseshoe pits (2), parking area (65 spaces)

Deficiencies: Lack of off-street parking; ADA accessibility; tennis court/basketball court is unfinished

Planned Improvements: Rehabilitate picnic shelter and restroom, upgrade playground equipment; install a court separation fence, signage and picnic tables; tree/landscape evaluation

Comments: This site is sometimes referred to as a community park, due to its community-wide use. However, because of the size and the facilities it contains, it functions as a neighborhood park. The heavy use of this site is more likely due to the lack of alternative facilities, the mature vegetation and the quality of maintenance rather than its design.

Site Location:



Senior Citizens Park

Location: Clackamas County, lies within Oregon City city limits: located at the corner of 6th Street and Jefferson Street.

Size: 0.20 Acres

Ownership: City of Oregon City

Status: Developed

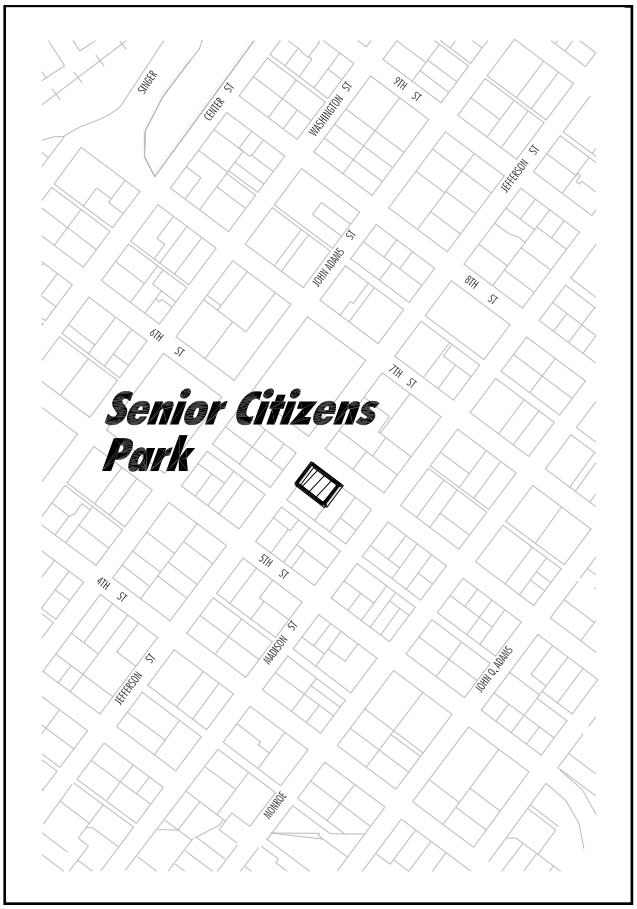
Existing Facilities: Restroom building, open grass area

Deficiencies: Lack of development; ADA accessibility; restroom building is not functional

Planned Improvements: Install signage and picnic tables; tree/landscape evaluation

Comments: This site essentially consists of a single residential lot. Because of its size, it has very little recreational value. Some consideration should be given to disposing of this site.

Site Location:



Shenandoah Park

Location: Clackamas County, within Oregon City city limits; located at the corner of Shenandoah Avenue and Allegheny Drive

Size: 0.70 Acres

Ownership: City of Oregon City

Status: Developed

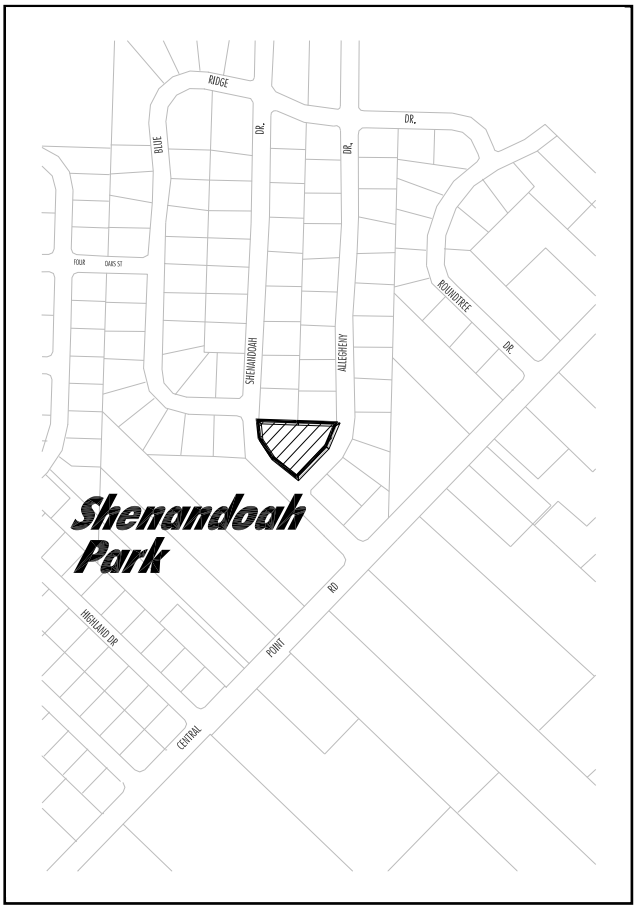
Existing Facilities: Open play area, playground

Deficiencies: Lack of development; ADA accessibility; street improvements

Planned Improvements: Install signage and picnic tables; construct half court basketball; tree/landscape evaluation

Comments: This site is a small park site.

Site Location:



Singer Creek Park

Location: Clackamas County, within Oregon City city limits; located off Linn Avenue

Size: 11.03 Acres

Ownership: City of Oregon City

Status: Developed

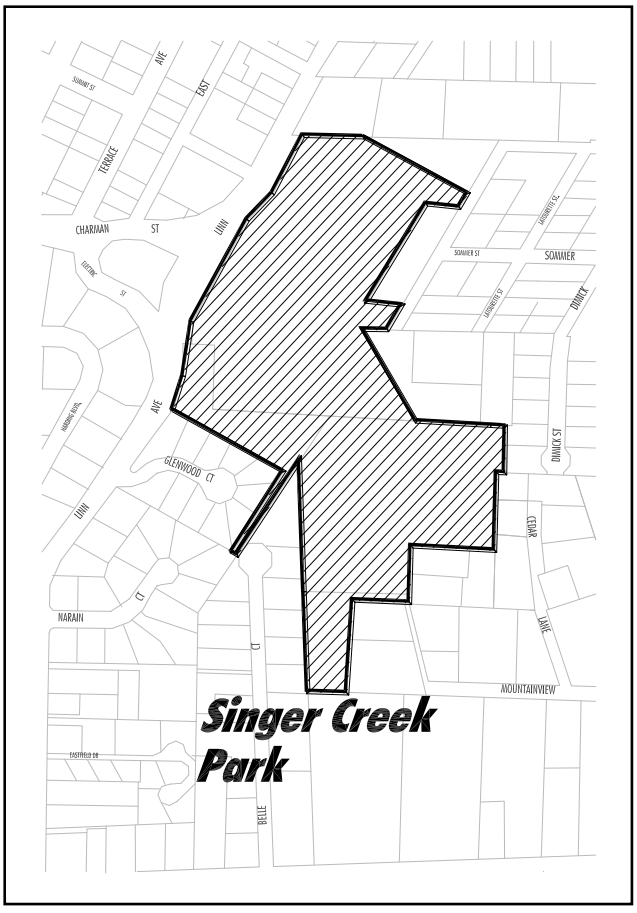
Existing Facilities: Open play area, pathway, natural area

Deficiencies: Lack of access/parking area; ADA accessibility; street improvements

Planned Improvements: Develop regional plan (FY03); resurface pathway; develop parking area and picnic shelter; install signage and picnic tables; tree/landscape evaluation

Comments: The park is located in a nice setting along Singer Creek. Although barely visible from Linn Avenue, the site contains a large meadow that offers a number of opportunities for development.

Site Location:



Sports Craft Landing

Location: Clackamas County, lies within Oregon City city limits: located at the south terminus of Clackamette.

Size: 2.00 Acres

Ownership: City of Oregon City

Status: Developed

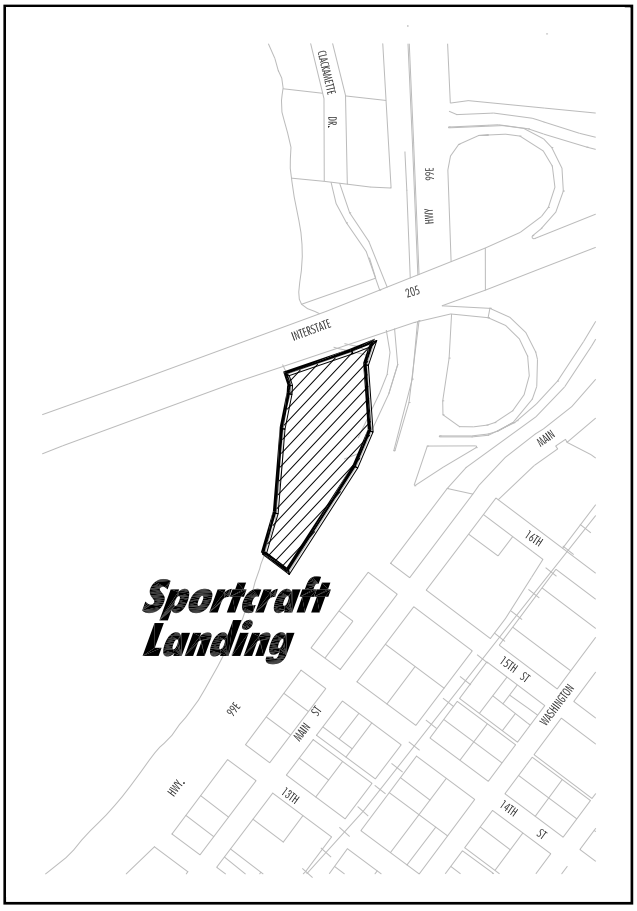
Existing Facilities: Boat launch (2 lanes), trailer parking area (30 spaces lower, 19 spaces above), parking (22 plus 2 handicapped spaces), restroom (portable), benches, pathway

Deficiencies: Permanent restroom facility, parking lot improvements (resurfacing and curbing)

Planned Improvements: Sealcoat parking area, landscape area along Abernethy Creek; install signage and picnic tables; tree/landscape evaluation

Comments: This is the only boat launch in the City that provides direct access to the Willamette River. The Marina and Moorage operation is a private business and is leased.

Site Location:



Stafford Park

Location: Clackamas County, lies within Oregon City city limits; located between Holmes Lane and Mountainview Street.

Size: 2.10 Acres

Ownership: City of Oregon City

Status: Developed

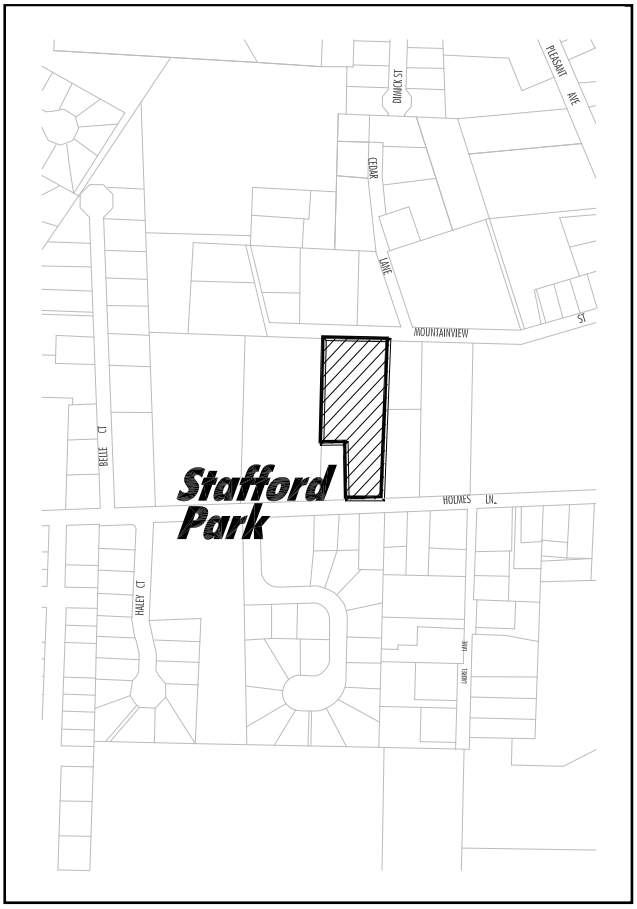
Existing Facilities: Playground area, open play area; picnic area (1 table); parking area (number is undetermined)

Deficiencies: Lack of development; ADA accessibility

Planned Improvements: Install irrigation system (FY00), develop pathway (FY00), and construct sidewalk along Homes (FY00); install drinking fountain, signage, picnic tables; upgrade playground equipment; tree/landscape evaluation

Comments: Some consideration should be given to developing a master plan for this site.

Site Location:



Straight Cemetery

Location: Clackamas County, lies within Oregon City city limits: located off Clackamas River Drive.

Size: 0.40 Acres

Ownership: City of Oregon City

Status: Developed

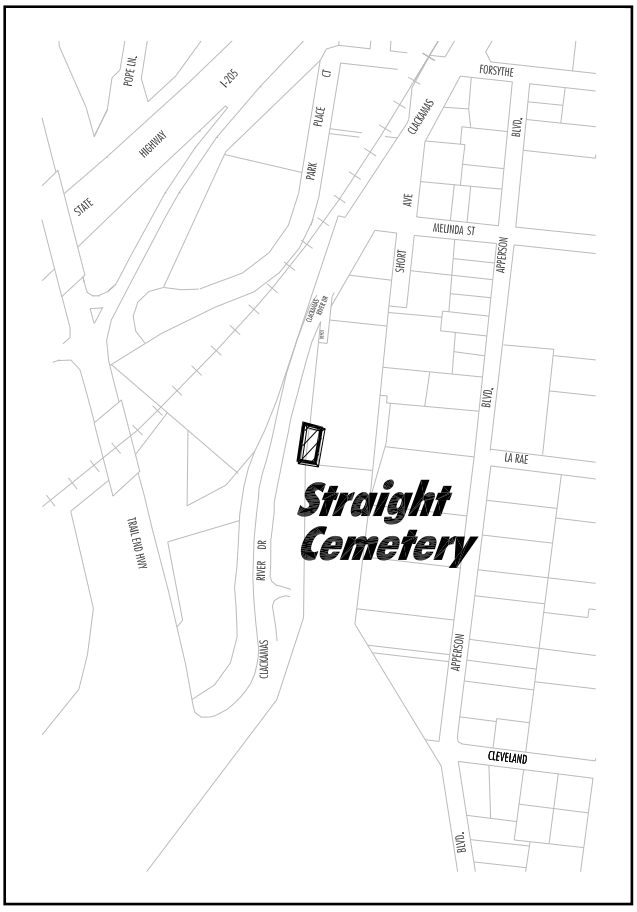
Existing Facilities: Cemetery

Deficiencies: Visibility

Planned Improvements: Tree/landscape evaluation

Comments: This is a small pioneer cemetery located off Clackamas River Drive.

Site Location:



Waterboard Park

Location: Clackamas County, within Oregon City city limits; located west of Waterboard Park Road.

Size: 19.30 Acres

Ownership: City of Oregon City

Status: Developed

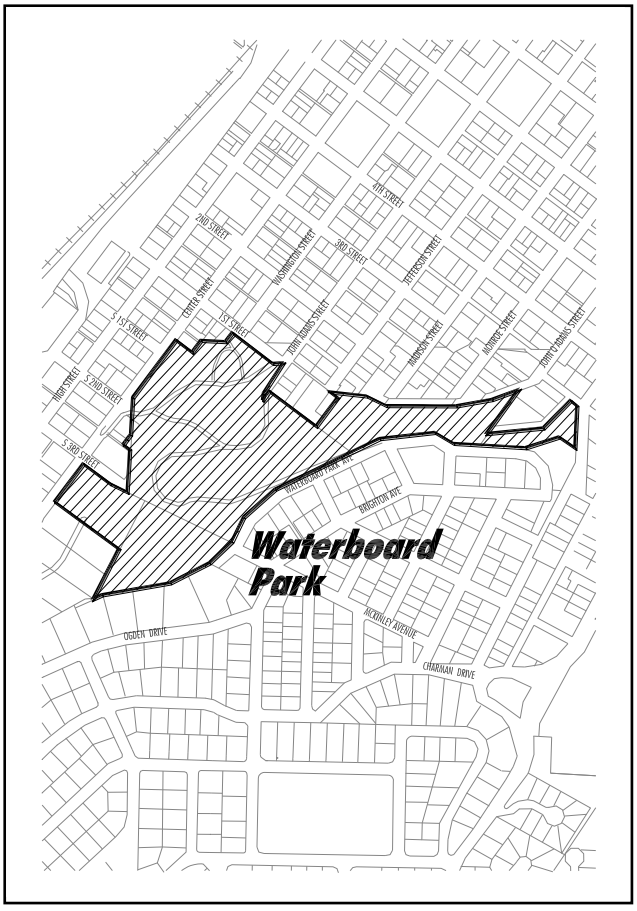
Existing Facilities: Natural area

Deficiencies: Access; ADA accessibility

Planned Improvements: Expand and upgrade trail system; install signage and picnic tables, tree/landscape evaluation

Comments: This site consists of moderate to steep hillsides. This area is subject to severe erosion and landslides.

Site Location:



LOCAL TRAILS

L1 Thimble Creek Trail
L2 Holcomb Ridge Trail
L3 Park Place School Trail
L4 Park Place Park Trail System
L5 Park Place Creek Loop
L6 Park Place Development Trail System
L7 Livesay Creek Trail
L8 Abernethy Creek Trail
L9 Abernethy Creek Extension Trail
L10 Stadium Loop Trail
L11 Barclay Park Connection
L12 Holcomb School Connection
L13 Swan Avenue
L14 Hunter Spur Trail
L15 Waterboard - Singer Creek Connection
L16 Waterboard Rim Trail
L17 Waterboard Park Trail
L18 Center Street
L19 Old Canemah - McLoughlin Connection
L20 Rivercrest Loop Trail
L21 Parks Trail
L22 Hillendale South Trail
L23 Wesley Lynn - Chapin Trail
L24 Newell Creek Canyon Trail System
L25 Chapin - South End Connection
L26 Glacier Court Trail
L27 BPA Powerline Trail
L28 Coffee Creek Trail
L29 Canemah Bluff Trail
L30 Lazy Creek Trail
L31 Finnegan's Trail
L32 Parkland Trail
L33 Powerline Trail
L34 Central Point Trail
L35 King Trail
L36 Clackamette Park/Jon Storm Park Trail

REGIONAL TRAILS

R1 Clackamas River Trail
R2 Newell Creek Canyon Trail
R3 Oregon City Loop Trail
R4 Beaver Lake Trail
R5 Barlow Road Trail
R6 Trolley Trail Bridge
R7 Willamette Greenway Trail

Oregon City Conceptual Trails Map

Existing and Proposed Trails

LEGEND

METRO REGIONAL TRAILS
- EXISTING TRAIL
- PROPOSED TRAIL
- PROPOSED RIVER TRAIL

EXISTING AND PROPOSED TRAILS
- EXISTING COMMUNITY TRAIL
- PROPOSED COMMUNITY TRAIL
- EXISTING LOCAL TRAIL
- PROPOSED LOCAL TRAIL

TRAILHEADS
- EXISTING BOAT LAUNCH
- PROPOSED BOAT LAUNCH
- EXISTING TRAILHEAD
- PROPOSED TRAILHEAD

- URBAN GROWTH BOUNDARY
- OREGON CITY LIMITS
- PARKS
- SCHOOLS
- TRANSIT CENTER

N

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Miles

Source: Metro RLIS Lite (2003)
Oregon City Geographic Information Systems

alta PLANNING + DESIGN

OREGON CITY
TRAILS MASTER PLAN

OCTOBER 2004

alta
PLANNING + DESIGN

OREGON CITY
TRAILS MASTER PLAN

OREGON CITY, OREGON

Prepared for:

City of Oregon City

Prepared by:

Alta Planning + Design
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George Hudson, Principal
Allison Wildman, Planner

In Association With:

Adolfson Associates
Sarah Hartung

OCTOBER 2004

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Larry Potter, Park Operation and Facilities Manager
David Knoll, GIS Coordinator

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Doug Neeley
Marcia Sinclair
Sha Spady
Dean Walch
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Jim Morgan, Metro Parks and Greenspaces
Dennis Muir
Beth Park

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I. Introduction

Plan Overview

Trails offer numerous aesthetic and recreational opportunities, as well as commuter options for traveling to and from destinations in Oregon City. Residents who desire to bicycle or walk to work, go for a family bicycle ride to the park, library, or along the Willamette and Clackamas rivers, or experience an undeveloped natural area will benefit from safe, connecting trails. Trails often help raise property values, provide common space for social interactions, improve overall community safety, and encourage healthy lifestyles. They can also improve over-use conditions in sensitive environmental areas when designed properly.

A high-quality trail system is a marker of a community that is truly great to live, work, and play in. The Oregon City Trails Master Plan (referred to as *the Plan*) uses the term 'trail' to describe shared use paths, multi-use trails, sidewalks, and hiking pedestrian paths designed for non-motorized usage. Sidewalks or paths directly adjacent to roadways are included when they provide a link between trails or between a trail and a destination. Trail users may include but are not limited to: bicyclists, non-motorized scooters, in-line skaters, users of other wheeled devices like Segways or electric assist-bicycles, roller skaters, wheelchair users (both non-motorized and motorized), walkers, runners, and, in some cases, equestrians and non-motorized water activities.

Oregon City has many opportunities to develop a quality trail system. Many of its parks and greenspaces have their own internal trails. Some of them have been formally developed and others have been created by user demand, where people have simply walked and created a path. Many streets in newer developments and older historic core have sidewalks. There are a number of opportunities to create a unique trail system on the Newell Creek Canyon rim and to develop trails as larger plots of land are subdivided into smaller residential areas.

As part of the development of the Plan, project staff analyzed the existing trail system and street network. The Plan recommends improvements that will upgrade the existing system where needed, fill in the missing gaps, and connect to significant environmental features, schools, public facilities, local neighborhoods, and business districts in Oregon City and throughout the region.

This Plan is intended to hold value for the next 50 to 100 years. By taking a long view, it includes projects that may be decades away and are dependent on a series of potentially major changes, which may or may not happen. This long view sets forth the vision, the implementation of which depends on City and resident leadership and support.

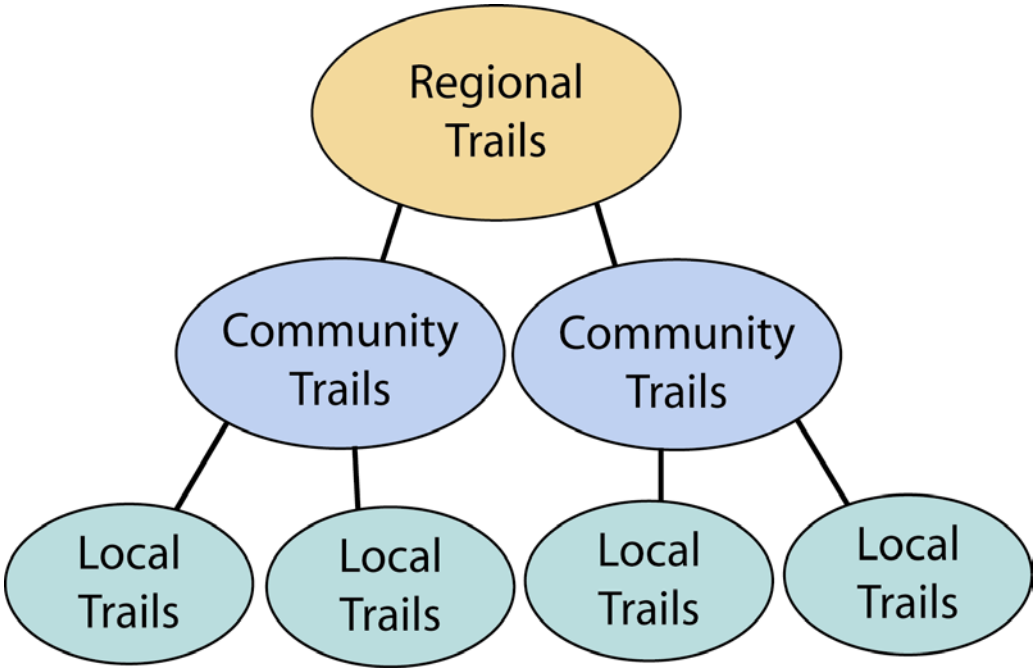


Figure 1. Trail Hierarchy Concept

Vision

The Plan proposes the development of a hierarchical trail system that integrates regional trails, community trails, and local trails (*Figure 1*) in a series of loops. This hierarchical system of trails–explained in more detail in the *Design Guidelines* and *Recommendations* sections–gives community members a wide variety of trail options throughout the city and to other parts of the metropolitan region.

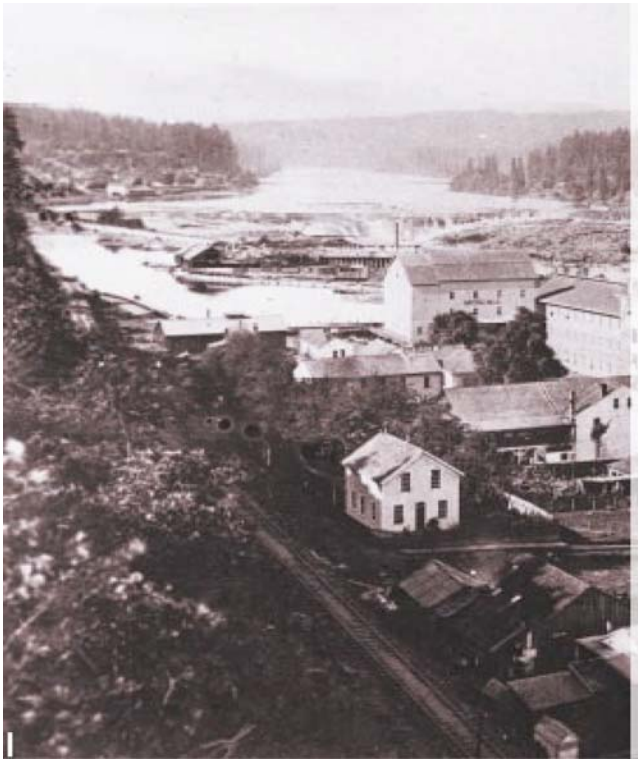
The recommended trail network complements Oregon City's rich indigenous and pioneer history, commerce, and ecology. The trail system will embody these icons of Oregon City as the trails travel along historic pioneer trails and obsolete railways; past rivers that have provided food, water, commerce, transportation and power for many generations; and through the varied ecological zones of the plateau hillside. Trails will connect parks, public facilities, open spaces and natural areas, and community centers to richly enhance Oregon City's quality of life. Additionally, the proposed trail system provides a series of loops so that residents can use trails to travel to work, shop, and recreate.

Emphasizing History

History is an important part of Oregon City and the trail system proposed in this Plan. Many of the existing trails and demand pathways in the area grew out of seasonal hunting and fishing trails, pioneer wagon roads, logging skid roads, abandoned rail lines, wildlife trails accessing water and feeding areas, and along waterways. Before the first hunters and fur trappers arrived in Oregon, the site of Oregon City was the meeting place for a number of native tribes, including the Molallas, Calapooyas, Multnomahs, Teninos, and Chinooks. The natives fished salmon in the waters of the Clackamas and at Willamette Falls (known as Hyas Tyee Tumwater) and traded with one another. In 1815, white settlers came to the area and recognized the potential power generated by the falls. The area became known as Willamette Falls.

Oregon City was settled in 1829 as part of the Hudson Bay Company (HBC) by Dr. John McLoughlin. Oregon became part of U.S. Territory in 1849 and a state in 1859. McLoughlin bought out HBC's claim and platted the lower portion of Oregon City in 1847. Today, Oregon City is recognized as the oldest incorporated city west of the Mississippi.

Oregon City was the official end of the Oregon Trail, a 2000-mile pioneer wagon route forged from Missouri in the 1840's by the prospect of free land and opportunity, because it was the site of the American Provisional Government; anyone who wanted to claim their land had to first visit the claims office. The Barlow Road was the final overland segment of the Trail, linking The Dalles to



"There are here three falls on a line of rocks extending across the river, which forms the bed of the upper channel. The water is precipitated through deep abrazed gorges, and falls perhaps forty feet at an angle of about twenty degrees. It was a beautiful sight when viewed from a distance, but it became grand and almost sublime as we approached it nearer. I mounted the rocks and stood over the highest fall, and although the roar of the cataract was almost deafening, and the rays of the bright sun reflected from the white and glittering foam threatened to deprive me of sight, yet I became so absorbed in the contemplation of the scene, and the reflections which were involuntarily excited, as to forget every thing else for the time, and was only aroused by Captain W[yeth] tapping me on the shoulder, and telling me that every thing was arranged for our return."

John Townsend, a scientist who canoed up the Willamette River in 1834, looking at Hyas Tyee Tumwater (Willamette Falls)

Oregon City over the southern flanks of Mount Hood. Most of the road has been relocated, removed, or paved over with more modern facilities west of the Cascades, though wagon ruts are still visible in eastern Oregon. Abernethy Green (site of the End of the Oregon Trail Interpretive Center) was a flat area east of the river where pioneers could temporarily accommodate their wagons and oxen until they received their land claim. Oregon City claims a number of firsts in the state of Oregon and all areas west of the Rocky Mountains including the first newspaper, location of the first Oregon capital for Provisional and Territorial governments, library, debate society, and jail.

It is important to recognize the history of Oregon City in the city's trail system. First, it provides a logical framework for trail corridors and destinations. The Barlow Road, Abernethy Green, Canemah, historic sites in the downtown core, native fishing, hunting, and trading trails, and the Willamette River were all existing travel corridors and destinations at one time and provide numerous trail opportunities. Secondly, residents of Oregon City respect and take pride in their historical roots. The historical theme is one that can be integrated with the trail system to develop a unique trail experience. Lastly, the trail system can help preserve the history of Oregon City. As the city continues to grow and develop, pieces of history are lost under new buildings and parking lots. A heritage trail system can help preserve the rich history and unearth buried pieces of the past. A network of heritage trails on city sidewalk and other paths should be developed to link these resources and the neighborhoods of Oregon City. The Clackamas Heritage Partners should play a role in developing this network, which can be used as an important part of the cities economic development strategy.

Creating Community

The proposed trail system in the Plan will also help deepen residents' understanding of Oregon City's history and culture, promote and offer healthy recreation, transportation, and community-gathering options, boost regional economic growth, and improve community safety.

Encouraging Environmental Stewardship

The proposed trail system has a significant number of earthen trails for hiking and, in some cases, bicycling and horse riding. These trails offer excellent opportunities to provide interpretive education and enhance residents' appreciation of the Willamette and Clackamas rivers, Newell Creek Canyon, Canemah Bluff, and other natural resources. The trail system also provides educational opportunities for people of all ages, so that residents and visitors can discover and appreciate the area's rich beauty, both now and into the future.

Plan Scope and Public Involvement

The Plan followed a series of research, field, and public process activities from late Fall 2003 to late Spring 2004.

Research activities included:

- Assessment of existing bicycling and walking conditions and facilities in Oregon City.
- Evaluation of bicycle and pedestrian needs, such as safety problems, demographic and geographic population and employment demands, and facility deficiencies.
- Field assessment of missing gaps, system deficiencies, and trail opportunities.

Examining frog habitat in Newell Creek Canyon

Public outreach activities included:

- Four meetings with the Oregon City Technical Advisory Committee, a group with six group representatives (see inside cover.)
- A Visioning Workshop including 15 stakeholders (see inside cover).
- Information in *The Oregonian, Oregon City News* and on the City's website.
- Two public open houses (3/04 and 5/04).
- Meetings with Park Place Neighborhood Association and development consultant.
- Meeting(s) with Canemah residents.

Gathering information from knowledgeable residents

Related Plans and Background Documents

A few adopted planning processes have helped guide the vision and development of the Oregon City Trails Master Plan. Below are summaries of the plans and their relevant goals, objectives, and policies:

City of Oregon City Transportation System Plan (2001)

The Oregon City Transportation System Plan (TSP) reviews the existing conditions of the transportation system, and provides a framework for transportation improvements in the future. The TSP recognizes the importance of multi-modal travel options and strives to improve the bicycle and pedestrian environment over time. The following statements reflect transportation policy goals and objectives from the TSP and the pedestrian system plan:

> "Develop and maintain a transportation system that incorporates, provides for, and encourages a variety of multi-modal travel options to meet the mobility needs of all Oregon City residents."
>
> "Provide an interconnected and accessible pedestrian system that links residential areas, major pedestrian generators, employment centers, and the arterial and collector roadway network with one another."
>
> "Provide a well-defined and accessible bicycle network that links residential areas, major bicycle generators, employment centers, and the arterial and collector roadway network with one another."
>
> "Ensure the adequacy of pedestrian and bicycle connections to local, county, and regional trails."
>
> "Improve the safety of vehicular, rail, bicycle, and pedestrian crossings."
>
> "The most important existing pedestrian system needs in the City of Oregon City, as prioritized by the citizens, city staff, and advisory committees involved in the planning process, is the provision of sidewalks on arterials and collectors that provide connectivity to key activity centers (especially schools and transit facilities)."
>
> "Pedestrian amenities such as curb extensions (to reduce the exposed crossing distance that pedestrians must walk), street planters, streetlights (to improve the visibility of pedestrians at night), and wide sidewalks all act as buffers and improve the safety of pedestrians throughout the city."

Oregon City Waterfront Master Plan (2002)

The Oregon City Waterfront Master Plan presents a vision for the Willamette and Clackamas River waterfronts and how they tie into the historic downtown. The Plan includes several proposed trails that connect under and along Highway 99/McLoughlin Blvd and Interstate 205, and to the End of the Trail Interpretive Center.

> "A waterfront trail system will link Clackamette Park to downtown to the south and the restored habitats of Clackamette Cove to the east."

"Primary connections noted by the plan include the enhancement of 17th Street or other viable connections crossing the railroad tracks to promote circulation of tourists and visitors, and exploration of opportunities for pedestrian connections at the new passenger rail depot. In addition, the extension of a trail system north from the restored Clackamette Cove would complete pedestrian connections to the openspaces of Gladstone via the pedestrian river crossing on the Clackamas."

Oregon City Downtown Community Plan (1999)

This Plan provides a vision for the future of the historic waterfront downtown of Oregon City. It provides design guidelines and new code language to protect and enhance the historic core. The Plan also lays out recommendations for better pedestrian facilities on McLoughlin Boulevard and guidelines to promote pedestrian-friendly development.

Oregon City Parks and Recreation Master Plan (1999)

The Parks and Recreation Master Plan provided a starting point for the Trails Master Plan by identifying several conceptual trail corridors in the plan.

Goals and Objectives

The Oregon City Trails Master Plan aims to develop a comprehensive network of multi-purpose trails that link important pedestrian generators, environmental features, historic landmarks, public facilities, Town Centers, and businesses districts. The following goals were derived from existing plans and input from Technical Advisory Committee members, Workshop participants, and citizens of Oregon City.

Goal 1: Trail Development and Regional Connections

Provide a trail system around Oregon City to seamlessly connect regionally significant trails with local trails and ensure that new development and subdivisions connect to this system. Establish and enhance regional trail connections to the adjacent communities of Gladstone, West Linn, unincorporated Clackamas County and the greater Portland metropolitan region.

Goal 2: Access

Develop a trail system for people of all abilities, pedestrians, bicyclists, equestrians, boaters, and other non-motorized trail users. Create a complementary system of on-road bicycle routes for commuter, recreational, and touring enthusiasts using scenic, collector, and local road rights-of-way and alignments through Oregon City and the surrounding unincorporated areas.

Goal 3: Transit Synergy

Ensure that the trail system connects with current and future planned transit operations in Oregon City, and is designed to be complementary with transit and transportation systems.

Goal 4: Community Linkages

Link trails to residential neighborhoods, community facilities like the library and city hall, parks, schools, athletic facilities, swimming pools, historic districts, the downtown, as well as other commercial and retail activity centers in Oregon City. Provide heritage trails that link the cities historic, scenic and geologic resources.

Goal 5: Amenities

Locate trailheads at or in conjunction with park sites, schools, and other community facilities to increase local access to the trail system and reduce duplication of supporting improvements. Furnish trail systems with trailhead improvements that include interpretive and directional signage systems, benches, drinking fountains, restrooms, parking and staging areas, and other services.

Goal 6: Maintenance and Emergency Access

Develop trail design and development standards that are easy to maintain and access by maintenance, security, and emergency vehicles.

Goal 7: Preservation

- Provide trail access to and preserve view corridors and viewsheds at vantage points.
- Preserve existing public rights-of-way and other easements for future trails and accessways, particularly powerline and utility corridors.
- Preserve sensitive natural areas by designing and planning trails so that the natural area can be experienced without impacting or degrading the environment.

II. Design Guidelines

Plan Concept

The Trails Master Plan uses the trail hierarchy concept (*Figure 1, on page 2*) to create a series of interconnected loops throughout the city (*Figure 2*). This concept enables trail users to connect to most destinations on a variety of trails; from earthen walking trails to sidewalks and bicycle lanes to paved shared use paths. The loop concept also allows recreational trail users to create personal loops, depending on how long or far they wish to travel.

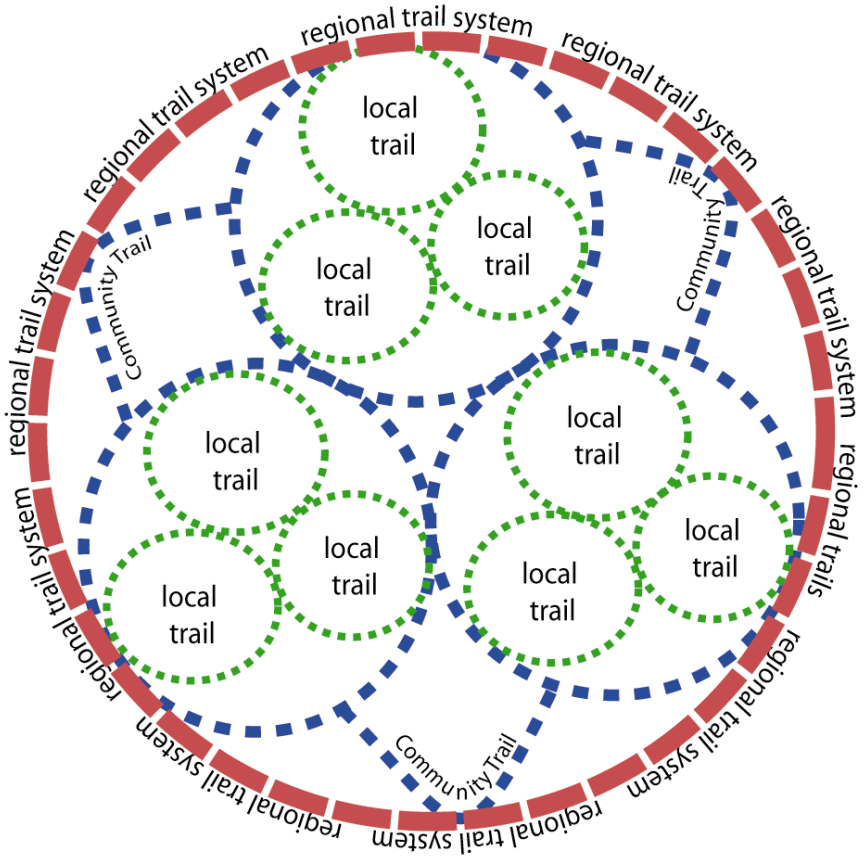


Figure 2. Oregon City Trail Loop Concept

The Oregon City Loop Trail

Most of the regional trails planned by Metro take advantage of established rights-of-way, like historic interurban train lines, utility corridors, waterways and greenways, providing a continuous, off-street travel experience.

The Oregon City Loop Trail in part utilizes an old Willamette Valley Southern Railway line that carried passengers and wood products through Newell Creek Canyon to Molalla and Mount Angel from 1915 to 1938.

Southern portions of the Oregon City Loop Trail take on a different character as it travels around Oregon City through parks, future subdivisions, and on local roadways.

Douglas Fir trees have grown on the edges of the railroad berm in Newell Creek Canyon

Meyers Road would be an important segment for the southern portion of the Oregon City Loop Trail

Regional Trails

Regional trails connect Oregon City to adjacent communities – Gladstone, West Linn, unincorporated Clackamas County, and the greater Portland metropolitan region – and to regionally significant features such as the Willamette and Clackamas Rivers, Beaver Lake, and the historic Barlow Road. There are five planned regional trails and one existing regional trail in the Oregon City area. The following proposed trails are in Metro's Regional Transportation Plan (RTP) and are eligible for regional funding.

- **Oregon City Loop Trail**, which would create a loop around Oregon City, utilizing the east side of the Newell Creek Canyon and linking to the Beaver Lake Trail.
- **Beaver Lake Trail**, as part of the Oregon City Loop Trail, would begin at the End of the Oregon Trail Center and travel on the east side of Newell Creek Canyon to Beaver Lake.
- **Oregon Trail-Barlow Road Trail**, which would roughly follow the pioneer wagon trail created by Sam Barlow from the End of the Oregon Trail Center to the Cascades.
- **Willamette Greenway Trail,** which would follow the Willamette River from Clackamette Park in Oregon City to Canby.
- **Trolley Trail Bridge**, which crosses the Clackamas River from Gladstone.
- **Clackamas River Water Trail**, where amenities like boat ramps, interpretation sites, and information would be provided for non-motorized boat users.

The **I-205 Corridor Trail**, which is a major north-south connection for non-motorized users, is the only existing regional trail in the city. The I-205 Corridor Trail ends on the Oregon City Bridge and utilizes existing roadways, pathways, and sidewalks through Oregon City.

Regional trails generally have their own right-of-way. Users should have minimal conflict with automobile traffic. These trails must be designed to meet the Americans with Disabilities Act (ADA) standards, American Association of State Highway and Transportation Officials (AASHTO) and the Manual on Uniform

Traffic Control Devices (MUTCD) standards, Oregon Department of Transportation (ODOT) standards and other State and Federal guidelines. Regional trails serve bicyclists, pedestrians, wheelchair users, skaters, and others.

Community Trails

Community trails link important Oregon City land uses and areas of interest, including retail areas, schools, parks, transit centers, churches, employment districts, libraries, and other desirable areas. They also connect users to adjacent communities and the regional trail system.

The designs of community trails vary according to the functional classification of the facility as well as the average daily traffic (ADT) on the adjacent roadway. Most community trails in Oregon City are either off-street shared use paths or separate facilities (i.e., a sidewalk or pathway for pedestrians and on-street bike lanes for bicyclists) that meet State and Federal standards. Safety for bicyclists and pedestrians on these routes is paramount, as they often parallel or intersect busy roadways. However, some community trails follow neighborhood streets, in which case pedestrians are accommodated with a sidewalk or shared use path and bicyclists share the roadway with vehicles. The majority of community trails are on arterial and collector streets and will be implemented when the roadway is widened or improved.

Local Trails

Local trails primarily serve pedestrians with safe and direct connections to and within local features, such as schools, parks, natural areas, waterways, and community centers. Some local trails may also be appropriate for bicycling, skating, and equestrians. There are three categories of local trails: City Trails, Natural Trails and Accessways.

City Trails

City trails are typically paved or made of a smooth surface to accommodate most trail users. These trails are typically found in developed parks and recreational areas, like Hillendale Park and Singer Creek Park. Some city trails may not be able to maintain a 5% grade to accommodate disabled users due to topographical constraints (steep grades, constrained widths, etc.). At least one trail in the park should be constructed to ADA standards to provide for all trail users.

Natural Trails

Natural trails are soft-surface trails typically found in undeveloped parks and natural areas and aim to provide a natural outdoor experience. These trails are usually for pedestrians only, but some trails could be open to mountain bikes and/or equestrians. Most of the trails in Newell Creek Canyon and on Canemah Bluff will be of this variety.

Oregon City accessway

Accessways

Accessways are specifically defined by Oregon City code (OCC §12.24.020) as being "any off-street path or way which is intended for the primary use of pedestrians and bicyclists and which provides direct routes between residential areas, retail and office areas, institutional facilities, industrial parks, transit streets, neighborhood activity centers, and transit oriented developments where such routes are not otherwise provided by the street system." These routes are intended to provide safe, direct, and convenient connections to reduce out-of-direction travel and make walking and bicycling easier.

Wooden stairway
(photo: Metro)

Accessways can also be unique. They can be stairs, an elevator, bridge, alley or passage connecting gardens, courtyards, or other urban spaces. Oregon City has a number of opportunities to use different types of accessways, particularly in the historic downtown area and to connect the various levels of the city.

Waterway Trails

Waterway trails are water corridors dedicated to no wake water activities augmented with special features, like small craft boat ramps, interpretive areas, and public beach sites for camping and picnicking. The intent of the water trail is to create awareness, preserve public access to the waterway, and provide a natural experience.

Trail Design Types

The following table provides a quick reference chart for the various types of trails and the accepted standards.

	Regional Trail	Community Trail		Local Trail			
		On-street	Off-street	City Trail	Natural Trail	Accessway	
Facility Type	Shared use path	Sidewalk/pathway Bicycle lane Shared roadway	Shared use path	Shared use path	Soft surface trail	Shared use path	Stairs, elevator, incline, bridge, alley, etc.
Users	bicyclists pedestrians wheelchairs baby strollers equestrians skaters	bicyclists pedestrians wheelchairs baby strollers skaters	bicyclists pedestrians wheelchairs baby strollers equestrians skaters*	bicyclists pedestrians wheelchairs*** baby strollers equestrians skaters****	bicyclists** pedestrians equestrians	bicyclists pedestrians wheelchairs baby strollers equestrians skaters	depends on facility type
Width	10' - 12' 2' soft shoulders	5' - 12' sidewalk 5' - 6' bicycle lanes	8' - 12'	6' - 12'	2' - 12'	7' 4' shoulders 5' in greenways	depends on facility type
Surface	Paved or other smooth-rolling surface to accommodate all trail users	Concrete Asphalt	Paved or other smooth-rolling surface to accommodate all trail users	Paved or other smooth-rolling surface to accommodate all trail users	Earth, gravel, wood shavers, or other soft surface material	Concrete Gravel in greenways	depends on facility type

* Depends upon chosen trail surface -- inline skates and skateboards will not roll well on surfaces other than asphalt or concrete.
** Mountain bikes, if allowed.
*** Paved park trails may still be too steep to safely accommodate wheelchair and other disabled users.
**** Depends upon chosen trail surface -- inline skates and skateboards will not roll well on surfaces other than asphalt or concrete.

Table 1. Trail Design Types and Standards

Trail Designs

The following cross sections illustrate standard treatments for the primary trail design opportunities in Oregon City. There are also a few innovative designs, like swales (shallow, wide depressions adjacent to roadways and trails that collect stormwater runoff) and other "green street" concepts, that can be used in some situations. This section should be supplemented with other trail design documents, including ODOT's Bicycle and Pedestrian Master Plan, Metro's "Green Trails: Guidelines for Building Environmentally Friendly Trails," AASHTO, and the MUTCD.

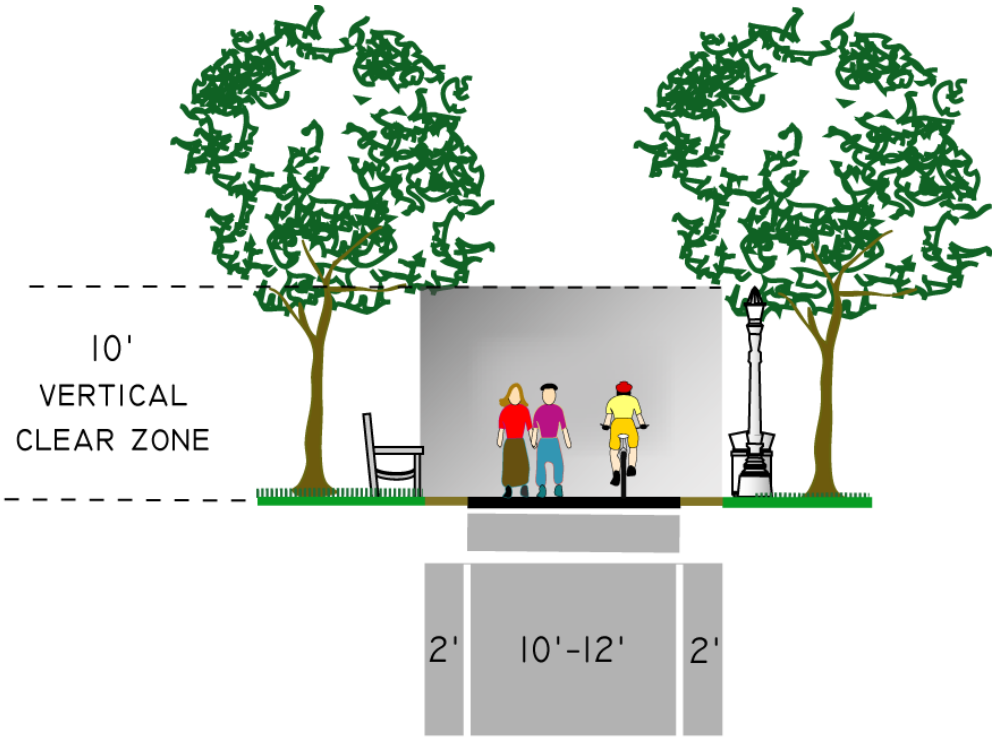


Figure 3. Regional Trail

Regional Trail

Figure 3 illustrates a typical shared use path design that is appropriate for regional trails and some community trails. This trail is designed to accommodate two-way bicycle and pedestrian traffic, typically has its own right-of-way, and can accommodate maintenance and emergency vehicles. This type of trail is typically paved (asphalt or concrete) but can also be a surface that provides a smooth surface, as long as it meets ADA requirements. Wider soft shoulders should be provided for equestrians and runner/joggers if space allows.

Community Trail: High Volume Roadways

On roadways with 3,000 or more vehicles a day, bicycle lanes should be used to improve bicyclist safety and comfort. A buffer or curb must separate the shared use path or sidewalk from the roadway for pedestrian safety. The width of the bicycle lane, buffer, and sidewalk or path should appropriately reflect the volume and speed of the vehicles using the roadway. Roadways with higher traffic volumes and speeds should have wider bicycle and pedestrian facilities or greater separation.

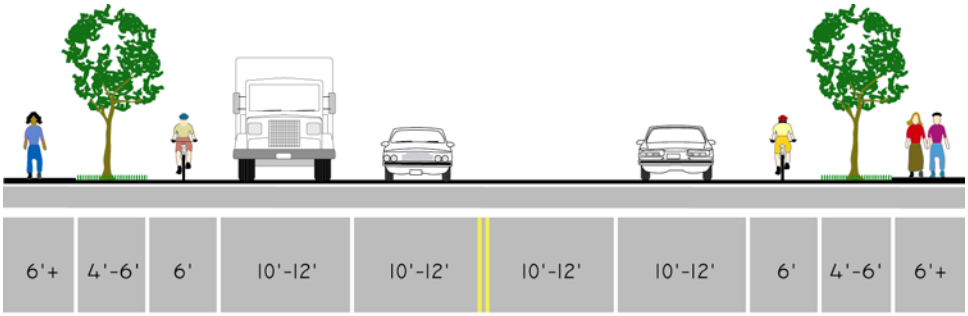


Figure 4. Community Trail on a High-Volume, High-Speed Roadway

Figure 4 illustrates typical bicycle and pedestrian trail accommodation in urbanized areas. The width of the sidewalk should depend on anticipated use; more users warrant a wider walkway. Sidewalks should be a minimum of 6' with a 4' minimum planter or 6' minimum tree well. Bicycle lanes should be 5' to 6'; 4' minimum is allowed under certain circumstances.

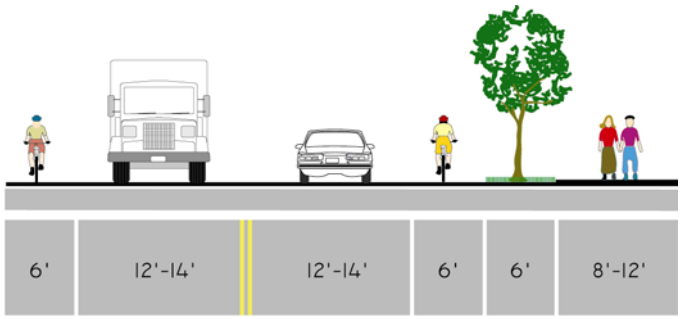


Figure 5. Community Trail Option 1 (Shared Use Path with Bike Lanes) on a High-Volume, High-Speed Roadway

Some arterials and major collectors can accommodate a shared use path on one side of the roadway and on-street bicycle lanes for commuter bicyclists (*Figure 5*). The shared use path provides a comfortable walking space for pedestrians and enables children and recreational bicyclists to ride without the discomfort of riding in a busy street. This configuration works best along roadways with limited driveway crossings and with services primarily located on one side of the roadway.

Sometimes a shared use path can provide trail accommodation on high-volume, high speed roadways (*Figure 6*). This type of trail works best in corridors where there are limited driveway/intersection crossings and few desirable destinations on the side of the roadway without the trail, like along Highway 213 or along local roadways with access management and minimal driveway use. The trail should be at least 8' wide (preferable 12') with a 6' or greater vegetated buffer.

Note: This treatment should be used only after a detailed analysis of the corridor has been conducted by a registered engineer. Driveway/uncontrolled intersection crossings should not exceed 4 for each quarter-mile.

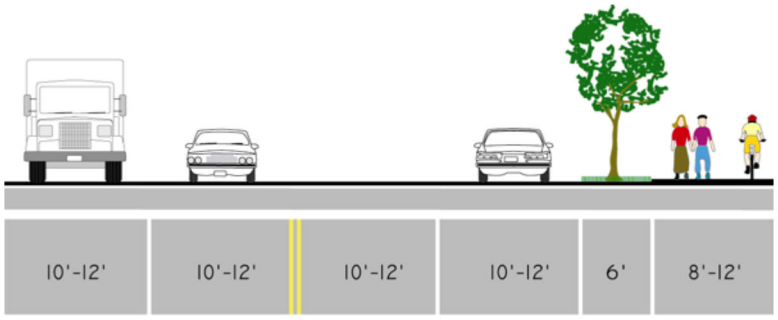


Figure 6. Community Trail Option 2 (Shared Use Path) on a High-Volume, High Speed Roadway

Community Trail: Moderate Volume Roadways

Some urban roadways can accommodate bicyclists with a wide outside travel lane if there is no shoulder or insufficient space for a bicycle lane. The lane should be wider on roadways with steep grades where bicyclists need more maneuvering space. If space is constrained, the wider lane should be provided on the uphill side of the roadway.

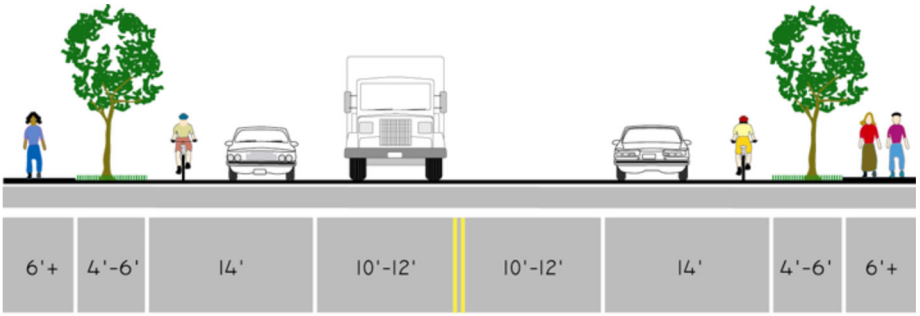


Figure 7. Community Trail (wide outside lanes) and a Sidewalk

Community Trail: Low Volume Roadways

On a low volume, low speed roadway (i.e., residential or neighborhood streets), many bicyclists can safely share the road with vehicles. Pedestrians should be separated from the roadway with a buffer or a curb. A curb must be present if there is insufficient space for a buffer. The width of the sidewalk or trail should depend on the traffic volume and speeds of the adjacent roadway.

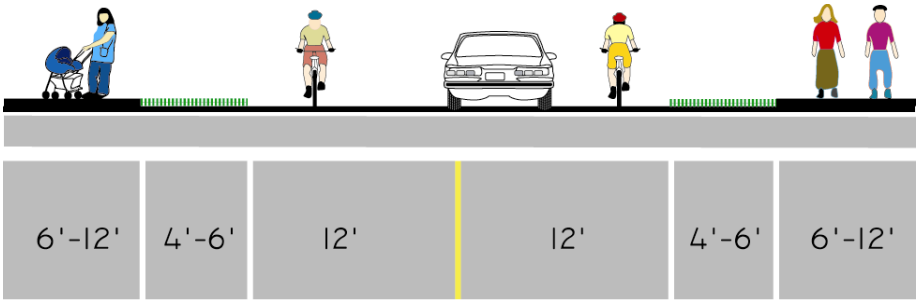


Figure 8. Community Trail on a Low Volume, Low Speed Roadway

Local Trail: City Trail

City trails provide access for most, if not all, trail users within neighborhoods, parks, greenspaces, and other recreational areas. They are similar to regional trails in that they typically have their own right-of-way and serve only non-motorized users. These trails should be at least 6' wide and at least 8' wide if bicycle use is anticipated. All efforts should be made so that at least one ADA accessible trail is available and serves the most desirable parts of the area (i.e., picnic areas, viewpoints, playground equipment, etc.)

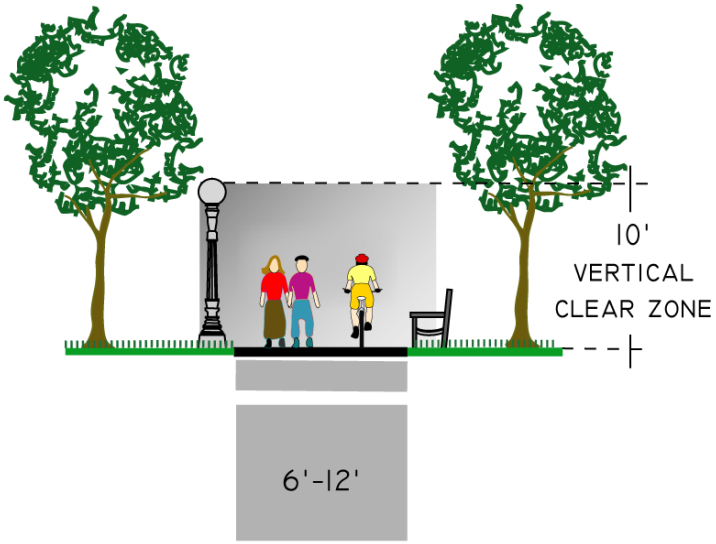


Figure 9. Paved City Trail

Local Trail: Natural Trail

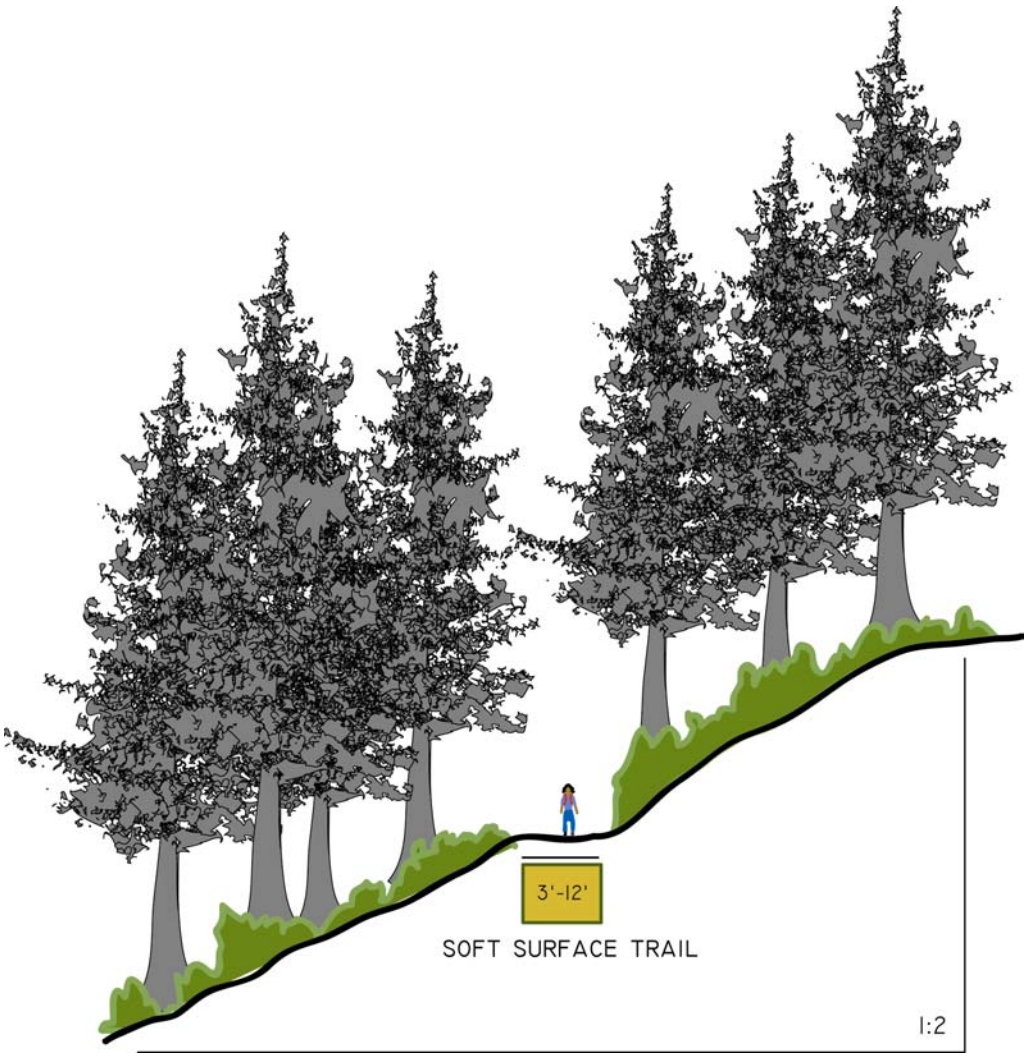


Figure 10. Natural Trail

Natural trails are usually considered when a trail is desired next to a natural resource. Trail width will vary depending on the existing topographic and environmental conditions. Natural trails should take into account issues like drainage, erosion, compaction/impaction from anticipated use, presence of waterways and sensitive riparian areas, habitat areas, environmental guidelines, such as "Green Trails" Guidelines for Environmentally Friendly Trails" by Metro, and regulations, like Oregon City's code for trails in water quality resource areas.

Trail width will depend on intended users. For example, narrower widths should be used in environmentally constrained areas with only hiking uses intended. Wider widths are desirable for shared bicycle and/or equestrian use. Areas with natural trails (i.e., natural parks and greenspaces) should have a complimentary accessible route that meets or exceeds ADA standards in addition to the natural trails.

Local Trail: Accessway

Accessways provide direct connections for trail users to schools, parks, community centers, retail areas, neighborhoods, and other trails. They are intended to be short, direct connections to reduce unnecessary out-of-direction travel for bicyclists and pedestrians. Oregon City Code (§12.24.040) requires accessways to have a 15' right-of-way with a centered 7' wide paved surface and two 4' planter strips. The City encourages the use of pervious surface materials, like pervious concrete and interlocking pavers. The accessway should not exceed 5% slope to accommodate all users. Accessways in parks, greenways, or other natural resource areas may have a 5' wide gravel path with wooden, brick or concrete edgings.

Figure 11. Bicycle and Pedestrian Accessway

Innovative Accessways

There are also other innovative ways to provide direct access, particularly in topographically constrained areas (i.e., on steep hills, over waterways, etc.) Stairs, alleyways, bridges, and elevators can provide quick and direct connections throughout the city and can be designed so they are safe, inviting, and accessible to most trail users. For example, stairways can have wheel gutters so that bicyclists can easily roll their bicycles up and down the incline and boardwalks can provide access through sensitive wet areas and across small waterways.

Bicycle wheel gutters on stairs

Boardwalk bridge

Innovative Roadside Trail Treatments

Filter strips and bio-swales are innovative ways to retain and treat stormwater from impervious surfaces and work well with roadside trails. The design guidelines for filter strips and swales are similar; both methods use grassy vegetation or aggregate to remove sediment from stormwater runoff. Use of filter strips and swales can be limited in retrofit situations due to slope, soil, and right-of-way conditions. Existing underground utility conflicts may increase cost and complexity.

Filter Strips

Filter strips *(Figures 12 and 13)* are gently sloped grassy and aggregate areas that are used to treat small quantities of sheet flow runoff. They are often used to pretreat stormwater flow of minimal depth (.5 inches) as it passes from an impervious area, like a parking lot or roadway, into a swale or infiltration area. Sidewalk width illustrated is a minimum.

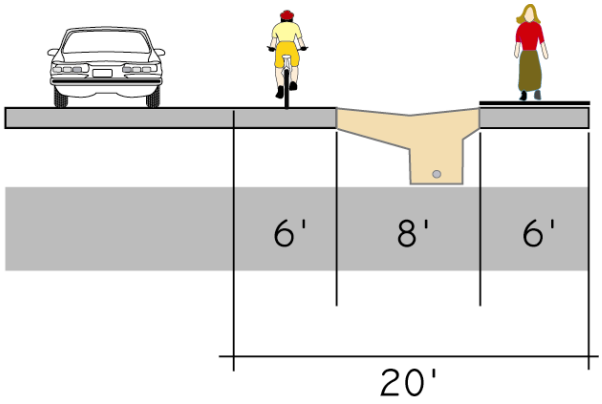


Figure 12. Aggregate Filter Strip

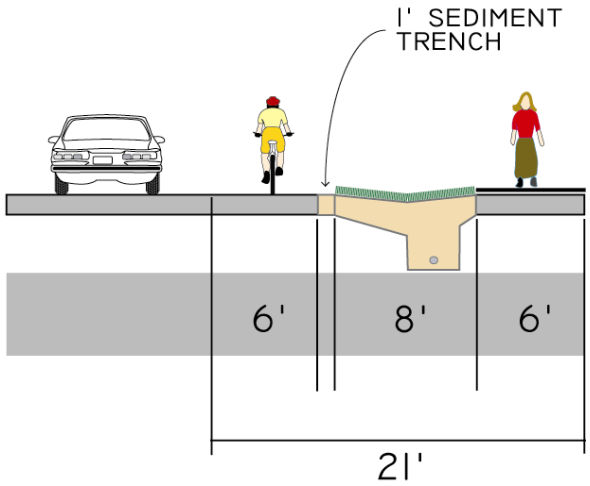


Figure 13. Grass Filter Strip

Swales

Swales (*Figure 14*) are shallow, wide depressions adjacent to roadways and trails that collect stormwater runoff over vegetation to slowly settle sediments and particulate matter. The pollutants are filtered out, settled, or removed by plants, causing fewer pollutants to enter ecologically sensitive water bodies. For more information and further design guidelines for swales and other Green Street concepts, consult Metro's "Green Streets" guidebook.

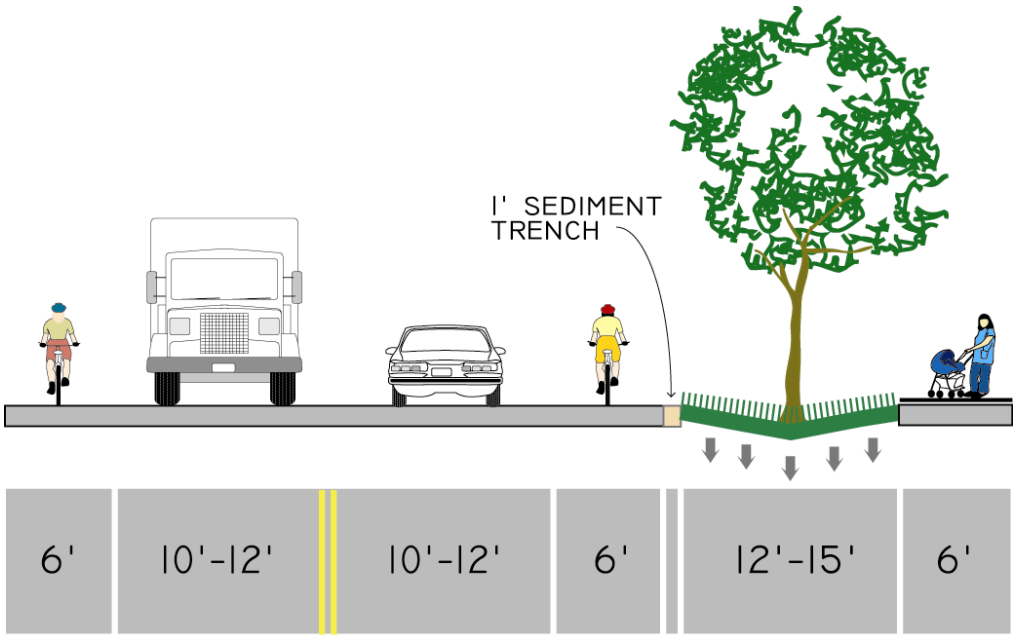


Figure 14. Bio-Swale

Bio-Swale

Bio-Swale Guidelines (Metro, "Green Streets")	
Optimal Length	200-250 ft
Slope of sides (optimal)	1% - 2%
Slope of sides (minimum, maximum)	1%, 6%
Optimal water depth	3 inches
Optimal width	12 ft

Trails and Environmental Regulation/Permitting

City of Oregon City

Water Quality Resource Areas

The City of Oregon City regulates development in Water Quality Resource Areas (WQRAs) that are delineated in the Oregon City Local Wetland Inventory (LWI), and on the Water Quality and Flood Management Areas Map. The general locations of streams, riparian areas and wetlands were verified in the field as part of the LWI, but the precise boundaries of WQRAs would need to be field delineated, flagged and surveyed prior to trail construction. Water Quality Resource Areas include the protected water feature (e.g. stream, wetland) and the associated vegetated corridor. The width of the vegetated corridor around the water resource depends on slope or designation as an anadromous fish-bearing stream (Ch. 17.49.050). WQRAs with steep slopes have a wider protected corridor than streams with more moderate or no slopes. The vegetated corridor is measured as the horizontal distance from either the two-year flood elevation or from one foot above (vertically) the Ordinary High Water Mark (a distinct mark in the soil or vegetation from normal water action).

Streams considered anadromous fish-bearing streams have a 200-foot vegetated corridor. The City relies on information from the Oregon Department of Fish and Wildlife (ODFW) for determining which streams are anadromous fish-bearing streams.

Trails in Water Quality Resource Areas

Proposed walkways and shared use paths are considered provisional uses within Water Quality Resource Areas and are subject to the application and development standards of Ch. 17.49.050 G and H(5). In general, setbacks will be required for trail development to protect the integrity of the water resource. Walkways and bike paths, either earthen or paved, should not be within 10 feet of the protected water feature. Where practicable, no more than 50 percent of earthen trails and no more than 25 percent of paved trails should occur between 30 and 10 feet of the protected water feature. A maximum trail width of 12 feet is recommended.

As an important note, the Oregon City Trails Master Plan process allows flexibility in the design and location of trails in situations where development criteria cannot be met. This should be kept in mind for areas where setback requirements or other criteria are difficult to achieve.

Grading and Clearing

Any grading or clearing within the Water Quality Resource Area will require mitigation. Mitigation for paved trails in WQRAs will likely require mitigation at a 1:1 ratio. For example, if a paved trail removes 50 square feet of vegetation, then 50 square feet must be added to the vegetated corridor. The City of Oregon City is open to considering "pre-mitigation" - mitigation completed before impacts occur as a means of reducing mitigation requirements (Tony Konkol, Oregon City, 2004).

Mitigation requirements are flexible and are determined on a case-by-case basis. Mitigation requirements will also vary slightly according to the quality of the Water Resource Area (See Table 17.49-2 in the Water Resources Overlay District). Mitigation should occur on-site and generally consists of installing native plants, removing non-native invasive plant species, removing debris, and seeding bare soil. Trail development that impacts the protected water feature (but not the vegetated corridor) will require concurrent review with the Department of State Lands (DSL).

Stormwater treatment may be required for paved trails in WQRAs. The City will need specific details on the design, materials, and location of proposed trails to determine the applicability of stormwater treatment (Tony Konkol, Oregon City, 2004).

Floodplain Management

Trail development in floodplain areas (near Clackamas Cove or Abernethy Creek) will require review under the floodplain management areas district. Trail projects will require balanced cut and fill within the 100-year floodplain or extent of the 1996 flood.

Steep Slopes

The City of Oregon City regulates development in areas with unstable soils and hillside constraints. Areas with steep slopes are identified on a slope map available at the planning department. In general, trail development should avoid areas with slopes greater than 35 percent to the maximum extent practicable; however, trail development in such areas may be allowed if the applicant can demonstrate that erosion or landslides will not occur. Trail development proposed on hillsides with slopes greater than 25 percent (or in areas prone to landslides) will require review by the City. Application materials will likely include: grading plan, a soil erosion control plan, a description of existing topography and soil characteristics, engineering geology report, and hydrology report. The reviewing engineer may waive some requirements depending on project details (Tony Konkol, Oregon City, 2004). The Master Plan process will provide the opportunity to clarify the required application materials for steep slope areas.

Clackamas County

River and Stream Conservation Areas

Clackamas County regulates development in River and Stream Conservation Areas (RSCA) (Section 704, special district). RSCAs are the protective corridor around streams and vary according to size of the stream. The stream conservation area is measured at a horizontal distance from the mean high water line and is 100 feet for large streams (Abernethy Creek), 70 feet for medium streams (Newell Creek), and 50 feet for small streams (tributaries to Beaver Creek). The size classification of streams is identified on Water Protection Rule Classification Maps available at the county planning office.

The RSCA special district requires setbacks for structures, but does not specify setbacks for recreational trails. The County is willing to consider trails an allowable use within RSCAs (Greg Fritts, Clackamas County, 2004), but more discussion with the County is needed to establish development standards and potential mitigation for trails in stream conservation areas. Proposed trail development will need to meet the objective of protecting the natural condition of the stream corridor.

Conservation Wetland District

Based on National Wetland Inventory mapping, wetland areas do not appear to overlap with proposed trail alignments in Clackamas County (USFWS, 1981). Most of the wet areas identified on NWI mapping are perennial and intermittent streams, or wetlands strictly associated with these drainages. Because an in-depth field review of potential wetland areas was not conducted, there may be wetlands not identified on NWI mapping that occur in areas where trails are proposed.

Alterations, developments, and enhancements proposed in wetland areas would require review by Clackamas County, and permitting by DSL and/or the U.S. Army Corps of Engineers (Corps). Proposed activities within wetland buffers (25 feet of the wetland boundary) will require review and approval by the County. The DSL and the Corps do not regulate activities in wetland buffers. According to the Conservation Wetland District regulations, "Public trails and boardwalks may be constructed within buffer areas when consistent with a North Clackamas Parks and Recreation District or other adopted local government Plan" (Section 705.05). Compensatory mitigation may be required depending on the disturbance to the wetland and the buffer area. Mitigation may include enhancing or creating wetland areas. Areas disturbed for trail development will need to be revegetated with approved plant species.

Floodplain Management District

Clackamas County regulates uses in the 100-year floodplain. "Hiking and horseback riding trails" are permitted uses within the 100-year floodplain; however, filling, grading, and paving of trails within the 100-year floodplain (e.g. adjacent to Abernethy Creek) will require development review under the floodplain management district. Trail development will likely be required to achieve balanced removal and fill within the floodplain. Mitigation requirements are not specified in the text of the floodplain management district.

Stormwater Drainage

Clackamas County requires storm drainage and erosion control for all "significant residential, commercial, industrial and recreational development" (Section 1008, Zoning and Development Ordinance). The County does not, however, have specific requirements for treating stormwater from trail surfaces. Stormwater treatment requirements will need to be clarified with the County during development review.

Steep Slopes

Clackamas County regulates development on steep slopes and unstable soils. The development standards (Section 1003) require an engineering geologic study for areas

with slopes greater than 20 percent; however, this may be waived for trail development depending on project details. Trail development standards and potential mitigation requirements on steep slopes should be clarified with the County during development review.

Oregon State Regulations

Proposed trail construction that requires the fill or removal of more than 50 cubic yards of material in Waters of the State (i.e. streams and wetlands) will require a permit from the Department of State Lands (DSL). Waters of the State are defined as "natural waterways including all tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state, navigable and nonnavigable, including that portion of the Pacific Ocean that is in the boundaries of this state." For streams that are designated "essential salmon habitat" by DSL, a permit is required if any fill or removal is proposed within the Ordinary High Water Mark (OHWM). Streams with essential salmon habitat include Abernethy Creek, Newell Creek, and lower Livesay Creek (near its confluence with Abernethy Creek) (DSL, 2004).

The project would most likely qualify for a General Authorization (GA) permit from DSL for all the proposed stream crossings (Steve Morrow, DSL, 2004). A GA is a streamlined permit that is processed within 40 days of a technically complete application and does not require a permit fee. All stream crossings for the project should be reviewed under one permit application. The GA would be for certain transportation related structures (OAR 141-089-0170) which allows the fill or removal of up to 5,000 cubic yards in waters of the state or the fill of up to 0.5 acres of wetland for the construction of new bicycle, pedestrian or other lanes or trails.

If more than 5,000 cubic yards of fill/removal or more than 0.5 acres of wetland fill /removal are proposed, then the project would require an individual permit from DSL. The individual permit process is similar to a GA permit, but it takes longer to process and includes an application fee.

Compensatory mitigation would be required for both a GA permit or an individual permit from DSL. For non-wetland waters, there are no standardized mitigation ratios. Mitigation is established on a case-by-case basis for impacts to non-wetland waters of the state but may include planting native vegetation, day-lighting a portion of a stream, removing a culvert, or improving fish habitat. Pre-mitigation is not recognized by DSL as a means to reduce mitigation requirements.

Stream crossings requiring work below the OHWM would be reviewed by the Oregon Department of Fish and Wildlife (ODFW) as part of the DSL permit process and would be subject to in-water work guidelines. Work below ordinary high water of Abernethy Creek and its tributaries would need to be completed between July 15 and September 30 to protect Coho salmon, winter steelhead, and cutthroat trout (ODFW, 2000). A variance can be requested for conducting work outside of the approved window, but the applicant will need to propose additional

mitigation measures or complete field surveys to determine if protected fish and or habitat are present.

If stream crossings can be completed without any fill or removal in wetlands or below the ordinary high water mark of streams, or without any in-water work, then the project will not need a permit from DSL or concurrent review by the ODFW.

Federal Regulations

At this time, both the DSL and the Corps have jurisdiction over proposed activities in wetlands and a permit application would need to be submitted to both agencies. The application form is the same for both agencies and is available on-line. The Corps, however, does not regulate "isolated" wetlands as of 2002. The Corps and DSL are in the process of dividing jurisdiction over wetlands that may take effect as early as fall of 2004 (Larry Devroy, DSL, 2004).

Proposed trail development that requires fill in Waters of the U.S. (e.g. wetlands) will require review and permitting by the Corps. Depending on the amount of fill proposed (if less than 0.25 or 0.5 acres), the project may quality for a Nationwide Permit, a programmatic permit. If impacts are greater than 0.5 acres, then an individual permit and alternatives analysis would be required. The issuance of a federal permit will likely require informal consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NOAA Fisheries) under Section 7 of the Endangered Species Act. Section 7 informal consultation with the agencies would also be required if federal funding or an equivalent federal nexus is necessary to construct the proposed trails.

Trail-Roadway Crossings

Like most trails in built urban areas, Oregon City's trails must cross roadways at certain points. These roadway crossings may be designed at-, below-, or above-grade. At-grade crossings create a potentially high level of conflict between trail users and motorists. However, well-designed crossings have not historically posed a safety problem, as evidenced by the thousands of successful trails around the United States with at-grade crossings. Designing safe grade crossings is a key to safe implementation of this Plan.

Trail-roadway crossings should comply with the AASHTO, ODOT, and MUTCD standards.

In some cases, a required trail crossing may be so dangerous or expensive (e.g., to build an undercrossing or overcrossing) as to affect the feasibility of the entire alignment. However, in most cases, trail crossings can be properly designed at-grade to a reasonable degree of safety and to meet existing traffic and safety standards.

Evaluation of trail crossings involves analysis of vehicular and trail user traffic pattern, including speeds, street width, traffic volumes (average daily traffic, peak hour traffic), line of sight, and trail user profile (age distribution, destinations). This plan identifies the most appropriate crossing options given available information, which must be verified and/or refined through the actual engineering and construction document stage.

Basic Crossing Prototypes

The proposed intersection approach in this plan is based on established standards, published technical reports, and the experiences from existing facilities. Virtually all crossings fit into one of four basic categories:

- *Type 1: Unprotected/Marked*

  Unprotected/marked crossings include trail crossings of residential, collector, and sometimes major arterial streets or railroad tracks.

- *Type 2: Route Users to Existing Intersection*

  Trails that emerge near existing intersections may be routed to these locations, provided that sufficient protection is provided at the existing intersection.

- *Type 3: Signalized/Controlled*

  Trail crossings that require signals or other control measures due to traffic volumes, speeds, and trail usage.

- *Type 4: Grade-separated*

  Bridges or undercrossings provide the maximum level of safety but also generally are the most expensive and have right-of-way, maintenance, and other public safety considerations.

Type 1: Unprotected/Marked Crossings

An unprotected crossing (Type 1) consists of a crosswalk, signing and often no other devices to slow or stop traffic. The approach to designing crossings at mid-block locations depends on an evaluation of vehicular traffic, line of sight, trail traffic, use patterns, vehicle speed, road type and width and other safety issues such as the proximity of schools. The following thresholds outlined recommend where unprotected crossings may be acceptable:

- Install crosswalks at all trail-roadway crossings
- Maximum traffic volumes:
  - ≤ 9,000-15,000 ADT
  - up to 15,000 ADT on two-lane roads, preferably with a median.
  - up to 12,000 ADT on four-lane roads with median.
- Maximum travel speed
  - 35 mi/h
- Minimum line of sight:
  - 25 mi/h zone: 155 feet
  - 35 mi/h zone: 250 feet
  - 45 mi/h zone: 360 feet

On two lane residential and collector roads below 15,000 ADT with average vehicle speeds of 35 mi/h or less, crosswalks and warning signs ("Bike Xing") should be provided to warn motorists, stop signs and slowing techniques (bollards/geometry) should be used on the trail approach. Care should be taken to keep vegetation and other obstacles out of the sight line for motorists and trail users. Engineering studies should be done to determine the appropriate level of traffic control and design.

Type 1 Crossing

Raised Crosswalk

On roadways with low to moderate volumes of traffic (< 12,000 ADT) and a need to control traffic speeds, a raised crosswalk may be the most appropriate crossing design to improve pedestrian visibility and safety.

The crosswalks are raised 150 mm above the roadway pavement, similar to speed humps, to an elevation that matches the adjacent sidewalk. The top of the crosswalk is flat and typically made of asphalt, patterned concrete, or brick pavers. Brick or unit pavers should be discouraged because of potential problems related to pedestrians, bicycles and ADA requirements for a continuous, smooth, vibration-free surface. Tactile treatments are needed at the sidewalk/street boundary so that visually impaired pedestrians can identify the edge of the street. Costs can range from $5,000 to $20,000 per crosswalk, depending on the width of the street, the drainage improvements affected, and the materials used for construction.

A flashing yellow beacon costing between $15,000 and $30,000, may be used, preferably one that is activated by the trail user rather than operating continuously. Some jurisdictions have successfully used a flashing beacon activated by motion detectors on the trail, triggering the beacon as trail users approach the intersection. This equipment, while slightly more expensive, helps keep motorists alert.

Crossings of higher volume arterials over 15,000 ADT may be unprotected in some circumstances – for example, if they have 85th percentile speeds of 30 mi/h or less and have only two lanes of traffic. Such crossings would not be appropriate, however, if a significant number of school children used the trail.

Type 2: Route Users to Existing Intersection

Crossings within 250 feet of an existing signalized intersection with pedestrian crosswalks are typically diverted to the signalized intersection for safety purposes. For this option to be effective, barriers and signing may be needed to direct trail users to the signalized crossings. In most cases, signal modifications would be made to add pedestrian detection and to comply with the ADA. In many cases, such as on most community trails parallel to roadways, crossings are simply part of the existing intersection and are not a significant problem for trail users.

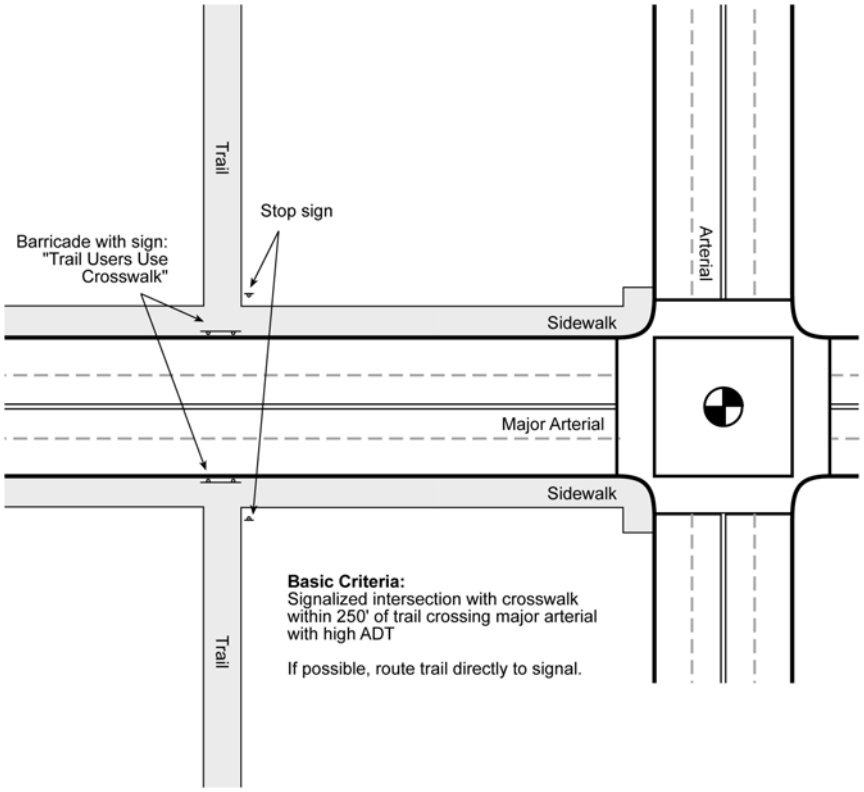


Figure 15. Type 2 Roadway Crossing Schematic

Type 3: Signalized/Controlled Crossings

New signalized crossings are recommended for crossings more than 250 feet from an existing signalized intersection and where 85th percentile travel speeds are 40 mi/h and above and/or ADT exceeds 15,000 vehicles. Each crossing, regardless of traffic speed or volume, requires additional review by a registered engineer to identify sight lines, potential impacts on traffic progression, timing with adjacent signals, capacity and safety.

Trail signals are normally activated by push buttons, but also may be triggered by motion detectors. The maximum delay for activation of the signal should be two minutes, with minimum crossing times determined by the width of the street. The

signals may rest on flashing yellow or green for motorists when not activated, and should be supplemented by standard advanced warning signs. Typical costs for a signalized crossing range from $150,000 to $250,000.

Type 3 Crossing

Type 4: Grade-separated Crossings

Practically all the crossings needed for this Plan can and should be accommodated at-grade. In one location, (crossing McLoughlin from the top of the Bluff), a Type 4, grade-separated crossing will likely be needed.

Type 4 Grade-Separated Undercrossing

Grade-separated crossings may be needed where ADT exceeds 25,000 vehicles, and 85th percentile speeds exceed 45 mi/h. Safety is a major concern with both overcrossings and undercrossings. In both cases, trail users may be temporarily out of sight from public view and may have poor visibility themselves. Undercrossings, like parking garages, have the reputation of being places where crimes occur. Most crime on trails, however, appears to have more in common with the general crime rate of the community and the overall usage of the trail than any specific design feature.

Type 4 Grade-Separated Overcrossing

Design and operation measures are available which can address trail user concerns. For example, an undercrossing can be designed to be spacious, well-lit, equipped with emergency cell phones at each end and completely visible for its entire length prior to entering.

Other potential problems with undercrossings include conflicts with utilities, drainage, flood control, and maintenance requirements. Overcrossings pose potential concerns about visual impact and functional appeal.

Signing and Striping

Crossing features for all roadways include warning signs both for vehicles and trail users. The type, location, and other criteria are identified in the Manual for Uniform Traffic Control Devices (MUTCD). Adequate warning distance is based on vehicle speeds and line of sight. Signage should be highly visible; catching the attention of motorists accustomed to roadway signs may require additional alerting devices such as a flashing light, roadway striping or changes in pavement texture. Signing for trail users must include a standard stop sign and pavement marking, sometimes combined with other features such as bollards or a kink in the trail to slow bicyclists. Care must be taken not to place too many signs at crossings lest they overwhelm the user and lose their impact.

Directional signing may be useful for trail users and motorists alike. For motorists, a sign reading "Bicycle Trail Xing" along with an Oregon City trail emblem or logo helps both warn and promote use of the trail itself. For trail users, directional signs and street names at crossings help direct people to their destinations.

The directional signing should impart a unique theme so trail users know which trail they are following and where it goes. The theme can be conveyed in a variety of ways: engraved stone, medallions, bollards, and mile markers. A central information installation at trailheads and major crossroads also helps users find their way and acknowledge the rules of the trail. They are also useful for interpretive education about plant and animal life, ecosystems, and local history.

A number of striping patterns have emerged over the years to delineate trail crossings. A median stripe on the trail approach will help to organize and warn trail users. The actual crosswalk striping is a matter of local and State preference, and may be accompanied by pavement treatments to help warn and slow motorists. The effectiveness of crosswalk striping is highly related to local customs and regulations. In communities where motorists do not typically yield to pedestrians in crosswalks, additional measures may be required.

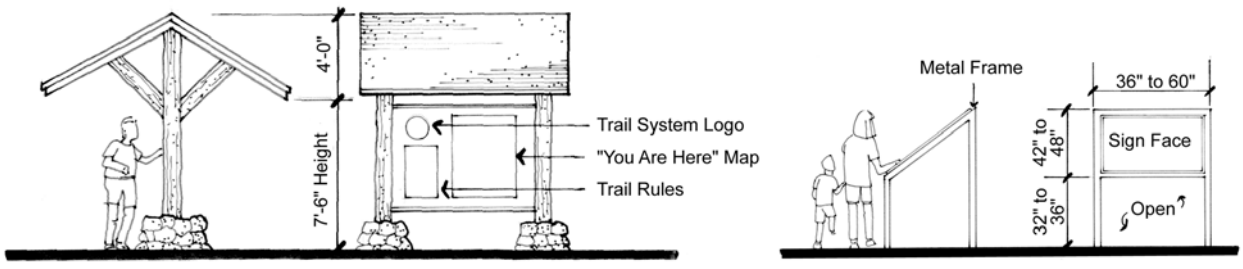


Figure 16. Trailhead information installation examples

Sample informational and directional signage

Wooden bollard with directional information

Inlaid medallions

Stone mileage marker

Trail Features

There are a number of amenities that make a trail inviting to the user. Below are some common items that make trail systems stand out.

Interpretive Installations

Interpretive installations and signs can enhance the trail experience by providing information about the history of Oregon City. Installations can also discuss local ecology, environmental concerns, and other educational information.

Water Fountains and Bicycle Parking

Water fountains provide water for people (and pets, in some cases) and bicycle racks allow trail users to safely park their bikes if they wish to stop along the way, particularly at parks and other desirable destinations.

Pedestrian-Scale Lighting and Furniture

Pedestrian-scale lighting improves safety and enables the trail to be used year-round. It also enhances the aesthetic of the trail. Lighting fixtures should be consistent with other light fixtures in the city, possibly emulating a historic theme.

Providing benches at key rest areas and viewpoints encourages people of all ages to use the trail by ensuring that they have a place to rest along the way. Benches can be simple (e.g., wood slates) or more ornate (e.g., stone, wrought iron, concrete).

Maps and Signage

A comprehensive signing system makes a trail system stand out. Informational kiosks with maps at trailheads and other pedestrian generators can provide enough information for someone to use the trail system with little introduction – perfect for areas with high out-of-area visitation rates as well as the local citizens.

Art Installations

Local artists can be commissioned to provide art for the trail system, making it uniquely distinct. Many trail art installations are functional as well as aesthetic, as they may provide places to sit and play on.

Developing Trail Themes

Basalt is used throughout Oregon City in walls and other structures

A design theme is significant for any trail system. A theme can create a unique and enriching experience for the trail user, help strengthen the community's identity, and provide a recognizable continuity to the trail system.

The name "Oregon City" conjures up a defined image. Willamette Falls, basalt cliffs and pioneers are key elements of this image. Oregon City has a place in American history as the end of the Oregon Trail, a 2000-mile route that carried a mass migration of emigrants westward in what is no doubt the most significant event in Oregon history. In 1845, Samuel K. Barlow and Joel Palmer proposed and built an overland route that could be used by emigrants in lieu of the treacherous Columbia River route. This became known as the Barlow Road and moved through the Holcomb Valley area and ended in Oregon City. Though there is no evidence of this historic route in Oregon City today, there is good documentation of the emigrants' experience through their written journals, and known stopping spots or activity areas of the emigrants in Oregon City.

The geologic formations and topography remain as dominate feature of Oregon City. Willamette Falls remains a visual attraction, and fishing is a common activity during the fall and spring Chinook runs, just as it was for the original Native American inhabitants of the area. Columnar basalt is still a dominant landscape feature.

The trail system in Oregon City should be designed around a historic theme that blends with this existing cultural and geologic history present in the City. Materials should be used in simple and elegant ways, but should shy away from being rustic in character. Key elements of this theme should include:

- Incorporation of the pioneer image in the trail system logo.
- Interpretation of the Oregon Trail and early development of Oregon City.
- Use of basalt as a design element on the trail in the form of retaining walls, guardrails and bollards.
- Use of heavy, cut, timbers in wood structures, such as benches, picnic shelters, bridges.
- Use of plank textured concrete as a trail design element at key trail entry points.

Equally important, creation of a trail system presents an opportunity for environmental enhancement and stewardship. As the system is developed, opportunities should be captured to enhance wildlife habitat, improve water quality and groundwater infiltration, and improve the native plant community.

III. Existing Conditions

Summary of Existing Conditions

Historic Downtown

Older residential area above the Bluff

Newer development on the plateau

At 8.1 square miles, Oregon City is geographically compact. However, within its boundaries is a geographically diverse and historically rich landscape that can provide an excellent foundation for the development of a comprehensive and unique trail system.

The city is characterized by its pioneer history, topography and landforms, and its proximity to the Willamette and Clackamas rivers. The majority of the city lies on three distinct levels: the river-front historic downtown, the venerable residential areas above the first bluff, and the commercial and newer residential areas on the plateau. Other portions of the city sit on small bluffs above the Clackamas River and on rolling hills to the east. Commanding views of Mount Hood, Cascade foothills, Willamette Falls, and the rivers provide inspiring vistas and visual connections to the larger region. The city's proximity to rural land provides quick escape from the urban environment. Newell Creek Canyon is a valuable local and regional resource and adds to the quality of life of Oregon City.

Oregon City is recognized as a Regional Center in Metro's 2040 Growth Concept Plan. West Linn and Gladstone are nearby Town Centers.

The City currently has a small system of trails, mostly located in parks. The most recognized trail is the McLoughlin Promenade located at the top of the Bluff and the stairway running past the Singer Creek waterfalls. There are many informal "demand trails" located in Newell Creek Canyon, Clackamette Park, Waterboard Park, Singer Creek Park, Old Canemah Park, and on Canemah Bluff. Many of these trails provide pleasant walking opportunities for those who are able-bodied, particularly in small loops. But there are many gaps and challenging conditions to address, as many of the trails are on private land and traverse steep hillsides.

Many of the existing paved trails are in poor condition, do not feel safe or inviting to trail users, and do not provide larger community connections. Demand trails have created erosion problems and soil instability in many of the parks, particularly Newell Creek Canyon.

Motorized dirt bikes and other motorized vehicles are known to use many of the trails on Canemah Bluff, adding to the instability of the hillside. Topography presents a challenge as much of Oregon City, particularly the older part of town, sits on the north face of a steep slope facing the Willamette River.

The existing trail system as a whole poorly serves residents with disabilities. It also poorly serves bicyclists, as there are few striped bicycle lanes and many of the paved paths in the parks are narrow and covered with moss/debris.

Rapid growth and trail accommodation is perhaps the most pressing challenge. Using the most recent figures from Portland State University's Population Research Center, the population of Oregon City has increased 91.2% since 1990 – from 14,698 people to 28,100 people (*Annual Oregon Population Report, 2003*). U.S. Census figures from 2000 are slightly different, showing an increase in population of 75% (*US Census, 1990 and 2000*). Over 2,300 people moved to Oregon City between 2000 and 2003. Figure 17 shows general development patterns in the City from 1900 – 2001. Nearly half of the development has occurred in the last 20 years. Thirty-five percent of all development has occurred since 1990.

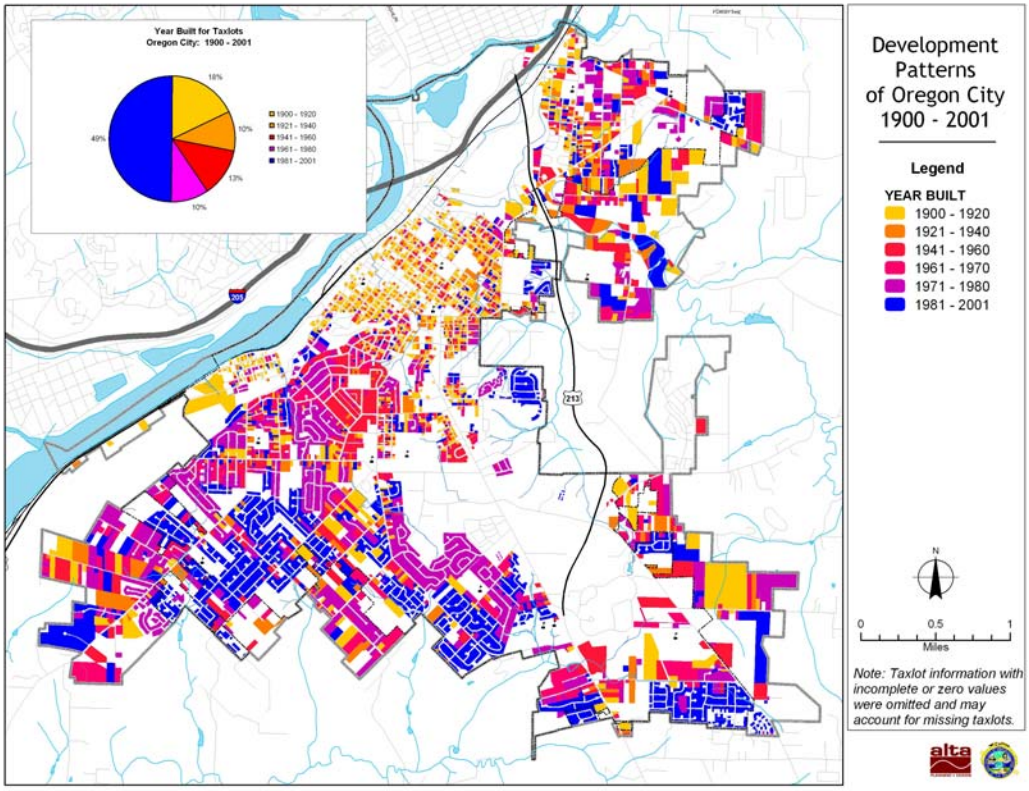


Figure 17. Development Patterns from 1900 – 2001 in Oregon City

With few exceptions, development has been radial from the historic downtown and suburban in nature. As the City continues to grow and subdivide its older, larger,

more rural lots into smaller, more suburban lots, it will be critical to integrate trails with the growth patterns before the opportunities are lost.

Despite these drawbacks, the existing trail system provides a good starting point for the city to develop a comprehensive trail system. This Plan intends to focus on how to upgrade and connect existing trails with new and planned trails, and ensure that they serve multiple users with a variety of interests.

Existing Trails

There are several types of trails in Oregon City: on-road shoulders, sidewalks, bicycle lanes, paved park trails, informal or "demand" pedestrian trails, and accessways.

There are pathways in some sections of Oregon City that are designed as **on-road shoulders**, characterized by a 3' – 6' wide shoulder, sometimes on one side of the roadway. The shoulder pathway is demarcated by a wide fog line or the addition of humps or reflectors to discourage automobiles from driving in the pathway. Signs also accompany some of the pathways telling motorists not to park in the shoulder.

Sidewalks are distinguished from shoulder pathways in that they usually have a curb and are physically elevated from the roadway. Sidewalk connections for pedestrians are fairly comprehensive in downtown Oregon City and throughout many of the newer (1990 on) neighborhoods. Sidewalks are largely absent in many of the older neighborhoods and on the fringe of the community.

"No Parking on Pathway" sign on Linn

Shoulder pathway on Holcomb

Sidewalk and vegetated buffer in a new development

Bicycle lanes are often located on roadways with a traffic volumes exceeding 3000 ADT. Bicycle lanes currently exist on parts of Molalla Avenue, Highway 213 from I-205 to Glen Oak, Glen Oak, Beavercreek Road, and on sections of Washington Street. The City's Transportation System Plan identifies a number of other streets for future bicycle lanes:

- 7th Street
- Beavercreek Road: Molalla Avenue to UGB
- Molalla Avenue
- Singer Hill
- South End Road
- Warner Milne Road
- Anchor Way
- Central Point Road
- Division Street
- Gaffney Lane
- Holmes Lane
- Leland Road
- Main Street Extensions
- Monroe Street
- Partlow Road
- 12th Street
- Center Street: 2nd to 7th
- Clackamette Drive
- Front Avenue
- Glen Oak
- Holcomb Blvd.
- Jackson: 15th to 12th
- Meyers Road
- Taylor Street: 12th to 7th
- Davis Road
- Cleveland Street
- Clackamas River Drive
- Abernethy Road
- Fir Street

Existing bicycle facilities on Beavercreek Road

Oregon City bicyclist on Beavercreek Road

Oregon City residents have indicated that they wish to see improved and additional bicycle lanes on primary routes through town, particularly connecting the upper plateau to the historic downtown and shopping areas (*Public Meeting, March 10, 2004*).

Hillendale Park paved trails

McLoughlin Promenade

Singer Creek Park natural "demand trail"

Natural trail surrounding the wetland at Metro's recycling facility

Paved city trails and **earthen trails** are found throughout many of Oregon City's parks, like Hillendale Park and Singer Creek Park. Informal earthen trails are found in Newell Creek Canyon and Singer Creek Park. Other places with paved city trails and earthen trails include:

- Old Canemah Park
- Mountainview Cemetery
- Chapin Park
- Atkinson Park
- Rivercrest Park
- McLoughlin Promenade
- End of the Trail Interpretive Center
- Park Place Park
- Clackamette Park
- Wesley Lynn Park (future)
- Canemah Bluff
- Canemah Cemetery
- Barclay Park
- Clackamas Community College
- Environmental Learning Center

Accessways are required for all new development and provide short, direct connections to local roads, schools, parks, and other community destinations. There are a number of good accessways in Oregon City. Older subdivisions (1960 – 1992) were not required to provide accessways and connectivity is poor for bikes and pedestrians in these areas. Also, some newer developments have not provided accessways.

Waterway trails do not formally exist, though boaters frequently float on the Clackamas and Willamette rivers and in Clackamette Cove. The City is currently planning to install a small boat launch in Clackamette Cove. Currently, most boaters enter the rivers from Clackamette Park and adjacent to Sportcraft Marina.

For additional descriptions and recommended standards and designs, refer to Table 1 in the Design Guidelines section of this document.

Challenges and Opportunities

Access

There are several small trail systems located in parks and along the bluffs in Oregon City. However, much of the sidewalk and bicycle lane network is incomplete or non-existent, making it difficult to walk or bicycle to these trails, particularly for disabled users. Many of the existing trails lack amenities like lighting, signage, and benches to invite users which, in turn, lead residents to believe that the trails are unsafe or not meant for public use (*Public meeting, March 10, 2004*).

Maintenance

The 1999 Oregon City Parks and Recreation Master Plan concluded from a household survey that "maintaining existing parks, open space areas and trails" was where the City should focus its efforts. This is apparent from the field survey, as many of the existing park trails and facilities are in poor condition. Many of the existing trails in parks are covered in moss, cracked, and in poor repair from tree roots pushing up the trail surface. Mossy trail surfaces are slippery and can be hazardous, particularly for bicyclists and skaters. Cracks and undulations in the surface are tripping hazards and are difficult for disabled users.

Moss on trails in Old Canemah Park

Trail damage from tree roots and water

Roots push up trail surfaces and make them hazardous for trail users, particularly those with disabilities

Narrow trails become narrower when the edges of asphalt trails start decomposing

Limited Public Rights-of-Way and Encroachment

Oregon City, like many well-established communities, has the challenge of accommodating and balancing the needs of different roadway users within limited public rights-of-way. Pedestrians and bicyclists are often left without proper facilities. Even more problematic is the issue of private property encroachment into the public right-of-way, such as a property owner placing trees, shrubs, fences, or walls in the public right-of-way. This is particularly true in older residential areas without sidewalks, where there is no visual delineation between private property and the public right-of-way. There are numerous examples like this throughout Oregon City. Although it is within the City's right to reclaim this space, it can be politically challenging to do so, particularly if the residents perceive that a trail or improved facility will bring more people through the area.

Limited Trail Development Opportunity

Much of Oregon City has been subdivided and developed in the last 20 years. The character of the development has been suburban in nature with poor street connectivity and minimal dedicated public open space and parks. It is only within the last ten years that sidewalks or other pedestrian facilities have been required as part of development standards. The opportunity to develop trails through most of these neighborhoods has been lost and future trails will rely heavily on undeveloped parcels of land that are slated for development.

Topography and Rivers

Basalt cliffs, steep hillsides, and sensitive fish-bearing stream corridors with dense vegetation present challenges to trail development and implementation. There are federally listed fish species (Steelhead and Chinook salmon) and habitat in the Clackamas River, Willamette River, Abernethy Creek, Newell Creek, and lower Livesay Creek. Abernethy Creek, Newell Creek and lower Livesay Creek are designated as "essential salmon habitat" by the Department of State Lands. These waterways provide excellent opportunities but trail development will be restricted in these areas and must be developed to the highest standards available.

Topography is a strong characteristic of Oregon City

Abernethy Creek

Demand Trails

Demand trails or "desire lines" are footpaths created by people where there are no formal existing facilities. These trails usually indicate that a facility is needed. Demand trails are often present along roadways without sidewalks or trails, and in natural areas without a formal trail system (*see photos below*). These trails can be especially problematic in environmentally sensitive areas. Demand trails can destabilize slopes, promote erosion and channeling, trample sensitive vegetation in riparian areas, and disrupt wildlife nesting and feeding sites, among other things. They also often have a number of spur trails that exacerbate the problems.

Urban demand path on the side of Beavercreek Road – this pedestrian prefers to walk in the bicycle lane.

Natural demand trail in Clackamette Park

Demand trail due to poor connectivity on Canemah Bluff

Demand trail on the Metro property on Canemah Bluff

However, demand trails can be an opportunity for trail development, as the trail has already indicated where people would like to go and provided a route to get there. Demand trails can be difficult to close and rehabilitate once they have been identified as a link. In these cases, it may be best to develop the trail and mitigate any problems that may have developed due to people informally using the area.

Environmental Conditions of Trail Target Areas

The project team visited three specific target areas as a sample of the greater area to assess existing environmental conditions in greater detail. These target areas included the headwaters of Livesay Creek (in the Park Place neighborhood), the confluence of Abernethy Creek and Newell Creek, and a potential boardwalk area in the headwaters of Mud Creek (a tributary of Beaver Creek) south of Meyers Road. Newell Creek Canyon is also discussed in this section.

Livesay Creek

Environmental issues along Livesay Creek include Water Quality Resource Areas (the creek and associated wetlands), steep slopes, and listed fish habitat in the lower reach. Livesay Creek is considered a WQRA and trail development would be subject to review under the Water Quality Resource Areas overlay district. Permitting from the DSL and the Corps may also be required. A series of wetlands are mapped along Livesay Creek and its tributaries (Shapiro, 1999). These wetlands were verified in the field as part of the LWI completed for Oregon City, but for the most part, the mapped boundaries of LWI wetlands are only accurate within 25 feet and have not been surveyed. During the April 8 site visit, the project team observed a flagged wetland boundary in the upper reach of Livesay Creek that was probably part of a formal wetland delineation for adjacent residential development. Wetlands in the lower reaches of the creek will likely need to be delineated in the field, flagged, and surveyed. Field delineation of wetlands will need to follow the methodology outlined in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987). Permits from the DSL and Corps (if necessary) and approval by the City of Oregon City will be required before trail construction begins.

Upper Livesay Creek

Steep slopes are mapped in several areas on both sides of Livesay Creek. Trail development along the hillsides of Livesay Creek (in areas with slopes greater than 25 percent) will require review under the City's Unstable Soils and Hillside Constraints overlay district. While steep slopes do not preclude trail development, greater scrutiny of soil suitability and drainage is advised. The mapped soil unit around Livesay Creek is Xerochrepts and Haploxerolls, 20 to 60 percent slopes (Gerig, 1985). These soils are prone to slumping, especially if cuts are made in steeper areas. It is recommended that a qualified soil scientist, geologist, or engineer review the suitability of these soils for trail development.

The lower portion of Livesay Creek would most likely be considered an anadromous fish-bearing stream by the City and therefore would have a buffer of 200 feet. The potential for disturbance from trail development is greater in a larger WQRA, therefore, more mitigation will likely be required than in a narrower WQRA.

According to DSL, the lower portion of the creek contains essential salmon habitat and any amount of fill or removal below the OHWM of the creek would require a permit from DSL.

Confluence of Abernethy Creek and Newell Creek

Environmental issues near the confluence of Abernethy Creek and Newell Creek include listed fish species in Abernethy Creek, steep slopes, floodplain areas, and preserving native riparian habitat. Proposed trail development affecting steep slopes (greater than 20 percent), flood-prone areas, and the creeks will require review by Clackamas County. DSL considers the two creeks essential salmon habitat and would regulate any fill or removal of material below the OHWM of the creeks.

Newell Creek Canyon

One area assessed in the field was a narrow finger of land between Abernethy Creek and Newell Creek. This finger of land should be further evaluated for erosion potential from periodic scouring and natural movement of the streams. Trail design considerations to minimize disturbance to the surrounding riparian habitat include installing soft trails, restricting bicycle use, planting native vegetation densely in areas to discourage off-trail use, and avoiding the use of lights.

The soils mapped in this area include Xerochrepts and Haploxerolls, very steep; and Woodburn silt loam, 3 to 8 percent slopes (Gerig, 1985). According to the soil survey, Woodburn silt loam has "moderate" potential for erosion if developed for recreational trails (Gerig, 1985). As stated above, it is recommended that a qualified soil scientist, geologist, or engineer review the suitability of soils for trail development in steep areas.

Newell Creek Canyon is an important habitat area that supports a multitude of resident and migratory species. Although much of the canyon is owned by Metro, the area is also within the jurisdiction of Clackamas County and private property owners. Ideally, Metro and Clackamas County would work in partnership with property owners and amongst themselves on trail projects through Newell Creek Canyon.

Trails would most likely be located at the top of the canyon due to topographical constraints. In that case, trail development would be outside of the jurisdiction of DSL and the Corps, but may be regulated under the Clackamas County River and Stream Conservation Area special district. Newell Creek is identified as a "medium" stream with a 70-foot buffer. Setbacks are required for structures within river conservation areas, but are not specified for trails. Setback requirements and

potential mitigation will need to be clarified with Clackamas County during the development review stage of the project.

Metro has prepared a draft of the *Green Trails: Guidelines for Environmentally Friendly Trails* that will be finalized by the end of summer 2004 (Jennifer Budhabhatti, Metro, 2004). This is a planning tool for trail design and does not include regulatory standards.

Stormwater run-off is identified as a concern for Newell Canyon in the *Newell Creek Watershed: Restoration and Conservation Strategy* (John Inskeep Environmental Learning Center, 2003). Trail design considerations for minimizing adverse impacts from run-off include: installing gravel, wood chip, or semi-pervious trails, decreasing the trail width in certain areas, and directing runoff away from the canyon.

Mud Creek

A trail crossing is proposed for Mud Creek, a tributary to Beaver Creek, just southwest of South Myers Road. This area of Mud Creek consists of a broad depression adjacent to residences and appears to be within Oregon City limits.

Mud Creek wetland

According to the Oregon City LWI, wetlands are mapped in association with the creek (Shapiro, 1999). As stated previously, the boundary of the wetland area(s) will need to be delineated in the field, flagged, and surveyed. Field delineation of the wetland boundary will need to adhere to the methods outlined in the Corps' 1987 manual. Trail development in this area will most likely require review and permitting by Oregon City, DSL, and possibly the Corps.

IV. Recommended Trail Network and Implementation Measures

Recommended Strategy

The recommended trail network fulfills the vision and goals of this Plan. It provides a comprehensive network of trails that connect to every school, park, community center, business district, library, and natural resource. It connects to Oregon City's immediate neighbors: West Linn, Gladstone, and portions of unincorporated Clackamas County. It serves multiple users, multiple interests, and improves access for residents of varying physical capabilities, ages, and skill levels.

The following details of the network should be noted:

- The **Conceptual Trails Plan Map** includes both existing (shown as solid lines) and recommended trails (shown as dashed lines). Many community trail projects call for improvements to existing but substandard facilities.

- "Accessways" – those providing a direct connection from cul-de-sacs and other disconnected developments – will be determined through development review and permitting processes. Since accessway locations cannot be known until the development applicant provides a site plan, most accessways are not shown on the map. The proposed accessways currently shown on the map are desirable local connections but are subject to redevelopment and/or subdivision of private property. Therefore, the actual trail location may change.

- The trails shown are largely conceptual. Most need to be further studied and designed. The location of the trail may change as a result.

- Some sidewalks are shown as local trails because they fulfill the needs of local pedestrian circulation and connections.

- Some local connections are on quasi-public property (e.g., through private open space owned/managed by a neighborhood association).

Development

Many of the trails shown on the **Conceptual Trails Map**, particularly local trails located along roadways or intended as accessways, will be developed over time by Oregon City property owners and new development, much like the sidewalk system and the current accessway system has been developed. In some cases, the City will

be able to require the property owner to construct the trail as part of the development review process. In other cases, the City will work with the property owner to ensure the City can develop the trail itself in the future.

Improvement Selection Criteria

With the goal of developing a high quality system of multi-purpose trails, improvements must not only meet the residents' expectations, but exceed them. There are essentially two types of improvements for the Oregon City network.

Develop new facilities

New facility provisions are needed for regional trails, community trail corridors, local trails, and to connect residential and commercial areas if:

- there are no existing facilities;
- facilities currently only serve one user group but are intended to serve multiple user groups;
- in parks, no ADA compliant facilities are available.

Upgrade existing facilities

Facilities will need to be upgraded if they currently support multiple uses but are not constructed to Federal and State standards, have obstructions, or are in poor condition.

Selection Criteria

There are four different categories of trails, but three different sets of selection and ranking criteria (accessways are not included due to their development requirement). Depending on the type of trail, the criteria include (100 total points possible):

Ease of Implementation (25 points): How difficult will it be to implement this project? This criteria takes into account topographical, environmental, political, and economic constraints.

User Generators (20 points): How many user generators does the project connect to within ¼ - ½ miles of the project, such as schools, parks, transit centers, employment and commercial districts, Town Centers, churches, etc.? Relative to other projects, does this serve special needs populations, like children and the elderly?

Connectivity (25 points): To what degree does this project fill in a missing gap in the trail system?

Hazard Mitigation (20 points): To what degree does this project mitigate safety problems, such as speed, road width, and dangerous roadway crossings?

Equity (10 points): Have projects been evenly dispersed throughout the city? Is this project in an under-served area?

Project Priorities and Phasing

The projects in each category were ranked based on a weighted scoring system with the selection criteria described previously. Project scores were based on the information obtained from site visits and field work, City staff, and from the public. As a result, the projects have been grouped by trail classification (regional and local) into Tier 1, Tier 2, and Tier 3 project priorities (*Tables 3 and 4*).[1] Community trails have been omitted from this process because all of the projects are in the Oregon City Transportation System Plan and have gone through their own priority process. Refer to the TSP for those priority rankings.

Tier 1 projects are the top priority trail projects for short-term project implementation and are targeted for completion in the next five to ten years.

Tier 2 projects are mid-term projects planned for implementation between ten and 25 years. These projects comprise the bulk of the trail system.

Tier 3 projects are long-term projects recommended for implementation between the next 25 and 50 years from Plan adoption. These are projects that generally supplement the trail system or may provide potential trails over a longer period of time as land uses and regional planning boundaries change.

The short, mid- and long-term schedule may change according to available funds, changing priorities, new roadway projects that coincide, new development and redevelopment opportunities, or other factors.

It should be noted that the purpose of this exercise is to understand the relative priority of the projects so that the City may apportion available funding to the highest priority projects. Medium and long-term projects also are important, and may be implemented at any point in time as part of a development or public works project. The ranked lists should be considered a "living document" and should be frequently reviewed to ensure they reflect current Oregon City priorities.

Table 2. Regional Trail Priorities

Tier 1: 5-10 years	Tier 2: 10-25 years	Tier 3: 25+ years
Clackamas River Trail	Trolley Trail Bridge	Beaver Lake Trail
Newell Creek Canyon Trail	Willamette Greenway Trail	Barlow Road Trail
Oregon City Loop Trail		

[1] Numerical ranking information is on file in the Oregon City Parks & Recreation Department.

Table 3. Local Trail Priorities

Tier 1: 5-10 years
Holcomb Ridge Loop Trail
Barclay Park Connection
Holcomb School Connection
Swan Avenue
Rivercrest Loop Trail
Parks Trail
Hillendale South Trail
Wesley Lynn - Chapin Trail
Chapin - South End Connector
Lazy Creek Trail
Powerline Trail
Park Place Park Trail
King Trail

Tier 2: 10-25 years
Park Place School Trail
Park Place Creek Loop
Abernethy Creek Trail
Hunter Spur Trail
Waterboard - Singer Creek Connection
Waterboard Park Trail
Center Street
Old Canemah - McLoughlin Connection
Glacier Court Trail
Coffee Creek Trail (Canemah Connector)
Canemah Bluff Access Trail
Parkland Trail

Tier 3: 25+ years
Thimble Creek Trail
Livesay Creek Trail
Abernethy Creek Extension Trail
Stadium Loop Trail
Waterboard Rim Trail
Newell Creek Trail System
BPA Powerline Trail
Canemah Bluff Trail
Finnegan's Trail
Central Point Trail

Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
REGIONAL TRAILS															
R1	**Clackamas River Trail**	High Rocks Bridge - Oregon City Bridge	Shared use path, on-street	Regional trail would connect to existing I-205 path over the High Rocks Bridge and follow the Clackamas River, traverse Clackamette Cove, and link to on-street facilities on Main Street and the proposed McLoughlin Blvd. Promenade to the Oregon City bridge.	Oregon City Downtown Community Plan, Oregon City Waterfront Master Plan	Yes		Main St., McLoughlin Blvd.		Type 1, Type 3	2.3	Easy	Oregon City, Clackamas County, ODOT, Metro	1	$501,401
R2	**Newell Creek Canyon Trail (East)**	Hwy. 213 and Redland Rd. - Beavercreek Rd.	Shared use path, some on-street	Regional trail would follow the Oregon City-Molalla interurban railroad bench on the east side of Newell Creek Canyon.	Metro Regional Transportation Plan	No	Private property owners that front Holly Road and who are adjacent to the railroad easement.	Holly Lane widening to accommodate wide shoulders and/or bicycle lanes or a trail.	Improvements to the Hwy 213 right-of-way.	Type 1	2.7	Moderate - Difficult	Metro, Clackamas County	1	$2,709,180
R3	**Oregon City Loop Trail**	Beavercreek Rd. - Hwy. 213 (excludes Newell Creek Canyon Trail section)	Shared use path, on-street, boardwalk	Regional trail would generally follow the Oregon City UGB on a collection of local roads, through new development, along powerline right-of-way, and down the bluff to link up with the Promenade in downtown Oregon City.	Metro Regional Transportation Plan	Yes - more than 50% of trail in WQRZ	New development, easements on Canemah Bluff,	High St., Central Point Rd., Meyers Rd., Beavercreek Rd., Redland Rd., Abernethy Rd., 15th St.	Boardwalk from Meyers to Frontier Pkwy.	Type 1, Type 2	9.5	Difficult	Oregon City, Clackamas County, Metro	1	$2,469,331
R4	**Beaver Lake Trail**	Clackamas Community College Oregon City UGB limits	Shared use path	Regional trail would travel from Clackamas Community College through the Oregon City High School Freshman Campus to the airstrip. The trail would skirt the golf course and continue on to Beaver Lake.	Metro Regional Transportation Plan	Small portion	New development easements south of Loder Rd.				1.02	Moderate	Metro, Clackamas County, Oregon City Parks and Recreation	3	$368,820
R5	**Barlow Road Trail**	Abernethy Rd. - Oregon City Limits	Shared use path, on street	Regional trail would follow the perceptive alignment of the historic Barlow Road from Abernethy Green to the Oregon City UGB. The trail would primarily utilize existing and proposed roadways.	Metro Regional Transportation Plan	Yes - more than 50% of trail in WQRZ				Type 1+	1.7	Difficult	Metro, Clackamas County, Oregon City Parks and Recreation	3	$913,904
R6	**Trolley Trail Bridge**	Portland Ave. (Gladstone) - Oregon City limits	Shared use path	Regional trail would connect the proposed regional Trolley Trail to the Clackamas River Trail via an old railroad bridge spanning the Clackamas River.	Metro Regional Transportation Plan	Yes	Union Pacific bridge		Safety improvements (railings, screens, etc.)		0.08	Moderate to Difficult	Metro, Oregon City Parks and Recreation, City of Gladstone, Oregon City Public Works	2	Unknown
R7	**Willamette Greenway Trail**	Clackamette Park to Canby (Oregon City limits for the purpose of this study)	Shared use path, sidewalk, bicycle lanes	Regional trail would follow the Willamette River from the confluence of the Clackamas and Willamette rivers to Canby. Some portions would be a rail with trail, others will be a shared use path or on-street facilities.	Metro Regional Transportation Plan	Yes	Union Pacific easement	Highway 99E	Improvements to existing sidewalks, tunnel improvement,	Type 2		Difficult	Metro, Clackamas County, Oregon City Parks and Recreation, Oregon Department of Transportation	2	$1,119,825

Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
COMMUNITY TRAILS															
**Note: All Community Trails are located in the City of Oregon City Transportation System Plan (TSP) and have their own internal ranking system. Please refer to the TSP for detailed information on Community Trails not listed here.*															
C1	**South End**	Oregon City UGB - 2nd St.	Bike lanes and sidewalks	Bike lanes from UGB to Barker and sidewalks throughout. Provides critical pedestrian and bicycle access from the plateau to historic downtown and the river.	Oregon City Transportation System Plan	n/a	n/a	See description.			2.9		Oregon City Public Works		$3,535,500
C2	**Partlow**	South End - Central Point	Bike lanes and sidewalks	Bike lanes and sidewalks from South End Rd. to Central Point Rd.	Oregon City Transportation System Plan	n/a	n/a	See description.			0.5		Oregon City Public Works		$930,000
C3	**Central Point**	Oregon City UGB - Warner-Parrott Rd.	Bike lanes and sidewalks	Bike lanes from Warner Parrott to the UGB and sidewalks from Roundtree Drive to the UGB	Oregon City Transportation System Plan	n/a	n/a	See description.			1.5		Oregon City Public Works		$3,721,250
C4	**Pease**	S. McCord Rd. - Leland Rd.	Bike lanes and sidewalks		Oregon City Transportation System Plan	n/a	n/a	See description.			0.73		Oregon City Public Works		
C5	**Leland**	Warner-Milne - Oregon City UGB	Bike lanes and sidewalks	Bike lanes and sidewalks from Warner Milne to the UGB	Oregon City Transportation System Plan	n/a	n/a	See description.			0.9		Oregon City Public Works		$2,700,750
C6	**Meyers**	Leland Rd. - Hwy. 213	Bike lanes and sidewalks	Bike lanes from Highway 213 to Beavercreek Rd. and sidewalk from Leland Rd. to Gaffney Lane	Oregon City Transportation System Plan	n/a	n/a	See description.			1.48		Oregon City Public Works		$443,000
C7	**Gaffney**	Meyers Rd. - Molalla Rd.	Bike lanes and sidewalks	Bike lanes and sidewalks from Molalla Avenue to Meyers Road	Oregon City Transportation System Plan	n/a	n/a	See description.			0.72		Oregon City Public Works		$1,695,250
C8	**Molalla**	Hwy. 213 - Holmes St.	Bike lanes and sidewalks	Bike lanes from 7th to Highway 213 and spot improvements for sidewalks. Curb ramps should be provided at each corner.	Oregon City Transportation System Plan	n/a	n/a	See description.			1.26		Oregon City Public Works		$32,480
C9	**Division**	Molalla Rd. - Redland Rd.	Bike lanes and sidewalks		Oregon City Transportation System Plan	n/a	n/a	See description.			1.15		Oregon City Public Works		
C10	**Taylor**	7th - 12th	Bike lanes and sidewalks	Bike lanes from 12th Street to 7th Street	Oregon City Transportation System Plan	n/a	n/a	See description.			0.29		Oregon City Public Works		$2,000

Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
C11	**7th**	Taylor - High St.	Bike lanes and sidewalks	Bike lanes from High Street to Taylor Street	Oregon City Transportation System Plan	n/a	n/a	See description.			0.6		Oregon City Public Works		$30,000
C12	**12th**	John Adams - Taylor	Bike lanes and sidewalks	Bike lanes from Highway 99E to Taylor Street	Oregon City Transportation System Plan	n/a	n/a	See description.			0.51		Oregon City Public Works		$3,000
C13	**Linn**	4th - Warner-Milne	Bike lanes and sidewalks	Bike lanes and sidewalks from Jackson to Warner Milne	Oregon City Transportation System Plan	n/a	n/a	See description.			1.16		Oregon City Public Works		$502,000
C14	**Warner-Milne**	Molalla - Warner-Parrott	Bike lanes	Bike lanes from Linn Ave to Molalla	Oregon City Transportation System Plan	n/a	n/a	See description.			0.7		Oregon City Public Works		$10,150
C15	**Redland**	Hwy. 213 - UGB	Bike lanes and sidewalks	Bike lanes and sidewalks from Highway 213 to the UGB	Oregon City Transportation System Plan	n/a	n/a	See description.			1.76		Oregon City Public Works		$754,500
C16	**Holcomb**	Redland Rd. - UGB	Shared use path, sidewalk, bicycle lanes	Bike lanes and sidewalks or trail from Abernethy Rd. to the UGB	Oregon City Transportation System Plan	n/a	n/a	See description.			1.93		Oregon City Public Works		$772,500
C17	**Beavercreek**	Molalla - UGB	Bike lanes and sidewalks	Bike lanes from Molalla to the UGB and sidewalks from Warner Milne to the UGB	Oregon City Transportation System Plan	n/a	n/a	See description.			2.6		Oregon City Public Works		$987,550
C18	**Glen Oak**	Quinalt - Beavercreek	Bike lanes and sidewalks	Bike lanes and sidewalks from Highway 213 to Beavercreek Road	Oregon City Transportation System Plan	n/a	n/a	See description.			0.25		Oregon City Public Works		$203,000
C19	**Front**	Holcomb - Forsyth	Bike lanes and sidewalks	Bike lanes and sidewalks from Forsythe to Holcomb	Oregon City Transportation System Plan	n/a	n/a	See description.			0.64		Oregon City Public Works		$504,000
C20	**Holmes**	Molalla - Davis	Bike lanes and sidewalks	Bike lanes from Telford to Molalla and sidewalks from Molalla to Reliance Lane	Oregon City Transportation System Plan	n/a	n/a	See description.			0.72		Oregon City Public Works		$243,000
C21	**Cleveland**	Swan Ave. - Front Ave.	Bike lanes and sidewalks	Bike lanes and sidewalks or trail from Front Avenue to Swan Avenue	Oregon City Transportation System Plan	n/a	n/a	See description.			0.31		Oregon City Public Works		$41,072
C22	**Davis**	Holmes - Linn	Bike lanes and sidewalks	Bike lanes from Telford to Linn Ave.	Oregon City Transportation System Plan	n/a	n/a	See description.			0.18		Oregon City Public Works		$2,000

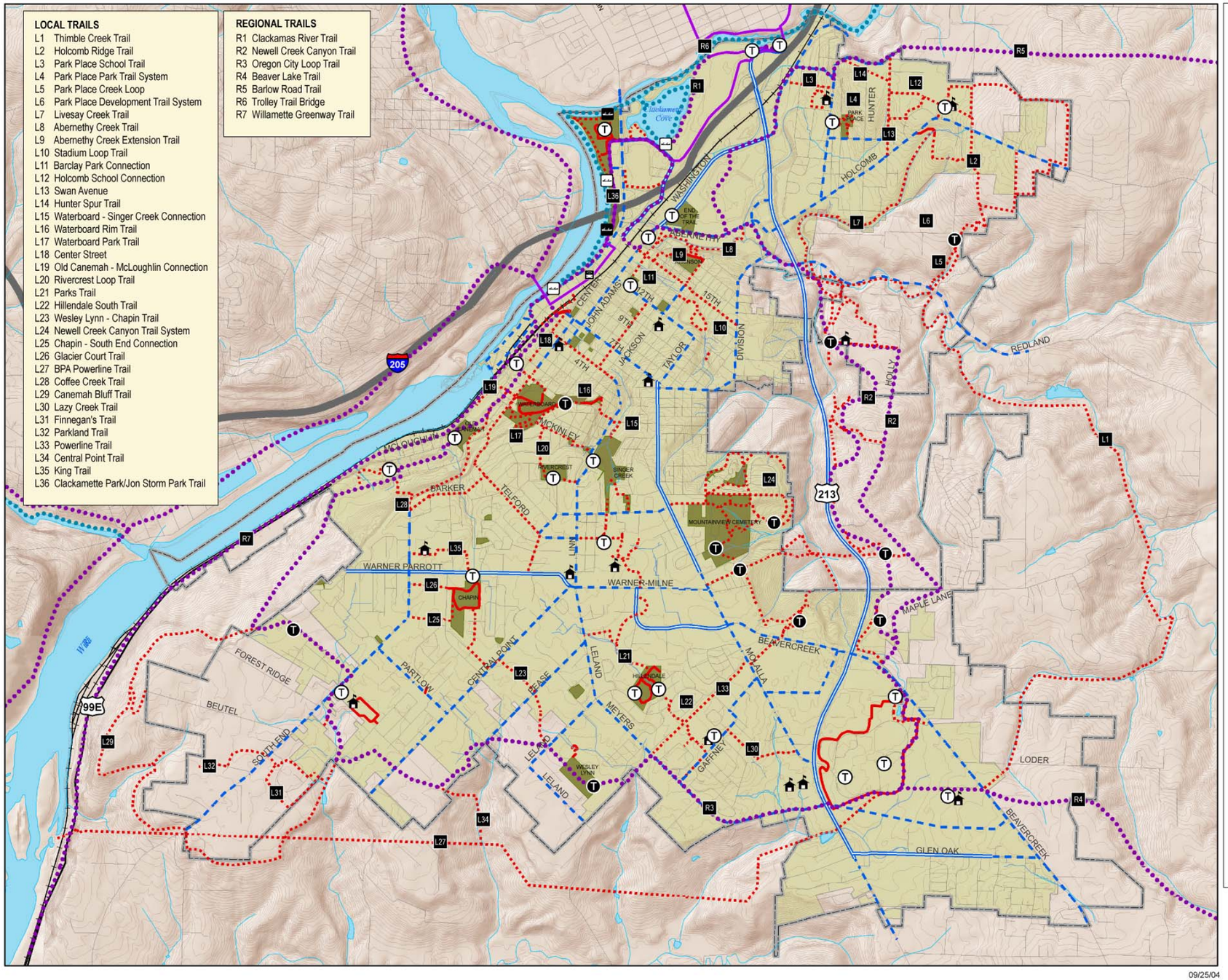
Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
C23	**Washington**	4th - Abernethy	Bike lanes	Bike lanes and improved sidewalks from 4th Avenue to the newly built sections just before Abernethy Road.	Oregon City Transportation System Plan	n/a	n/a	See description.			0.65		Oregon City Public Works		
C24	**Center Street**	7th - 2nd	Bike lanes	Bike lanes and improved sidewalks from 7th Avenue to 2nd St.	Oregon City Transportation System Plan	n/a	n/a	See description.			0.31		Oregon City Public Works		
C25	**Fir**	7th - 2nd	Bike lanes	Bike lanes and improved sidewalks from Molalla to Beavercreek.	Oregon City Transportation System Plan	n/a	n/a	See description.			0.52		Oregon City Public Works		
LOCAL TRAILS															
L1	**Thimble Creek Trail**	Redland Rd. - Beavercreek Rd.	Earthen trail	Earthen hiking trail that would follow Thimble Creek out of the UGB limits and connect to the Beaver Lake Trail at Beavercreek Road.	Parks and Recreation Master Plan	Yes	Numerous private property easements		Sensitive areas	Type 1, Type 3	4.5	Difficult	Oregon City Parks and Recreation	3	$1,071,900
L2	**Holcomb Ridge Loop Trail**	Holcomb Elementary	Paved trail, earthen hiking trail	A series of trails that would follow the perimeter of Holcomb Elementary school and the UGB to the future Park Place development. The trails would then connect through the Holcomb Ridge development on existing roadways and trails and connect back to the elementary school on Holcomb Blvd.		Small portion	Easements as part of new development, easements if some parcels are not developed				3.4	Moderate	Oregon City Parks and Recreation, OC Public Works, Clackamas County, Park Place Neighborhood Association	1	$729,281
L3	**Park Place School Trail**	Front St. - Washington St.	Paved trail	A short connection utilizing undeveloped street right-of-way adjacent to Park Place Elementary School. This off-street path would provide a traffic-free pathway and a direct connection for children going to school.		No		Develop trail in public right-of-way	Grade issues		0.52	Moderate - Difficult	Oregon City Schools, Oregon City Parks and Recreation, Park Place Neighborhood Association	2	$121,511
L4	**Park Place Park Trail System**	Cleveland St. - Front St.	Paved trail	A paved trail would provide a direct connection from Cleveland to the Park Place Park. A smaller system of earthen hiking trails could be developed on the hillside behind the park facilities.		No	None				0.17	Easy	Oregon City Parks and Recreation	2	$92,286
L5	**Park Place Creek Loop**	Park Place development - Redland Rd.	Earthen hiking trails, paved trail	A series of earthen trails would provide access to the stream corridor and connect to paved trails on the perimeter which would lead to new development and a community park.	Parks and Recreation Master Plan	No	Easements as part of new development				0.95	Easy	Oregon City Parks and Recreation	2	$157,613

Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
L6	**Park Place Development Trail System**	TBD	Paved trail	A collection of trails traversing the Park Place development providing connections to Redland Rd., proposed parks and open space, and adjacent subdivisions.		No	Easements as part of new development				n/a	Easy	Oregon City Parks and Recreation, OC Planning	N/A	$0
L7	**Livesay Creek Trail**	Holcomb Ridge Trail to Redland Rd.	Earthen hiking trail	A stream-side walking trail following a Class 4 waterway down Holcomb ridge.	Parks and Recreation Master Plan	Yes	Private property easements along the stream corridor		Environmental, slope, water quality issues. Private property issues.	Type 3 crossing of Redland Rd.	1.23	Difficult	Oregon City Parks and Recreation	3	$229,500
L8	**Abernethy Creek Trail**	15th and John Adams to Abernethy Rd.	Earthen or paved trail	A trail connecting 15th and John Adams and the Oregon City property on the north side of Abernethy Creek. The trail would then travel east on the north side of the creek to the Clackamas County Facilities property, until it can rejoin the Clackamas County property on the south side of the creek..	Parks and Recreation Master Plan	Yes				Type 1, 2 bridges	0.75	Moderate)	Oregon City Parks and Recreation, Clackamas County	2	$331,144
L9	**Abernethy Creek Extension Trail and Loop**	Abernethy Creek to Atkinson Park	Earthen trail	A trail would switchback up the steep hillside to connect to an existing trail on undeveloped public right-of-way just beneath Atkinson Park. The trail would remain on Clackamas County property. An earthen trail from Aktinson Park would connect down the hill from McLoughlin through the 16th Street ROW to Jefferson Street and reconnect to John Adams and 15th		Yes		Sidewalks on 15th	Environmental, slope, water quality issues. Nature trail will need to be hand built on the steep slopes in the 16th Street ROW; boardwalk / catwalk connection needed to connect to Jefferson		0.45	Easy – Moderate – Difficult (terrain)	Oregon City Parks and Recreation, Oregon City Public Works, Clackamas County	3	$74,550
L10	**Stadium Loop Trail**	Jackson St. and 14th	Earthen or paved trail	An earthen or paved trail would travel up 14th St., around the track, and follow existing demand trails around the Oregon City High School.	Newell Creek Conservation Strategy (DRAFT)	Small portion		Sidewalks on 14th			0.45	Easy	Oregon City Schools, Oregon City Parks and Recreation	3	$104,782
L11	**Barclay Park Connection**	Abernethy Creek to Barclay Park	Sidewalk	Add a sidewalk on John Adams so pedestrians can connect to Barclay Park		Yes		Sidewalks on John Adams	Slope	Type 1	0.23	Easy	Oregon City Public Works	1	$30,181
L12	**Holcomb School Connection**	Swan Ave. to Holcomb Elementary School	Paved trail	Trail would skirt the perimeter of the Oregon City View Manor and provide a connection to Swan Ave. if/when the private parcel adjacent to the Manor is developed.		Very small portion	Easements as part of new development	Sidewalk on Swan Ave.			0.69	Moderate	Oregon City Parks and Recreation, Clackamas County	1	$146,459
L13	**Swan Ave.**	Forsythe to Holcomb	Sidewalk or paved roadside trail	This trail would provide critical north/south user access, as Swan one of two roads that connect to Forsythe in this area.	TSP	Yes		Sidewalk or trail along roadway		Type 1+ at Holcomb and Forsythe	0.52	Easy - Moderate	Oregon City Public Works Department	1	$170,230

Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
L14	**Hunter Spur Trail**	Forsythe to Swan Ave.	Paved trail	This trail would utilize existing public right-of-way adjacent to the South Fork Water property to provide a connection through the neighborhood.		Very small portion	Easement needed for portion of trail west of Hunter		Slope	Type 1 crossing on Swan	0.26	Moderate - Difficult	Oregon City Parks and Recreation, Oregon City Public Works	2	$594,151
L15	**Waterboard - Singer Creek Connection**	Waterboard Park to Singer Creek Park	Signage, paved trail	This route would rely on way finding signage to Linn Ave. and then follow Singer Creek to existing paved trails within the park.	Parks and Recreation Master Plan	Yes	Easement needed to cross taxlot 22E31DD04600		Environmental, water quality issues.	Type 3 crossing on Linn	0.14	Easy - Moderate	Oregon City Parks and Recreation	2	$87,893
L16	**Waterboard Rim Trail**	Terrace Ave. to McKinley	Paved trail	This trail would travel along the rim of Waterboard Park providing outstanding views of downtown and the Willamette River. The existing trail needs to be maintained/upgraded, and a new portion will have to be constructed on the unpaved portions of the rim in public right-of-way.		No			Diplomatic measures with neighborhood to use unimproved right-of-way		0.27	Easy - Moderate	Oregon City Parks and Recreation, Oregon City Public Works	3	$76,604
L17	**Waterboard Park Trail**	McKinley Ave. to Center St.	Earthen trail	This trail would switchback down the steep hillside and connect to Center St. The trail would periodically intersect Waterboard Park Rd.		No			Slope issues	Type 1+ at Center	0.41	Moderate	Oregon City Parks and Recreation	2	$73,062
L18	**Center Street**	Telford to S. 2nd Ave.	Sidewalk	This trail follows Center St. and connects downtown Oregon City to the top of the plateau. The trail would also provide access to Waterboard Park trails and the sections of the Oregon City Loop Trail.	TSP	No		Sidewalks on both sides of the roadway	Slope issues	Type 1+ at Sunset	0.61	Moderate - Difficult	Oregon City Public Works	2	$84,823
L19	**Old Canemah - McLoughlin Connection**	Old Canemah Park to Tumwater	Paved trail, sidewalk	A paved trail would extend through Old Canemah Park to the PGE substation and connect to McLoughlin Blvd. Sidewalks would provide facilities to High Street, where trail users would meet up with the Regional Trail.		Yes	Easements needed to cross PGE property to McLoughlin Blvd.	Sidewalks on McLoughlin, Tumwater, and S. 2nd St.		Type 1 at High	0.31	Moderate	Oregon City Parks and Recreation, Oregon City Public Works	2	$60,361
L20	**Rivercrest Loop Trail**	McKinley Ave. to Linn	Sidewalk	An on-street loop trail would provide a connection to Singer Creek Park, Waterboard Park, and Rivercrest Park. Trail would travel through small public open spaces.	Park Drive in TSP	Small portion		Sidewalks on McKinley, Brighton, Charman and Park	Encroachment issues	Type 1+ at Linn	0.96	Easy - Moderate	Oregon City Public Works, Oregon City Parks	1	$213,114
L21	**Parks Trail**	Singer Creek Park to Hillendale Park	Paved trail	This trail would link various parcels of public and quasi-public land to provide an off-street north/south connection linking schools, county buildings, and parks.	Parks and Recreation Master Plan	Small portion	Easements needed to cross PGE properties, McLoughlin Memorial, cemetery		Trail will travel through school property	Type 2	1.3	Moderate - Difficult	Oregon City Parks and Recreation, Clackamas County	1	$492,917
L22	**Hillendale South Trail**	Hillendale Park to Gaffney Lane	Sidewalk, paved trail	This trail would utilize sidewalks to connect to the Powerline Trail and then continue south on a paved trail through school property.	Parks and Recreation Master Plan	No		Sidewalks on Wassail, Eastborne, Clairmont	Trail will travel through school property	Type 1	0.48	Easy	Oregon City Public Works, Oregon City Parks and Recreation	1	$162,942

Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
L23	**Wesley Lynn - Chapin Trail**	Wesley Lynn Park to Chapin Park	Paved trail	This trail would connect two community parks via public right-of-way and undeveloped parcels of land.		Very small portion	Easements as part of new development				1.01	Easy - Moderate	Oregon City Parks and Recreation, Oregon City Public Works	1	$300,413
L24	**Newell Creek Canyon Trail System**	Newell Creek Trail system	Earthen trails, paved on-street trails	A series of hiking trails that would access various parts of the eastern slope in Newell Creek Canyon. The trails would lead to potential interpretive stations and viewpoints, as well as connect along the rim. Paved trails would utilize existing public street right-of-way.	Newell Creek Conservation Strategy (DRAFT)	Yes	Easements needed to cross taxlot, easements as part of development (Wal-Mart)	Sidewalk improvements on Barclay	Sensitive areas, existing demand trails will need to be closed and repaired.	Type 4 tunnel under Highway 213; boardwalk / bridge crossing Newell Creek	32	Easy - Difficult	Oregon City Parks and Recreation, Metro	3	N/A
L25	**Chapin - South End Connection**	Chapin Park to South End Rd.	Paved trail	This trail would connect South End Rd. to Chapin Park via the small public property parcel to the public right-of-way on Gentry Way.		No				Type 1 crossing on Boynton, Type 1+ on South End	0.35	Easy	Oregon City Public Works Department	1	$57,380
L26	**Glacier Court Trail**	Chapin Park to South End Rd.	Sidewalk	A sidewalk connection would provide better access to Chapin Park. Some sidewalk segments exist in places.		No		Sidewalk improvements on Glacier Ct.			0.2		Oregon City Public Works Department	2	$34,927
L27	**BPA Powerline Trail**	Highway 213 to the Willamette River	Earthen trail	This hiking/equestrian trail would follow the BPA right-of-way from Highway 213 to the Willamette River rocks off highway 99E. Grades would be moderate to steep in some areas but would provide a pastoral natural experience for local walkers and horse riders.	Parks and Recreation Master Plan	Yes	Easements needed across numerous private property parcels		Slope, erosion, privacy	Type 2 crossing on Highway 213, Type 1+ on Leland, Central Point, and South End. Type 3 crossing on 99E.	4.43	Very Difficult	Clackamas County, Oregon City Parks and Recreation	3	$1,491,426
L28	**Coffee Creek Trail**	South End - Old Canemah Park	Stairs, earthen trail	This accessway would provide a connection from South End Road to Canemah Park and the regional trail system.		Yes	Easements needed across numerous private property parcels	Sidewalk on South End Rd. to connect to stairway	Slope, erosion, private property	Type 1+ on South End Rd.	0.54	Difficult	Oregon City Parks and Recreation, Oregon City Public Works	2	$119,070
L29	**Canemah Bluff Trail**	Oregon City Loop Trail to Oregon City Loop Trail	Earthen trail	This earthen trail would follow the contours on Canemah Bluff and travel around the southwestern point of the plateau. Two spur trails would connect to Beutel Rd. and Navajo Way. The trail will connect to the regional trail near Hazel Grove Drive.	Parks and Recreation Master Plan	Some	Easements needed to cross multiple (27) private properties			Type 1+ crossing on South End Rd.	3.5	Very Difficult	Oregon City Parks and Recreation, Metro	3	$651,038

Projects						Implementation Measures									Planning Estimate Capital Costs (Excludes Property Acquisition/Easement)
ID	**Trail**	**From - To**	**Type**	**Description**	**Adopted Plan(s)**	**In Water Quality Resource Zone?**	**Acquisition/ Easement**	**Right-of-Way Improvement**	**Other**	**Crossings**	**Length (miles)**	**Ease of Implementation**	**Lead Responsibility**	**Priority**	**Trail Costs (See Cost Estimate Worksheet for Cost Breakdown)**
L30	**Lazy Creek Trail**	Gaffney to Molalla	Sidewalk and paved trail	This on-street connection provides direct access from Molalla to Gaffney and the Parks Trail System. This trail would provide a more direct connection for Clackamas County Community College students living in the surrounding neighborhoods and residents wishing to access the College trail system.		Some	Easement needed to cross taxlot 32E08A 01606	Sidewalk on Lazy Creek Lane		Type 2 crossing on Molalla	0.43	Easy - Moderate	Oregon City Public Works	1	$114,026
L31	**Finnegan's Trail**	South End Rd. to Finnegan's Way	Paved trail or earthen trail	This trail would formalize existing demand trails on quasi-public land and connect to the regional trail at the creek. It would also provide a connection to South End Rd and the trail system connecting to Canemah Bluff.		Some			Negotiation with the homeowner's association	Type 1+ crossing on South End Rd.	0.8	Moderate - Difficult, depending on resident's receptiveness to a trail	Oregon City Parks and Recreation	3	$221,454
L32	**Parkland Trail**	South End Rd. to Canemah Bluff via Navajo Way	Paved trail	A trail would travel through future development and follow Navajo Way to connect to Canemah Bluff and the proposed Canemah Bluff Trail.			Easements as part of new development	Sidewalks on Navajo Way		Type 1+ or Type 3 crossing on South End Rd.	0.41	Moderate	Oregon City Parks and Recreation, Oregon City Public Works	2	$102,287
L33	**Powerline Trail**	Beavercreek Rd. - Meyers Rd.	Shared use path, on-street	Community trail will utilize the powerline right-of-way in Newell Creek Canyon southwest to Meyers Rd., where it will connect to the Oregon City Loop Trail.	Parks and Recreation Master Plan	n/a	n/a	See description.			1.1		Oregon City Parks and Recreation, Public Works	1	$481,478
L34	**Central Point Trail**	Regional Trail to BPA Powerline Corridor Trail	Earthen trails	This trail would provide access from Central Point Rd and the Regional Trail through new development to the BPA Powerline Corridor trail along the creek.	Parks and Recreation Master Plan	Yes	Easements as part of new development, easements on private property				0.45	Difficult	Oregon City Parks and Recreation	3	$77,497


LOCAL TRAILS
L1 Thimble Creek Trail
L2 Holcomb Ridge Trail
L3 Park Place School Trail
L4 Park Place Park Trail System
L5 Park Place Creek Loop
L6 Park Place Development Trail System
L7 Livesay Creek Trail
L8 Abernethy Creek Trail
L9 Abernethy Creek Extension Trail
L10 Stadium Loop Trail
L11 Barclay Park Connection
L12 Holcomb School Connection
L13 Swan Avenue
L14 Hunter Spur Trail
L15 Waterboard - Singer Creek Connection
L16 Waterboard Rim Trail
L17 Waterboard Park Trail
L18 Center Street
L19 Old Canemah - McLoughlin Connection
L20 Rivercrest Loop Trail
L21 Parks Trail
L22 Hillendale South Trail
L23 Wesley Lynn - Chapin Trail
L24 Newell Creek Canyon Trail System
L25 Chapin - South End Connection
L26 Glacier Court Trail
L27 BPA Powerline Trail
L28 Coffee Creek Trail
L29 Canemah Bluff Trail
L30 Lazy Creek Trail
L31 Finnegan's Trail
L32 Parkland Trail
L33 Powerline Trail
L34 Central Point Trail
L35 King Trail
L36 Clackamette Park/Jon Storm Park Trail
REGIONAL TRAILS
R1 Clackamas River Trail
R2 Newell Creek Canyon Trail
R3 Oregon City Loop Trail
R4 Beaver Lake Trail
R5 Barlow Road Trail
R6 Trolley Trail Bridge
R7 Willamette Greenway Trail
Oregon City Conceptual Trails Map
Existing and Proposed Trails
LEGEND
METRO REGIONAL TRAILS
EXISTING TRAIL
PROPOSED TRAIL
PROPOSED RIVER TRAIL
EXISTING AND PROPOSED TRAILS
EXISTING COMMUNITY TRAIL
PROPOSED COMMUNITY TRAIL
EXISTING LOCAL TRAIL
PROPOSED LOCAL TRAIL
TRAILHEADS
EXISTING BOAT LAUNCH
PROPOSED BOAT LAUNCH
EXISTING TRAILHEAD
PROPOSED TRAILHEAD
URBAN GROWTH BOUNDARY
OREGON CITY LIMITS
PARKS
SCHOOLS
TRANSIT CENTER
N
0
0.5
1
Miles
Sources:
METRO RLIS, 2001
Oregon City GIS, 2002 - 2004
09/25/04

Estimated Long-Term Costs

The candidate projects are recommended to be implemented over the next 50 years, or as funding is available. Some of the more expensive projects may take longer to implement.

The total implementation cost is estimated at approximately $34 million. Approximately $7 million is for regional trails, $19 million for trails on collector and arterial roadways, and $9.3 million for local trails. A complete breakdown of costs is presented in Tables 6 and 7 on the following pages. Again, many trails will likely be implemented as part of property development projects over time. It is important to note that while some of the trail projects can be funded with Federal, State, and regional transportation, safety, and/or air quality grants, many are recreational in nature and must be funded by local or private sources.

Trail Type	Miles*	Cost/mile	Total
Regional Trails	17	$6,000**	$102,000
Community Trails	24	assumed as part of routine roadway maintenance	
Local Trails			
Natural Trails	22	$800	$17,600
City Trails	17	$3,000 - $6,000	$51,000 - $102,000
Sidewalks/Accessways	n/a	assumed as part of routine roadway maintenance	

* Approximate estimation. Actual trail miles will be determined after a detailed planning process and an engineering/survey analysis.

** Lower bound cost estimate based on Portland's Springwater Corridor Trail. Maintenance costs typically range from $6,000 - $10,000 per year. On-street portions of the Regional Trail will undergo routine street maintenance.

Table 4. Annual Trail Maintenance Costs

Table 5. Estimated Costs for Oregon City's Trail Network: Regional Trails

ID	Trail Name and Segments	Trail miles Construction (12' paved) $300,000 per mile *	Trail miles Construction (unpaved) $132,000 per mile *	On-street miles: Widening $300,000 per mile	Stripe/sign bike lane $25,000 per mile	Sidewalk (6', one side) $184,800 per mile	Signing $1,500 per mile	Crossings: Type 1 $5,000 per crossing	Type 1+ $15,000 per crossing	Type 2** $10,000 per crossing	Type 3 $100,000 per crossing	Other****	Preliminary Cost	Design & CM (15%)	Contingency (20%)	Estimate of Total Cost
Regional Trails																
R1	I-205 Path (Two Rivers Trail)	$204,000			$17,750	$131,208	$3,450		$15,000				$371,408	$55,711	$74,282	$501,401
R2	Newell Creek Canyon Trail	$867,000		$117,000	$3,750		$4,050		$15,000			$1,000,000	$2,006,800	$301,020	$401,360	$2,709,180
R3	Oregon City Loop Trail	$1,430,400		$21,000	$17,500	$60,984	$14,250	$5,000	$30,000			$250,000	$1,829,134	$274,370	$365,827	$2,469,331
R4	Beaver Lake Trail	$163,200								$10,000	$100,000		$273,200	$40,980	$54,640	$368,820
R5	Barlow Road Trail	$180,000		$207,000		$262,416	$2,550		$15,000	$10,000			$676,966	$101,545	$135,393	$913,904
R6	Trolley Trail Bridge												$0	$0	$0	$0
R7	Willamette Greenway Trail	$300,000		$375,000	$50,000		$4,500					$100,000	$829,500	$124,425	$165,900	$1,119,825
Totals																$6,962,636

* actual cost will depend on ROW acquisition, drainage issues, surface selected

** includes signal modifications to add pedestrian actuation

*** includes only the trail segments within Oregon City's city limits

**** special conditions that may include bridge construction, property acquisition, and sidewalk construction

Table 6. Estimated Costs for Oregon City's Trail Network: Local Trails

ID	Trail Name and Segments	Trail miles Construction (12' paved) $300,000 per mile *	Trail miles Construction (unpaved) $132,000 per mile	On-street miles: Widening $300,000 per mile	Stripe/sign bike lane $25,000 per mile	Sidewalk/Path (6', one side) $184,800 per mile	Signing $1,500 per mile	Crossings: Type 1 $5,000 per crossing	Type 1+ $15,000 per crossing	Type 2** $10,000 per crossing	Type 3 $100,000 per crossing	Other****	Preliminary Cost	Design & CM (15%)	Contingency (20%)	Estimate of Total Cost
Local Trails																
L1	Thimble Creek Trail		$594,000									$200,000	$794,000	$119,100	$158,800	**$1,071,900**
L2	Holcomb Ridge Loop Trail		$183,480	$12,000	$1,000	$343,728							$540,208	$81,031	$108,042	**$729,281**
L3	Park Place School Trail					$85,008		$5,000					$90,008	$13,501	$18,002	**$121,511**
L4	Park Place Park Trail		$63,360					$5,000					$68,360	$10,254	$13,672	**$92,286**
L5	Park Place Creek Loop		$66,000				$750					$50,000	$116,750	$17,513	$23,350	**$157,613**
L6	Park Place Development Trail System												$0	$0	$0	**N/A**
L7	Livesay Creek Trail		$165,000					$5,000					$170,000	$25,500	$34,000	**$229,500**
L8	Abernethy Creek Trail					$140,448	$1,140					$100,000	$241,588	$36,238	$48,318	**$326,144**
L9	Abernethy Creek Extension Trail		$33,000										$33,000	$4,950	$6,600	**$44,550**
L10	Stadium Loop Trail					$77,616							$77,616	$11,642	$15,523	**$104,782**

L11	Barclay Park Connection					$22,176	$180						$22,356	$3,353	$4,471	**$30,181**
L12	Holcomb School Connection					$103,488		$5,000					$108,488	$16,273	$21,698	**$146,459**
L13	Swan Avenue					$96,096			$30,000				$126,096	$18,914	$25,219	**$170,230**
L14	Hunter Spur Trail					$35,112			$15,000			$390,000	$440,112	$66,017	$88,022	**$594,151**
L15	Waterboard - Singer Creek Connection					$49,896	$210		$15,000				$65,106	$9,766	$13,021	**$87,893**
L16	Waterboard Rim Trail					$51,744		$5,000					$56,744	$8,512	$11,349	**$76,604**
L17	Waterboard Park Trail		$54,120										$54,120	$8,118	$10,824	**$73,062**
L18	Center Street					$62,832							$62,832	$9,425	$12,566	**$84,823**
L19	Old Canemah - McLoughlin Connection					$44,352	$360						$44,712	$6,707	$8,942	**$60,361**
L20	Rivercrest Loop Trail					$136,752	$1,110	$5,000	$15,000				$157,862	$23,679	$31,572	**$213,114**
L21	Parks Trail					$347,424	$2,700	$5,000		$10,000			$365,124	$54,769	$73,025	**$492,917**
L22	Hillendale South Trail					$85,008	$690		$15,000			$20,000	$120,698	$18,105	$24,140	**$162,942**
L23	Wesley Lynn - Chapin Trail	$165,000			$750	$11,088	$690		$45,000				$222,528	$33,379	$44,506	**$300,413**
L24	Newell Creek Trail System												$0	$0	$0	**$0**
L25	Chapin - South End Connector					$42,504							$42,504	$6,376	$8,501	**$57,380**
L26	Glacier Court Trail					$25,872							$25,872	$3,881	$5,174	**$34,927**
L27	BPA Powerline Trail		$584,760					$20,000				$500,000	$1,104,760	$165,714	$220,952	**$1,491,426**
L28	Coffee Creek Trail		$13,200									$75,000	$88,200	$13,230	$17,640	**$119,070**
L29	Canemah Bluff Trail		$462,000				$5,250		$15,000				$482,250	$72,338	$96,450	**$651,038**
L30	Lazy Creek Trail					$79,464		$5,000					$84,464	$12,670	$16,893	**$114,026**
L31	Finnegan's Trail					$147,840	$1,200		$15,000				$164,040	$24,606	$32,808	**$221,454**
L32	Parkland Trail					$75,768							$75,768	$11,365	$15,154	**$102,287**
L33	Powerline Trail	$330,000					$1,650		$15,000	$10,000			$356,650	$53,498	$71,330	**$481,478**
L34	Central Point Trail		$56,760				$645						$57,405	$8,611	$11,481	**$77,497**

Trail Funding Sources

Public Funding for Trails

There are a variety of potential funding sources including local, State, regional, and Federal funding programs that can be used to construct or augment the proposed trail improvements. Most of the these are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. Local funding for these projects would typically come from Oregon City and/or potential future bonds or other local revenues.

Table 7 summarizes public funding sources for Oregon City trails. Some of these funds are restricted to the type of improvements that qualify for assistance. It is important to note that many of the funding sources are highly competitive and impossible to determine exactly which projects will be funded by which funding sources. It is also difficult to pinpoint the timing of the projects, due to dependence on competitive funding sources, timing of roadway and development projects, and the overall economy.

Other Funding Opportunities

Residents and other community members are excellent resources for garnering support and enthusiasm for a trail and the City should work with volunteers to substantially reduce trail implementation and maintenance costs. Local schools, community groups, or a group of dedicated neighbors may use the project as a project for the year, possibly working with a local designer or engineer. Work parties can be formed to help clear the right-of-way where needed. A local construction company can donate or discount services. Other opportunities for implementation will appear over time, such as grants and private funds. The City should look to its residents for additional funding ideas to expedite the completion of the trail system.

Source	Description	Eligible Projects	Funding Cycle
Metro Transportation Improvement Program Funding (MTIP)	Federal transportation funds coordinated by Metro. Funds can be used for Preliminary Engineering, ROW acquisition and construction.	Regional, Community Trail projects along roadways with regional classifications	2 years
Recreational Trails Grants	Coordinated by Oregon State Parks. Funds can be used for ROW acquisition and construction.	Regional, Local Trails	Annual
Land and Water Conservation Fund (LWCF)	Federal funds coordinated by Oregon State Parks. Funds can be used for ROW acquisition and construction.	Regional, Local Trails	Annual
Measure 66 funds from Oregon State Lottery	Coordinated by Oregon State Parks. Funds can be used for ROW acquisition and construction.	Regional, Local Trails	2 years
Transportation Enhancements	Administered by Oregon Department of Transportation (ODOT). Must serve transportation need.	Regional, Community, some Local Trails	2 years
Oregon Bike/Ped Grants	Administered by ODOT's Bicycle and Pedestrian Program. Must be in public ROW.	Regional, Community, some Local Trails	2 years
System Development Charges (SDCs)	Fees on new construction allocated for parks, streets, and public improvements. Where available, funds can be used for ROW acquisition and trail construction.	Community, Local Trails	Varies
Local/Regional bond measures	Funds can be used for ROW acquisition, engineering, design and trail construction.	Regional, Community, Local Trails	Varies
Tax Increment Financing/Urban Renewal Funds	Part of trail project must be located in an urban renewal district which meets certain economic criteria and is approved by a local governing body.	Community, Local Trails	Varies
Local Traffic Safety Commission	Funding for street crossings and signals.	Community, Local Trails	Varies
Safe Routes to School Funds	Federal funds for pedestrian and bicycle facilities to improve school safety	Regional, Community, Local Trails	Pending legislation
Congestion Mitigation and Air Quality (CMAQ) funds	Federal funding for bicycle and pedestrian facilities that reduce travel by automobile. Recreational facilities generally are not funded.	Community Trails	2 years

Table 7. Public Funding Sources for Bicycle, Pedestrian, and Trail Projects

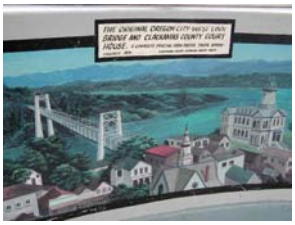
Maintenance Guidelines and Costs

The following table summarizes a recommended maintenance schedule for the Oregon City Trail system. These guidelines address maintenance on the off-street portions of the trails. On-street portions should be maintained per the standards of the responsible jurisdiction.

Item	Frequency
Inspections	Seasonal - at both beginning and end of summer
Signage Replacement	1 - 3 years
Pavement Markings Replacement	1 - 3 years
Major damage response (fallen trees, washouts, flooding)	Schedule based on priorities
Pavement Sealing, Potholes	5 - 15 years
Introduced tree and shrub plantings, trimming	Every 1- 3 years
Culvert Inspection	Before winter and after major storms
Cleaning Ditches	As needed
Trash Disposal	Weekly during high use; twice monthly during low use
Lighting Luminaire Repair	Once a year
Pavement Sweeping/Blowing	As needed, before high use season. Weekly in fall.
Maintaining culvert inlets	Inspect before the onset of the wet season, then again in early fall
Shoulder plant trimming (weeds, trees, brambles)	Twice a year: middle of growing season and early fall
Waterbar maintenance (earthen trails)	Annually
Site furnishings, replace damaged components	As needed
Graffiti Removal	Weekly, as needed
Fencing Repair	Inspect monthly for holes and damage, repair immediately
Shrub/Tree Irrigation for introduced planting areas	Weekly during summer months until plants are established
Litter Pick-up	Weekly for high use; twice a month for low use

Table 8. Maintenance Tasks and Frequency of Need

V. Additional Recommendations



In addition to implementing the proposed trails discussed in the previous chapter, the following action items are recommended to ensure the success of the Oregon City Trails Master Plan.

Implementation

To oversee implementation of the proposed trail system, it is recommended that staff management, the Parks and Recreation Advisory Committee, and the Natural Resource Committee take leadership roles, and devote at least two meetings annually to Plan evaluation, monitoring, and progress.

New Development

Develop and adopt City Code to ensure that trail portions are built to recommended standards as part of the land use permitting process. City inspectors should be educated about Oregon City trail standards and trail siting guidelines to ensure that trails are included in the development and are constructed properly.

Waterway Trails

Oregon City has two navigable waterways that are adjacent to the city limits, which are ideal for non-motorized aquatic recreation (i.e., canoeing and kayaking).

- Launches for small non-motorized watercraft should be provided in parks and public spaces that are adjacent to the Willamette and Clackamas Rivers. Launches on Clackamette Cove should be considered when the area is redeveloped.

- Small tie-up areas should be provided so people can visit downtown Oregon City and fish on the Willamette River.

Trailheads

Good access to the trail system is a key element to its future success. Trailheads (formalized parking areas) serve the local and regional population arriving to the pathway and trail system by car. As seen on the **Conceptual Trails Map**, this Plan identifies a series of trailhead locations, all in conjunction with major parks and schools. Trailheads provide essential access to the trail system and provide amenities

like parking, restrooms, and signage for trail users. Additional trailhead siting will occur with further planning processes for individual projects.

Signage

A comprehensive signage and directional system should be developed to inform and educate users about the trail and pathway system. This program should include a unique sign that delineates the Oregon City Trail network theme. Opportunities for interpretive information could include the history of Oregon City and its early pioneers; mills and shipping; historic sites, information about native flora and fauna; water quality; geologic formations; drainage and flow of water systems; bicycle and pedestrian safety and awareness; history of the Willamette and Clackamas rivers and native populations. An integrated system of interpretive signs or markers should be developed on heritage trails to guide, and provide information about, heritage sites. Comprehensive and innovative signing systems make trail networks outstanding.

Signs should also be created to warn either motorists of bicyclists and pedestrians or caution bicyclists and pedestrians of oncoming motor vehicles.

Kiosks could be placed along some trails and at major trailheads, such as Mountainview Cemetery, Canemah Park, and Clackamette Park, that include a map and other helpful information about the route, safety, and the city. A sample is provided in the *Design Guidelines* section of this Plan.

Education

Numerous educational opportunities exist to use the trail system for educational purposes about history, culture, science, and safety. The trail projects are more likely to attract foundation funding specific to education if education is incorporated into project design.

Establish bicycle and pedestrian safety programs that will teach bicycle safety to children, adults, and other groups that encounter bicyclists and pedestrians. A specific curriculum geared for each audience, along with a handbook or other literature, is recommended.

Link to local youth participation programs, such as the Girl and Boy Scouts for educational opportunities, adopt-a-trail, trailside plantings, and other activities.

Other Master Plan Processes

The following projects need to undergo Master Planning processes in order to identify the feasibility, cost, and funding availability of each project:

- Oregon City Loop Trail
- Newell Creek Canyon Regional Trail
- Newell Creek Canyon trails

- Barlow Road Trail
- Powerline Trail
- Canemah Bluff (Metro property and links to Oregon City)
- Parks Trail and the Wesley Lynn – Chapin Trail
- Park Place UGB expansion area trails
- Livesay Creek Trail

Safe Routes to School

Nationwide, communities are developing programs to improve the safety and ability of children to bicycle and walk to school. Federal money may be available in the future as a part of the transportation budget for projects that improve direct access to schools.

This Plan includes a trail connection to every school in Oregon City. Complementary to that would be the development of a local safe routes to school program. The toolbox of potential solutions includes:

- signal timing modifications
- curb extensions and median islands
- traffic calming
- markings and signage
- trails, sidewalks, bicycle lanes, and other facility improvements
- crosswalks
- crossing guard programs
- safe routes to school maps
- escorted bike and walk groups
- educational safety curriculums
- outreach programs to encourage safe driving.

VI. Appendix

Oregon City Trails Visioning Workshop Comments

January 14, 2004
6:00 – 8:00 PM
Pioneer Community Center

Attendees:

Dianne Kosboth	Lois Kiefer	Jerry Herman
George Kosboth	Ralph Kiefer	Alison Himmelwitz
Dean Walch	Sha Spady	Liz Crane
Bill Woods	Richard Craven	Lango Hansen
Shawn Dachtler	Kathy Franco	Doug Neeley
Marcia Sinclair	Thelma Haggenmiller	

Facilitators:
Dee Craig, Oregon City Parks and Recreation
Jim Row, Oregon City Parks and Recreation
Larry Potter, Oregon City Public Works Department
Allison Wildman, Alta Planning + Design
George Hudson, Alta Planning + Design

Notes (from notations made on aerials with trails. Names of trails taken from Oregon City Base Map):

- Near Clackamas Community College, there is a jogging trail that can be connected to the Oregon City Loop regional trail.
- Near the Oregon City H.S. freshman campus, there are maintenance roads.
- Newell Creek Trail needs to stay on the canyon rim.
- Stay out of the ravine for the Newell Creek Trail.
- Newell Creek Trail has a viewing point for good views of Mt. Hood.
- The land around the Newell Creek Trail is city owned.
- Newell Creek Trail should continue into Mountainview Cemetery and go out to Molalla Ave.
- East of the Beaver Creek Trail, there are Old Molalla railway easements.
- Ogden Middle School is a destination.

- Just NW of Ogden MS, there is a culvert that can be walked through that runs under HWY 213, connecting Newell Creek Trail and Beaver Creek Trail.
- A connection should be made from Holcomb Blvd to Clackamette Heights Trail.
- Holcomb Blvd has no sidewalks.
- The Barlow Alternative Trail is a MUST.
- North of Holcomb Blvd from Winston Dr (just south of Armel) there is county concern over loss land of Oregon Trail.
- There will be a future road that connects Holcomb Blvd near the town line with a new town center that will be south of Livesay Rd.
- The Oregon Trail runs nearby Holcomb Elementary School
- There is easement trail potential along that part of Oregon Trail, heading NW towards Hunter Ave.
- There needs to be a connector between Park Place Elementary School and the nearby trail.
- The Cemetery City Park near where Hwy 213 and train tracks intersect is a destination.
- Just NE of the new Amtrak station (across from End of Oregon Trail Center) is a Metro wetlands with a small loop trail and info kiosk.
- Tie in Barclay Park via 12th.
- Create a loop between Barclay Park, the Swimming pool, and Atkinson Park.
- A connection is needed between Canemah Park and Old Canemah Park.
- Access to Canemah Cemetery.

Oregon City Trails Public Open House Comments

March 10, 2004
6:00 – 8:00 PM
Pioneer Community Center

Facilitators:
Dee Craig, Oregon City Parks and Recreation
Jim Row, Oregon City Parks and Recreation
Larry Potter, Oregon City Public Works Department
Allison Wildman, Alta Planning + Design
George Hudson, Alta Planning + Design

Written Comments:

"I live on South End and Warner Parrott. As a part of the Trails Master Plan, I would like to see improved/added BIKE LANES along main roads, connecting to shopping areas (Fred Meyer, etc.) and historic downtown. Also, there are many rough walking paths that connect the Rivercrest Neighborhood to the historic downtown. I believe these trails run through Waterboard Park. I would like to see these paths upgraded so that they are more inviting to users. As they are, they feel a bit isolated…almost like you wonder if you should be there. Accessing historic downtown from

these trails is much more convenient as a pedestrian than going by road…which gets me back to BIKES LANES!"

"Proposed trail extensions: extending from Metro Trailhead in the Canemah Children's Park, going directly below and parallel with South End Road, crossing over Miller Avenue at Coffee Creek, and going into the Old Canemah Park."

"Newell Creek – West side – only one trail through center of Newell Creek and one on the ridge; East side – follow old RR berm."

"Need crossing light for 99E north to 205 north."

"Newell Creek – Keep trail on east side of Highway 213 on old RR berm."

VII. References

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U.S. Fish and Wildlife Service (USFWS). 1981. *National Wetlands Inventory: Oregon City Quadrangle.* Portland, Oregon.

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2.13.17 Bob LaSalle

The applicant states on page 9 of the Annexation Narrative that "the future development of the property will not have any significant impact upon the economic, social and physical environment of the community." We disagree.

Chapter 14.04.060.A.3 and.7 of the Oregon City Municipal Code states "When reviewing a proposed annexation, the Commission shall consider the following factors as relevant:

.3 Adequacy and availability of public facilities and service to service **POTENTIAL** development.

.7 Lack of any significant adverse effects on the economic, social and physical environment of the community by the overall impact of the annexation."

On page 5 of the Annexation Narrative the applicant states "The schools serving this site are Holcomb Elementary School, Ogden Middle School, and Holcomb Elementary School." He further states that "discussions with the School District staff indicate that there are no capacity problems with these schools". Well, I suppose if there were two Holcomb Elementary Schools there wouldn't be a capacity issue, but in my discussions with the school district just two weeks ago I can see a problem. With a potential of 124 new dwellings there is a potential of 99 new students at Holcomb Elementary School. That school has a capacity of 564 students, with a current enrollment of 488 students. That school will not be overcrowded, it will be beyond capacity. On top of that add the potential of 230 more students from the anticipated dwellings from future developments already approved or anticipated you can see we are close to failing our students.

That development would also produce 1,240 new daily auto trips onto Holcomb Boulevard which is already a speed prone route with a sharp curve at the School Road, and will certainly add to the already heavy congestion at Hwy 213 and Redland Road and the Holcomb, Redland, Abernethy intersection. Again, getting back to anticipated dwellings from future developments we're looking at an additional 3,360 daily trips.

It's time to start looking at what the cumulative effects of all these developments will have on our infrastructure and community, not just individually.

For these reasons we urge you to follow the Code and deny this annexation until solutions to these problems can be found.

Oh, and for future reference, this property is in the Barlow Road Designated Corridor.

1A

Dwellings	Location
10	Hunter, across from the Water Works
27	Sunnybrook Ridge
5	Holcomb & Swan
200	92 acres in the Park Place Concept Plan south of Holcomb
124	Serres 35 acres north of Holcomb
98	"Airport" property
18	Apartments on Holcomb
2	15961 Hunter
6	Holcomb and Hunter

COMMENT FORM

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

OREGON CITY

Date of Meeting 2.13.17

Item Number From Agenda 3.b.

NAME: MICHAEL C. ROBINSON

ADDRESS: Street: 1120 NW COUCH ST, TENTH FLOOR

City, State, Zip: PORTLAND, OR 97209-4128

PHONE NUMBER: (503) 727-2264

E-MAIL ADDRESS: MROBINSON@PERKINSCOIE.COM

SIGNATURE: M. C. Robinson

COMMENT FORM

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

OREGON CITY

Date of Meeting 2/13/17

Item Number From Agenda 3A

NAME: GARY SHAVER

ADDRESS: **Street:** 14995 JOSI CT

City, State, Zip: OREGON CITY

PHONE NUMBER: 503 421-3590

E-MAIL ADDRESS: Shavergh@q.com

SIGNATURE: G Shaver

COMMENT FORM

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

OREGON CITY

Date of Meeting Feb 13 2016

Item Number From Agenda AN-16-0004/ZC-16-0001

NAME: Kim Krumm

ADDRESS: **Street:** 14991 Josi CT

City, State, Zip: OREGON CITY OR 97045

PHONE NUMBER: 503 650 1683

E-MAIL ADDRESS: Krummk@comcast.net

SIGNATURE:

COMMENT FORM

OREGON CITY

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

Date of Meeting 2/13/17

Item Number From Agenda 3A

NAME: Chris Borisch Borisch

ADDRESS: **Street:** 15118 Oyek Dr

City, State, Zip: Oregon City OR 97045

PHONE NUMBER: 503-804-8346

E-MAIL ADDRESS: chris_borisch@msn.com

SIGNATURE: Chris Bor

COMMENT FORM

OREGON CITY

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

Date of Meeting 2-13-2017

Item Number From Agenda 3A

NAME: BRYCE BORISCH

ADDRESS: **Street:** 15118 OYER DR

City, State, Zip: Oregon City, OR 97045

PHONE NUMBER: 503-913-4076

E-MAIL ADDRESS: OYER2003@MSN.COM

SIGNATURE: Bryce Borisch

COMMENT FORM

OREGON CITY

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

Date of Meeting 2-13-2017

Item Number From Agenda 3A

NAME: TROY LAVOIE

ADDRESS: **Street:** 15114 OYER DR

City, State, Zip: Oregon City 97045

PHONE NUMBER: 971 282 2935

E-MAIL ADDRESS: TROYLAVOIE@GMAIL.COM

SIGNATURE:

COMMENT FORM

OREGON CITY

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

Date of Meeting 2.13.17

Item Number From Agenda 3.a.

NAME: MICHAEL ROBINSON (APPLICANT'S REPRESENTATIVE)

ADDRESS: **Street:** 1120 NW COUCH ST, TENTH FLOOR

City, State, Zip: PORTLAND, OR 97209-4128

PHONE NUMBER: 503-727-2264

E-MAIL ADDRESS: MROBINSON@PERKINSCOIE.COM

SIGNATURE: MCR

COMMENT FORM

OREGON CITY

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Date of Meeting 2-13-17

Item Number From Agenda 3a

NAME: BOB LA SALLE

ADDRESS: **Street:** 16298 S. OAKTREE TERR.

City, State, Zip: O.C. 97045

PHONE NUMBER: 503-318-7969

E-MAIL ADDRESS:

SIGNATURE: Bob LaSalle

COMMENT FORM

OREGON CITY

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Date of Meeting 2/13/17

Item Number From Agenda 3A

NAME: Joe Novak

ADDRESS: **Street:** 14234 Holcomb Blvd.

City, State, Zip: Oregon City 97045

PHONE NUMBER:

E-MAIL ADDRESS: NOVAKJOE500@gmail.com

SIGNATURE: Joe Novak

COMMENT FORM

OREGON CITY

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Date of Meeting Feb. 13

Item Number From Agenda 3a

NAME: Barbara Renken

ADDRESS: **Street:** 15090 Dyer Dr.

City, State, Zip: Oregon City, OR 97045

PHONE NUMBER: 503 722 3941

E-MAIL ADDRESS: miniflowa@comcast.net

SIGNATURE: Barbara Renken

COMMENT FORM

PLEASE PRINT CLEARLY

- SPEAK INTO THE MICROPHONE AND STATE YOUR NAME AND RESIDING CITY
- Limit Comments to ***3 MINUTES***.
- Give to the Clerk in Chambers ***prior*** to the meeting.

OREGON CITY

Date of Meeting 2/13/2017

Item Number From Agenda 3a

NAME: Torey Lam

ADDRESS: **Street:** 16285 Baylor

City, State, Zip: Oregon City OR 97045

PHONE NUMBER: 808-499-5491

E-MAIL ADDRESS: torey.lam@live.com

SIGNATURE: Torey Lam

COMMENT FORM

OREGON CITY

PLEASE PRINT CLEARLY

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Date of Meeting 2/13/17

Item Number From Agenda 3A

NAME: Mike Ziolko

ADDRESS: **Street:**

City, State, Zip: Oregon City

PHONE NUMBER:

E-MAIL ADDRESS:

SIGNATURE: Mike Ziolko

EXHIBITS ENTERED INTO THE RECORD AT A HEARING

Community Development Department, 221 Molalla Avenue, Suite 200, P.O. Box 3040, Oregon City, OR 97045, (503) 722.3789
www.orcity.org

Hearing Date: 2-13-2017

File Number: _____

Exhibit Number:	Description of Exhibit:	Submitted By:
1A	Bob LaSalle Narrative	Bob LaSalle

February 1, 2017

Annexation Issue

Barbara Renken, Resident of Oregon City, Barlow Crest Neighborhood, Park Place.

Vice Chair of PPNA, Secretary of CIC

Thank you for your time, service and dedication to Oregon City and our Citizens.

Many of us are aware that SB 1573 was passed in March 2016, allowing for land to be annexed under specific guidelines into cities without a vote of the people, which had been the law until March 15th.

It is my understanding that if a city in the State of Oregon has a Municipal Code regarding annexations, it then over rules this bill when the Staff and Commission choose to take action.

Our Oregon City Municipal Code, Ordinance 14 is pretty specific about the citizens right to vote on annexations. It takes into consideration quality of life, transportation, education, infrastructure. Other cities have encouraged the City Staff and City Commission to defend their OCMC, including the city of Corvallis, among others.

I am here to encourage you to defend our Municipal Code and the residents that elected/hired you to work for them.

Without your support the cost of the infrastructure and the effect of these nonstop annexations will be devastating without the cooperation of the State, County, City, and yes, even the Federal Land and Transportation Departments. This is the purpose of Ordinance 14 in our Municipal Code; to protect you and the citizens of Oregon City. Oregon City is a better city because of annexation approval.

Barlow Crest is in a section previously a part of a large farm with an airstrip. This farm has been subdivided and been annexed in to Oregon City on several occasions, with a vote. We love our home, our neighborhood and we're not against development and/or progress done responsibly for the benefit of all.

The Neighbors of Park Place and other areas in Oregon City urge you to deny this annexation until critical issues and challenges are addressed.

ENTERED INTO THE RECORD
DATE RECEIVED: 2/1/17
SUBMITTED BY: Barbara Renken
SUBJECT: Item 6a.

Oregon City News Editorial - Wed Jan 25, 2017

SB 1573 (Annexation Bill) and Oregon City

Unknown to many Oregon residents, and supported by the Oregon Homebuilders Association, Gov. Kate Brown signed a bill, (SB 1573) on March 15, which attempts to circumvent cities' local vote requirements for annexations. That is SB 1573 would allow any property outside of an Oregon city to be annexed into the nearest city without a vote of that city's citizens, as long as it is on the border of the city limits.

The problem, however, is that at least 34 Oregon cities have a city charter which requires a vote to annex land into the city. Oregon City is one of those, as is Corvallis. SB1573 attempts to invalidate those local voting requirements, taking local control away from the voters.

Corvallis has chosen to sue the state of Oregon for violating their city's charter. Other Oregon cities are also looking at the possibility of suing, as we can in Oregon City. Oregon City's charter states that the citizens of our city have the right to vote on annexations of properties into our city. This should be explored and considered.

As a result of Gov. Brown's decision, some builders have jumped up to accept contracts from property owners who have been eager to sell and develop their property in the city. Just a few of these are located in Oregon City's Beavercreek and Park Place neighborhoods, previously introduced as "concept plans." Some of these properties have been on the ballot for annexation and have been overwhelmingly defeated several times, and for good reason.

So here we are with some of these same properties already voted down for annexation, (in the Beavercreek and Park Place neighborhoods) being annexed now without citizen approval. The citizens living in these areas are displeased with the possible outcomes. Some developers in the past have been eager to propose both low- and high-density development projects without concern for transportation, education, utilities, habitat or other effects of quasi-rural areas.

Recently I attended a Planning Commission meeting, (Jan. 9) where many people submitted public comments opposing the proposed annexations. In addition to the voting rights issues, the citizens presented facts and concerns new and are reasons why previous annexation ballots have been voted down in the past 10 years.

Therefore, in light of the local voting rights and SB1573 concerns raised by the public at the meeting, the Planning Commission formally suggested to the City Commission that in deciding on the annexation application, the City Commission should seriously consider the implications to our local right to vote on annexations. Should the City Commission refer the annexation to the voters? Soon the City Commission will decide: yes or no.

The City Commission should defend our charter by referring the annexation to the people for a vote. My concern is the city leans more on the developer's side than on the citizens' side. I understand the more development, the more taxes, the more money. However, we need to stand up for our city and our rights in deciding how we want to see this city continue to develop.

Do we want our city to become Happy Valley? Or Beaverton? Or do we want a more suburban lifestyle for our families and children to grow up in? You decide. Do you prefer children playing in their yards, or playing in the streets? Developers have a way of applying for development with little regard for local parks, habitat or quality of life.

Please pay attention to what is happening and attend or watch Planning Commission and City Commission meetings and take responsibility for your city.

I think the Planning Commission and the City Commission are currently overwhelmed with the fallout of SB 1573. The Park Place Concept Plan if annexed and developed per the original plan, would add over 1,500 homes, and this is not the only annexation or development currently in consideration in Park Place. Once that annexation is developed, the adjacent land that is currently unannexed would be eligible to be sold and developed. The Park Place neighborhood could see upwards of 2,000 homes, all accessed via Holcomb Boulevard in the next few years. Citizens need to step up and defend their right to vote on annexations.

Barbara Renken
Oregon City

City Planning Members,

I am here as a tax paying citizen and property owner who is against this annexation.
We all know this annexation is to increase the tax base through possible future housing. Be aware that the local infrastructure in this area such as Redland and the Hwy 213 plus Redland and Holcomb already has very significant problems. Additionally there is only one school in the entire area, which is already at near capacity.
Any addition to these will bring daily hardship on everyone in the area. Do any of you live in this area? Do you drive it daily? Do your children go to Holcomb Elementary School?
Please be responsible community members and help to address these items first before creating any additional problems and hardships through this annexation.

This annexation is short sighted, irresponsible and currently unconstitutional under Oregon law and benefits no one except the actual home developer through any proposed housing.
I would like to remind the Planning members on who they are supposed to be working for, and that would be the voters and not the special interests such as the "home Builders Association" who strongly pushed for SB 1573.

Planning Members, if you want this annexation then let the citizen's vote on it as it states in Oregon law and not through some backroom land grab.

Regards,
Mike Marchione and Kathleen Eisele
16061 Winston Dr
Oregon City, Or 97045

MMKE@Comcast.net

ENTERED INTO THE RECORD
DATE RECEIVED: 2/1/17
SUBMITTED BY: Kathleen Eisele
SUBJECT: Item 6a.

PARK PLACE NEIGHBOORHOOD ASSOCIATION

SIGN IN SHEET

DATE: Decenber 06, 2016 — STEERING COMMITTEE MEETING

NAME	ADDRESS	PHONE	E-MAIL
Lisa Novak	14234 Holcomb Blvd	971-347-9271	novak0929@gmail.com
Steve Ramsey	16155 Trail Dr.	503-654-0249	
Debbie & Bill Fuller			
Jan + Ron VanDomelen	15831 Stable Rd.		
Ryan Richards	Pitlock Place	503-741-1296	
Chris & Bryce Borsch	15118 Oyek Dr	503-804-9346	chris_borsch@msn.com
Debbie & Charlie Brown	14448 Ames Ct	5037808910	debandlee@aol.com
Molly & Jerry Bauck	14456 Ames Ct.	503-722-9354	mollybauck@q.com

PARK PLACE NEIGHBOORHOOD ASSOCIATION			
SIGN IN SHEET			
DATE: Decenber 06, 2016	STEERING COMMITTEE MEETING		
NAME	ADDRESS	PHONE	E-MAIL
Linda VanHavenbeke			
Steve			
Bob Zaballa			
Bill & Sue Pothoven			
Barbara Reuben			
Brian Csergei			
John Anderson			
Nick Dierckman			
TROY LAVOIE	15114 OVER DR		TroyLavoie@Gmail.com
Drew Larson			
Carla Calhoun			
Greg Stone	15946 Appers Blvd		

Serres Property Annexation & Zone Change

Neighborhood Meeting

Park Place Neighborhood Association

December 6, 2016

A neighborhood meeting was held on December 6, 2016 regarding a proposal to annex and re-zone approximately 35.65 acres of land on the north side of Holcomb. The meeting was held in the Alliance Charter Academy cafeteria.

Rick Givens, a planning consultant, represented the applicants in making a presentation regarding the proposal. Mr. Givens started his presentation by explaining that although there had been a prior neighborhood meeting regarding the proposed annexation application, it had been determined by the City's and the applicant's legal counsels that a zone change from Clackamas County to City zoning is required by City code at the time of annexation. For that reason, this second neighborhood meeting was being held. Mr. Givens noted that the subject property is designated by the City's Comprehensive Plan as Low Density Residential and that the default zoning per City code for land in this designation is R-10, single-family residential with a 10,000 sq. ft. minimum lot size standard. The proposed zoning in this application is R-10. A member of the audience asked if a higher density zoning could be applied subsequently and Mr. Givens explained that, while LDR lands can be zoned R-6 or R-8 as well as R-10, that would require a separate application in the future and would be subject to review for compliance with all of the approval standards listed in the City code. At this time, the proposal is simply for R-10 zoning. Mr. Givens explained how public services would be provided to the property and then opened the meeting up to public discussion.

The primary concern brought up by several people in the audience was traffic. There is considerable traffic congestion in the area on Holcomb Blvd. at peak traffic times. People were concerned about how the annexation and zone change would impact traffic. Mr. Givens explained that the proposal was simply to rezone and annex the property at this time. Further, because the City has not yet completed work on an Alternative Mobility Standard for the Hwy. 213 corridor, no development could be approved by the City at this time because a development proposal could not satisfy the requirements of Title 12 of the Municipal Code. Once that issue is resolved, a traffic study would have to be completed to demonstrate that the proposal would comply with the new Alternative Mobility Standard as well as the other standards of Title 12. Mr. Givens also noted that the long term solution to traffic congestion on Holcomb Blvd. was the completion of the Holly Lane Collector roadway called for in the Beaver Creek Concept Plan. A portion of that would be developed in conjunction with a second area proposed for annexation in a separate application that would also be discussed at the neighborhood meeting.

People were concerned about storm drainage impacts along Ames Road. Mr. Givens explained that the development of the Serres property would provide for storm water detention and would also provide for off-site storm drainage improvements to take storm water to the north to a natural drainageway on the north side of Forsythe Road. There would be no storm water added to the existing system along

Ames Road. There was also some concern expressed about a potential extension of Ames Rd. to connect with the Serres property when it is ultimately developed. Mr. Givens noted that the property that separates Ames from connecting with the annexation area is presently outside of the Urban Growth Boundary and, for that reason, could not be developed in the foreseeable future.

Mr. Givens noted that this proposal is scheduled for the January 9, 2017 Planning Commission hearing and that people were welcome to give testimony at that hearing. It was also noted that information relating to the application is available on the City's website.

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DEBBIE & BILL FULLER			
Jan + Ron VanDomelen	15831 Stable Rd.		
Ryan Richards	Pitlock Place	503-741-1296	
Chris & Bryce Borsch	15118 Oyer Dr	503-804-9346	Chris_borsch@MSN.com
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Steve			
Bob Tedalb			
Bill + Sue Rothrock			
Barbara Reuben			
Brian Csergei			
John Anderson			
Nick Dierckman			
TROY LAVOIE	15114 OYER DR		TroyLavoie@Gmail.com
Dave Larson			
Carla Calhoun			
Greg Stone	15946 Apperson Blvd		