

# Amended Fairview Refinement Plan II

April 2016

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## Fairview Refinement Plan II (2009)

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Development Standards and Design Guidelines: Ronald Kellett

Master Plan Coordinator: A.C. Neilsen Development Services, Inc.

# Table of Contents

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Contact Information .....	2
Introduction to Amended Plan .....	6
Introduction to Fairview Refinement Plan II 2009 .....	6
Summary of Significant Changes in this Amended Plan .....	10
[1] * Illustrative Site Plan .....	11
[2] Permitted Land Uses.....	12
[3] General Allocation and Identification of Major Proposed Land Uses .....	12
[4, 5] Name, Location and Extent of Existing and Proposed Streets .....	14
[6] Typical Street Sections .....	14
[7] Development Standards.....	21
[8] Standards for Conservation of Natural Resources .....	25
[9] Wetland and Riparian Resources .....	27
[10] Tree Inventory and Preservation Plan .....	27
[11] Methods of Conservation of Natural Features, Structures, Viewsheds .....	29
[12] Maintenance of Common Open Space and Facilities .....	30
[13] Maintenance of Infrastructure .....	30
[14] Construction Phasing Of Streets .....	30
[15] Location and Extent of Proposed Provision for Sanitary, Stormwater Drainage and Utilities .....	30
[16] Standards for Phasing of Public Utilities.....	31
[17] Phasing Schedule .....	32
[18] Financial Assurances.....	35
[19] Extent the Amended Refinement Plan Supplements or Supersedes Adopted City Regulations .....	35
[20] Standards for Interpreting the Amended Refinement Plan .....	35
[21] Development Design Guidelines and Applicable Approval Process .....	35
[22] General Landscape Plan .....	36
[23] General Drainage Plan .....	38
[24] Traffic Impact and Analysis Report .....	40
[25] Impacts on Existing Structures and Other Development .....	40
[26] Impacts on Existing Infrastructure and Public Services.....	40
[27] Existing " <b>Historically Significant</b> ' Resources.....	41

\* SRC 530.030(d) Required Refinement Plan Submission Sections

## List of Tables:

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Table 1 Alternate Development Standards for AU, MI, and VC.....	21-23
Table 2 Fairview Alternative Multi-Family Design Standards.....	24

## List of Plates:

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Plate 1	Illustrative Site Plan Refinement Area in the Fairview Master Plan Context .....	5
Plate 2	Illustrative Site Plan Amended Fairview Refinement Plan II .....	9
Plate 3	Illustrative Plan with Key Features .....	11
Plate 4	Land Use Zoning with FMU Zones .....	13
Plate 5	Proposed Major and Existing Streets and Multi-Use Paths .....	16
Plate 6.1	Typical Street Sections .....	17
Plate 6.2	Typical Street Sections .....	18
Plate 6.3	Typical Street Sections .....	19
Plate 6.4	Typical Street Sections .....	20
Plate 7	<b>Natural Features, Historic Structures “Historically Significant” Resources</b> .....	26
Plate 8	Tree Inventory and Preservation Plan.....	28
Plate 9	Utilities Plan.....	33
Plate 10	Proposed Phasing Plan.....	34
Plate 11	General Landscape Plan .....	37
Plate 12	General Drainage and Stormwater Management Plan .....	39

## Appendices:

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Amended Tree Inventory and Arborist Report .....	Attachment A
Amended Traffic Impact Report Update.....	Attachment B



ILLUSTRATIVE SITE PLAN  
REFINEMENT PLAN AREA IN THE  
FAIRVIEW MASTER PLAN CONTEXT

PLATE 1

# Introduction to Fairview Refinement Plan II 2009

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In 2001, Governor John Kitzhaber designated Sustainable Fairview Associates, LLC (SFA) to conduct exclusive negotiations for the purchase of the former Fairview Training Center. The Governor selected SFA because of its commitment to and understanding of sustainable development. He wanted the former state land to be redeveloped as a model for the state and nation. SFA purchased the 275-acre site in 2002. It then held a three-day charrette (an intensive multidisciplinary design workshop) to evaluate the site and frame a plan to achieve the development goals of the City of Salem and the State of Oregon. Salem City Staff and more than 20 design, development, environmental, and economic professionals participated with SFA.

The charrette began an on-going collaborative effort to develop the former Fairview Training Center as a model of sustainable development. Within a year the City of Salem adopted the Fairview Mixed-Use Zone (SCR 140C). In 2004, the City approved the Master Plan for Fairview Training Center Redevelopment (Fairview Plan). In 2005, Pringle Creek Community (PCC) became the first development (32 acres) to be approved within the framework of the Fairview Mixed-Use Zone and Fairview Plan. PCC has won numerous awards for its leadership in sustainable development

## Introduction to Amended Plan

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This Refinement Plan Amendment is caused by the desire to redesign the central area of the Fairview Refinement Plan II and adjacent area to include additional acres for a community park. The community park will be a major amenity and contribute in meeting the purpose of the Fairview Mixed-Use Zone (now SRC 530) in the innovative inclusion of parks and the Fairview Plan goals for parks and open space. It greatly adds to the walkability of the entire Zone.

The main sections of this plan are numbered according to the submittal requirements of SRC 530.030 (d). The descriptions in those sections generally provide the information to show that the approval criteria of SRC 530.035 (e) are met. The (approved) essential characteristics of the Fairview Refinement Plan II are not changed; they remain fully consistent with the Fairview Plan and the criteria of SRC 530. A summary of the changes follows this Introduction. To supplement the information of the required sections, the remaining paragraphs of this Introduction relate the changes to the approval criteria and the Sustainable Land Use Principles of the Fairview Plan

A community park is consistent with the Fairview Plan. Although the Fairview Plan does not foresee a large community park, it does address the desirability of parks and open space. It describes "A community green located along Main Street in the Village Center will serve as sports field and community gathering place, and a recreational, social, and aesthetic amenity, while also functioning as a storm water management device and an environmental education tool." **This** describes exactly the most important change in this amendment. The park provides a great amenity for the entire area of Salem.

Nothing is changed by this amendment that affects conformity with the Salem Area Comprehensive Plan.

Special care is taken as the land added to the Refinement Plan area is regulated to be compatible with the adjoining land uses. The large boundary with Pringle Creek Community (PCC) lies in the same AU overlay as PCC. The permitted AU land uses under SRC 530 are restricted in the Park West area of this amendment in order to further protect the actual AU uses chosen by PCC.

The variety of planned housing units nicely complements those planned in PCC, Fairview Addition and Fairview Hills. These housing units will provide homes for the increasing number of employees who work in Fairview Industrial Park and the commercial development anticipated at Kuebler Road and I-5.

The planned infrastructure and public services are designed to match up with and be feasible given the Fairview Hills and Fairview Addition Refinement Plans that have been approved since Fairview Phase II was approved. The joint section of Lindburg Street has been constructed. The location of Strong Road is changed in this amendment to match with the approved section of Strong Road in Fairview Addition. Storm water management planning has been coordinated with the neighboring properties. The new infrastructure to be built will not only handle the refinement area but will contribute to meeting the area needs for water service and transportation connections.

Much of the preceding explanation of fulfillment of Fairview Plan principles ties directly to the formal criteria of Chapter 530. The first formal criterion speaks to encouraging mixed-use development (as contained in the Mixed-Use zone goals), protection of open spaces, and greater housing and transportation options. The greater transportation options are illustrated in the extensive provision of safe paths of various kinds for pedestrians and bicycles. Plate 5 shows that it possible to get safely and efficiently throughout and through the refinement area. There are good connections to adjoining properties. The Transit District should serve Lindburg and Strong collector streets in the future. There is now public transit on Fairview Industrial and Pringle Road.

The multiple uses projected in this plan add to the strong diversity already established in the existing refinement plans. The best estimate is that there will be about 100 small lot single family, 100 apartments and 80 condo/townhouse living units. This will promote the goal of housing diversity and multiple housing options. **Much of the new housing will be "affordable" by local standards, but be varied** enough to support social and economic diversity. It is estimated there will be up to 80,000 square feet of mixed use, office, and retail. The plan provides the most essential part of the Village Center. Fairview Addition has a flexible eastern edge by the core of the Center envisioned in Fairview Plan II, the intersection of Lindburg and Strong. Beyond the first large block within Village Center Loop is community park; recreation, public event space, and natural green space. The vision outlined in the Fairview Plan for a Center is fulfilled.

The creation of the 28-acre community park counts strongly toward meeting the criterion for integrative park uses. The park is designed to serve not only the Fairview area, but also the surrounding neighborhoods. The Salem-Keizer School District has chosen not to locate a new elementary school on the site so opportunities for cooperative use with them at this time do not exist, but may become possible in the future with Leslie Middle School.

The entire overall implementation of Fairview Plan herein encourages key aspects of sustainable development. It preserves and enhances open space, reduces the need to use the automobile by providing good paths for alternative transportation, and uses storm water management techniques to reduce the need for costly underground infrastructure.

The goal of retrofitting Fairview Training Center buildings for re-use encountered economic and governmental regulatory obstacles that could not be overcome. On the other hand, the re-use of the materials contained in those buildings will exceed expectations. Almost zero hard material such as stone, brick, and concrete will leave the property. The bulk will be crushed and reused on site. Tens of thousands of board feet of lumber have been salvaged and are being reused. A modest amount of

structural ornamentation has also been saved and reused. The sustainability goal and vision for re-use has been well accomplished in this refinement area.

The proposed plan for the community park greatly adds to meeting the goal of resourceful use of land through efficient arrangement of land uses, circulation, buildings, open space, and infrastructure. The land use in the surrounding area has been redesigned and configured to complement the park facilities. The non-motorized connective paths have been coordinated to the great benefit of human circulation.

The AU areas south of the park and east of the Village Center are intended to provide opportunities for office uses that promote employment and complement Fairview Industrial Park. The AU overlay encourages a wide variety of non-residential development, while allowing moderate residential use. The small MI area fits its surroundings flexibly at the corner of Reed and Lindburg.

As noted above the goal of preserving the older original Fairview campus for reuse proved to be economically impossible. Early twentieth century institutional structures were not suited to retrofit for 21<sup>st</sup> century use regulations. The most recent (post 1960 structures) are preserved and should be reusable. The future of the small Chapel is uncertain. The minimal amount of historical/archeological area will be dealt with in full compliance with applicable regulations. These are a very small cemetery plot that may never have in been used in the 1850's and a contemporaneous probable cabin site. Both are in areas disturbed by Fairview Training Center constructions.

Energy conservation and environmental quality for air and water are promoted through the reduced need for motor vehicle transportation by creating work opportunities near homes, more convenient non-automotive connections, and the preservation of a large tract of green space.





ILLUSTRATIVE SITE PLAN  
 AMENDED FAIRVIEW  
 REFINEMENT PLAN II

PLATE 2

# Summary of Significant Changes in This Amended Plan

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This Amended Fairview Refinement Plan II, addressing the development of approximately 75-acres currently owned by SFA, is the next step. The same planning team that created the Fairview Plan and several of the key professionals who produced the Pringle Creek Community Refinement Plan, produced the Fairview Refinement Plan II. This amendment is primarily the work of the team member Westech Engineering.

1. Approximately 35 adjacent acres are appended to the 40-acre Lindburg Green Refinement Plan area and subdivision.
2. About 12 acres of the added land is combined with about 16-acres of the existing subdivision to form a community park that meets the description of this kind of park in the 2013 Salem Comprehensive Parks System Master Plan. The detailed planning of the park will be done by the City using the regular process for community park design and approval. The park concept plan as of February is shown on the illustrative plates of this application. This amendment also allows for alternate smaller sizes of the park by adding Village Center and Adapted Reuse around the perimeter.
3. The ten-acre private school with playing fields is removed from the approved plan. Moreover, Salem-Keizer School District no longer a site for an elementary school.
4. The middle section of the main East-West (EW) connector street, Strong Road, is relocated southward to form the southern boundary of the new park rather than intersect the park.
5. The design and platting for the western part of the current Phase II plan and subdivision are changed to adjust to the new street locations and existence of the park. The Adaptive Use area between the park and PCC has additional use restrictions barring some non-residential uses. The Village Center/Adaptive Use area designations are adjusted to reduce VC and replace some green space of the current subdivision with the large central park.
6. The development standards for the zones, the design guidelines and the street section/intersection plans are largely unchanged except to note the possibility of a community park, and to replace some streets with non-vehicle access.
7. The Tree Inventory and Preservation Plan and the Traffic Impact Assessment appendices are updated. The other previous appendices are unchanged and available at:

*<http://www.cityofsalem.net/Departments/CommunityDevelopment/Planning/FairviewMasterPlan/Pages/default.asp>*  
x



ILLUSTRATIVE PLAN WITH KEY SITE FEATURES

PLATE 3

- Illustrative Plan Key Features
- Village Center
  - Community Center
  - Heritage School
  - Significant Tree Stands
  - Oak Grove

## [2] PERMITTED LAND USES

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With the exceptions noted in this paragraph, the Permitted Uses Table SRC 530-1 is adopted as the Permitted Uses for AU, MI and VC overlays within this Amended Refinement Plan II. The following exceptions apply only to the area of AU between PCC and Lindburg Road called West Park Phase. In this **"AU restricted" area the following SRC 400 uses are not allowed:** Motor Vehicle, Trailer, and Manufactured Dwelling Sales and Services, Construction Contracting, Repair, Maintenance, and Industrial Services, Whole Sales, Storage, and Distribution, Manufacturing, Infrastructure and Utilities (except Basic Utilities).

## [3] GENERAL ALLOCATION AND IDENTIFICATION OF MAJOR PROPOSED LAND USES

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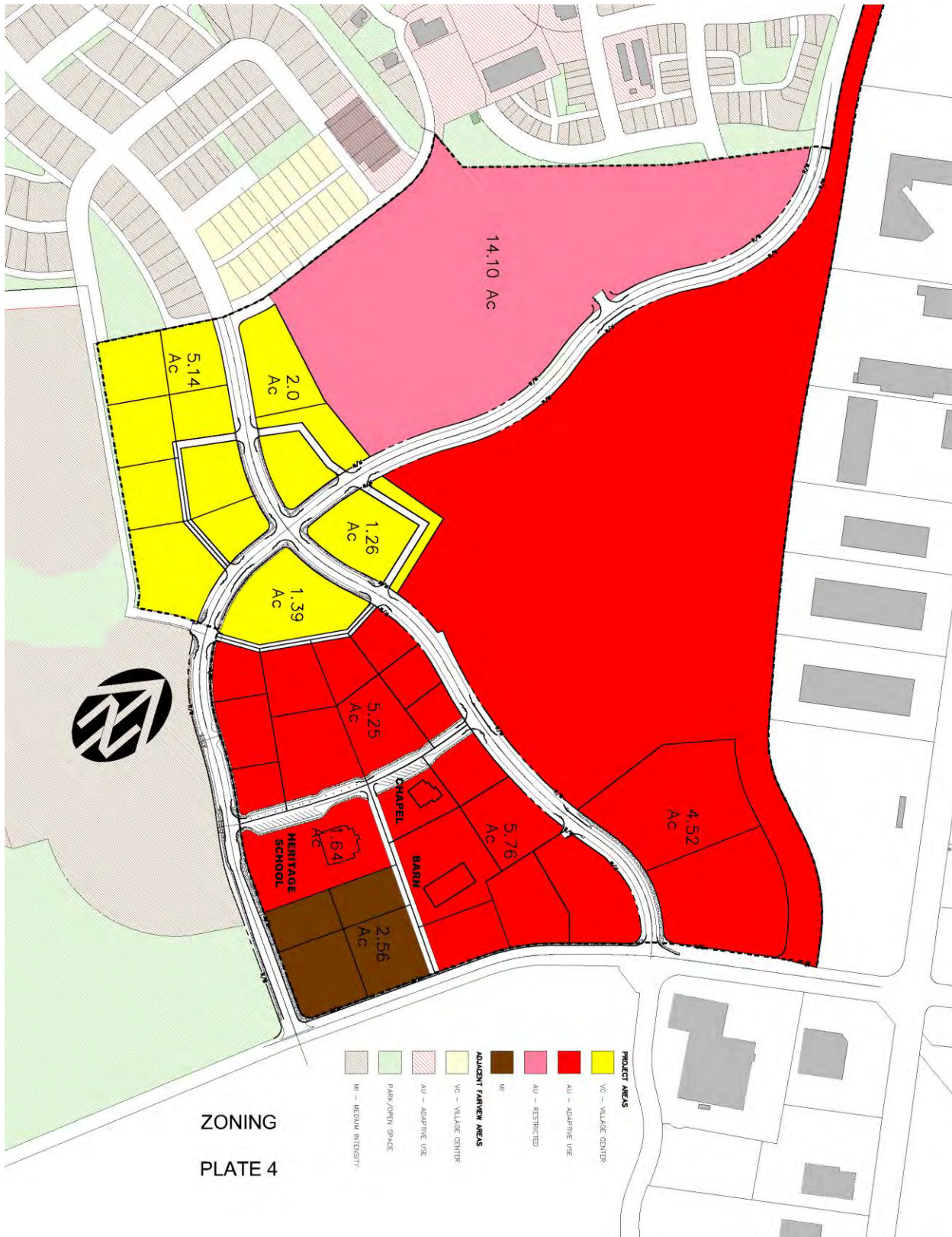
The general allocation of land uses follows the Fairview Plan. With this 28-acre park, there will be a total of about 35-acres of public and private green space in the 74-acre refinement area.

Three zones, MI, AU and VC defined in the Fairview Plan are present in this Amended Fairview II Refinement Plan area. As noted in the preceding paragraph the northwestern section of AU has use restrictions not included in the Chapter 530 Table SRC 530-1. The Adaptive Use area is approximately 40 acres, including much of the 28-acre park. The Village Center overlay area is approximately 30 acres and the MI less than 3 acres.

The overlay sketch, Figure 530-1 of SRC Chapter 530, was drawn as a rough approximation of the intended development and does not match exactly with the streets and property lines that have been established. It does not at all bar a large central park, but does result in overlay zones overlapping intended major use blocks. Plate 4 illustrates how the Chapter 530 overlay areas have been and are here being implemented with infrastructure and development.

The previously mentioned approximate boundaries of the overlay areas created ambiguity about what the density requirement might be for residential development project density in each block or phase of actual development.

There is no minimal amount of residential development in any area. However, residential development projects must meet the minimum and maximum density requirements for the area. The FMU zoning does not set a minimum number of residential units, but sets the maximum at 2000 units. The Fairview Plan states an expectation of 1600 units. It is anticipated that this refinement area will have units for about 280 families. Combined with those expected in the other approved refinement plans the total is about 1200. This leaves a wide range for the 14 **acres of "Woods"** and the **60+** acres owned by Simpson Hills that have not yet been planned.



## [4, 5] NAME, LOCATION AND EXTENT OF EXISTING AND PROPOSED STREETS

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The only existing streets that will remain are on the perimeter of the refinement area. On the north Old Strong Road is to be vacated and on the east Reed Road will be improved. The Amended Refinement Area internal street network proposed consists of two principal collector streets and some local access streets.

### Improve Boundary Street

Reed Road will be improved according to City of Salem requirements.

### Strong Road: Connect Reed Road to Pringle Road

The most significant new street will be a connection from Strong Road as it meets Reed Road at the east and built west from there across Fairview to Pringle Road. This new collector connection will be named Strong Road.

### Lindburg Road: Connect Reed Road at SE to Pringle Creek Community:

The second collector street named Lindburg Road will be built along the south of this Refinement Plan area from Reed Road and curve northward to intersect the Strong Road replacement in the center of the Fairview property. It will then continue around the west side of the park to the northern tip of the area at Pringle Creek Community.

### New Internal Local Street and Connectors

Public residential streets in Park West will connect Fairview Addition West and Pringle Creek Community to the refinement area on the west and northwest. The exact location of streets will be determined in a subsequent development plan. Satisfaction of the goal and standards for connectivity will be determined at the time of further development.

Internal private connectors to augment Chapel Lane and Heritage Street in the Oak, Chapel/Barn and Central Mixed Blocks will be added when the development is made specific with subdivision plans as the associated Phases occur. The combination of pedestrian, bicycle and motorized vehicle connections within and between these blocks will be made to ensure efficient movement by all modes of transportation. Safe pedestrian and bicycle access through the Blocks will be provided at intervals no greater than 400 feet. Satisfaction of the goal and standards for connectivity will be determined at the times of City site plan approval and Fairview Design Review.

## [6] TYPICAL STREET SECTIONS

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The street sections provided here are designed to create multi-functional streets that are consistent with the Fairview Plan and recognize the importance of street design for the character and quality of the community. Since the Fairview Plan was adopted, there have been advances in the application of the **concepts of "green" or "complete" streets in urban and suburban settings.** The owners and development team expect to work with the City of Salem to achieve streets that are functional and beautiful. This Refinement Plan provides a series of typical street cross-sections designed to achieve these goals. The plan calls for Strong and Lindburg to be built as Main Streets that serve as collectors and provide the most direct access through the neighborhood. The owners expect to work with the City to assure that the performance of these streets addresses Public Works goals as well as engaging the spirit of innovation that they have embraced by adopting the FMU Zone, the Fairview Plan, and with Pringle Creek Community. All streets, whether public or private, are part of an integrated storm water management program and will be designed to achieve infiltration of all storm waters up to a five-year storm. Storms larger than this will be managed by standard overland flow practices.

Strong Road enters from a Reed Road entrance connecting to the existing Strong Road up to Hillcrest. It moves through the Village Center along the south side of the park to connect with the Fairview Addition and continue to Pringle Road. The details of the street section vary as the surrounding use changes through the park and the Village Center.

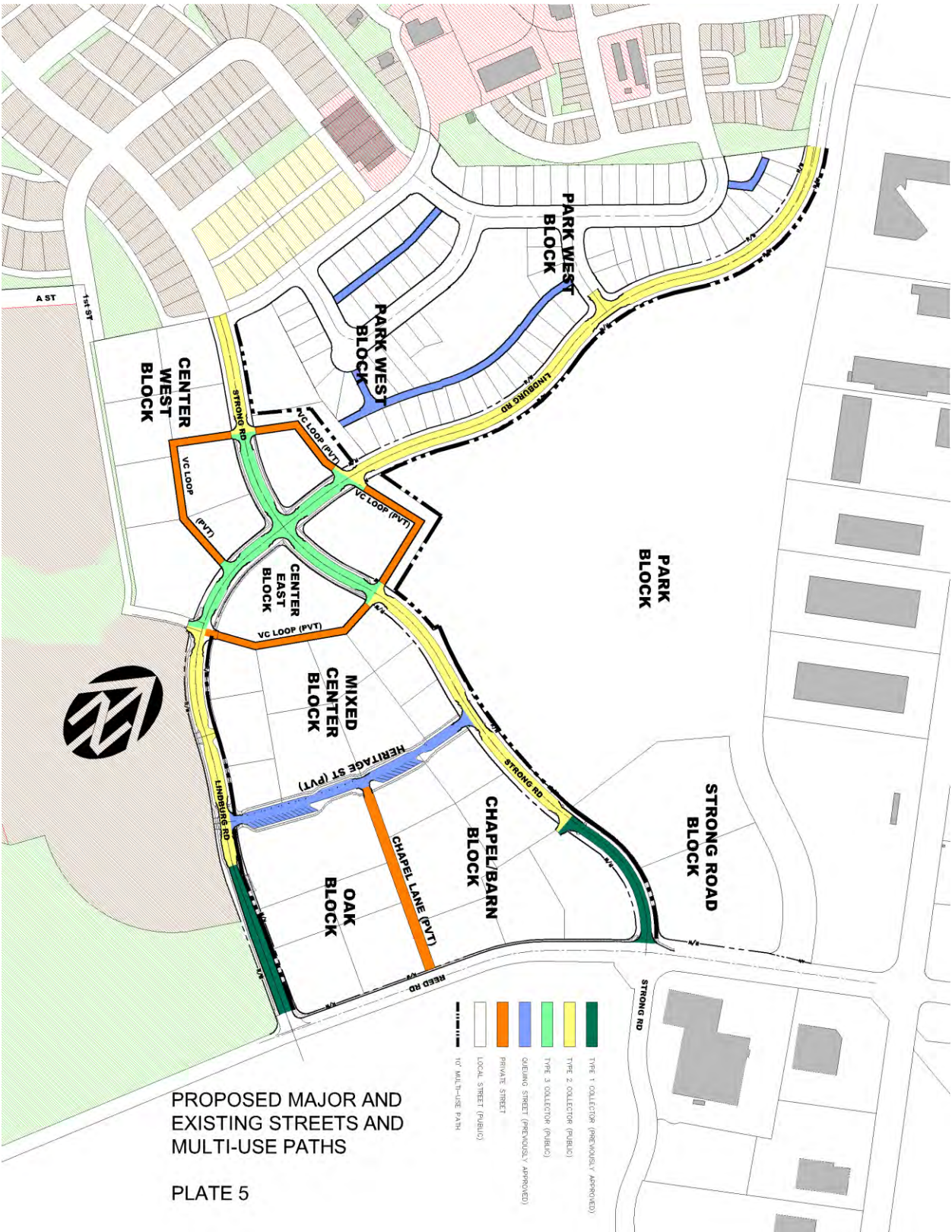
Lindburg Street is similarly designed to change in cross section details as it moves from a mid-Reed Road entrance on the southeast and curves to the north to cross Strong Road in the Village Center and pass through the section with park on one side and residential on the other to the north edge at Pringle Creek Community.

Other streets are intended to be local and two are private. They will generally follow the designs successfully used in the Pringle Creek Community to meet both environmental concerns and City requirements for public safety. Street trees on public streets shall meet the requirements of SRC Chapter 86. (Street Trees).

These safety standards shall include:

1. Private streets with dimensions less than required by the Fire Code shall have a maximum **intersection spacing of 400'**, provide mid-block vehicle passing space and provide intersection and horizontal curve turning radii sufficient to accommodate fire apparatus.
2. Private streets serving schools and other high occupancy buildings shall meet the dimensional requirements of the Fire Code.
3. All buildings served by streets not meeting the dimensional requirements of the Fire Code shall be equipped with approved fire sprinkler protection.

Plate 5 shows the types and locations of the new streets. Typical cross sections of streets are shown on plates 6.1-6.4



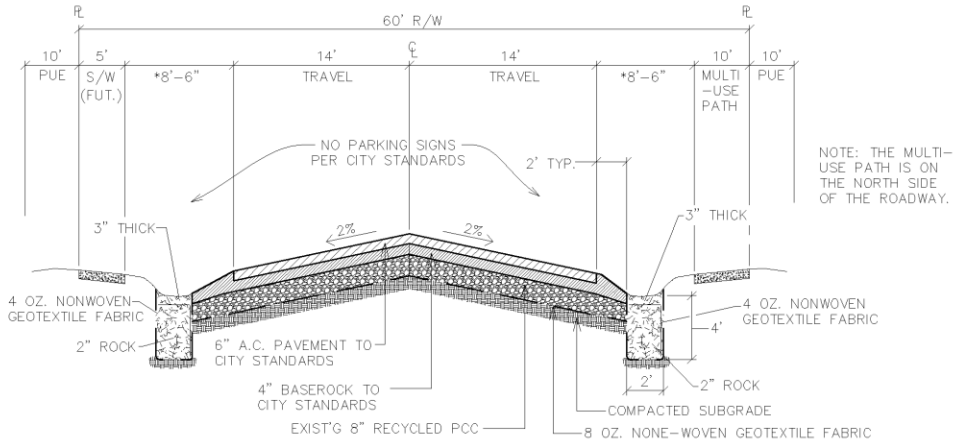
**PROPOSED MAJOR AND EXISTING STREETS AND MULTI-USE PATHS**

**PLATE 5**

- TYPE 1 COLLECTOR (PREVIOUSLY APPROVED)
- TYPE 2 COLLECTOR (PUBLIC)
- TYPE 3 COLLECTOR (PUBLIC)
- QUEUEING STREET (PREVIOUSLY APPROVED)
- PRIVATE STREET
- LOCAL STREET (PUBLIC)
- VC MULTI-USE PATH



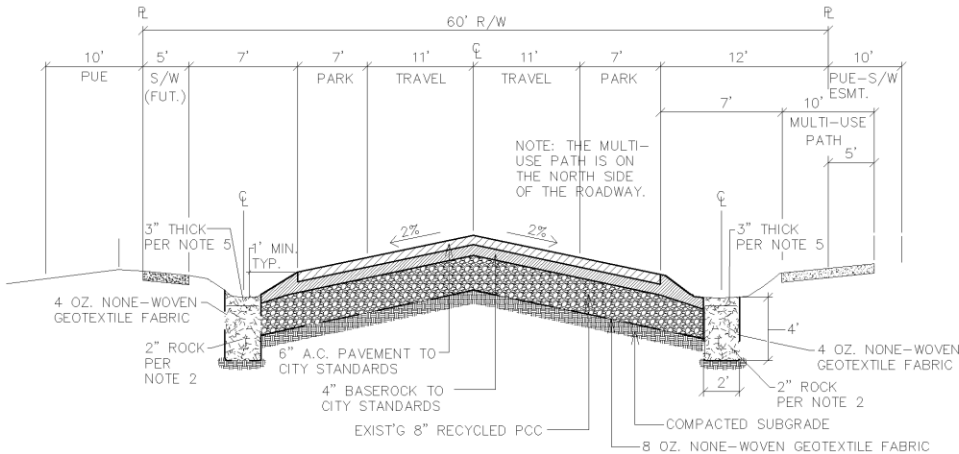
\* 0' FOR LINDBURG STREET (WETLANDS)



**TYPE 1 COLLECTOR STREET – (PUBLIC)**

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NOTE: WHERE NEW DRIVEWAYS OR PEDESTRIAN CROSS WALKS ARE LOCATED, SWALES ARE REPLACED WITH S/D CULVERTS.



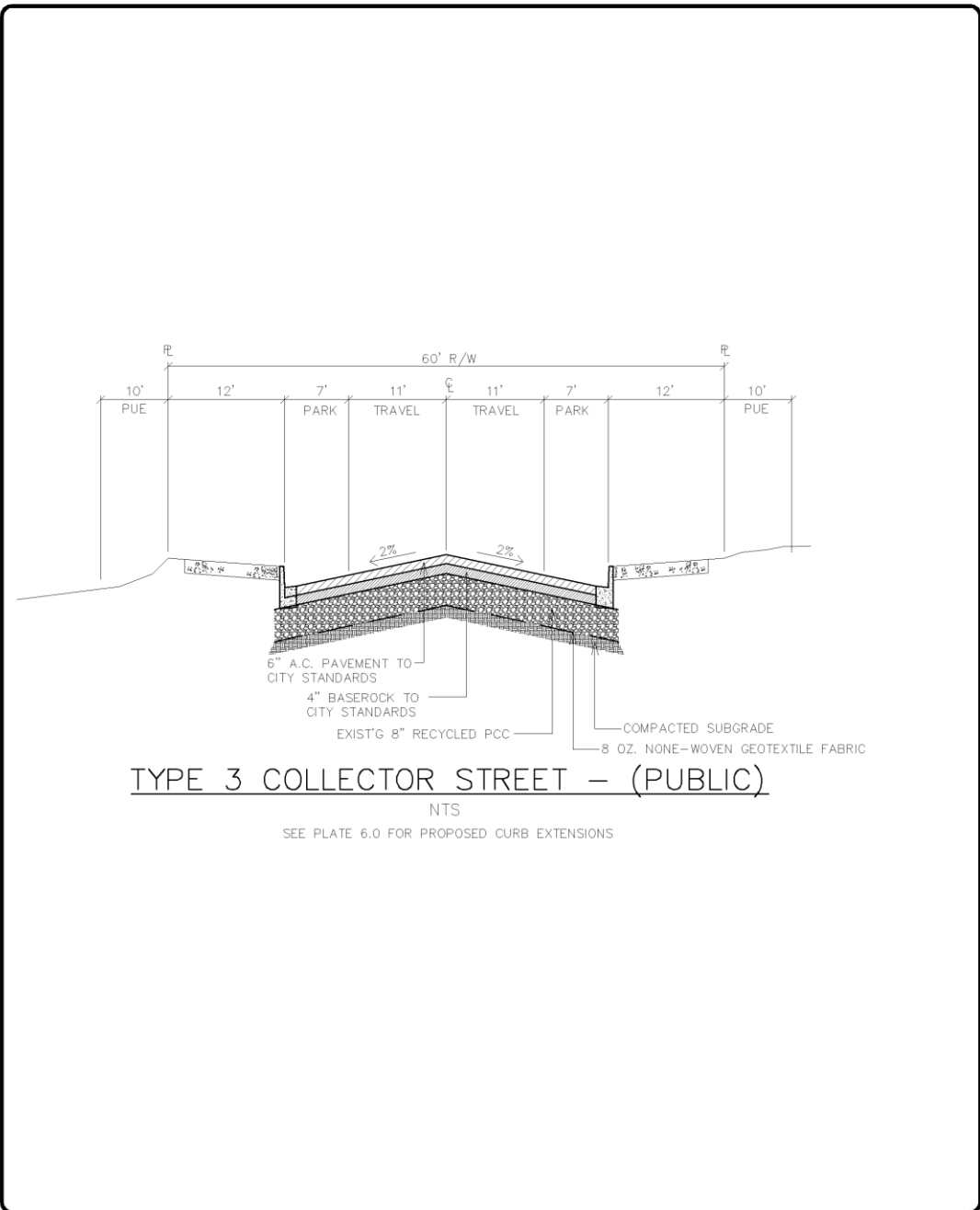
**TYPE 2 COLLECTOR STREET – (PUBLIC)**

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SEE PLATE 6.0 FOR PROPOSED CURB EXTENSIONS

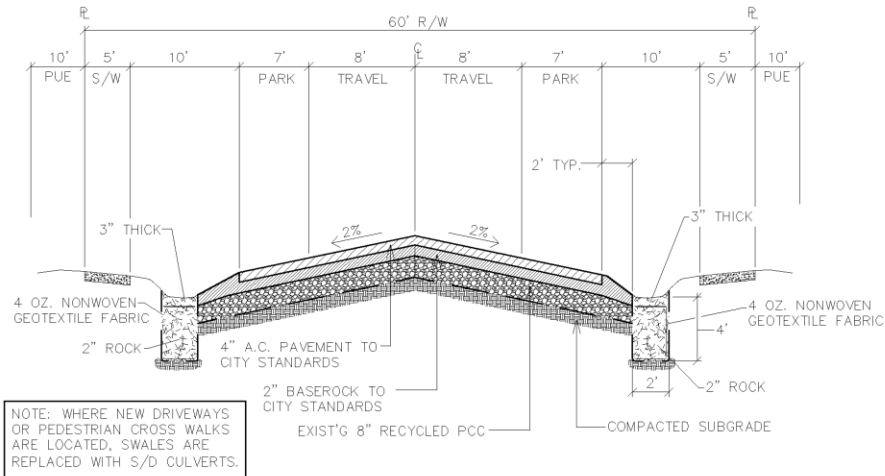
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<p><b>WESTECH ENGINEERING, INC.</b> CONSULTING ENGINEERS AND PLANNERS</p> <p>3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302 Phone: (503) 585-2474 Fax: (503) 585-3986 E-mail: westech@westech-eng.com</p>	<p>SCALE</p> <p>HORIZ: N/A</p> <p>VERT: N/A</p>	<p>Sustainable Fairview Associates</p> <p>Salem, Oregon</p>	<p>PLATE</p> <p>6.1</p>
	<p>DSN: SAW/RCE</p> <p>DRN: RCE</p> <p>CHKD: SAW/RCE</p> <p>DATE: SEP 2014</p>	<p>Typical Street Sections</p>	

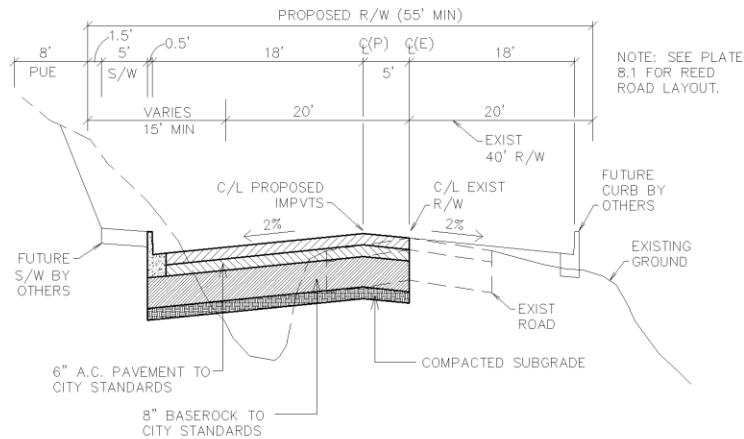


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 <b>WESTECH ENGINEERING, INC.</b> CONSULTING ENGINEERS AND PLANNERS 3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302 Phone: (503) 585-2474 Fax: (503) 585-3986 E-mail: westech@westech-eng.com	SCALE HORIZ: N/A VERT: N/A	Sustainable Fairview Associates Salem, Oregon	PLATE 6.2
	Typical Street Sections	JOB NUMBER 2720.0000.0	



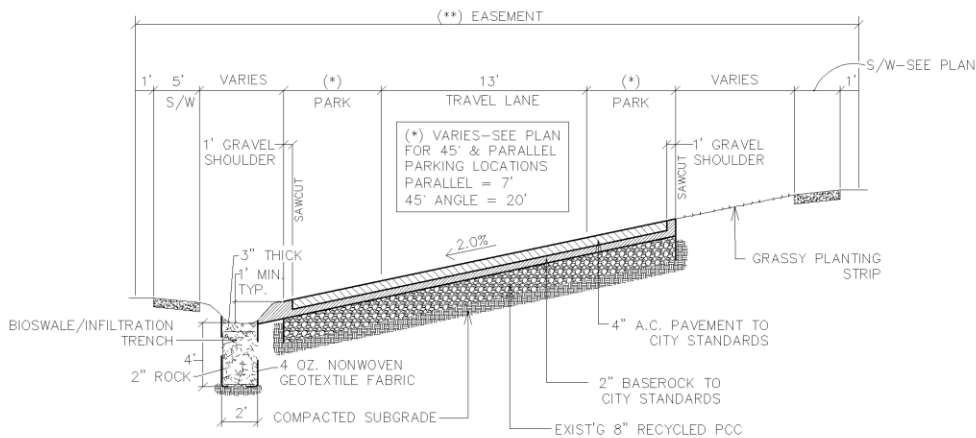
**LOCAL STREET – (PUBLIC)**  
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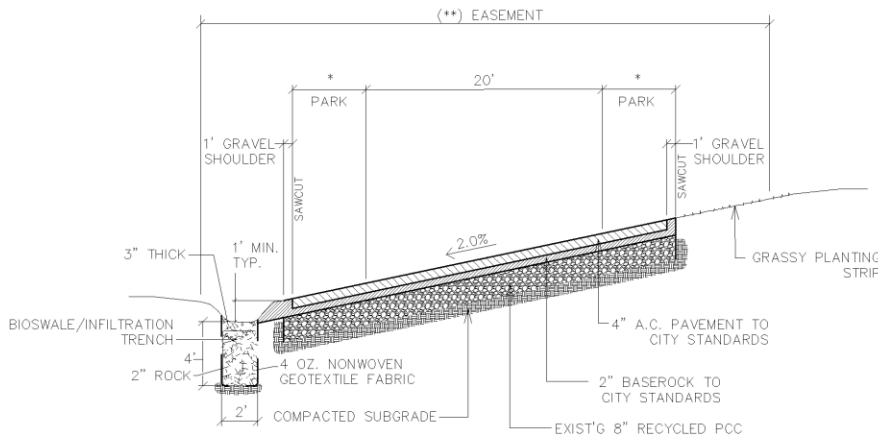
**REED ROAD – (PUBLIC)**  
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 <p><b>WESTECH ENGINEERING, INC.</b> CONSULTING ENGINEERS AND PLANNERS</p> <p>3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302 Phone: (503) 585-2474 Fax: (503) 585-3986 E-mail: westech@westech-eng.com</p>	<p>SCALE</p> <p>HORIZ: N/A</p> <p>VERT: N/A</p>	<p>Sustainable Fairview Associates</p> <p>Salem, Oregon</p>	<p>PLATE</p> <p>6.3</p>	
	<p>Typical Street Sections</p>		<p>JOB NUMBER</p> <p>2720.0000.0</p>	
	<p>DSN: SAW/RCE</p> <p>DRN: RCE</p> <p>CKD: SAW/RCE</p> <p>DATE: SEP 2014</p>			



**QUEUING STREET – (PRIVATE)**  
NTS



**PRIVATE STREET – (PRIVATE)**  
NTS

NOTE: WHERE NEW DRIVEWAYS OR PEDESTRIAN CROSS WALKS ARE LOCATED, SWALES ARE REPLACED WITH S/D CULVERTS.

NOTE: PARKING TO BE DETERMINED DURING SPR

\* VARIES  
0' – NO PARKING  
7' – PARALLEL PARKING  
17' – ANGLED PARKING

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**WESTECH ENGINEERING, INC.**  
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SCALE	
HORIZ:	N/A
VERT:	N/A
DSN:	SAW/RCE
DRN:	RCE
CHD:	SAW/RCE
DATE:	SEP 2014

Sustainable Fairview Associates Salem, Oregon

\*\* VARIES DEPENDANT UPON PARKING

Typical Street Sections

PLATE

6.4

JOB NUMBER

2720.0000.0

Tables 1 and 2 below establish standards for development within the Amended Refinement Plan. The development standards, regulations, and guidelines in the refinement plan are intended to implement the principles in the Fairview Plan, approved by the City in 2004, develop the area consistent with the Fairview Mixed Use Zone (FMU/SRC 530), and **realize SFA’s vision for a vibrant, compact, walkable, and sustainable community.** Unless otherwise noted, terms used in the Alternate Development Standards tables following shall adhere to the definitions set forth in SRC Chapter 111.

Standards for Community Park: In lieu of the development standards established in this amended refinement plan, development of the Community Park shall be subject to the approved parks master plan and the applicable development standards of the PA (Public Amusement) zone.

<b>TABLE 1</b>			
<b>DEVELOPMENT STANDARDS FOR AMENDED FAIRVIEW REFINEMENT PLAN II</b>			
<b>SUBJECT</b>	<b>AREAS</b>	<b>NOTE</b>	<b>STANDARD</b>
<b>DENSITY</b>			
Residential	AU		Minimum 6 du/acre. Maximum 35 du/acre
	MI		Minimum 7 du/acre. Maximum 30 du/acre
	VC		Minimum 13 du/acre. Maximum 35 du/acre
<b>LOT STANDARDS</b>			
Lot area	AU, MI, VC		Minimum 1000 sq. ft.
Lot width	VC		Minimum 20 ft. Multifamily maximum 30 ft. /du
	AU, MI		Minimum 22 ft. Multifamily minimum 6 ft./du
Lot depth	AU, VC		Minimum 40 ft. Maximum 200 ft for mixed use/commercial and multifamily
	MI		Minimum 40 ft. Maximum 150 ft. for mixed use/commercial and multifamily
<b>LOT COVERAGE</b>			
Building coverage	AU, MI, VC	1	Maximum 70%
Building footprint	AU, MI, VC		Maximum 10,000 sq. ft. Maximum accessory structure 1,000 sq. ft.
Floor area ratio	VC		Minimum 0.75
<b>SETBACKS</b>			
FMU Zone Boundary Setback	AU, MI, VC		Minimum 20 ft. from boundary of FMU zone ( <i>applicable to all buildings and accessory structures</i> )
Strong and Lindburg Roads	VC		Minimum 10 ft. Maximum 20 ft. Minimum 70 percent of lot frontage shall be occupied by buildings placed at the minimum setback line.
Front abutting street	AU, MI, VC		Minimum 10 ft. Maximum 20 ft.
Street front open porches and entries	AU, MI, VC	2	Up to 5 ft. into setback for Household Living setback
Side street	AU, MI, VC		Minimum 10 ft. Maximum 20 ft.
Side interior	VC		Minimum 5 ft. for Multifamily;

**TABLE 1**  
**DEVELOPMENT STANDARDS FOR AMENDED FAIRVIEW REFINEMENT PLAN II**

			Minimum 8 ft. for any use when abutting single family; Min. 0 ft. all other
Side interior	AU, MI		Minimum 5 ft. for duplex and detached single family; Minimum 0 ft. for single family townhouse; Minimum 8 ft. for multifamily residential and non-residential abutting single family; Minimum 0 ft. all other.
Rear principal building	VC		Minimum 5 ft.
Rear principal building	AU,MI		Minimum 0 ft. for single family and duplex; Minimum 30 ft. for all other
Rear other buidlings	AU, MI, VC		Minimum 5 ft., except residential accessory buildings min. 2 ft.
<b>BUILDING DIMENSIONS</b>			
Height	AU, MI, VC		Maximum 45 ft. Maximum 18 ft. for accessory buildings
Exterior wall length	AU, MI, VC		Maximum 100 ft. without 4 ft. change of plane for mixed- use/commercial and multifamily
Building Size	MI		No building used exclusively for a non-residential use within the MI area shall have a building footprint greater than 6,000 square feet.
<b>PARKING AND LOADING</b>			
Parking stalls	AU, MI, VC	3	Minimum 1/du residential, 1/500 sq. non-residential
Eligible on street parking	AU, MI, VC		50% of required parking may be located on street within 100 ft. of the lot it serves for multi-family; 50% of required parking may be loacted on street within 200 ft. of the lot it serves for all other
Surface parking coverage	AU, MI, VC		Maximum 40% of parcel , tuck-in areas exempt.
Bicycle parking	AU, MI, VC	6	Minimum 1/du residential multi-family and mixed use. 1/500 sq. ft. non-residential
<b>Parking lot setbacks</b>			
Front/street setback	AU, MI, VC		Minimum 20 ft.
Side setback adjacent to residential	AU, MI, VC		Minimum 10 ft.
Side setback adjacent to non- residential	AU, MI, VC		Minimum 5 ft.
<b>Private garages</b>			
Depth	AU, MI, VC		Maximum 24 ft.
Width	AU, MI, VC		Maximum 12 ft. single, 24 ft. double
<b>DRIVEWAYS/CURB CUTS</b>			
Maximum per parcel	AU, MI, VC		2 except 1 for mixed use in MI and for single family and duplex
Access	AU, MI, VC		Only from lesser class ROW/Easement
Separate wheel tracks allowed	AU, MI, VC		Only for single family, duplex and their accessories.
Width			

**TABLE 1**  
**DEVELOPMENT STANDARDS FOR AMENDED FAIRVIEW REFINEMENT PLAN II**

Access driveways serving 15+ stalls	VC	Minimum 10 ft. Maximum 18 ft.
	AU, MI	Minimum 12 ft. Maximum 16 ft.
Access driveways serving 4-14 stalls	AU, MI, VC	Minimum 10 ft. Maximum 14 ft.
Access driveways serving 1-4 stalls	AU, MI, VC	Minimum 8 ft. single family. Minimum 12 ft. for more than 1 du
Depth	AU, MI, VC	Maximum 20 ft. for single family, duplex and their accessories
Curb cuts	AU, MI, VC	Maximum 2/parcel
<b>LANDSCAPE</b>		
Fences		
Residential front street	AU, MI, VC	Maximum 4 ft.
Residential side street	AU, MI, VC	Maximum 6 ft.
Residential all other	AU, MI, VC	Maximum 6 ft.
Non-residential front street	AU, MI, VC	Maximum zero in VC, 4 ft. in AU and MI
Non-residential all other	AU, MI, VC	Maximum street side 4' in VC. All other maxima 6'

**NOTES:**

- 1 Accessory buildings footprint counted in coverage.
- 2 Porches and entryways must be roofed. If enclosed, then minimum 50% screened and/or glass.
- 3 Parking stalls are standard SRC sizes.
- 4 FAR: Floor Area Ratio is enclosed floor space area divided by lot area.
- 5 A master list of share parking should be kept with City and POA.
- 6 Bicycle racks allowed in the "Street Furniture, Accessories and Trees zone of public ROW.

**TABLE 2****FAIRVIEW ALTERNATIVE MULTI-FAMILY DESIGN STANDARDS**

Note: Except where such standards/guidelines are specifically modified by the Fairview Alternative Multi-Family Design Standards outlined below, the City of Salem will review plans for Multifamily buildings (projects > 5 units) for conformance with the City's multiple family design review guidelines/standards of SRC Chapter 702. Additional standards and guidelines will apply through Conditions, Covenants and Restrictions.

<b>COMMON OPEN SPACE</b>	
Requirements	None required in VC or within ~600" of Public Open Space
<b>PLAY AND RECREATION AREAS</b>	
Requirements	None required in VC or within ~600" of Public Open Space
<b>PRIVATE OPEN SPACE</b>	
Private open space located not more than 5 feet above finished grade	Minimum 48 square feet per dwelling unit in VC; Minimum 96 square feet per dwelling unit in all other areas.
<b>LANDSCAPE DESIGN</b>	
Multiple family buffer abutting single family	Buffer multi-family from single family uses with minimum 6 ft. fence and trees > 1.5" caliber every 20 ft. Subject to Design Review
Parking Area Perimeter Landscaping	Minimum one canopy tree per 30 ft. of parking area perimeter. Trees must be planted within 15 ft. of paving
Canopy Tree Planter Bays	Plant canopy trees in > 9 ft. wide planter bays
<b>BUILDING MASS AND FAÇADE</b>	
Building Frontage	Parcels > 75 ft. wide build to > 70% of frontage in VC; Parcels > 75 ft. wide build to > 50% of frontage in AU,MI
Side Yard Façade Setback Plane	Vertical 28 ft. in height plus 45° additional setback above 28 ft. in height. Subject to Design Review



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## [8] STANDARDS FOR CONSERVATION OF NATURAL RESOURCES

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The following principles will guide Sustainable Fairview Associates during the development of the Amended Refinement Area:

### *Respect the Landscape*

Development will celebrate, not eliminate, the natural features of the site. For example, the Refinement Area includes a portion of creek channel on its northeastern boundary. The creek has been badly degraded over the decades, stripped of vegetation and unnaturally channelized. The natural functions of the stream and adjacent floodplains will be restored as much as possible.

### *Eliminate Impact on the Regional Watershed*

The Amended Refinement Area will incorporate a low-impact natural storm water system. Open street sections with infiltration verges and buildings designed to allow infiltration or storage of water on site will ensure that more than 90% of water that annually falls on the site will be returned by natural movement of Pringle Creek.

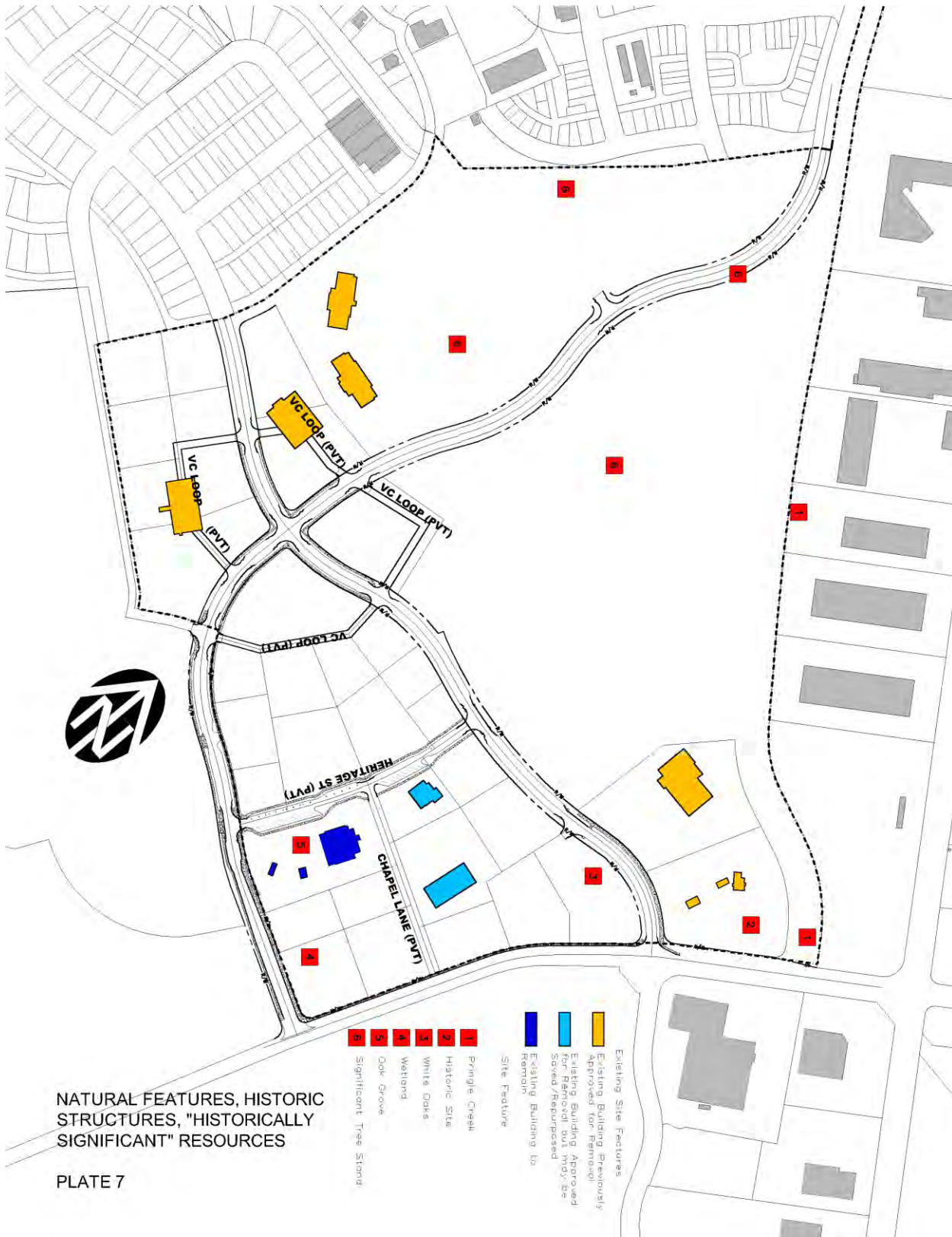
### **"Layer" the Systems**

All parts of the site will be integrated for maximum synergy. For example, streets will be part of the natural water cycle system; recreational space will be part of the natural habitat system; commercial and institutional activities will be layered with residential uses.

### *Close the Cycle of Energy/Material Flows*

Rainwater that falls on the site will recharge the aquifer below. Water captured in rain barrels will be used for local landscaping and gardens.

In addition to following these principles, development of the Refinement Area will meet or exceed all provisions required under Salem Revised Code Chapters 808 - Preservation of Trees and Vegetation; Chapter 810 - Landslide Hazards and; Chapter 809 - Wetlands.



**NATURAL FEATURES, HISTORIC STRUCTURES, "HISTORICALLY SIGNIFICANT" RESOURCES**

**PLATE 7**

- 1 Pringle Creep
  - 2 Historic Site
  - 3 White Oaks
  - 4 Waldens
  - 5 Old Grove
  - 5 Significant Tree Stand
- Site Feature**
- Existing Site Features
  - Existing Building Previously Approved for Removal
  - Existing Building Approved for Removal out may be Saved/Repurposed
  - Existing Building to Remain

## [9] WETLAND AND RIPARIAN RESOURCES

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A section of the southeast corner of the site on the north side of Lindburg Road near Reed Road is classified as wetlands. The wetland extends south on Simpson Hills' property and the ROW for Lindburg Road contains mitigated wetlands. The major part of the oak grove playground for Heritage School is included in the wetlands area that was expanded after a 2010 re-inspection and re-classification. The reinvestigation of the wetlands that extended on both sides of Lindburg Road was instigated by major earth moving on the south side of the area. The remaining wetlands will be again inspected in a few years to check for changes in extent. Appropriate steps will be taken to mitigate if any wetlands need to be disturbed.

The northeast boundary of the refinement area contains a stretch of the West Branch of the Middle Fork of Pringle Creek parallel to Old Strong Road. This Refinement Plan calls for preservation of the natural riparian area that remains and restoration of some native plants. This amended plan continues to anticipate that Strong Road will be vacated as a public street and the ROW will become a private or park driveway, and pedestrian and bicycle trails.

## [10] TREE INVENTORY AND PRESERVATION PLAN

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As noted, a professional arborist made an inventory and evaluated the trees in the original Refinement Area. The Amended area contains approximately 540 trees, including 300 previously described. Many in the inventory are smaller ornamental trees that have been poorly maintained and were planted close to buildings that have been identified for removal.

The landscape plan designates preservation of many of the existing trees. However, most of the trees of the short-lived species planted as landscaping around buildings and other facilities that are to be deconstructed will be removed. They will be replaced by more suitable species that integrate with the principles of the sustainable development.

There are four significant stands in the added area. A vast majority of these stands will be preserved, but a few trees are damaged or dead and will be removed. A few more trees will be removed to allow reasonable development.

All provisions required under Chapter 808 (Preservation of Trees and Vegetation) will be met or exceeded in the course of the removal of trees. For a detailed inventory and specific preservation plan, refer to the Amended Tree and Preservation Plan within the appendix of this refinement plan. Location and choice of new trees will be determined at the time of site plan and design reviews. Plate 8 illustrates the starting plan.



TREE INVENTORY AND  
PRESERVATION PLAN  
PLATE 8

Tree Preservation Inventory  
 Deciduous Evergreen  
 Existing Trees to Remove  
 Existing Trees to be Removed

### Natural Features

Little of the Amended Refinement area was left untouched by development at the Fairview Training Center during the twentieth century. Existing vegetation consists primarily of mature domestic landscaping at former building sites and large areas of grass between the buildings.

### Trees

The tree inventory discussed in [10] identified more than 500 existing trees within the Amended Refinement area. This includes a grove of native Oregon White Oaks that has been integrated into the playground area for Heritage School, the private school currently on the site. Arborists have evaluated the trees in this grove. Most are healthy and will be saved. There are about two dozen additional mature white oaks in three other areas. Several are in poor health and will be removed as necessary. Most will be preserved by careful development design.

There are many mature Douglas Firs as well, that were planted early in the history of Fairview. Most were deliberately chosen to be in the park and are being incorporated into the park planning. Priorities for the park left some of the firs outside of the park area and will be need to be removed. *For additional information, see the **amended "Tree Inventory and Preservation Plan" Appendix A.***

### Historic Structures

The Fairview Training Center contained no designated historic structures. SFA commissioned a Historic Properties Inventory from Paulson and Provost History Consulting. Copies of this inventory may be obtained from the State of Oregon Historic Preservation Office or from the Knight Library at the University of Oregon. This inventory gives a detailed description and photographs of each of the structures on the former Fairview Training Center.

After extensive efforts to find a reuse and estimates of the cost of preservation or remodeling it was reluctantly decided in January 2016 to deconstruct the original (1908) Le Breton building. A condition agreed to by SFA and the City of Salem for removal of the building is that there be an on-site interpretative kiosk or other installation that will include, but is not limited to, panels including historical photos, architectural information, maps and other information to meaningfully educate the public about the history of the former Fairview Training Center site. The park planning process is implementing this requirement. *See section [27] Existing "**Historically Significant" Resources**".*

## View Sheds

The Fairview Plan identifies view sheds in two primary directions:

- A. Uphill towards three natural ravines that were to be protected and enhanced as storm water management resource and natural habitat;
- B. Downhill towards two public and private parks and open space.

These view sheds have been dramatically disturbed by extensive earthmoving and preparation for development by Simpson Hills, LLC. The good view toward the Cascades in the north and east from a few locations on the site remains.

## [12] MAINTENANCE OF COMMON OPEN SPACE AND FACILITIES

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The common open space and facilities will be maintained by the Sustainable Fairview Community Declaration of Protective Covenants, Conditions and Restrictions.

## [13] MAINTENANCE OF INFRASTRUCTURE

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The City will be responsible for maintenance of City/public infrastructure and utilities within the public rights-of-ways of the refinement plan area. . All private infrastructure and community amenities will be owned and perpetually maintained by the Fairview II Property Owners Association (POA). Management responsibilities will be included in the Fairview II Property Owners **Association's** Conditions, Covenants and Restrictions (**CC&R's**). Funding for the maintenance and agreement will be provided by the POA. Maintenance standard will meet or exceed the City of Salem Public Works Standards.

## [14] PHASING AND CONSTRUCTION OF STREETS

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The streets will be constructed as needed to fully serve each phase as it is developed. Sufficient ROW will be established to provide the capacity for all necessary utilities anticipated in the Fairview Plan for this amended refinement area and the adjacent areas. All streets will be phased and constructed to balance the needs of automobiles, bicycles and pedestrians.

## [15] LOCATION AND EXTENT OF PROPOSED PROVISION FOR SANITARY, STORMWATER DRAINAGE AND UTILITIES

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Water, sanitary sewer, electric power, gas and communications lines will be constructed in the street right-of-way or easements. Water and sewer sizes will be in accordance with City of Salem Public Works requirements and agreements. All Oregon State Health Authority and Department of Environmental **Quality requirements will be met. Fire hydrant spacing will be in accordance with the Fire Marshal's** requirements. Plate 9 illustrates the locations and extent of the improved infrastructure. Except for the park area and within Strong Road, the storm water will be without storm sewers. Usual storm water will be retained on each developed site.

## [16] STANDARDS FOR PHASING OF PUBLIC UTILITIES

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Infrastructure facilities and utilities will be constructed to anticipate future development on this and adjacent parcels, and will fully serve the development as the phases are built out. Each phase will demonstrate how full services will be provided, including all utility extensions and roadways to be constructed or accessed at the refinement area or phase boundary. City standards apply. The phases are shown on Plate 10.

## [17] PHASING SCHEDULE

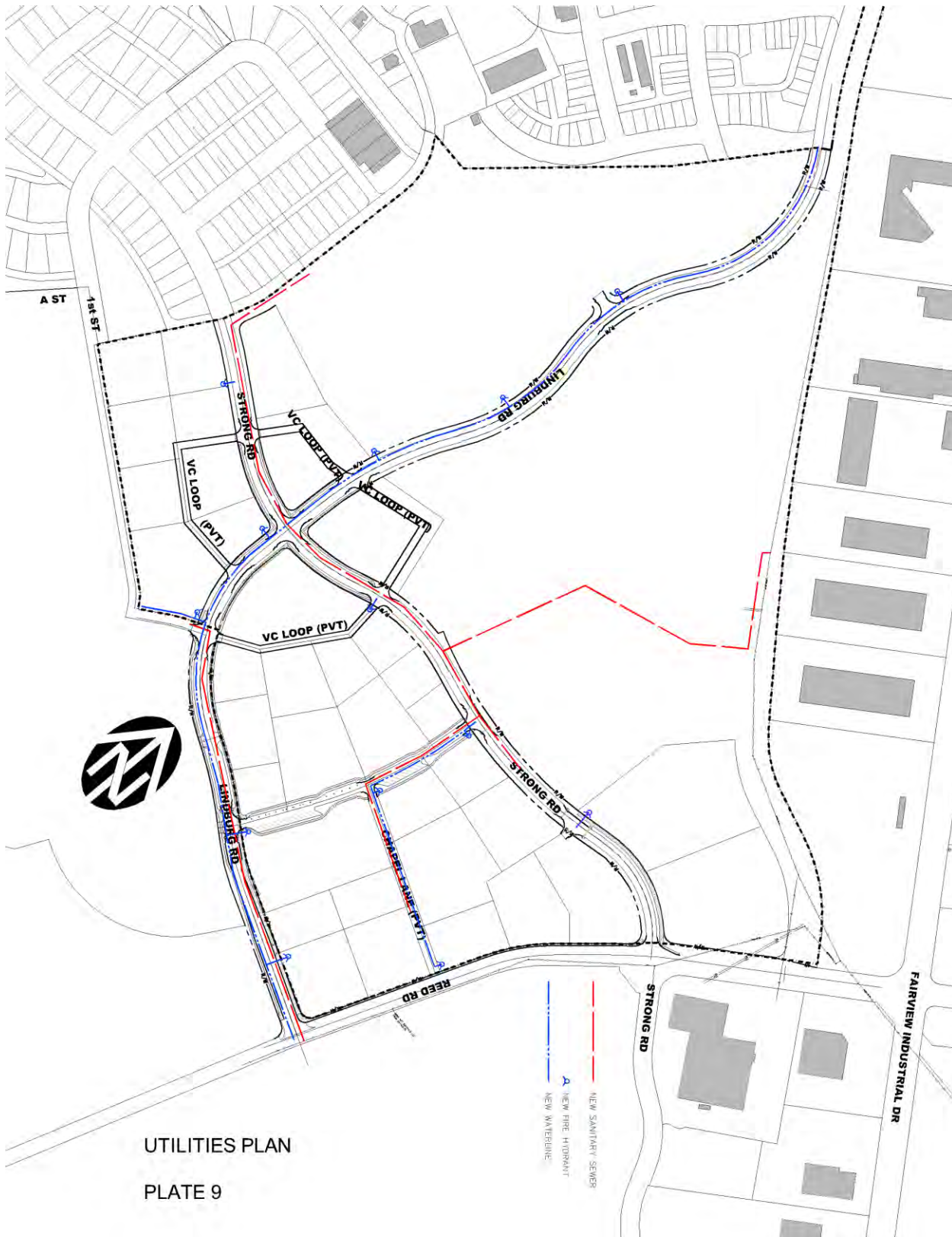
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Development of the Amended Refinement Area is to proceed in flexible stages, as the real estate market will allow. The key component is that each phase, as developed, will be designed to stand alone from a street and utility standpoint. It is not the intent to develop a phase that does not have adequate access or utility service.

The Heritage Phase is complete and the platted Lindburg Green Phase has the required infrastructure and is marketable. The Park Phase and Park West Phase will occur as Lindburg Road is completed. The Lindburg Green II and Center Phases depend upon construction of additional stretches of Lindburg and Strong Roads. The timing of the construction of the main streets with utilities is mutually dependent upon the order of the Phases.

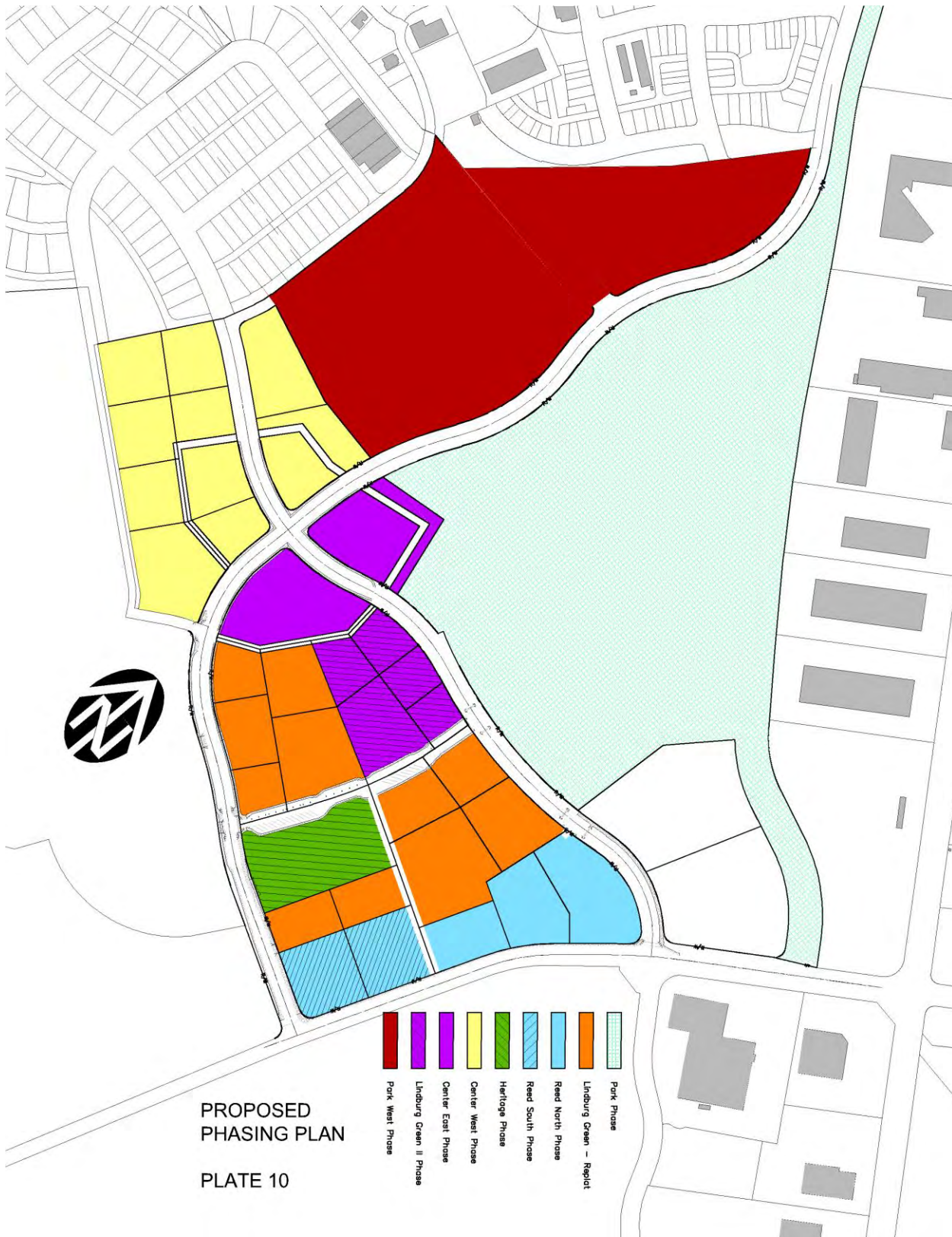
All streets will be designed to balance the needs of automobiles, bicycles and pedestrians. Sufficient ROW will be established to provide the capacity for all necessary utilities anticipated in the Fairview Plan for this refinement area and the adjacent areas. The streets will be constructed as needed to fully serve each phase as it is developed.














UTILITIES PLAN  
 PLATE 9

 NEW FIRE HYDRANT  
 NEW WATERLINE  
 NEW SANITARY SEWER



PROPOSED PHASING PLAN  
PLATE 10

-  Park Phase
-  Lindburg Green - Replot
-  Reed North Phase
-  Reed South Phase
-  Heritage Phase
-  Center West Phase
-  Center East Phase
-  Lindburg Green II Phase
-  Park West Phase

## [18] FINANCIAL ASSURANCES

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In 2005 Sustainable Fairview Associates entered into an Infrastructure Agreement with the City of Salem that creates a Development District and specifies a schedule, cost estimates, and financing for infrastructure projects (primarily off-site) related to the development of the entire former Fairview Training Center property. The first phase of the development was Pringle Creek Community. The Fairview II Refinement Plan was the second phase, Fairview Hills the third, Fairview Addition the fourth and this amendment a fifth that revises and extends the second. The Infrastructure Agreement has been updated through three amendments to assure changes in City and developer needs and priorities are addressed. As each phase is developed, a Development Agreement will be executed in accordance with current City code to ensure completion of the public infrastructure.

## [19] EXTENT THE AMENDED REFINEMENT PLAN SUPPLEMENTS OR SUPERSEDES ADOPTED CITY REGULATIONS

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This Amended Refinement Plan includes development standards for buildings and streets that are unique to this development and based on the Intent and Purpose Statement of the Fairview Mixed-Use Zone 530.001. It includes alternative standards designed to facilitate a vibrant mixed-use and walkable community. Specific standards that supersede and supplement City regulations are contained in the Tables 1 and 2 on pages 21-24. Additional Design Review will be required for certain buildings and uses within this refinement area. Design Review for this refinement area will be controlled by the Property Owners Association. If this Amended Refinement Plan is silent on a standard of the SRC, then the SRC standards shall apply.

## [20] STANDARDS FOR INTERPRETING THE REFINEMENT PLAN

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Development standards and regulations established under this Amended Refinement Plan are designed to meet the intent of the Fairview Plan and the Fairview Mixed Use Zone. Where a provision in this refinement plan varies from the provisions of the zoning code, the provisions of this plan shall govern.

## [21] DEVELOPMENT DESIGN GUIDELINES AND APPLICABLE APPROVAL PROCESS

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The privately owned sections of the Fairview II Refinement Plan Area will be governed by the Fairview II **Property Owners Association (POA) and the Conditions, Covenants and Restrictions (CC&R's), including** related Design Guidelines, contained therein. All guidelines will be in compliance with City of Salem code as supplemented by this refinement plan. The Design Review process will be conducted by a **Property Owner's Design Review Board (DRB). The City of Salem will not review the work of the DRB.**

The design review process is intended to ensure that each project contributes to the quality and character of the Fairview community. In addition to meeting all applicable development standards, each project will demonstrate that its site planning and architecture are compatible and make positive contributions to the spatial quality and livability of the community. Principles and standards outlined here provide guidance for this review. The guidelines developed will be, by intention, performance goals to be interpreted creatively and flexibly, not specifications to be applied narrowly and precisely. The goal is to assure those who choose to live work and recreate in Fairview that larger scale developments will reflect the shared goals

and principles of the Refinement Plan.

These include:

- A. Well-designed streets and open spaces;
- B. Community and environmentally friendly landscape design and location;
- C. A safe and supportive pedestrian environment;
- D. Well-scaled, inviting buildings;
- E. A robust natural landscape;
- F. Environmentally beneficial storm water, energy, water, and waste systems and practices.

## [22] GENERAL LANDSCAPE PLAN

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The most important element of the general landscape plan is retention of more than 300 mature trees, including more than 40 Oregon White Oaks, 50 Sequoias and 125 Douglas Firs. The layout of streets and future uses has been carefully aligned to preserve more than 80% of the larger trees. New trees of quality long-lived species will be planted to ensure continuation of the beautiful existing treescape.

Tree spacing is intended to create a continuous canopy over the street within a reasonable time (15 years) to dramatically enhance storm water performance, provide shade to building facades for reduced summer cooling needs, reduce heat island effects of summer sun on asphalt, and lengthen lifespan of asphalt road surface by shielding it from sun. Depending on choice of species, this could well lead to spacing at 20-30 feet. The landscape will be designed to support healthy spacing. The landscape plan (Plate No. 11) illustrates this concept.



The storm drainage system will be designed to maintain the current “natural” amount of storm water on site and maintain at least the current quality level of runoff into the Pringle Creek drainage area. To a large extent, this will be done without storm water piping. The plan diagram of Plate 12, shows the flow lines to street right-of-ways and permeable areas that can serve both as filtration areas and to hold storm water temporarily.

Design Parameters:

- A. Private on-site detention requirements will satisfy City of Salem standards only if infiltration of the 20-year storm cannot be achieved.
- B. Soil Conservation Service type 1A rainfall distribution with 24-hour minimum duration.
- C. Infiltration rates of 3.1 in/hr. in accordance with LEI soil infiltration test results.
- D. Runoff rates and other soil and vegetation parameters based on established U.S. manuals and standards.
- E. Roadway sections will provide a diversity of storm water treatment facilities. The roadways themselves will convey storm water in peak storm events. Underground piping will be used only as necessary for safety considerations. Backup storm water conveyance through intersections will be done with concrete cross gutters.
- F. Roadside infiltration is designed to infiltrate a minimum of 1.25 inches of rain in a 24-hour period. The infiltration system will consist of a combination of facilities including roadside swales and verges; blue green shallow depressions; flat yard, playing field and park areas; and small infiltration wells at roof downspouts.
- G. Despite the planned infiltration systems, the introduction of new impervious surface and the changes in the surface uphill to the south of the refinement area may result in increased storm water flow during peak storm events. When the City reviews the Refinement Plan(s) for any uphill and upstream properties, care must be taken to ensure that the current natural drainage patterns and flows are not altered.



## [24] TRAFFIC IMPACT AND ANALYSIS REPORT

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Kittleson and Associates, Inc. (K&A) prepared a report on the trip generation estimates for the original Fairview Plan and updated it for Refinement Plan II (2009) the Simpson Hills Refinement Plan (2012), and Fairview Addition (2014). They have now further updated the estimates to include the traffic impact of this 2016 amendment to the 2009 Plan. The full report is Appendix B of this plan.

The report shows that the anticipated traffic fits fully into the framework set by the Fairview Plan and associated Infrastructure Agreement. The Fairview Plan TIA predicts approximately 17,000 trips when all 275 acres are developed. The existing Pringle Creek Community Plan, Fairview Hills (amended Refinement Plan II), and the very recent Fairview Addition Plan together forecast approximately 10,000 trips on 180 acres developed. In this Amended Refinement Fairview Plan II, Traffic from a 500-student school is taken out. Approximately 28 acres of City Park are added. The number of residential units is increased by about 280 and the square feet office and retail is adjusted upward to include the complete Village Center. The result is an increase of about 1100 daily trips to make the cumulative total for all refinement Phases to date 11,270. All projections remain consistent with the original Fairview Plan.

## [25] IMPACTS ON EXISTING STRUCTURES AND OTHER DEVELOPMENT

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The Refinement Plan area is bordered on the west by Fairview Addition; on the north by Fairview Industrial Park; on the east by Hillcrest School; and on the south by proposed Simpson Hills' development. All but Hillcrest were parts of the former Fairview Training Center. Pedestrian and bicycle trails through the property, including along the corridor of the vacated section of Strong Road, will increase the recreational amenities of the neighborhood. The trail plan is being coordinated with the existing Pringle Creek refinement area and the proposed Simpson Hills refinement area to optimize the connections for non-motorized as well as motorized travel. SFA has had good relationships with the Morningside Neighborhood Association since purchasing the Fairview Training Center in 2002 and will continue to consult with **and inform the group in order to maintain high "livability" in the area.**

One building has been renovated and is being used as a private school (Heritage); this building will be preserved. Two other buildings are approved for demolition but planned for restoration (Barn 7,000 sq. ft.; and Chapel, 2,500 sq. ft.). Demolition of about 20 other buildings has created opportunities for new and efficient construction. Concrete and asphalt from demolition will be recycled and new street alignments will facilitate connectivity for automobiles and pedestrians.

## [26] IMPACTS ON EXISTING INFRASTRUCTURE AND PUBLIC SERVICES

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The impacts on off-site infrastructure predicted by the City are laid out in the Urban Growth Area Development Permit and the subsequent Infrastructure Agreement as amended. The method of financing Improvements to address off-site impacts is contained in the Infrastructure Agreement. This Amended Refinement Plan shows development consistent with the Fairview Plan and the impacts of off-site infrastructure outlined in detail in the Infrastructure Agreement of 2005 as amended.

Existing on-site infrastructure consists of deteriorating roads, an abandoned internal water system, antiquated sanitary lines, overhead power and telephone lines. The redevelopment with high-capacity systems involving current technology and design will facilitate new development opportunities consistent with the Fairview Plan. An initial improvement is a high capacity water line that will serve a large section of the city around Fairview. Transit Service will benefit from increased density of residential units and jobs. Developing a mix of housing types will provide opportunities for a more significant jobs/housing



balance.

## **[27] EXISTING "HISTORICALLY SIGNIFICANT" RESOURCES**

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This refinement plan area, particularly the park site, contains much of the former Training Center institutional complex discussed in the Historic Inventory and Analysis.\*

The State of Oregon and SFA documented the area for the purpose of making the case for official historic designation – or to make a record for history in case such preservation turned out to be unworkable. The concept of preserving a Fairview Historic District has proved impractical over the years since. This refinement plan calls for the removal of the last buildings in the historic area. The conditions for removal of LeBreton Hall, the first institutional building on site, were discussed in [11].

This refinement area contains part of the site of a mid-nineteenth century farmhouse and yards. The **Carey family in about 1850 designated a 30' x 60' plot for family burials, but moved after a short time.** The exact locations of these features are not known and little ground remains intact in this area after the Fairview Training Center was expanded in the mid-twentieth century and right-of-way acquisition was acquired for Strong Road. The best guess of the site reserved by the Carey family for burials is the former site of a large dormitory that was removed fifty years ago.

The area designated as Site 6 in the archeologists report is in the lawn near the front of an existing house (C4) and adjacent to the right-of-way.\* There was likely a late nineteenth century farmhouse there. The developers will be required to locate possible artifacts and remains when the existing house and outbuildings are deconstructed and the site is re-landscaped.

*\*The original report is the Fairview Training Center Historic Inventory and Analysis, Exhibit 5 of the Fairview Plan. The entire original plan with exhibits is available at <http://www.cityofsalem.net/Departments/CommunityDevelopment/Planning/FairviewMasterPlan/Pages/default.aspx>*

APPENDIX A

AMENDED TREE INVENTORY AND PRESERVATION PLAN

FEBRUARY, 2016

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

This addition and amendment to the tree inventory and preservation plan adds 258 trees to the inventory of trees on the approximately 35 acres being joined to the refinement area. This brings the total currently on the 75 acres to about 540. Technically, this is a second amendment to the tree plan. The first amendment was done in 2013 to add a sliver of area for the Lindburg Street ROW to provide for the removal of a few trees there.

The first several pages of this amended inventory show the newly included trees combined with the remaining trees from the 2009 and 2013 inventories. The last column indicates with a zero (0) or one (1) whether the tree is planned for removal or preservation. The next to the last column show whether the tree is in the park.

The final pages give the 2009 and 2013 inventory and plans at the times submitted.

In the seven years since the original plan was created there has been some construction and demolition that has taken out many of the trees then planned for removal and seen some natural deaths due to disease and weather.

Overall, most of the "natural" trees have been and will be preserved. Most of the ornamental trees that were planted as landscape for buildings being removed will not be preserved. Very few large, healthy trees will be removed; many dozens will be preserved. This amended plan calls for 331 of the 538 existing trees to be preserved.

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Prnk?	1 Denotes Retain
1	5466	D	QUGA	Oregon White Oak	36	3	Storm damage/missing limb	No	0
2	5485	D	JUNI	Black Walnut	18	3	Lean to south	No	0
3	5486	D	JUNI	Black Walnut	12	1	Basal cavity & trunk seam	No	0
4	5487	D	JUNI	Black Walnut	20	3	Limitations: decline on site	No	0
5	5491	D	JUNI	Black Walnut	16	1	Basal damage/epicormics	No	0
6	5507	C	CON	Conifer	16	1	Dead	No	0
7	5510	C	SEGI	Sequoia	77	9		No	1
8	5513	C	PSME	Douglas-Fir	48			No	1
9	5515	C	SEGI	Sequoia	48	1	Declining; cavity	No	0
10	5521	D	PRUN	Cherry	16	1	Severe trunk decay	No	0
11	5542	D	ROPS	Black Locust	36	1	Limitations - Invasive	No	0
12	5543	C	Cedar		42			No	0
13	5544	D	DEC	Deciduous	22	1	Dead	No	0
14	5621	C	PSME	Douglas-Fir	26		Old Strong Road East end	Yes	1
15	5626	C	PSME	Douglas-Fir	30			Yes	1
16	5636	C	PSME	Douglas-Fir	26			Yes	1
17	5637	C	PSME	Douglas-Fir	27			Yes	1
18	5646	C	PSME	Douglas-Fir	14			Yes	1
19	5648	C	PSME	Douglas-Fir	16			Yes	1
20	5649	C	PSME	Douglas-Fir	14			Yes	1
21	5657	C	PSME	Douglas-Fir	14			Yes	1
22	5658	C	PSME	Douglas-Fir	16			Yes	1
23	5659	C	PSME	Douglas-Fir	28	5	Codominant trunks	Yes	1
24	5660	C	PSME	Douglas-Fir	26			Yes	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
25	5664	C	PSME	Douglas-Fir	26			Yes	1
26	5685	C	PSME	Douglas-Fir	20	1	Low vigor; root damage	Yes	1
27	5686	C	PSME	Douglas-Fir	24			Yes	1
28	5687	C	PSME	Douglas-Fir	20			Yes	1
29	5706	D	ILEX	Holly	6	1	Multiple trunk	No	0
30	5765	D	BEPE	European White Birch	12	1	Lean	No	0
31	5766	D	BEPE	European White Birch	14	1	Lean	No	0
32	5767	D	BEPE	European White Birch	12	1	Lean; sapsuckers	No	0
33	5781	C	Cedar		25		Old basal wounds	No	0
34	5782	C	Cedar		20		Multiple trunk; pitching	No	0
35	5797	C	CON	Conifer	24	1	Dead	No	0
36	5822	C	SEGI	Sequoia	60	9		No	1
37	5823	D	ROPS	Black Locust	36	1	Limitations - Invasive	No	0
38	5840	C	SEGI	Sequoia	52	7	Surface girdling root	No	1
39	5843	C	CON	Conifer	18	1	Dead	No	0
40	5857	C	PISY	Scotch Pine	24	1	Multiple top; basal injury; bark beetles	No	0
41	5943	C	PISY	Scotch Pine	6	1	Pitch moth; sapsuckers	No	0
42	5955	C	PISY	Scotch Pine	8	1	Sapsucker girdling	No	
43	5956	C	PISY	Scotch Pine	8	1	Extreme pitch moth	No	0
44	5961	C	PISY	Scotch Pine	8	1	Basal wound	No	0
45	5963	C	PSME	Douglas-Fir	8	5		No	0
46	5968	D	QUGA	Oregon White Oak	24	5	Lean to east	No	0
47	5969	D	QUGA	Oregon White Oak	28	7		No	1
48	5970	D	QUGA	Oregon White Oak	11	7		No	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
49	5971	D	QUGA	Oregon White Oak	24	5	Old basal wound at 5 ft.	No	1
50	5972	D	QUGA	Oregon White Oak	12	5	Old basal wound	No	1
51	5973	D	QUGA	Oregon White Oak	22	7		No	1
52	5974	D	QUGA	Oregon White Oak	12	5	Lean to west	No	1
53	5975	D	QUGA	Oregon White Oak	16	7		No	1
54	5976	D	QUGA	Oregon White Oak	10	7		No	1
55	5977	D	QUGA	Oregon White Oak	22	7		No	1
56	5978	D	QUGA	Oregon White Oak	22	7		No	1
57	5979	D	QUGA	Oregon White Oak	22	7		No	1
58	5980	D	QUGA	Oregon White Oak	24	7		No	1
59	5981	D	QUGA	Oregon White Oak	14	5	Lean to east	No	1
60	5983	D	QUGA	Oregon White Oak	34	7		No	1
61	5984	D	QUGA	Oregon White Oak	44	1	Trunk decay at 8 ft.	No	0
62	6036	C	PISY	Scotch Pine	12	1	Lean to south	No	0
63	6048	C	PISY	Scotch Pine	26	1	Limitations: species struct.; short lived	No	0
64	6049	D	BEPE	European White Birch	6	1	Limitations: site adaptability, species	No	0
65	6054	C	PISY	Scotch Pine	26	1	Good vigor	No	0
66	6055	C	PISY	Scotch Pine	24	1	Good vigor	No	0
67	6070	D	BEPE	European White Birch	6	1	Limitations: site adaptability, species	No	0
68	6071	D	BEPE	European White Birch	6	1	Limitations: site adaptability, species	No	0
69	6083	D	BEPE	European White Birch	6	1	Limitations: site adaptability, species	No	0
70	6084	D	BEPE	European White Birch	6	1	Limitations: site adaptability, species	No	0
71	6085	D	BEPE	European White Birch	6	1	Limitations: site adaptability, species	No	0
72	6086	C	PISY	Scotch Pine	24	1	Low vigor	No	0

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
73	6087	C	PISY	Scotch Pine	24	1	Low vigor	No	0
74	6088	C	SEGI	Sequoia	42	9		No	1
75	6089	C	SEGI	Sequoia	32	7		No	1
76	6090	C	SEGI	Sequoia	32	7		No	1
77	6091	C	SEGI	Sequoia	36	9		No	1
78	6092	C	SEGI	Sequoia	14	1	Low vigor	No	0
79	6093	C	SEGI	Sequoia	34	7		No	1
80	6094	C	SEGI	Sequoia	28	7		No	1
81	6095	C	SEGI	Sequoia	26	7		No	1
82	6096	C	SEGI	Sequoia	26	7		No	1
83	6099	D	QUGA	Oregon White Oak	36	9		No	1
84	6100	D	QUGA	Oregon White Oak	26	5	Lean to east	No	1
85	6101	D	QUGA	Oregon White Oak	34	7		No	1
86	6103	D	QUGA	Oregon White Oak	36	9		No	1
87	6104	D	QUGA	Oregon White Oak	22	7		No	1
88	6132	D			14			No	0
89	6217	D	LIST	Sweetgum	12	5		No	1
90	6218	D	LIST	Sweetgum	14	5		No	1
91	6222	D	LIST	Sweetgum	12	5		No	1
92	6223	D	PICO	Lodgepole Pine	14	1	Low vigor	No	0
93	6224	C	PICO	Lodgepole Pine	14	1	Low vigor	No	0
94	6225	C	PICO	Lodgepole Pine	14	1	Low vigor	No	0
95	6245	D	QURU	Red Oak	16	7		No	1
96	6246	D	QURU	Red Oak	14	7		No	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
97	6258	C	SEGI	Sequoia	28	7		No	1
98	6259	C	SEGI	Sequoia	26	7		No	1
99	6263	C	SEGI	Sequoia	30	7		No	1
100	6264	C	SEGI	Sequoia	28	7		No	1
101	6265	C	SEGI	Sequoia	26	7		No	1
102	6268	C	SEGI	Sequoia	26	7		No	1
103	6269	C	SEGI	Sequoia	26	7		No	1
104	6270	C	SEGI	Sequoia	28	7		No	1
105	6271	C	SEGI	Sequoia	50	9		No	1
106	6272	C	SEGI	Sequoia	34	7		No	1
107	6342	D	POTR	Black Cottonwood	44	3	Limitations: high failure rate	No	0
108	6357	D	QUGA	Oregon White Oak	30	7		No	1
109	6385	C	PISY	Scotch Pine	22	1	Structurally unsound	No	0
110	6463	D	BEPE	European White Birch	10	1	Limitations: site adaptability, species	No	0
111	6465	D	BEPE	European White Birch	10	1	Limitations: site adaptability, species	No	0
112	6587	C	PISY	Scotch Pine	26	1	Poor structure; low vigor	No	0
113	6614	D	BEPE	European White Birch	12	1	Limitations: site adaptability, species	No	0
114	6753	D	QURU	Red Oak	34	7		No	1
115	6783	D	CASP	Catalpa	22	1	Low vigor	No	0
116	6794	D	QURU	Red Oak	30	7		No	1
117	6815	D	CASP	Catalpa	24	1	Limitation: decay, decline, short lived	No	0
118	6871	D	CASP	Catalpa	18	1	Hollow; decay	No	0
119	6879	D	CASP	Catalpa	18	1	Hollow; decay	No	0
120	6888	D	CASP	Catalpa	28	1	Hollow; decay	No	0



## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
121	6903	D	CASP	Catalpa	20	1	Limitation: decay, decline, short lived	No	0
122	6914	D	LITU	Tulip Tree	22	5	Limitations: insects (aphids)	No	0
123	6917	D	LITU	Tulip Tree	18	5	Limitations: insects (aphids)	No	0
124	6924	D	LITU	Tulip Tree	30	5	Limitations: insects (aphids)	No	0
125	6960	D	LITU	Tulip Tree	8	5	Limitations: Insects (aphids)	No	0
126	6969	D	CASP	Catalpa	22	1	Limitation: decay, decline, short lived	No	0
127	6970	D	CASP	Catalpa	18	1	Limitation: decay, decline, short lived	No	0
128	6971	D	CASP	Catalpa	14	1	Limitation: decay, decline, short lived	No	0
129	6993	D	JUNI	Black Walnut	20	3	Limitations: decline on site	No	0
130	6997	D	JUNI	Black Walnut	22	3	Limitations: decline on site	No	0
131	6999	D	ACPL	Norway Maple	5	1	Limitations: disease, species char.	No	0
132	11574	C	PSME	Douglas-Fir	28			No	0
133	11576	C	PSME	Douglas-Fir	20			No	0
134	11578	C	PSME	Douglas-Fir	24	5	Codominant stems	No	0
135	11631	C	PSME	Douglas-Fir	16	1	Damaged top	No	0
136	20068	D	QURU	Red Oak	28	7		No	1
137	20087	D	QURU	Red Oak	30	7		No	1
138	20115	D	QURU	Red Oak	30	7		No	1
139	20229	D	QURU	Red Oak	38	9	Codominant trunks	No	1
140	20524	D	BEPE	European White Birch	12	1	Limitations: site adaptability, species	No	0
141	20525	D	BEPE	European White Birch	6	1	Limitations: site adaptability, species	No	0
142	23008	C	PSME	Douglas-Fir	16			No	0
143	23023	C	PSME	Douglas-Fir	20			No	0
144	23027	C	PSME	Douglas-Fir	22	1	Thin crown	No	0

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
145	23031	C	PSME	Douglas-Fir	18			No	0
146	25693	D	PRCE	Pissard Plum	12	1	Included bark Hoff	Yes	0
147	25694	D	PLRA	Sycamore	48	9	No anthracnose; specimen tree	Yes	1
148	25698	C	CEDO	Deodar Cedar	30	3	Broken top	Yes	0
149	25722	D	ACRU	Red Maple	12	3	Included bark	Yes	0
150	25723	D	ACRU	Red Maple	24	3		Yes	0
151	25724	D	ACRU	Red Maple	14	3		Yes	0
152	25732	D	QURU	Red Oak	30	7		Yes	1
153	25740	D	QURU	Red Oak	30	7		Yes	1
154	25965	C	PSME	Douglas-Fir	38		East of annex	Yes	0
155	25967	C	PICO	Lodgepole Pine	22	1	Limitations: insects, decline	Yes	0
156	25969	C	PICO	Lodgepole Pine	24	1	Limitations: insects, decline	Yes	0
157	26020	C	PSME	Douglas-Fir	40	3	3 codominant trunks	Yes	0
158	26480	D	CASP	Catalpa	20	1	Meier	No	0
159	26481	C	PIPU	Colorado Spruce	6	5		No	1
160	26482	D	CASP	Catalpa	16	1	Limitation: decay, decline, short lived	No	0
161	26483	C	PIPU	Colorado Spruce	6	5		No	1
162	26484	C	PIPU	Colorado Spruce	6	5		No	1
163	26485	D	CASP	Catalpa	24	1	Limitation: decay, decline, short lived	No	0
164	26496	C	PINI	Austrian Pine	14			No	1
165	26497	C	PINI	Austrian Pine	14			No	1
166	26498	C	PINI	Austrian Pine	14			No	1
167	26499	C	PINI	Austrian Pine	14			No	1
168	26500	C	PINI	Austrian Pine	16			No	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
169	26501	C	PSME	Douglas-Fir	12			No	1
170	26502	C	PSME	Douglas-Fir	10			No	1
171	26543	C	PINI	Austrian Pine	16	3	Low vigor	No	0
172	26546	C	PINI	Austrian Pine	14			No	1
173	26547	C	PINI	Austrian Pine	16			No	1
174	26554	C	PINI	Austrian Pine	16				1
175	26555	C	PINI	Austrian Pine	18			No	1
176	26558	C	PINI	Austrian Pine	16			No	1
177	26571	C	PINI	Austrian Pine	14			No	1
178	26574	C	PINI	Austrian Pine	14			No	1
179	26575	C	PINI	Austrian Pine	16			No	1
180	26576	C	PINI	Austrian Pine	16			No	1
181	26638	D	JURE	English Walnut	12	1	Limitations: blackline	No	0
182	26651	D	CASP	Catalpa	34	1	Limitation: decay, decline, short lived	No	0
183	26654	C	PISY	Scotch Pine	26	1	Dead	No	0
184	26657	C	PISY	Scotch Pine	18	1	Limitations: species struct.; short lived	No	0
185	26658	C	PISY	Scotch Pine	20	1	Limitations: species struct.; short lived	No	0
186	26660	C	PISY	Scotch Pine	18	1	Limitations: species struct.; short lived	No	0
187	26661	C	PISY	Scotch Pine	18	1	Poor vigor	No	0
188	26663	C	PISY	Scotch Pine	24	1	Limitations: species struct.; short lived	No	0
189	26664	D	CASP	Catalpa	24	1	Limitation: decay, decline, short lived	No	0
190	26732	C	PISY	Scotch Pine	24	1	Poor structure	No	0
191	26733	D	CASP	Catalpa	26	1	Limitation: decay, decline, short lived	No	0
192	26734	D	CASP	Catalpa	20	1	Limitation: decay, decline, short lived	No	0

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Prnk?	1 Denotes Retain
193	26761	D	CASP	Catalpa	14	1	Limitation: decay, decline, short lived	No	0
194	26967	D	QUGA	Oregon White Oak	20	3	One sided canopy	No	0
195	26971	D	QUGA	Oregon White Oak	26	3	Lean	No	1
196	26972	D	QUGA	Oregon White Oak	28			No	1
197	26973	D	QUGA	Oregon White Oak	26	1	Decay 0-16	No	0
198	26974	D	QUGA	Oregon White Oak	14	1	Basal decay; lean	No	0
199	26999	C	SESE	Sequoia	38	9		No	1
200	27052	D	LIST	Sweetgum	10	5		No	1
201	27053	C	SEGI	Sequoia	38	9		No	1
202	27054	C	SEGI	Sequoia	38	9		No	1
203	27055	C	SEGI	Sequoia	36	9		No	1
204	27056	C	SEGI	Sequoia	32	7		No	1
205	27133	C	SESE	Sequoia	30	7		No	1
206	27134	C	SESE	Sequoia	34	7		No	1
207	27135	C	SESE	Sequoia	32	7		No	1
208	27136	C	SESE	Sequoia	28	7		No	1
209	27137	C	SESE	Sequoia	28	7		No	1
210	27138	C	SESE	Sequoia	34	7		No	1
211	27139	C	SESE	Sequoia	26	7		No	1
212	27140	C	SESE	Redwood	40	5	Broken top	No	0
213	27141	C	SESE	Redwood	26	5	Broken top	No	0
214	27142	C	SESE	Sequoia	22	7		No	1
215	27144	C	SEGI	Sequoia	40	9		No	1
216	27145	C	SEGI	Sequoia	36	9		No	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
217	27146	C	SEGI	Sequoia	28	7		No	1
218	27147	C	SEGI	Sequoia	20	7		No	1
219	27148	C	SEGI	Sequoia	24	1	Low vigor	No	0
220	27149	C	SEGI	Sequoia	30	7		No	1
221	27150	C	SEGI	Sequoia	30	7		No	1
222	27151	C	SEGI	Sequoia	38	9		No	1
223	27152	C	SEGI	Sequoia	30	7		No	1
224	27153	C	SEGI	Sequoia	30	7		No	1
225	27154	C	SEGI	Sequoia	28	7		No	1
226	27169	D	LIST	Sweetgum	12			No	1
227	27171	D	LIST	Sweetgum	12			No	1
228	27193	D	LIST	Sweetgum	18	5		No	1
229	27211	D	LIST	Sweetgum	16	5		No	1
230	27212	D	LIST	Sweetgum	14	5		No	1
231	27234	D	LIST	Sweetgum	16			No	1
232	27261	D	QUGA	Oregon White Oak	26			No	1
233	27263	D	QUGA	Oregon White Oak	26	1	Lean; decay at 10 ft.	No	0
234	27264	D	QUGA	Oregon White Oak	30			No	1
235	27267	D	QUGA	Oregon White Oak	22			No	1
236	27268	D	QUGA	Oregon White Oak	24	3	Lean	No	1
237	27269	D	LIST	Oregon White Oak	16	3	Lean	No	1
238	27270	D	QUGA	Oregon White Oak	22	7		No	1
239	27271	D	QUGA	Oregon White Oak	32	3	Lean	No	1
240	27272	D	QUGA	Oregon White Oak	18	7		No	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
241	27273	D	QUGA	Oregon White Oak	26	1	Basal wound	No	0
242	27275	D	QUGA	Oregon White Oak	20	7		No	1
243	27276	D	QUGA	Oregon White Oak	24	3	Lean	No	1
244	27278	C	PINI	Austrian Pine	12			No	1
245	27279	C	PINI	Austrian Pine	10	3	Low vigor	No	1
246	27291	C	SEGI	Sequoia	18	7		No	1
247	27294	C	SEGI	Sequoia	28	7		No	1
248	27295	C	SEGI	Sequoia	26	7		No	1
249	27296	C	SEGI	Sequoia	30	7		No	1
250	27333	C	SEGI	Sequoia	42	9		No	1
251	27825	C	PSME	Douglas-Fir	40	3		No	1
252	27828	D	CASP	Catalpa	12	1	Poor vigor	No	0
253	27829	C	ACPL	Norway Maple	16	1	Limitations: disease, species char.	No	0
254	28194	C	PINI	Austrian Pine	20		North end Row at Holman Holderness	No	1
255	28195	C	PINI	Austrian Pine	18			No	1
256	29212	D	CASP	Catalpa	16	1	Hospital SW Edge Park	No	0
257	29253	D	LIST	Sweetgum	12	5		Yes	0
258	29262	D	LIST	Sweetgum	12	5		Yes	0
259	29292	D	LITU	Tulip Tree	20	5	Limitations: insects (aphids)	Yes	0
260	29294	D	LITU	Tulip Tree	16	5	Limitations: insects (aphids)	Yes	0
261	29297	D	LITU	Tulip Tree	16	5	Limitations: insects (aphids)	Yes	0
262	31015	D	JUNI	Black Walnut	50	3	One sided to north; branch scar	Yes	0
263	43946	D	ALJU	Mimosa	20	1	Very poor condition; decay	Yes	0
264	100007	D	CASP	Catalpa	20		Patterson landscape	No	0

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
265	100013	D	CASP	Catalpa	20			No	0
266	100014	D	CASP	Catalpa	20			No	0
267	100022	D	CASP	Catalpa	20			No	0
268	100023	D	CASP	Catalpa	20			No	0
269	100049	D	CASP	Catalpa	18			No	0
270	<b>Lindburg Amendment</b>							No	0
271	20986	D	QUGA	Oregon White Oak	31			No	0
272	1	C	PINI	Austrian Pine	20	5	Knapp30337	Yes	0
273	2	C	PINI	Austrian Pine	18	0	Dead	Yes	0
274	3	C	PINI	Austrian Pine	20	0	Dead	Yes	0
275	4	C	PINI	Austrian Pine	15	3		Yes	0
276	5	C	PINI	Austrian Pine	15	3		Yes	0
277	6	C	PINI	Austrian Pine	13	3	Dead	Yes	0
278	7	C	PINI	Austrian Pine	13	3		Yes	0
279	8	C	PINI	Austrian Pine	20	3		Yes	0
280	9	C	PINI	Austrian Pine	12	3		Yes	0
281	10	C	PINI	Austrian Pine	12	0	Dead	Yes	0
282	11	C	PINI	Austrian Pine	10	1	Mostly dead	Yes	0
283	12	C		Pine - Ponderosa	26	8		Yes	1
284	13	C		Pine - Ponderosa	26	8		Yes	1
285	14	C		Pine - Ponderosa	26	8		Yes	1
286	15	C		Pine - Ponderosa	26	8		Yes	1
287	16	C		Pine - Ponderosa	26	8		Yes	1
288	17	C		Pine - Ponderosa	23	8		Yes	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
289	18	C		Pine - Ponderosa	24	8		Yes	1
290	19	C		Pine - Ponderosa	24	8		Yes	1
291	20	C		Pine - Ponderosa	26	8		Yes	1
292	21	C		Pine - Ponderosa	24	8		Yes	1
293	22	C		Pine - Ponderosa	26	8		Yes	1
294	23	C		Pine - Ponderosa	26	8		Yes	1
295	24	C		Pine - Ponderosa	24	0	Dead	Yes	0
296	25	C		Pine - Ponderosa	24	6		Yes	1
297	26	C		Pine - Ponderosa	26	8		Yes	1
298	27	C		Pine - Ponderosa	28	8		Yes	1
299	28	C		Pine - Ponderosa	26	5		Yes	1
300	29	C		Pine - Ponderosa	26	7		Yes	1
301	30	C		Pine - Ponderosa	28	7		Yes	1
302	31	C		Pine - Ponderosa	26	7		Yes	1
303	32	C		Pine - Ponderosa	26	7		Yes	1
304	33	C		Pine - Ponderosa	26			Yes	1
305	34	C		Pine - Ponderosa	26			Yes	1
306	35	C		Pine - Ponderosa	24	7		Yes	1
307	36	C		Pine - Ponderosa	26	7		Yes	1
308	37	C		Pine - Ponderosa	24	7		Yes	1
309	38	C		Pine - Ponderosa	26	7		Yes	1
310	38a	C		Pine - Ponderosa	24	7		Yes	1
311	39	D	CASP	Catalpa	40	2		Street?	0
312	40	D	CASP	Catalpa	24	2		Yes	0



## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
313	41	D	CASP	Catalpa	36	4		Yes	0
314	47	D	ILEX	Holly	8	3		Street?	0
315	47a	D	ILEX	Holly	8	3		Yes	0
316	48	D	ILEX	Holly	10	3		Yes	0
317	49	D	CASP	Catalpa	10	1		Yes	0
318	50	D	QUGA	White Oak	48	9		Yes	1
319	51	D	QUGA	White Oak	48	9		Yes	1
320	53	C	PSME	Douglas-Fir	40	9		Yes	1
321	54	C	PSME	Douglas-Fir	44	9		Yes	1
322	55	C	PSME	Douglas-Fir	26	9		Yes	1
323	56	C	PSME	Douglas-Fir	40	9		Yes	1
324	57	C	PSME	Douglas-Fir	40	9		Yes	1
325	58	C	PSME	Douglas-Fir	50	9		Yes	1
326	59	C	PSME	Douglas-Fir	24	9		Yes	1
327	60	C	PSME	Douglas-Fir	32	9		Yes	1
328	61	C	PSME	Douglas-Fir	32	9		Yes	1
329	62	D		Oregon Ash	22	5		Yes	0
330	63	D		Oregon Ash	12	2	Dead?	Yes	0
331	64	C	PSME	Douglas-Fir	60	9		Yes	1
332	65	C	PSME	Douglas-Fir	40	9		Yes	1
333	67	C	PSME	Douglas-Fir	32	9		Yes	1
334	68	C	PSME	Douglas-Fir	34	9		Yes	1
335	69	C	PSME	Douglas-Fir	60	9		Yes	1
336	70	C	PSME	Douglas-Fir	37	9		Yes	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
337	71	C	PSME	Douglas-Fir	45	9		Yes	1
338	72	D	CASP	Catalpa	27	3		Yes	0
339	73	D	CASP	Catalpa	20	3		Yes	0
340	74	C	PSME	Douglas-Fir	50	9		Yes	1
341	75	C	PSME	Douglas-Fir	50	9		Yes	1
342	76	C	PSME	Douglas-Fir	50	9		Yes	1
343	77	D		Oregon Ash	30	5		Yes	1
344	78	C	PSME	Douglas-Fir	30	7		Yes	1
345	79	C	PSME	Douglas-Fir	40	7		Yes	1
346	80	C	PSME	Douglas-Fir	36	8		Yes	1
347	81	C	PSME	Douglas-Fir	36	7		Yes	1
348	82	C	PSME	Douglas-Fir	50	8		Yes	1
349	83	C	PSME	Douglas-Fir	28	8		Yes	1
350	84	C	PSME	Douglas-Fir	32	8		Yes	1
351	85	C	PSME	Douglas-Fir	36	9		Yes	1
352	86	C	PSME	Douglas-Fir	48	9		Yes	1
353	87	C	PSME	Douglas-Fir	28	9		Yes	1
354	88	C	PSME	Douglas-Fir	40	9		Yes	1
355	89	C	PSME	Douglas-Fir	50	9		Yes	1
356	20986	D	QUGA	Oregon White Oak	31	7		Yes	1
357	91	C	PSME	Douglas-Fir	36	9		Yes	1
358	92	C	PSME	Douglas-Fir	42	9		Yes	1
359	93	C	PSME	Douglas-Fir	36	9		Yes	1
360	94	C	PSME	Douglas-Fir	44	9		Yes	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
361	95	C	PSME	Douglas-Fir	50	9		Yes	1
362	96	C	PSME	Douglas-Fir	50	9		Yes	1
363	97	C	PSME	Douglas-Fir	50	9	Knapp 23200	Yes	1
364	98	D	CASP	Catalpa	28	2		Yes	0
365	99	D	CASP	Catalpa	14x3	2	Knapp 23175	Yes	0
366	100	D	CASP	Catalpa	2x16	3		Yes	0
367	101	D	ILEX	Holly	10	4		Yes	0
368	102	C		Spruce	12	8		Yes	0
369	20986	D	QUGA	Oregon White Oak	40	9		Yes	1
370	106	D	LITU	Tulip Tree	28	6		Street?	0
371	107	D	LITU	Tulip Tree	36	6		Yes	0
372	108	D	QUGA	White Oak	36	9		Yes	1
373	110	D	LIST	Sweetgum	20	8		Street?	0
374	111	D	LIST	Sweetgum	20	8	Almost dead	Yes	0
375	112	D	LIST	Sweetgum	18	8		Yes	0
376	113	D	LIST	Sweetgum	18	8		Yes	0
377	114	D	LIST	Sweetgum	22	8		Yes	0
378	115	D	QUGA	White Oak	40	9		Yes	1
379	116	D	LIST	Sweetgum	28	8		Yes	1
380	117	D	LIST	Sweetgum	32	8		Yes	1
381	118	C	PSME	Douglas-Fir	40	8		Yes	1
382	119	C	PSME	Douglas-Fir	40	8		Yes	1
383	120	C	PSME	Douglas-Fir	28	8		Yes	1
384	121	C	PSME	Douglas-Fir	30	9		Yes	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
385	122	C	SEGI	Sequoia	44	9		Yes	1
386	123	C	PSME	Douglas-Fir	30	9		Yes	1
387	124	C	PSME	Douglas-Fir	36	8		Yes	1
388	125	C	PSME	Douglas-Fir	28	8		Yes	1
389	126	C	PSME	Douglas-Fir	30	6		Yes	1
390	127	C	PSME	Douglas-Fir	28	6		Yes	1
391	128	C	SEGI	Sequoia	30	8		Yes	1
392	129	C	PSME	Douglas-Fir	48	9		Yes	1
393	130	C	PSME	Douglas-Fir	40	9		Yes	1
394	131	C	PSME	Douglas-Fir	40	9		Yes	1
395	132	C	PSME	Douglas-Fir	32	9		Yes	1
396	133	C	SEGI	Sequoia	34	8		Yes	1
397	134	C	PSME	Douglas-Fir	33	8		Yes	1
398	135	C	PSME	Douglas-Fir	22	8		Yes	1
399	136	C	PSME	Douglas-Fir	12	8		Yes	1
400	137	C	PSME	Douglas-Fir	44	9		Yes	1
401	138	C	PSME	Douglas-Fir	38	9		Yes	1
402	139	C	SEGI	Sequoia	36	8		Yes	1
403	140	C		Pine?	10	2		Yes	0
404	141	C	SEGI	Sequoia	36	8		Yes	1
405	142	C	SEGI	Sequoia	26	8		Yes	1
406	143	C	SEGI	Sequoia	50	8		Yes	1
407	144	C	SEGI	Sequoia	20	6		Yes	1
408	145	C	PSME	Douglas-Fir	28	8		Yes	1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
409	146	C	SEGI	Sequoia	65	8		Yes	1
410	147	C	PSME	Douglas-Fir	28	8		Yes	1
411	148	C	SEGI	Sequoia	28	8		Yes	1
412	149	C	PSME	Douglas-Fir	38	9		Yes	1
413	150	C	PSME	Douglas-Fir	28	7		Yes	1
414	151	C		Port Orford Cedar	2x22	1	Blown down and died	Yes	0
415	152	C	PSME	Douglas-Fir	52	9		Yes	1
416	153	C	PSME	Douglas-Fir	52	9		Yes	1
417	154	C	PSME	Douglas-Fir	36	9		Yes	1
418	155	C	PSME	Douglas-Fir	40	9		Yes	1
419	156	C	PSME	Douglas-Fir	44	9		Yes	1
420	20986	D	QUGA	Oregon White Oak	54	9		Yes	1
421	158	C	PSME	Douglas-Fir	30	8		Yes	1
422	159	C	PSME	Douglas-Fir	30	8		Yes	1
423	160	C	PSME	Douglas-Fir	16	8		Yes	0
424	161	C	PSME	Douglas-Fir	40	8		Yes	1
425	162	C	PSME	Douglas-Fir	34	8		Yes	1
426	162a	C	PSME	Douglas-Fir	40	8		Yes	1
427	165	C		Conifer Cedar	16	5	against Olcott will not survive demo?	Yes	1
428	166	C		Port Orford Cedar	50	7	Olcott quint trunk	Yes	1
429	167	C		Port Orford Cedar	40	7	Pierce	Yes	1
430	168	D		Crab Apple?	16	3		Street?	0
431	168a	D		Crab Apple?	11	3		Street?	0
432	169	D		Crab Apple?	11	3		Street?	0

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	<sup>1</sup> Denotes Retain
433	170	D	LIST	Sweet Gum	16	5		Street?	0
434	171	C		Fir	12	6		Street?	0
435	172	C		Fir	12	6		Street?	0
436	173	C		Fir	14	6		Street?	0
437	174	C		Fir	12	6		Street?	0
438	175	D		Acacia?	20	1		Street?	
439	256	D		Cherry	12	6		Yes	1
440	257	D		Cherry	12	6		Yes	1
441	258			Hoff Front Wall Shrub	10	1		Yes	0
442	259			Hoff Front Wall Shrub	10	1		Yes	0
443	260	C		Pool Courtyard Fir	10	1		Yes	0
444	261	C		Pool Courtyard Fir	10	1		Yes	0
445	262	C		Pool Courtyard Fir	10	1		Yes	0
446	263	D		Maple? Overlook Old Strong Rd.	22	7	Double trunk	Yes	0
447	264	D		Maple? Overlook Old Strong Rd.	18	7		Yes	0
448	265	C		Pine	14	3		Yes	0
449	266	C		Fir	12	3		Yes	0
450	267	C	PSME	Douglas-Fir	16	5		Yes	0
451	42	C	PSME	Douglas-Fir	66				1
452	43	C	PSME	Douglas-Fir	48				1
453	43	C		Pine	36				0
454	45			Hickory	28				1
455	46	C		Pine	16				1
456	66	C	PSME	Douglas-Fir	28				0

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
457	104	C		Port Orford Cedar	48				1
458	105	D		Smoke tree	8				0
459	176	C	SEGI	Sequoia	60				1
460	177	C	SEGI	Sequoia	70				1
461	178	C		Fir	30x2				0
462	179	C		Port Orford Cedar	60				1
463	20986	D	QUGA	Oregon White Oak	42				0
464	20986	D	QUGA	Oregon White Oak	42				0
465	20986	D	QUGA	Oregon White Oak	42				0
466	183	C		Port Orford Cedar	50				0
467	184	C		Port Orford Cedar	50				1
468	185	C		Port Orford Cedar	50				1
469	186	C		Port Orford Cedar	50				1
470	187	C		Port Orford Cedar	50				1
471	188	D		Maple	12				1
472	189	D		Maple??	12				1
473	190	C		Port Orford Cedar	40				1
474	191	C		Port Orford Cedar	40				1
475	192	C	PSME	Douglas-Fir	48				0
476	193	C	PSME	Douglas-Fir	50				1
477	194	C	PSME	Douglas-Fir	50				1
478	195	C	PSME	Douglas-Fir	66				1
479	196	C		Port Orford Cedar	40				1
480	197	C		Fir	34				0

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
481	198	C		Fir	34				0
482	199	C	PSME	Douglas-Fir	42				1
483	200	C	PSME	Douglas-Fir	50				1
484	201	C	PSME	Douglas-Fir	48				1
485	202	C	PSME	Douglas-Fir	24				1
486	203	C	PSME	Douglas-Fir	36				1
487	204	C	PSME	Douglas-Fir	36				1
488	205	C	PSME	Douglas-Fir	36				1
489	206	C	PSME	Douglas-Fir	30				1
490	207	C	PSME	Douglas-Fir	40				1
491	208	C	PSME	Douglas-Fir	36				1
492	209	C	PSME	Douglas-Fir	28				1
493	210	C	PSME	Douglas-Fir	36				1
494	211	C	PSME	Douglas-Fir	48				1
495	212	C	PSME	Douglas-Fir	44				1
496	213	C	SEGI	Sequoia	60				1
497	214	C	PSME	Douglas-Fir	26				0
498	215	C	PSME	Douglas-Fir	32				0
499	216	D	QUGA	White Oak	20				0
500	217	D	QUGA	White oak	28				0
501	218	D	QUGA	White oak	44				1
502	219	C	PSME	Douglas Fir	40				1
503	220	D		Plum?	10				0
504	221	C	PINI	Austrian Pine	22				1



## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
505	222	C	PINI	Austrian Pine	20				1
506	223	C	PINI	Austrian Pine	20				1
507	224	C	PINI	Austrian Pine	24				1
508	225	D		Black walnut	40				1
509	226	C	PINI	Austrian Pine	14				1
510	227	C	PINI	Austrian Pine	24				1
511	228	C	PINI	Austrian Pine	24				1
512	229	C	PINI	Austrian Pine	22				1
513	230	C	PINI	Austrian Pine	24				1
514	231	C	PINI	Austrian Pine	18				1
515	232	C	PINI	Austrian Pine	24				1
516	233	C	PINI	Austrian Pine	28				0
517	234	C		Port Orford Cedar	20				1
518	235	D		Oregon ash ?	16				1
519	236	C		Port Orford Cedar	24				1
520	237	C		Port Orford Cedar	10				0
521	238	C		Port Orford Cedar	36				1
522	239	C	PSME	Douglas-Fir	32				1
523	240	D	QUGA	White Oak	30				1
524	241	C	PSME	Douglas-Fir	12				1
525	242	C	PSME	Douglas-Fir	20				1
526	243	C	PSME	Douglas-Fir	14				1
527	244	C	PSME	Douglas-Fir	12				1
528	245	C	PSME	Douglas-Fir	16				1

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

SALEM TREE NUMBER	PBS SFA NUMBER	Type	Eco-Code	Species	DBH (in)	Rating	Comments	Park?	1 Denotes Retain
529	246	C	PSME	Douglas-Fir	18				0
530	247	C	PSME	Douglas-Fir	16				1
531	248	C	PSME	Douglas-Fir	16				1
532	249	C	PSME	Douglas-Fir	14				1
533	250	C	PSME	Douglas-Fir	16				0
534	251	C	PSME	Douglas-Fir	16				0
535	252	C	PSME	Douglas-Fir	16				1
536	253	C	PSME	Douglas-Fir	16				1
537	254	C	PSME	Douglas-Fir	16				1
538	255	C	PSME	Douglas-Fir	14				1
									331

# AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

Engineering +  
Environmental



August 25, 2009

Sustainable Fairview Associates  
Attn: Sam Hall  
P.O. Box 144  
Salem, Oregon 97308  
Via Email: [shall@willamette.edu](mailto:shall@willamette.edu)

Re: Tree Inventory and Arborist Report  
Sustainable Fairview Tree Plan, Salem, Oregon  
PBS Project No. 30037.000

Dear Mr. Hall:

This letter shall act as *Tree Inventory and Arborist Report* for the trees located on the Sustainable Fairview site in Salem, Oregon. This report summarizes the existing tree conditions, provides recommendations for tree removal and retention, and includes general recommendations for tree protection before, during, and after construction. Recommendations for tree removal are provided based on the biological condition of trees and suitability for retention with development. The extent of construction impacts is not yet known and recommendations may be modified as site design information becomes available. The information contained in this report can be used to guide site design in order to preserve the best existing tree features.

The enclosed *Tree Inventory Data* provides a complete description of individual trees surveyed at the Sustainable Fairview site, including species, diameter, crown radius, general comments, and arborist ratings and recommendations for retention or removal. The location of individual trees is illustrated in the enclosed *Tree Inventory Site Map*. The tree point numbers shown on the site map correspond with the tree numbers included in the *Tree Inventory Data*. The trees were marked with numbered aluminum tags several years ago; many of the tags are still attached while others are missing.

## **TREE INVENTORY AND ANALYSIS**

Trees are present on much of the Fairview site. The City of Salem defines trees as woody plants measuring 10 inches or larger in diameter at breast height. Oregon white oaks measuring 24 inches or larger in diameter are especially significant and protected by Section 68.050 of the City Code. Walter H. Knapp & Associates, LLC conducted an inventory of this site in 2000. Working in cooperation with Walter H. Knapp & Associates, LLC, and using the 2000 inventory as a base, individual trees were re-

## AMENDED TREE INVENTORY AND PRESERVATION PLAN 2016

evaluated in July and August 2009 by PBS Engineering + Environmental forest biologist, certified arborist, and certified tree risk assessor Morgan Holen. The trees on site were assigned a rating based on general condition. The ratings are defined as follows:

- Rating 1-3: Not sustainable due to species limitations, hazardous structure, or poor condition
- Rating 5: Moderate condition (biologically sustainable, but not outstanding)
- Rating 7: Good condition (no major defects or limitations)
- Rating 9: Excellent condition (specimen tree)

## ARBORIST RECOMMENDATIONS

Trees are either recommended for retention or for removal. Trees recommended for removal could potentially be retained depending on the hazard risk potential of any individual tree. Therefore, the recommendations contained in this report assume that some target potential will exist for every tree, thus trees in poor condition do pose some degree of hazard potential. The recommendations may be modified as the site design is developed. In all, 131 (44%) of the inventoried trees are recommended for removal for poor condition and 165 (56%) trees are recommended for retention. Table 1 provides a summary of the *Tree Inventory Data*, showing the count of trees by species and arborist recommendation. Recommendations for retention may be modified based on proposed construction impacts yet to be determined. The trees recommended for retention can be used to guide the site design so as to retain the best existing tree features.

**TABLE 1. Summary of Arborist Recommendations – Sustainable Fairview Site.**

<b>Species</b>	<b>Remove</b>	<b>Retain</b>	<b>Total Count</b>	<b>%</b>
Austrian pine	4	15	19	6%
black cottonwood	1		1	0.3%
black locust	2		2	1%
black walnut	4	3	7	2%
catalpa	41		41	14%
cherry	1		1	0.3%
Colorado spruce		3	3	1%
conifer	3		3	1%
deciduous	1		1	0.3%
deodar cedar	1		1	0.3%
Douglas-fir	3	27	30	10%
English walnut	1		1	0.3%
European white birch	9		9	3%
lodgepole pine	5		5	2%
mimosa	2		2	1%
Norway maple	1		1	0%
Oregon ash	1		1	0%
Oregon white oak	6	34	40	14%
Pissard plum	1		1	0.3%
red maple	3		3	1%
red oak	1	9	10	3%
redwood	2		2	1%
Scotch pine	32		32	11%
sequoia	4	52	56	19%
sweetgum		13	13	4%
sycamore		1	1	0.3%
tulip tree	1	6	7	2%
western redcedar	1	2	3	1%
<b>Grand Total</b>	<b>131</b>	<b>165</b>	<b>296</b>	<b>100%</b>
<i>Percent of Total</i>	<i>44%</i>	<i>56%</i>	<i>100%</i>	

In all, 296 trees measuring 10 inches or larger in diameter were evaluated. A complete description of individual trees is provided in the enclosed *Tree Inventory Data*.

Twenty-six species of trees were identified. The trees are in variable condition and many were planted at different times throughout the recent past. Most of the trees on site were planted for landscaping, around buildings, in rows along property lines or driveways, as windbreaks, or for aesthetics. Some of the more prominent species warrant discussion:

- Forty (14% of all inventoried trees) Oregon white oaks (*Quercus garryana*) located in small groves in the eastern portion of the site were inventoried and most appear in good or fair condition. The oaks appear to be naturally occurring and are suitable for retention if protected in the existing groups, with the exception of a five hazardous oaks that are recommended for removal with no significant negative impact to the remaining trees. Some mistletoe was observed in tree 6101 and could be pruned to reduce the risk of spreading the infection.
- Tree 25694, a 60-inch diameter sycamore (*Platanus racemosa*) appears in remarkable condition and is recommended for retention. A proposed roadway is planned adjacent to the tree and should be designed to provide adequate protection for the tree. We recommended continued consultation with the project arborist during the design phase in order to incorporate modified construction techniques for tree preservation.
- Fifty-six (19%) giant sequoias (*Sequoiadendron giganteum*), also located in the eastern portion of the site forming a double row along existing powerlines and around existing buildings, appear in mostly good condition with the exception of a few that have been topped or pruned for powerline clearance. The sequoias are mostly suitable for retention; the topped sequoias may persist for a long time and could be retained with monitoring for hazard potential. Four sequoias are recommended for removal for non-sustainable condition.
- Thirty (10%) Douglas-firs (*Pseudotsuga menziesii*) are scattered across the site, but many are located in a row along the south side of Strong Road SE. These trees appear in variable condition, but are generally suitable for retention with development.
- Nineteen (6%) Austrian pines (*Pinus nigra*) appearing in marginal condition with moderate to severe pitch moth infection are located in a row along an existing driveway. Fifteen of these trees are sustainable and suitable for retention.
- Thirteen (4%) sustainable sweetgums (*Liquidambar styraciflua*) in moderately good condition are scattered across the site adjacent to existing buildings.
- Ten (3%) red oaks (*Quercus rubra*) in good condition are scattered across the site adjacent to existing buildings. If retained, the red oaks will require special protection during building demolition work to ensure their protection.
- Species recommended for removal because of poor condition or with inherent limitations include:
  - Forty-one (14%) catalpas (*Catalpa speciosa*), a short-lived species appearing with low vigor, decay, and in decline or dying across the site;
  - Nine (3%) European white birches (*Betula pendula*), a short-lived species appearing in decline across the site with top dieback and a history of branch failure, the species is susceptible to bronze birch borer when stressed; and
  - Thirty-two (11%) scotch pines (*Pinus sylvestris*), a short-lived species appearing in decline across the site with low vigor, poor structure (typical of the species) and moderate pitch moth infection (which can lead to hazardous branch failure).

No trees measuring 10 inches or larger in diameter were identified along the north side of Strong Road SE. This area is a stream corridor dominated by willow (*Salix* spp.). This area should not be impacted by construction, but may be enhanced at the property owner's discretion.

The trees to be retained with require special protection during construction to help them remain long-term amenities to the site. Many of the trees will require pruning prior to construction to provide sufficient clearance, reduce the risk of crown damage, remove dead and broken branches for safety, and to generally improve aesthetics. Recommended specifications for tree protection during construction are included in the *Tree Protection Measures* section herein.

## **CITY REGULATIONS**

As stated previously, the City of Salem defines trees as woody plants measuring 10 inches or larger in diameter at breast height. Oregon white oaks measuring 24 inches or larger in diameter are especially significant and protected by Section 68.050 of the City Code. Thirty of the 40 inventoried Oregon white oaks measure 24-inches or larger in diameter, of which four are recommended for removal for poor and hazardous condition. Removal of significant trees requires a removal permit pursuant to Section 68.090.

Trees on lots or parcels 20,000 square feet or greater are regulated by Section 68.070, which states that no person shall remove more than 15 percent of the trees on-site within a single calendar year, and no more than 50 percent of the trees on-site within any five consecutive years. According to SRC 68.090, trees protected under SRC 68.070 may only be removed after the issuance of a tree removal permit demonstrating that the removal does not exceed the City's preservation requirements. However, 44 percent of the inventoried trees are recommended for removal because of poor condition or species limitations. The removal of additional trees may be required depending on the proposed site design. If the necessary tree removal exceeds the City's preservation requirements, the owner may apply for a Tree Plan Variance per Code Section 68.130 to allow the necessary tree removal for this project. Trees recommended for retention will need special consideration to assure their protection during construction.

## **TREE PROTECTION MEASURES**

We recommend that the owner continue working with an arborist to provide ongoing consultation during the design and construction process. We also recommend a preconstruction meeting with the developer, contractors, and project arborist to review tree protection measures and address questions or concerns on site. General recommendations for tree protection are provided below.

### **Before Construction**

1. *Tree Protection Zone.* The project arborist should designate the Tree Protection Zone (TPZ). Where feasible, the TPZ should be established at the dripline of the tree or group of trees as a minimum. If infrastructure (roads, sidewalks, and utilities) must be installed closer to the tree(s), the TPZ may be established within the dripline area if the project arborist determines that the tree(s) will not be unduly damaged.
2. *Protection Fencing.* All trees to be retained should be protected by installation of tree protection fencing to prevent injury to tree trunks or roots, or soil compaction within the root protection zone, which generally coincides with the tree dripline. Fences will be either orange plastic construction fencing secured to metal posts in the ground, or 6-foot high chain-link fencing on concrete blocks. The project arborist will determine the exact location and type of fencing. Trees located more than 30 feet from construction activity may not require fencing.
3. *Designation of Cut Trees.* Trees to be removed should be clearly marked with construction flagging, tree-marking paint or other methods approved in advance by the project arborist.
4. *Preconstruction Conference.* The project arborist should be on-site to discuss methods of tree removal and tree protection prior to any construction.

## During Construction

1. *Tree Protection Zone Maintenance.* The protection fencing should not be moved, removed, or entered by equipment except under direction of the project arborist. Without authorization from the project arborist, none of the following will occur within tree protection zones:
  - a. Construction of new buildings
  - b. Grade change or cut and fill, during or after construction
  - c. New impervious surfaces
  - d. Utility or drainage field placement
  - e. Staging or storage of materials and equipment during construction
  - f. Vehicle maneuvering during constructionTree protection zones may be entered for tasks like surveying, measuring, and sampling. Fences must be closed upon completion of these tasks.
2. *Mulching.* If construction equipment needs to enter the TPZ of a retained tree, a layer of gravel or other suitable mulch at least 6-inches deep will be placed in the path of the equipment as protection for the root system of the tree. This material will be removed at the end of construction. Tree protection fencing will be immediately replaced after such operations are completed.
3. *Soil Protection.* The stripping of topsoil around retained trees will be restricted. No fill (including temporary storage of spoils) will be placed within the TPZ.
4. *Excavation within the TPZ.* Excavation within the TPZ should be avoided if alternatives are available. If excavation within the TPZ is unavoidable, the project arborist should evaluate the proposed excavation to determine methods to minimize impacts to trees. This can include tunneling, hand digging or other approaches. All construction within the TPZ should be under the on-site technical supervision of the project arborist.
5. *Tree Protection Inspection.* The project arborist should monitor tree protection regularly during construction and provide written reports to the developer and the City at regular intervals.

## After Construction

1. *Landscaping.* The tree protection fencing may be removed once construction is complete to allow for landscaping. Cover the root zone with compost mulch to a depth of 2 to 3 inches. This will help to reduce soil temperature, retard water loss, and avoid lawnmower damage to tree trunks and roots. Grass-free, mulched rings, should be no less than 6 feet in diameter for retained trees on this site or else as directed by the project arborist. Larger trees require larger mulched rings. If needed, install irrigation outside of the mulched ring. The irrigation should not be directed at tree trunks.
2. *Final Report.* After the project has been completed, the project arborist should provide a final report describing tree protection throughout construction and any additional recommendations for maintaining and protecting the remaining trees.

## CONCLUSION

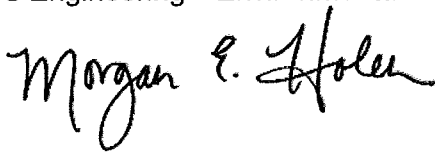
This report is provided in conjunction with the enclosed *Tree Inventory Site Map* and *Tree Inventory Data* for individual trees surveyed at the Sustainable Fairview site in Salem, Oregon. One-hundred and sixty-five (56%) trees inventoried are recommended for retention, while 131 (46%) trees are recommended for removal because of poor condition, hazardous structure, or species limitations. General recommendations for tree protection are provided. Recommendations may be modified and



additional recommendations may be provided as the extent of construction impacts are determined. It is the client's responsibility to implement the arborist recommendations contained in this report and to monitor tree protection measures throughout the construction process. We encourage continued coordination between the arborist, owner, and design team as the project moves through the design and construction phases.

We appreciate the opportunity to provide arborist services for Sustainable Fairview Associates. Please contact us at 971.409.9354 if you have questions, concerns, or need additional information.

Sincerely,  
PBS Engineering + Environmental

A handwritten signature in black ink that reads "Morgan E. Holen". The signature is written in a cursive style with a large initial 'M' and 'H'.

Morgan E. Holen Forest  
Biologist  
Certified Arborist (ISA PN-6145A)  
Certified Tree Risk Assessor (ISA No. 449) [morgan\\_holen@pbsenv.com](mailto:morgan_holen@pbsenv.com)

Enclosures: Tree Inventory Site Map 8-25-09 Tree  
Inventory Data 8-25-09

No.	Species	DBH (in)	C-Rad (ft)	Rating	Comments	Treatment
5466	Oregon white oak	40		3	storm damage, history of major branch failure	remove
5485	black walnut	18		3	lean to south	remove
5486	black walnut	14		1	basal cavity and trunk seam	remove
5487	black walnut	22		3	limitations-decline on site	remove
5513	Douglas-fir	48	30	9	no major defects	retain
5491	black walnut	18		1	basal damage, epicormics	remove
5507	conifer	16		1	dead	remove
5510	sequoia	77	25	9	no major defects	retain
5515	sequoia	48		1	declining, cavity	remove
5521	cherry	16		1	severe trunk decay	remove
5542	black locust	36		1	history of branch failure, species limitations	remove
5543	western redcedar	50		3	poor structure and condition	remove
5544	deciduous	22		1	dead	remove
5621	Douglas-fir	28	16	5	no major defects	retain
5626	Douglas-fir	32	16	5	no major defects	retain
5636	Douglas-fir	28	16	5	no major defects	retain
5637	Douglas-fir	28	16	5	no major defects	retain
5646	Douglas-fir	18	16	5	no major defects	retain
5648	Douglas-fir	22	16	5	no major defects	retain
5649	Douglas-fir	20	16	5	no major defects	retain
5657	Douglas-fir	18	16	5	no major defects	retain
5658	Douglas-fir	18	16	5	no major defects	retain
5659	Douglas-fir	30	16	5	codominant trunks	retain
5660	Douglas-fir	30	16	5	forked top	retain
5664	Douglas-fir	28	16	5	no major defects	retain
5685	Douglas-fir	20		1	low vigor, root damage, poor condition	remove
5686	Douglas-fir	26	16	5	no major defects	retain
5687	Douglas-fir	24	16	5	no major defects	retain
5781	western redcedar	25	25	5	old basal wounds, <i>monitor if retained</i>	retain
5765	European white birch	12	20	1	lean, species limitations	remove
5766	European white birch	14	20	1	lean, species limitations	remove
5767	European white birch	12	20	1	lean, sapsuckers, species limitations	remove
5782	western redcedar	20	25	5	multiple trunks, pitching, <i>monitor if retained</i>	retain
5797	conifer	24		1	dead	remove
5822	sequoia	60	30	7	major branch failure - included bark, decay	retain
5823	black locust	36		1	history of branch failure, species limitations	remove
5840	sequoia	52	25	7	surface girdling root	retain
5843	conifer	18		1	dead	remove
5857	Scotch pine	26		1	multiple tops, basal damage, bark beetles	remove
5883	Scotch pine	26		1	poor condition, sapsuckers	remove
5884	Scotch pine	30		1	poor structure	remove
5912	Scotch pine	34		1	multiple trunks, poor structure, bark beetles	remove
5917	Scotch pine	26		1	multiple trunks, poor structure	remove
5942	Scotch pine	14		1	marginal condition, pitch moth, sapsuckers	remove

No.	Species	DBH (in)	C-Rad (ft)	Rating	Comments	Treatment
5953	Scotch pine	12		1	broken top, poor condition	remove
5955	Scotch pine	12		1	marginal condition, sapsucker girdling	remove
5956	Scotch pine	12		1	poor condition, severe pitch moth	remove
5961	Scotch pine	12		1	marginal condition, basal wound	remove
5968	Oregon white oak	28	36	5	phototropic lean to east, codominant crown class	retain in grove
5969	Oregon white oak	34	34	7	no major defects, one-sided, codominant crown class	retain in grove
5970	Oregon white oak	12		7	no major defects, codominant crown class	retain in grove
5971	Oregon white oak	32	32	5	old basal wound at 5-ft	retain in grove
5972	Oregon white oak	16	20	5	old basal wound, branch decay	retain in grove
5973	Oregon white oak	24	20	7	no major defects, codominant crown class	retain in grove
5974	Oregon white oak	16	38	5	phototropic lean to west	retain in grove
5975	Oregon white oak	20	38	7	no major defects, one-sided	retain in grove
5976	Oregon white oak	12		7	one-sided, interior of grove	retain in grove
5977	Oregon white oak	24		7	no major defects, interior of grove	retain in grove
5978	Oregon white oak	26	32	7	one-sided, phototropic lean	retain in grove
5979	Oregon white oak	28	28	7	one-sided, phototropic lean, branch decay	retain in grove
5980	Oregon white oak	32	12	7	no major defects, codominant crown class	retain in grove
5981	Oregon white oak	16	22	5	Phototropic lean to east, intermediate crown class	retain in grove
5982	Oregon white oak	40	42	3	old conk near base of tree, <i>if retained further investigation needed to determine basal decay</i>	retain in grove
5983	Oregon white oak	40	46	7	one-sided, branch decay, no major defects	retain in grove
5984	Oregon white oak	50	40	5	moderate vigor, trunk decay at 8-ft, branch decay, <i>safety prune and monitor if retained</i>	retain in grove
6036	Scotch pine	12		1	lean to south	remove
6048	Scotch pine	26		1	limitations-species structure, short-lived	remove
6054	Scotch pine	30		3	poor structure, pitch moth, good vigor	remove
6055	Scotch pine	28		3	poor structure, good vigor	remove
6088	sequoia	46	16	9	no major defects	retain
6089	sequoia	34	16	7	no major defects	retain
6090	sequoia	40	14	7	crown pruned for powerline clearance	retain
6091	sequoia	44	16	9	no major defects	retain
6092	sequoia	18		1	low vigor, severe decline	remove
6093	sequoia	34	16	7	no major defects	retain
6094	sequoia	30	16	7	no major defects	retain
6095	sequoia	28	16	7	no major defects	retain
6096	sequoia	30	16	5	topped in the past	retain
6100	Oregon white oak	30	32	5	one-sided, phototropic lean to east	retain in grove
6099	Oregon white oak	40	40	7	moderate vigor, thin crown, <i>monitor if retained</i>	retain in grove
6101	Oregon white oak	40	36	7	broken branches, mistletoe, <i>prune if retained</i>	retain in grove
6103	Oregon white oak	40	34	9	no major defects, <i>clear debris pile at base of tree</i>	retain in grove
6104	Oregon white oak	24	30	7	no major defects	retain in grove
6132	black cottonwood	20		3	limitations-species	remove
6218	sweetgum	16	10	5	no major defects	retain
6217	sweetgum	14	10	5	no major defects	retain
6222	sweetgum	14	10	5	no major defects	retain

No.	Species	DBH (in)	C-Rad (ft)	Rating	Comments	Treatment
6223	lodgepole pine	16		1	low vigor	remove
6224	lodgepole pine	16		1	low vigor	remove
6225	lodgepole pine	16		1	low vigor	remove
6246	red oak	18	14	7	dead and broken branches, <i>safety prune if retained</i>	retain
6245	red oak	20	14	7	dead and broken branches, <i>safety prune if retained</i>	retain
6258	sequoia	30	16	7	no major defects	retain
6259	sequoia	26	16	5	topped in the past	retain
6263	sequoia	32	16	5	topped in the past	retain
6264	sequoia	28	16	7	no major defects	retain
6265	sequoia	30	16	7	no major defects	retain
6268	sequoia	28	16	7	no major defects	retain
6269	sequoia	28	16	7	no major defects	retain
6270	sequoia	30	16	7	no major defects	retain
6271	sequoia	54	16	9	no major defects	retain
6272	sequoia	36	16	7	no major defects	retain
6385	Scotch pine	24		1	structurally unsound	remove
6417	Scotch pine	14		1	poor condition, low vigor	remove
6419	Scotch pine	14		1	poor condition, low vigor	remove
6463	European white birch	10		1	decline, species limitations	remove
6465	European white birch	12		1	poor condition, species limitations	remove
6517	catalpa	16		1	poor condition, low vigor	remove
6518	catalpa	18		1	stem decay, low vigor	remove
6550	catalpa	18		1	poor condition, dieback	remove
6587	Scotch pine	26		1	poor structure, low vigor	remove
6598	European white birch	16		1	poor condition, species limitations	remove
6614	European white birch	10		1	poor condition, species limitations	remove
6634	catalpa	24		1	poor condition, low vigor	remove
6637	catalpa	14		1	low vigor	remove
6709	catalpa	24		1	Low vigor	remove
6753	red oak	38	30	7	no major defects	retain
6766	catalpa	16		1	severe decline	remove
6770	catalpa	10		1	Low vigor	remove
6773	catalpa	10		1	Low vigor	remove
6783	catalpa	24		1	Low vigor	remove
6794	red oak	34		7	no major defects	retain
6815	catalpa	28		1	decline, decay	remove
6871	catalpa	20		1	hollow with decay	remove
6879	catalpa	22		1	hollow with decay	remove
6888	catalpa	34		1	hollow with decay	remove
6903	catalpa	26		1	decline, decay	remove
6914	tulip tree	28	20	5	self-corrected lean, species limitations	retain
6917	tulip tree	24	16	5	some branch dieback, species limitations	retain
6924	tulip tree	36	18	5	no major defects, species limitations	retain
6969	catalpa	22		1	limitations-decay, decline, short-lived	remove

No.	Species	DBH (in)	C-Rad (ft)	Rating	Comments	Treatment
6970	catalpa	18		1	limitations-decay, decline, short-lived	remove
6971	catalpa	14		1	limitations-decay, decline, short-lived	remove
6993	black walnut	22	20	3	no major defects, decline on site	retain
6997	black walnut	26	20	3	no major defects, decline on site	retain
11468	Scotch pine	26		1	thin crown, poor structure and condition	remove
11572	Douglas-fir	28	20	7	no major defects	retain
11574	Douglas-fir	34	24	7	no major defects	retain
11576	Douglas-fir	26	16	7	no major defects	retain
11578	Douglas-fir	30	26	5	codominant stems, <i>monitor if retained</i>	retain
11631	Douglas-fir	20	12	1	marginal condition, forked top	retain
20068	red oak	36	40	7	no major defects	retain
20087	red oak	34	26	7	few broken branches, <i>safety prune if retained</i>	retain
20115	red oak	34	32	7	no major defects	retain
20229	red oak	2x32		9	potentially hazardous codominant trunks	remove
20431	catalpa	16		1	limitations-decay, decline, short-lived	remove
20465	catalpa	18		1	low vigor	remove
20524	European white birch	12		1	limitations-site adaptability, species	remove
20525	European white birch	2x10		1	limitations-site adaptability, species	remove
20534	catalpa	2x14		1	low vigor	remove
20537	catalpa	18		1	low vigor	remove
23008	Douglas-fir	20	16	5	no major defects	retain
23023	Douglas-fir	26	16	5	no major defects	retain
23027	Douglas-fir	28	16	1	thin crown, suitable for retention with row	retain
23031	Douglas-fir	18	10	5	no major defects	retain
25693	Pissard plum	2x12		1	included bark, poor condition	remove
25694	sycamore	60	40	9	specimen tree, no anthracnose; <i>could prune min. needed to provide clearance for proposed road, build up from existing grade using modified profile or use a retaining wall if cut necessary, perhaps move road west of tree for maximum protection</i>	retain
25698	deodar cedar	48		3	broken top, poor structure	remove
25722	red maple	16		3	poor condition, included bark	remove
25723	red maple	26		3	marginal condition	remove
25724	red maple	20		3	marginal condition	remove
25732	red oak	34	30	7	safety prune	retain
25740	red oak	36	30	7	safety prune	retain
25965	Douglas-fir	44	30	7	no major defects	retain
25967	lodgepole pine	28		1	species limitations-insects, decline	remove
25969	lodgepole pine	28		1	poor structure, species limitations	remove
26020	Douglas-fir	40		3	3 codominant trunks, high hazard potential	remove
26480	catalpa	28		1	species limitations-decay, decline, short-lived	remove
26481	Colorado spruce	10	10	5	no major defects	retain
26482	catalpa	22		1	species limitations-decay, decline, short-lived	remove
26483	Colorado spruce	10	8	5	no major defects	retain
26484	Colorado spruce	10	8	5	no major defects	retain

No.	Species	DBH C-Rad		Rating	Comments	Treatment
		(in)	(ft)			
26485	catalpa	30		1	species limitations-decay, decline, short-lived	remove
26496	Austrian pine	24	18	7	no major defects	retain
26497	Austrian pine	22	16	7	no major defects	retain
26498	Austrian pine	22	16	7	no major defects	retain
26499	Austrian pine	24	16	7	no major defects	retain
26500	Austrian pine	24	16	7	no major defects	retain
26501	Douglas-fir	16	12	7	no major defects	retain
26502	Douglas-fir	14	10	7	no major defects	retain
26543	Austrian pine	20	16	3	poor structure, low vigor	remove
26546	Austrian pine	20	16	7	no major defects	retain
26547	Austrian pine	20	16	5	forked top	retain
26554	Austrian pine	22	16	5	no major defects	retain
26555	Austrian pine	26	16	5	poor structure, good vigor	retain
26558	Austrian pine	22		3	marginal condition, dead and broken branches	remove
26571	Austrian pine	18	16	5	pitch moth	retain
26574	Austrian pine	18	16	5	pitch moth	retain
26575	Austrian pine	20	16	5	pitch moth	retain
26576	Austrian pine	24	16	5	pitch moth	retain
26638	English walnut	16		1	species limitations-blackline	remove
26651	catalpa	38		1	species limitations-decay, decline, short-lived	remove
26654	Scotch pine	26		1	dead	remove
26657	Scotch pine	20		1	dieback, not sustainable	remove
26658	Scotch pine	22		1	poor structure and condition	remove
26660	Scotch pine	18		1	dead	remove
26661	Scotch pine	24		1	severe decline, dying	remove
26663	Scotch pine	28		1	poor structure	remove
26664	catalpa	28		1	species limitations-decay, decline, short-lived	remove
26732	Scotch pine	32		1	poor structure	remove
26733	catalpa	26		1	species limitations-decay, decline, short-lived	remove
26734	catalpa	24		1	species limitations-decay, decline, short-lived	remove
26761	catalpa	14		1	species limitations-decay, decline, short-lived	remove
26955	Oregon white oak	38		1	basal decay, conk, active <i>beehive in hollow at 20-ft</i>	remove
26961	Oregon white oak	38	30	7	no major defects, one-sided	retain in grove
26963	Oregon white oak	34	30	7	one-sided, codominant crown class	retain in grove
26966	Oregon white oak	28		1	basal decay	remove
26967	Oregon white oak	20		3	one-sided crown	remove
26971	Oregon white oak	28	42	5	lean, dead and broken branches, <i>monitor if retained</i>	retain in grove
26972	Oregon white oak	28	28	7	no major defects	retain in grove
26973	Oregon white oak	26		1	decay 0- to 16-ft, poor condition	remove
26974	Oregon white oak	14		3	basal decay, <i>monitor if retained</i>	retain in grove
26999	sequoia	42	18	9	no major defects	retain
27052	sweetgum	12	14	5	competing with adjacent sequoia	retain
27053	sequoia	46	18	9	no major defects	retain
27054	sequoia	42	18	9	no major defects	retain

No.	Species	DBH (in)	C-Rad (ft)	Rating	Comments	Treatment
27055	sequoia	40	18	9	no major defects	retain
27056	sequoia	36	18	7	no major defects	retain
27080	sequoia	38	18	7	no major defects, surrounded by planter box	retain
27133	sequoia	32	18	7	no major defects	retain
27134	sequoia	36	18	7	no major defects	retain
27135	sequoia	34	18	7	no major defects	retain
27136	sequoia	30	18	7	no major defects	retain
27137	sequoia	30	18	7	no major defects	retain
27138	sequoia	36	18	7	no major defects	retain
27139	sequoia	28	18	7	no major defects	retain
27140	redwood	42	18	5	broken top	remove
27141	redwood	28	18	5	broken top	remove
27142	sequoia	24	18	7	no major defects	retain
27143	sequoia	18	18	1	low vigor, poor condition	remove
27144	sequoia	42	18	9	no major defects	retain
27145	sequoia	38	18	9	no major defects	retain
27146	sequoia	30	18	7	no major defects	retain
27147	sequoia	22	18	7	no major defects	retain
27148	sequoia	24	18	1	low vigor, poor condition	remove
27149	sequoia	32	18	7	no major defects	retain
27150	sequoia	34	18	5	top dieback, <i>monitor if retained</i>	retain
27151	sequoia	40	18	9	no major defects	retain
27152	sequoia	32	18	7	no major defects	retain
27153	sequoia	32	18	7	no major defects	retain
27154	sequoia	30	18	7	no major defects	retain
27169	sweetgum	24	18	7	no major defects	retain
27171	sweetgum	16	18	7	no major defects	retain
27193	sweetgum	20	10	5	no major defects	retain
27211	sweetgum	18	10	5	no major defects	retain
27212	sweetgum	16	10	5	no major defects	retain
27234	sweetgum	16	10	5	no major defects	retain
27264	Oregon white oak	30	28	7	no major defects	retain in grove
27268	Oregon white oak	28	36	3	phototropic lean	retain in grove
27269	Oregon white oak	18	32	3	phototropic lean, basal wound	remove
27270	Oregon white oak	28	36	7	basal wound, one-sided, codominant crown class	retain in grove
27271	Oregon white oak	38	52	5	one-sided, <i>safety prune if retained</i>	retain in grove
27272	Oregon white oak	32	36	7	no major defects	retain in grove
27275	Oregon white oak	22	30	7	no major defects	retain in grove
27276	Oregon white oak	26		3	phototropic lean	retain in grove
27278	Austrian pine	14	6	3	marginal condition	remove
27279	Austrian pine	12	6	1	low vigor, poor condition	remove
27284	sequoia	40	18	9	no major defects	retain
27290	sequoia	26		7	no major defects	retain
27291	sequoia	20		7	no major defects	retain

No.	Species	DBH C-Rad		Rating	Comments	Treatment
		(in)	(ft)			
27294	sequoia	30		7	no major defects	retain
27295	sequoia	28		7	no major defects	retain
27296	sequoia	32		7	no major defects	retain
27333	sequoia	42	18	9	no major defects	retain
27805	Scotch pine	18		1	low vigor	remove
27806	Scotch pine	24		1	dead	remove
27809	Scotch pine	22		1	limitations-species structure, short-lived	remove
27810	Scotch pine	24		1	limitations-species structure, short-lived	remove
27813	Scotch pine	24		1	low vigor	remove
27815	Scotch pine	24		1	limitations-species structure, short-lived	remove
27825	Douglas-fir	40		3	forked top, moderate-high hazard potential	remove
27828	catalpa	12		1	poor vigor	remove
27829	Norway maple	16		1	limitations-disease, species characteristics	remove
28194	Austrian pine	26	20	5	good vigor	retain
28195	Austrian pine	22	18	5	good vigor	retain
29212	catalpa	18		1	limitations-decay, decline, short-lived	remove
29253	sweetgum	12	12	5	no major defects	retain
29258	sweetgum	12	10	5	no major defects	retain
29262	sweetgum	16	14	5	no major defects	retain
29292	tulip tree	24	18	5	no major defects	retain
29294	tulip tree	18	12	5	no major defects	retain
29297	tulip tree	20	16	5	no major defects	retain
29309	tulip tree	20		5	top dieback	remove
31015	black walnut	50	42	5	one-sided, branch scar, <i>monitor if retained</i>	retain
43446	catalpa	18		1	poor condition	remove
43449	catalpa	18		1	poor condition	remove
43451	catalpa	20		1	poor condition	remove
43584	mimosa	20		1	very poor condition, decay	remove
43658	Oregon ash	12		3	poor condition	remove
43946	mimosa	16		1	extensive stem decay	remove
100007	catalpa	20		1	poor condition	remove
100013	catalpa	20		1	poor condition	remove
100014	catalpa	20		1	poor condition	remove
100022	catalpa	20		1	poor condition	remove
100023	catalpa	20		1	poor condition	remove
100049	catalpa	18		1	poor condition	remove

**NOTES** DBH: Diameter at breast height, measured in inches at 4.5 ft. above ground.C-Rad: Crown radius (ft.), distance from center of trunk to edge of tree crown (dripline). Used to define the root protection zone (RPZ) This is the area that should not be disturbed by excavation or other activities that could injure roots. Rating scale: 1-3 not sustainable, 5 sustainable, not remarkable, 7 good 9 specimen



2012 amendment : TCPA 13-08 Tree Matrix

	Species	Inventory #	Inventory dbh (in)	Remove	Retain	Significant Trees	Exempt - SRC 68.080(b)	Comments
1	Black cottonwood	58	44		X			
1	Oregon white oak	20986	31		X	X		TRV09-01 #112 - Retain
1	Oregon white oak	20974	32	X		X	X	Located in Lindburg Rd ROW. Noted for retention in FRP09-01. Cannot re-route road around without impacting other similarly sized OWO trees on the SH or SFA properties
1	Red maple	11027	13	X				FTC landscaping. Located in Lindburg Rd ROW
1	Scotch pine	20891	12	X				FTC landscaping. Located in Lindburg Rd ROW
1	Scotch pine	20892	12	X				FTC landscaping. Located in Lindburg Rd ROW
1	Red oak	S1	34	X				Located in Lindburg Rd ROW. Noted for removal in FRP09-01. Retained as tree #20115 in TCP09-05. Non OWO - species confirmed in field
1	Scotch pine	S2	12	X				FTC landscaping
1	Scotch pine	S3	12	X				FTC landscaping
1	Scotch pine	S4	12	X				FTC landscaping
1	Scotch pine	S5	12	X				FTC landscaping
1	Scotch pine	S6	12	X				FTC landscaping
1	Scotch pine	S7	11	X				FTC landscaping. Located in Lindburg Rd ROW
11	Trees proposed for removal							
2	Trees proposed to be retained							
1	Significant tree to be removed - exempted under 68.080(b)							
**1	Trees previously approved for removal under TRV 09-01 (#11026) - shown on plan for reference only							

Adjusted TCP09-05 Totals	
307	Total trees within TCP/TCPA site (TCP09-05 = 295 trees)
151	Trees proposed for removal (TCP09-05 = 140 for removal)
156	Trees proposed for preservation (TCP09-05 = 155 for preservation)
51%	Percentage of trees preserved (TCP09-05 = 53% preserved)

Note: Presence/absence and species confirmed in-field on August 23, 2013

APPENDIX B

AMENDED TRAFFIC IMPACT ANALYSIS

MARCH 2016



**KITTELSON & ASSOCIATES, INC.**  
TRANSPORTATION ENGINEERING / PLANNING  
610 SW Alder Street, Suite 700, Portland, OR 97206 • 503.228.5230 • 503.273.8169

## MEMORANDUM

Date: March 1, 2016

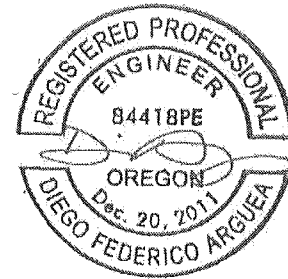
Project #: 19954

To: Bryce Bishop  
City of Salem  
555 Liberty Street SE, Room 325  
Salem, Oregon 973091-3513

From: Diego Arguea, PE, and Brian Dunn, PE

Project: Sustainable Fairview Development

Subject: Addendum to *Sustainable Fairview* Element of Phase II



EXPIRES: Dec. 31 2017

This memorandum presents a trip generation addendum for the *Sustainable Fairview* element of the Phase II development of the Sustainable Fairview Development Plan.

The most recent memorandum, prepared in June 2014, included the cumulative documentation of trip generation based on the most recent adopted development scenarios for Phases I and II, and added the development proposal for *Fairview Addition West*. The June 2014 memorandum is included as Attachment "A."

## PROPOSED ADDENDUM

This memorandum proposes a modification to the development proposal associated with Phase II of the development, specifically the *Sustainable Fairview* part of Phase II. The original proposal for *Sustainable Fairview* was prepared in 2009 and included the following land uses:

- Private school with 500 students;
- 50,000 square feet of office space;
- 20,000 square feet of specialty retail commercial space; and,
- 5 acres of City Park space.

The revised proposal replaces the original development scenario with the following land uses:

- 100 single-family homes;
- 100 apartment units;
- 80 condominium/townhouse units;
- Private school with 35 students;
- 60,000 square feet of office space;
- 30,000 square feet of specialty retail commercial space; and,
- 28 acres of City Park space.

This memorandum documents the expected change in trip generation as a result of the modification to the 2009 plan for *Sustainable Fairview*, and documents which, if any, additional transportation improvements identified in the development's Area Facilities Plan may be triggered as a result.

## HISTORICAL TRIP GENERATION

The Pringle Creek Community development (Phase I) generated 1,770 net new daily trips and did not trigger any off-site transportation improvements according to the Area Facilities Plan (see Attachment "B"). Phase II of the development which includes *Fairview Hills*<sup>1</sup> and *Sustainable Fairview*<sup>2</sup> were analyzed together in a trip generation memorandum prepared in February 2012, resulting in approximately 5,190 additional net new daily trips, triggering two off-site transportation improvements based on the Area Facilities Plan. Phase III of the development, *Fairview Addition West*, was estimated to generate approximately 3,210 additional net new daily trips, and was found to trigger one additional off-site transportation improvements in the Area Facilities Plan.

Prior to the proposed changes to *Sustainable Fairview* documented in this memorandum, the total cumulative daily trip generation had been documented as 10,170 daily trips. As described previously, this historical trip generation is included in the June 2014 memorandum in *Attachment "A."*

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<sup>1</sup> Documented in a letter, together with *Sustainable Fairview*, in February 2012.

<sup>2</sup> Originally prepared in 2009 but not documented in a letter until February 2012.

## REVISED TRIP GENERATION – SUSTAINABLE FAIRVIEW

Kittelson & Associates, Inc. prepared estimates of daily, weekday a.m., and weekday p.m. peak hour vehicle trip ends for the *Sustainable Fairview* part of Phase II of the site development based on empirical observations at similar land uses. These observations are summarized in the standard reference *Trip Generation Manual, 9<sup>th</sup> Edition*, published by the Institute of Transportation Engineers (Reference 1). This methodology is consistent with previous phases of the Sustainable Fairview Development Plan. Internal trip reductions for each identified land use were based on the mixed-use nature of the proposed development, and the methodology used to calculate the internalization rates are consistent with those in the February 2012 memorandum<sup>3</sup>, included as *Attachment "C."* The pass-by reduction is only applicable to the retail component of the development; as such, pass-by trips were deducted from the net external trips generated by the retail use.

As the data represented in the ITE standard reference manual is primarily collected at suburban locations with little or no transit service and minimal pedestrian or bicycle facilities, the cumulative addition of trips generated by ITE rates for all individual land uses likely overestimates the vehicle trip generation of the proposed mixed-use development. To account for the multi-modal aspects of the proposed development, net external trips were reduced by ten percent. This reduction is consistent with the Transportation Planning Rule (TPR, Reference 3) policies and has been accepted by the City of Salem in previous development phases.

After reducing trips further to account for multi-modal nature of the site, net new primary trips were calculated for the site. These are trips that are subject to the maximum thresholds established within the Area Facilities Plan.

Table 1 summarizes the estimated revised site trip generation during a typical weekday as well as during the weekday a.m. and p.m. peak hours for the *Sustainable Fairview* part of Phase II of the development. Note that the shaded-out trip generation for Fairview Hills is the same as the original as documented in the February 2012 memorandum. All trips in Table 1 have been rounded to the nearest five trips (daily trips rounded to the nearest 10 trips).

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<sup>3</sup>The *Trip Generation Handbook, 2<sup>nd</sup> Edition*, published by the Institute of Transportation Engineers (Reference 2) provided the data and methods for estimating internal capture and pass-by for mixed-use developments.

**Table 1 Phase II (Sustainable Fairview revision) Estimated Trip Generation**

Land Use	ITE Code	Site (SF/acres)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
<b>Fairview Hills (original trip generation)</b>									
Apartment <i>Internal Trips (5%)</i>	220	450 units	2,850 (140)	225 (10)	45 (5)	180 (5)	280 (10)	180 (5)	100 (5)
Shopping Center <i>Pass-by Trips (5%)</i>	820	24,000 SF	1,030 (350)	25 (10)	15 (5)	10 (5)	90 (30)	45 (15)	45 (15)
<b>Sustainable Fairview (revised from February 2012)</b>									
Detached Single Family Housing <i>Internal Trips (4%)</i>	210	100	950 (40)	75 (0)	20 (0)	55 (0)	100 (5)	65 (5)	35 (0)
Apartment <i>Internal Trips (4%)</i>	220	100	730 (30)	55 (0)	10 (0)	45 (0)	60 (0)	40 (0)	20 (0)
Residential Condo/Townhouse <i>Internal Trips (4%)</i>	230	80	460 (20)	35 (0)	5 (0)	30 (0)	40 (0)	25 (0)	15 (0)
Private School (K-8) <i>Internal Trips (4%)</i>	534	35 students	80 <sup>1</sup> (0)	35 (0)	20 (0)	15 (0)	20 (0)	10 (0)	10 (0)
General Office <i>Internal Trips (4%)</i>	710	60,000 SF	660 (30)	95 (5)	80 (5)	15 (0)	90 (5)	15 (0)	75 (5)
Specialty Retail <i>Pass-By (34%)<sup>2</sup></i>	814	30,000 SF	1,330 (450)	0 (0)	0 (0)	0 (0)	105 (30)	45 (15)	60 (15)
City Park <sup>3</sup> <i>Internal Trips (4%)</i>	411	28 acres	50 (0)	5 (0)	5 (0)	- (0)	5 (0)	5 (0)	- (0)
<b>Total Site-Generated Trips (Fairview Hills + Sustainable Fairview)</b>			<b>8,140</b>	<b>550</b>	<b>200</b>	<b>350</b>	<b>790</b>	<b>430</b>	<b>360</b>
<i>Internal Reduction</i>			<i>(260)</i>	<i>(15)</i>	<i>(10)</i>	<i>(5)</i>	<i>(20)</i>	<i>(10)</i>	<i>(10)</i>
<i>10% TPR Reduction for Multi-Modal</i>			<i>(790)</i>	<i>(55)</i>	<i>(20)</i>	<i>(35)</i>	<i>(75)</i>	<i>(40)</i>	<i>(35)</i>
<i>Pass-by Reduction</i>			<i>(800)</i>	<i>(10)</i>	<i>(5)</i>	<i>(5)</i>	<i>(60)</i>	<i>(30)</i>	<i>(30)</i>
<b>Net New Trips</b>			<b>6,290</b>	<b>470</b>	<b>165</b>	<b>305</b>	<b>635</b>	<b>350</b>	<b>285</b>

<sup>1</sup> Daily trips estimated based on the relationship of p.m. peak hour trips to daily trips of ITE #530 (Elementary School). No daily trip data is available for ITE #534.

<sup>2</sup> Pass-by rate taken from ITE #820. No pass-by rate is available for ITE #814.

<sup>3</sup> No ITE data is provided for a.m. or p.m. peak hours. For typical weekday a.m. and p.m. peak hours, approximately 10% of the daily trip generation is assumed.

As shown in Table 1, the revised development proposal is anticipated to generate approximately 6,290 net new daily trips. As stated previously, the original *Sustainable Fairview* (combined with *Fairview Hills*) proposal was estimated to generate 5,190 daily trips. As such, the revised development proposal for the Sustainable Fairview development is expected to result in a net increase in daily trips by approximately 1,100 trips.

## CUMULATIVE TRIP GENERATION FOR SUSTAINABLE FAIRVIEW MASTER PLAN

The revised trip generation shown in Table 1 was applied to the cumulative total to calculate a new total cumulative trips generated by the proposed land uses. The cumulative trips have been rounded (daily trips were rounded to the nearest ten trips and the hourly trips were rounded to the nearest five trips, consistent with previous updates to the Sustainable Fairview development) and are summarized together with previous phases of development in Table 2 below. For reference, the revised trips are shown in bold text.

**Table 2 Cumulative Sustainable Fairview Estimated Trip Generation**

Land Use	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Total	In	Out	Total	In	Out
Phase I – September 2005, <i>Pringle Creek</i>	1,770	140	40	100	160	95	65
Phase II – Revised February 2016 <i>Fairview Hills &amp; Sustainable Fairview</i>	<b>6,290</b>	<b>470</b>	<b>165</b>	<b>305</b>	<b>635</b>	<b>350</b>	<b>285</b>
Phase III – June 2014, <i>Fairview Addition West</i>	3,210	235	60	175	330	205	125
Cumulative Total Net New Trips (Phase I + Phase II + Phase III)	<b>11,270</b>	<b>845</b>	<b>265</b>	<b>580</b>	<b>1,125</b>	<b>650</b>	<b>475</b>

As stated previously under the Historical Trip Generation section, the previously proposed development total cumulative daily trip generation had been documented as 10,170 daily trips. With the revised proposal for Phase II *Sustainable Fairview*, this estimate is increased by 1,100 daily trips, resulting in 11,270 daily trips as shown in Table 2.

## AREA FACILITIES PLAN

Previous development teams and City of Salem staff collectively developed an Area Facilities Plan for the entire Sustainable Fairview development to identify specific required public improvements and the trigger for each improvement. Based on recent conversations with City staff, the project team understands that the Area Facilities Plan is currently being reevaluated and the original identified improvements may not be applicable, and some improvements may have already been constructed. For consistency with previous trip generation updates, however, the identified Area Facilities Plan improvements that would otherwise be triggered by phased development are identified in Table 3 below.

**Table 3 Area Facilities Plan – Anticipated Off-Site Improvements**

Required Public Improvement	Trigger <sup>1</sup> (Net New Daily Trips)	Estimated Cost	Estimated Start
<u>Transportation</u> 25th Street SE/Madrona Avenue SE. This improvement calls for Madrona Avenue SE to be realigned with 25 <sup>th</sup> Street SE and Airway Drive SE realigned with Madrona Avenue SE. The new Madrona Avenue SE/25 <sup>th</sup> Street SE intersection shall also be signalized. Madrona Avenue SE will be widened to a five-lane cross-section east of the railroad track to 25 <sup>th</sup> Street SE. Right-of-way acquisition is required and/or included in the cost estimate.	8,000	\$175,000	7/1/2010
<u>Transportation</u> Madrona Avenue/Fairview Industrial Drive SE. This improvement calls for the construction of an additional westbound left-turn lane from Madrona Avenue SE to southbound Fairview Industrial Drive SE. An additional southbound lane on Fairview Industrial Drive SE must also be constructed to receive the dual left-turn lanes, and shall terminate as a southbound right-turn lane at the intersection with Strong Road SE. Costs of right-of-way acquisition is included in the estimate.	12,000	\$2,300,000	9/1/2011

<sup>1</sup> Cost estimates in year 2004 dollars

As shown in Table 3, one public improvement is triggered by the combined total of 11,270 net new daily trips generated by Phases I, II, and III. The next transportation improvement is not triggered until the development reaches 12,000 net new daily trips (see Attachment "B"). There is thus no change to the mitigation triggers with the revised development as proposed for *Sustainable Fairview* as presented in this memorandum.

We trust this memorandum addresses the revised trip generation associated with the revision of land uses for the *Sustainable Fairview* element of the Phase II development. If you any questions, please call us at (503) 228-5230.

## REFERENCES

1. Institute of Transportation Engineers. *Trip Generation, 9<sup>th</sup> Edition*. 2012.
2. Institute of Transportation Engineers. *Trip Generation Handbook*. 2004.
3. Department of Land Conservation and Development. *Oregon Administrative Rules: Transportation Planning Rule 660-012-0055(6)(a)*.

## ATTACHMENTS

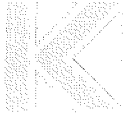
Attachment "A" – June 2014 *Fairview Addition West* Development Memorandum

Attachment "B" – Sustainable Fairview Development Area Facilities Plan

Attachment "C" – February 2012 Phase II Development Memorandum



**Attachment A**  
*June 2014 Fairview Addition West*  
Development Memorandum



# KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

610 SW Alder Street, Suite 700, Portland, OR 97205 503.228.5230 503.273.8189

## MEMORANDUM

Date: August 27, 2014

To: Tony Martin, PE  
City of Salem  
555 Liberty Street SE, Room 325  
Salem, Oregon 973091-3513

From: Diego Arguea, PE, and Brian Dunn, PE

Project: Fairview Addition West: Residential Subdivision and Shops

Subject: Trip Generation Impact Assessment

Project #: 17950



EXPIRES: Dec. 31 2015

This memorandum presents trip generation estimates for the Fairview Residential Subdivision and Shops (Phase IV: *Fairview Addition West*) of the Sustainable Fairview development located between Battle Creek Road SE, Reed Road SE, and Strong Road SE in Salem, Oregon. Phase IV follows the first three phases of development (*Pringle Creek Community* – September 2005; *Sustainable Fairview also known as Lindburg Green* – February 2012; and *Fairview Hills* – February 2012) and continues to follow the Sustainable Fairview Development Plan, previously submitted and approved by the City of Salem. The purpose of this memorandum is to estimate the number of Phase IV daily, weekday a.m., and weekday p.m. peak hour net new site-generated trips, and identify which, if any, transportation improvements identified in the development's Area Facilities Plan may be required as a result.

The Pringle Creek Community development (Phase I) generated 1,770 net new daily trips and did not trigger any off-site transportation improvements according to the Area Facilities Plan (see Attachment "A"). Phases II and III of the development, Sustainable Fairview (i.e. Lindburg Green) and Fairview Hills, respectively, were analyzed together in a trip generation memorandum prepared in February 2012. The combination of Phases II and III generated approximately 5,190 additional net new daily trips, triggering two off-site transportation improvements based on the Area Facilities Plan. *The February 2012 memorandum that documents these trips for Phases II and III is included in Attachment "B."*

The proposed Phase IV development, Fairview Addition West, is estimated to generate approximately 3,210 net new daily trips, and triggers one additional off-site transportation improvements in the Area Facilities Plan. Additional details of the trip generation methodology are provided herein.

## DEVELOPMENT PLAN

Olsen Design and Development is submitting an application for the next phase (Phase IV) of the Sustainable Fairview mixed-use development incorporating additional mixtures of residential and retail

land uses. An exact breakdown of the size, number, and mixture of these land uses is presented in the next section of this memorandum.

## TRIP GENERATION

Kittelson & Associates, Inc. prepared estimates of daily, weekday a.m., and weekday p.m. peak hour vehicle trip ends for Phase IV of the site development based on empirical observations at similar land uses. These observations are summarized in the standard reference *Trip Generation Manual, 9<sup>th</sup> Edition*, published by the Institute of Transportation Engineers (Reference 1). This methodology is consistent with previous phases of the Sustainable Fairview Development Plan.

The *Trip Generation Handbook, 2<sup>nd</sup> Edition*, published by the Institute of Transportation Engineers (Reference 2) provides data and methods for estimating internal capture and pass-by for mixed-use developments. Internal trip reductions for each identified land use were based on the mixed-use nature of the proposed development, and the methodology used to calculate the internalization rates are included in Attachment C. The pass-by reduction is only applicable to the retail component of the development; as such, pass-by trips were deducted from the net external trips generated by the retail use.

As the data represented in the ITE standard reference manual is primarily collected at suburban locations with little or no transit service and minimal pedestrian or bicycle facilities, the cumulative addition of trips generated by ITE rates for all individual land uses likely overestimates the vehicle trip generation of the proposed mixed-use development. To account for the multi-modal aspects of the proposed development for this, net external trips were reduced by ten percent. This reduction is consistent with the Transportation Planning Rule (TPR) policies and has been accepted by the City of Salem in previous development phases.

After reducing trips further to account for multi-modal nature of the site, net new primary trips were calculated for the site. These are trips that are subject to the thresholds established within the Area Facilities Plan.

Table 1 summarizes the estimated site trip generation during a typical weekday as well as during the weekday a.m. and p.m. peak hours for Phase IV of the development. Trip generation estimates shown in the table below are rounded to the nearest five trips.

**Table 1 Phase IV (Fairview Addition West) Estimated Trip Generation**

Land Use	ITE Code	Size (sq ft/units)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Detached Single-Family Housing <i>Internal Reduction (2%)</i>	210	330 units	3,142 (63)	248 (5)	62 (1)	186 (4)	330 (7)	208 (4)	122 (2)
Apartment <i>Internal Reduction (32%)</i>	220	20 units	133 (43)	10 (3)	2 (1)	8 (3)	12 (4)	8 (3)	4 (1)
Shopping Center <i>Internal Reduction (16%)</i> <i>Pass-by Reduction (34%)</i>	820	18,000 square feet	769 (123) (220)	17 (3) (5)	11 (2) (3)	7 (1) (2)	67 (11) (19)	32 (5) (9)	35 (6) (10)
<b>Total Site-Generated Trips</b>			<b>4,043</b>	<b>275</b>	<b>75</b>	<b>200</b>	<b>409</b>	<b>248</b>	<b>161</b>
<i>Internal Reduction</i>			<i>(228)</i>	<i>(11)</i>	<i>(4)</i>	<i>(7)</i>	<i>(21)</i>	<i>(12)</i>	<i>(9)</i>
<i>10% TPR Reduction</i>			<i>(381)</i>	<i>(26)</i>	<i>(7)</i>	<i>(19)</i>	<i>(39)</i>	<i>(24)</i>	<i>(15)</i>
<i>Pass-by Reduction</i>			<i>(220)</i>	<i>(5)</i>	<i>(3)</i>	<i>(2)</i>	<i>(19)</i>	<i>(9)</i>	<i>(10)</i>
<b>Net New Trips</b>			<b>3,214</b>	<b>233</b>	<b>61</b>	<b>172</b>	<b>330</b>	<b>203</b>	<b>127</b>

As shown in Table 1, Phase IV of the development is anticipated to generate approximately 3,214 net new daily trips. Of these trips, 233 (61 in/172 out) are anticipated during the weekday a.m. peak hour and 330 (203 in/127 out) are anticipated during the weekday p.m. peak hour. The cumulative trips have been rounded (daily trips were rounded to the nearest 10 trips and the hourly trips were rounded to the nearest five trips, consistent with previous updates to the Sustainable Fairview development) and are summarized together with previous phases of development in Table 2 below.

**Table 2 Cumulative Sustainable Fairview Estimated Trip Generation**

Land Use	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Total	In	Out	Total	In	Out
Net New Trips (Phase I – September 2005)	1,770	140	40	100	160	95	65
Net New Trips (Phases II & III – February 2012)	5,190	665	320	345	660	335	325
Total Net New Trips (Phase I + Phase II + Phase III)	6,960	805	360	445	820	430	390
Fairview Addition West (Phase IV)	3,210	235	60	175	330	205	125
Total Net New Trips (Phase I + Phase II + Phase III + Phase IV)	10,170	1,040	420	620	1,150	635	515

## AREA FACILITIES PLAN

Previous development teams and City of Salem staff collectively developed an Area Facilities Plan for the entire Sustainable Fairview development to identify specific required public improvements and the trigger for each improvement. Based on recent conversations with City staff, the project team understands that the Area Facilities Plan is currently being reevaluated and the original identified improvements may not be applicable, and some improvements may have already been constructed.

For consistency with previous trip generation updates, however, the identified Area Facilities Plan improvements that would otherwise be triggered by Phase IV are identified in Table 3 below.

**Table 3 Area Facilities Plan – Anticipated Off-Site Improvements**

Required Public Improvement	Trigger (Net New Daily Trips)	Estimated Cost <sup>1</sup>	Estimated Start
<p><u>Transportation</u>                      25th Street SE/Madrona Avenue SE. This improvement calls for Madrona Avenue SE to be realigned with 25<sup>th</sup> Street SE and Airway Drive SE realigned with Madrona Avenue SE. The new Madrona Avenue SE/25<sup>th</sup> Street SE intersection shall also be signalized. Madrona Avenue SE will be widened to a five-lane cross-section east of the railroad track to 25<sup>th</sup> Street SE. Right-of-way acquisition is required and/or included in the cost estimate.</p>	8,000	\$175,000	7/1/2010
<p><u>Transportation</u>                      Madrona Avenue/Fairview Industrial Drive SE. This improvement calls for the construction of an additional westbound left-turn lane from Madrona Avenue SE to southbound Fairview Industrial Drive SE. An additional southbound lane on Fairview Industrial Drive SE must also be constructed to receive the dual left-turn lanes, and shall terminate as a southbound right-turn lane at the intersection with Strong Road SE. Costs of right-of-way acquisition is included in the estimate.</p>	12,000	\$2,300,000	9/1/2011

<sup>1</sup> Cost estimates in year 2004 dollars

As shown in Table 3, one public improvement is triggered by the combined total of 10,170 net new daily trips generated by Phases I, II, III, and IV. The next transportation improvement is not triggered until the development reaches 12,000 net new daily trips (see Attachment A).

We trust this memorandum addresses the impacts of Phase III of the Sustainable Fairview development. If you any questions, please call us at (503) 228-5230.

REFERENCES

1. Institute of Transportation Engineers. *Trip Generation, 9<sup>th</sup> Edition*. 2.
2. Institute of Transportation Engineers. *Trip Generation Handbook*. 2004.

ATTACHMENTS

Attachment “A” – Sustainable Fairview Development Area Facilities Plan

Attachment “B” – February 2012 Sustainable Fairview Development Memorandum

Attachment “C” – Internalization Calculation Worksheet

Attachment E  
Area Facilities Plan

Area Facilities Plan

Attachment "D"

	Required Public Improvements	Cost in Dollars	Trigger	Estimated Start
1	<p><b>Transportation:</b>                      Battle Creek Road SE/Kuebler Boulevard SE. This improvement calls for the construction of eastbound and westbound right-turn lanes at this intersection. Construction can be accommodated within the existing right-of-way. Traffic signal modifications to allow protected/permitted left-turns and right-turn overlap phasing are also required.</p>	\$300,000.00	2000 total daily vehicle trips (FN 1)	6/1/2006
2	<p><b>Water:</b>                      Coburn Pump Station 3,000 GPM S-1 and control building.</p>	\$1,000,000.00	First Floor Construction Above Elevation 278	6/1/2007
3	<p><b>Transportation:</b>                      25th Street SE/Madrona Ave SE. The improvement calls for Madrona Avenue SE to be realigned with 25th Street see and Airway Drive SE realigned with Madrona Avenue SE. The new Madrona Avenue SE/25th Street SE intersection shall also be signalized. Madrona Avenue SE will be widened to a five-lane cross-section east of the railroad track to 25th Street SE. Right of way acquisition is required and or included in the cost estimate. (FN 2)</p>	\$3,000,000.00	6,000 total daily vehicle trips	6/1/2008
4	<p><b>Parks:</b>                      Acquire 5 acre neighborhood park site, within the development.</p>	\$500,000.00	When funds have accumulated	6/1/2010
5	<p><b>Transportation:</b>                      Commercial Street SE/Madrona Ave SE. The developer is required to construct a westbound right-turn lane at this intersection. No right-of-way acquisition is required for this improvement.</p>	\$175,000.00	8,000 total daily vehicle trips	7/1/2010
6	<p><b>Transportation:</b>                      Madrona Avenue SE/Fairview Industrial Drive SE. This improvement calls for the construction of an additional westbound left-turn lane from Madrona Avenue SE to southbound Fairview Industrial Drive SE. An additional southbound lane on Fairview Industrial Drive SE must also be constructed to receive the dual left-turn lanes, and shall terminate as a southbound right-turn lane at the intersection with Strong Road SE. Costs of right of way acquisition is included in the estimate. (FN 3)</p>	\$2,300,000.00	12,000 total daily vehicle trips	9/1/2011
7	<p><b>Water:</b>                      Coburn connecting lines. S-1 Master Plan trunk lines.</p>	\$250,000.00	When funds have accumulated	9/1/2011
8	<p><b>Water:</b>                      Coburn Reservoir. S-1 3.2 million gallon concrete reservoir.</p>	\$2,500,000.00	When funds have accumulated	6/1/2012

9	Parks: Develop neighborhood park on land previously acquired to master plan standards.	\$500,000.00	When funds have accumulated	6/1/2013
10	Transportation: Battle Creek Road SE/Reed Lane SE. Construction of a signal and a southbound left-turn lane on Battle Creek Road SE is required. Minimal right-of-way is required to accommodate this improvement and acquisition is included in the cost estimate.	\$500,000.00	15,000 total daily vehicle trips	6/1/2013
11	Transportation: Fairview Industrial Drive SE/Strong Road SE. This improvement calls for the construction of a traffic signal at this intersection. Minimal right-of-way is required to accommodate this improvement and is included in the estimate.	\$350,000.00	15,000 total daily vehicle trips	6/1/2013
12	Transportation: Traffic Signal at unspecified location on Pringle/Battle Creek.	\$300,000.00	After 15,000 total daily trips and when circumstances warrant the signal	7/1/2013
13	Transportation: Reed Road SE/Fairview Industrial Drive SE. Restripe the southbound approach and add separate right turn lane (or consider a round about).	\$200,000.00	17,100 total daily vehicle trips	7/1/2013
14	City Administration Fee:	\$314,100.00	Payable after City makes its 50% share payment for Reservoir	9/1/2013
<b>Total:</b>		\$1,189,100.00		



<b>Add Back from City:</b> 60% share of Coburn Reservoir, Pump Station, and connecting lines to be paid from city water revenues.	\$2,250,000.00		7/1/2013
<b>Existing Capacity Payments:</b> Payment to the City CIP account from Phase 1.	\$245,550.00	If funds are available	9/1/2013
<b>Existing Capacity Payments:</b> Payment to the City CIP account from Phase 2.	\$310,467.00	If funds are available	9/1/2013
<b>Existing Capacity Payment:</b> Payment to City CIP accounts from Phase 3.	\$1,831,649.00	If funds are available	11/1/2015
<b>Prior Trip Redevelopment Exemption Value:</b> Payment to SFA for credits from vehicle trips of prior development. (6770 trips at \$190 per trip)	\$1,286,300.00	If funds are available	12/1/2015
<b>Prior Sewer Use Redevelopment Exemption Value:</b> Payment to SFA for prior sewer use.	\$250,000.00		9/1/2016
<b>Total Estimated Repayments/Exemptions</b>	\$3,923,966.00		
<b>Total Estimated City Payment to Account for Reservoir</b>	\$2,250,000.00		

	Supplemental Projects	Estimated Cost in 2004 Dollars	Trigger	Estimated Start
1	Transportation: Pringle Road SE/Ewald Ave SE. install traffic signal.	\$355,000.00	If funds are available	7/1/2016
2	Transportation: Battle Creek SE/Kuebler Boulevard SE. construct north bound and south bound right turn lanes. Protected signal leads added to all intersection approaches.	\$575,000	If funds are available	7/1/2017
3	Transportation: Madrona Avenue SE/Pringle Road SE construct northbound and southbound through lanes.	\$1,250,000	If funds are available	7/1/2018
	Total Supplemental Projects	\$2,180,000		

(FN 1) If funds are available in the Trust account prior to the stated Trigger, then the project will be built with available funds, ahead of the Trigger. This applies to all Required Public Improvements.

(FN 2) Widening of Madrona Ave SE at 25th Street to five lanes may trigger the need for equipment upgrades, relocations and/or other improvements to the Southern Pacific railroad crossing located approximately 1,900 feet west of the current 25th Street SE/Madrona Avenue SE intersection. It is unlikely that ODOT Rail would require such modifications due to this improvement. Such modifications are much more likely to be required for the Madrona Avenue SE/Fairview Industrial Drive SE intersection improvement outlined below. Because of these reasons and the preliminary nature of this conceptual design, costs associated with such modifications to the existing railroad crossing are not included in this estimate.

(FN 3) In order to accommodate a second westbound left-turn lane at this intersection, it may be necessary to reconfigure/update the Southern Pacific railroad crossing on Madrona Avenue SE, located approximately 650 feet east of the intersection. Due to the likelihood of ODOT Rail gates, partial reconstruction, and interconnection to prevent possible queue spillbacks over the tracks when a train is approaching would be required in conjunction with this improvement. The cost of work related to the railroad crossing is estimated to be approximately \$500,000, and is included in this cost estimate.

**Attachment C**  
February 2012 Phase II  
Development Memorandum



# KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

610 SW Alder Street, Suite 700, Portland, OR 97205 503.228.5230 503.273.8169

## MEMORANDUM

Date: February 7, 2012  
To: Matt Harrell  
Simpson Hills LLC  
2260 McGilchrist Street SE  
Salem, Oregon 97302  
From: Chris Tiesler, P.E.  
Project: Sustainable Fairview Development – Fairview Hills  
Subject: Phase II Trip Generation Analysis

Project #: 12243



This memorandum serves to update trip generation estimates for the Fairview Hills portion of Phase II of the Sustainable Fairview development located between Battle Creek Road SE, Reed Road SE, and Strong Road SE in Salem, Oregon. Simpson Hills has revised their land use plan since the last trip generation analysis (memorandum prepared by Kittelison & Associates, Inc.<sup>1</sup>). Phase II follows the first phase of development (Pringle Creek Community – September 2005) and continues to follow the Sustainable Fairview Development Plan, previously submitted and approved by the City of Salem.

The purpose of this memorandum is update the number of Phase II daily, weekday a.m., and weekday p.m. peak hour net new site-generated trips generated by the new Fairview Hills plan, and determine if any transportation improvements identified in the development's Area Facilities Plan will be required as a result.

The Pringle Creek Community development (Phase I) generated 1,770 net new daily trips and did not trigger any off-site transportation improvements according to the Area Facilities Plan (see Attachment "A"). Phase II of the development is anticipated to generate approximately 5,190 additional net new daily trips. Based on the Area Facilities Plan, this will trigger two off-site transportation improvements (sum of Phase I & Phase II net new daily trips).

### DEVELOPMENT PLAN

Sustainable Fairview Associates LLC and Simpson Hill LLC propose to develop the next phase of the Sustainable Fairview mixed-use development incorporating additional office and retail land

<sup>1</sup> Kittelison & Associates, Inc. *Sustainable Fairview Development – Phase II Trip Generation Analysis*. July 22, 2009.

uses, a private K-8 school, a public park, and a mixture of residential dwellings. An exact breakdown of the size, number, and mixture of these land uses is presented in the next section of this memorandum.

## TRIP GENERATION

Kittelson & Associates, Inc. (KAI) prepared estimates of daily, weekday a.m., and weekday p.m. peak hour vehicle trip ends for Phase II of site development based on empirical observations at similar land uses. These observations are summarized in the standard reference *Trip Generation, 8<sup>th</sup> Edition*, published by the Institute of Transportation Engineers (Reference 1). This methodology is consistent with the methodology followed in the Sustainable Fairview Development Plan.

As the data represented in the ITE trip generation manual is primarily collected at suburban locations with little or no transit service and minimal pedestrian or bicycle facilities, the process likely overestimates the trip generation of the proposed mixed-use development. To adjust for this, trip generation estimates were reduced by ten percent to represent this multi-modal development. The ten percent reduction is consistent with the Transportation Planning Rule (TPR) policies and the City of Salem agreed to its application in this case.

The *Trip Generation Handbook*, published by the Institute of Transportation Engineers (Reference 2) provides estimates for pass-by and internal trips. Internal trip reductions for each identified land use were based on the mixed-use nature of the proposed development. The mix of land uses proposed in Phase II is roughly equivalent and consistent with the original Sustainable Fairview Development Plan; as such, the same internal trip reductions were applied accordingly. The pass-by reduction is only applicable to the retail component of the development; as such, pass-by trips were deducted from the total trips generated by the retail use. These reductions were subtracted from the total site-generated trips to calculate the final net new trips attributable to the site.

Table 1 summarizes the estimated site trip generation during a typical weekday as well as during the weekday a.m. and p.m. peak hours for Phase II of the development. Trip generation estimates shown in the table below are rounded to the nearest five trips.

**Table 1**  
**Estimated Trip Generation – Phase II**

Land Use	ITE Code	Size (s.f./units)	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
<i>Fairview Hills</i>									
Apartment	220	450 units	2,850	225	45	180	280	180	100
<i>Internal Trips (5%)</i>			(140)	(10)	(5)	(5)	(10)	(5)	(5)
Shopping Center	820	24,000 s.f.	1,030	25	15	10	90	45	45
<i>Pass-By (34%)</i>			(350)	(10)	(5)	(5)	(30)	(15)	(15)
<i>Sustainable Fairview</i>									
Private School (K-8)	534	500 students	1,380 <sup>1</sup>	455	250	205	300	140	160
<i>Internal Trips (4%)</i>			(60)	(20)	(10)	(10)	(10)	(5)	(5)
General Office	710	50,000 s.f.	550	80	70	10	75	15	60
<i>Internal Trips (4%)</i>			(20)	(5)	(5)	(0)	(5)	(0)	(5)
Specialty Retail	814	20,000 s.f.	890	0	0	0	70	30	40
<i>Pass-By (34%)<sup>2</sup></i>			(300)	(0)	(0)	(0)	(20)	(10)	(10)
City Park <sup>3</sup>	411	5 acres	10	0	0	0	0	0	0
<i>Internal Trips (4%)</i>			(0)	(0)	(0)	(0)	(0)	(0)	(0)
<b>Total Site-Generated Trips (Phase II)</b>			<b>6,710</b>	<b>785</b>	<b>380</b>	<b>405</b>	<b>815</b>	<b>410</b>	<b>405</b>
<i>Total Internal Trips</i>			<i>(220)</i>	<i>(35)</i>	<i>(20)</i>	<i>(15)</i>	<i>(25)</i>	<i>(10)</i>	<i>(15)</i>
<i>10% TPR Reduction</i>			<i>(650)</i>	<i>(75)</i>	<i>(35)</i>	<i>(40)</i>	<i>(80)</i>	<i>(40)</i>	<i>(40)</i>
<i>Total Pass-By Trips</i>			<i>(650)</i>	<i>(10)</i>	<i>(5)</i>	<i>(5)</i>	<i>(50)</i>	<i>(25)</i>	<i>(25)</i>
<b>NET NEW TRIPS (Phase II)</b>			<b>5,190</b>	<b>665</b>	<b>320</b>	<b>345</b>	<b>660</b>	<b>335</b>	<b>325</b>
<i>Phase I Net New Trips – September 2005</i>									
<b>NET NEW TRIPS (Phase I)</b>			<b>1,770</b>	<b>140</b>	<b>40</b>	<b>100</b>	<b>160</b>	<b>95</b>	<b>65</b>
<b>TOTAL NET NEW TRIPS (Phase I + Phase II)</b>									
<b>TOTAL NET NEW TRIPS</b>			<b>6,960</b>	<b>805</b>	<b>360</b>	<b>445</b>	<b>820</b>	<b>430</b>	<b>390</b>

<sup>1</sup> Daily trips estimated based on the relationship of p.m. peak hour trips to daily trips of ITE #530 (Elementary School). No daily trip data is available for ITE #534.

<sup>2</sup> Pass-by rate taken from ITE #820. No pass-by rate is available for ITE #814.

<sup>3</sup> No ITE data is provided for a.m. or p.m. peak hours. Given the relatively small size of the park and its central location within the development, no net new vehicle trips are assumed to occur during the weekday a.m. or p.m. peak hours.

As shown in Table 1, Phase II of the development is anticipated to generate approximately 5,190 net new daily trips. Of these trips, 665 (320 in/345 out) are anticipated during the weekday a.m. peak hour and 660 (335 in/325 out) are anticipated during the weekday p.m. peak hour. Overall, Phases I and II combined are estimated to generate 6,960 net new daily trips.

## AREA FACILITIES PLAN

The development team and City of Salem have collectively developed an Area Facilities Plan for the entire Sustainable Fairview development to identify specific required public improvements and the trigger for each improvement. Table 2 summarizes the improvements triggered by Phase II.

**Table 2**  
**Area Facilities Plan – Anticipated Off-Site Improvements**

Required Public Improvement	Trigger (Net New Daily Trips)	Estimated Cost <sup>1</sup>
<u>Battle Creek Road SE/Kuebler Boulevard SE</u> - Construct eastbound and westbound right-turn lanes within the existing right-of-way. - Traffic signal modifications to allow protected permissive left-turns and right-turn overlap phasing.	2,000	\$300,000
<u>25<sup>th</sup> Street SE/Madrona Avenue SE</u> - Realign Madrona Avenue SE with 25 <sup>th</sup> Street SE and Airway Drive SE with Madrona Avenue SE. - Widen Madrona Avenue SE to a five-lane cross-section east of the railroad to 25 <sup>th</sup> Street SE.	6,000	\$3,000,000 <sup>2</sup>
<u>Commercial Street SE/Madrona Avenue SE</u> - Construct a westbound right-turn lane within the existing right-of-way.	8,000	\$175,000

<sup>1</sup> Cost estimates in year 2004 dollars.

<sup>2</sup> Cost estimate includes right-of-way acquisition.

As shown in Table 2, two public improvements are triggered by the combined total of 6,960 net new daily trips generated by Phases I and II. The next transportation improvement is not triggered until the development reaches 8,000 net new daily trips per the Area Facilities Plan.

We trust this memorandum addresses the impacts of Phase II of the Sustainable Fairview development. If you any questions, please call us at (503) 228-5230.

## REFERENCES

1. Institute of Transportation Engineers. *Trip Generation, 8<sup>th</sup> Edition*. 2008.
2. Institute of Transportation Engineers. *Trip Generation Handbook*. 2004.

## ATTACHMENTS

Attachment "A" – Sustainable Fairview Development Area Facilities Plan