



# CITY OF TROUTDALE

"Gateway to the Columbia River Gorge"

## AGENDA

### TROUTDALE PLANNING COMMISSION REGULAR MEETING

Troutdale City Hall Council Chambers  
219 E. Historic Columbia River Hwy. (lower level, rear entrance)  
Troutdale, Oregon 97060

**Wednesday, April 15, 2015**  
**7:00 p.m.**

1. **ROLL CALL/PLEDGE OF ALLEGIANCE**
  
2. **APPROVAL OF MINUTES**  
February 18, 2015 Work Session  
February 25, 2015 Regular Meeting
  
3. **CITIZEN COMMUNICATION – NON-AGENDA ITEMS**
  
4. **HEARING PROCEDURE**  
*Tanney Staffenson, Planning Commission Chair*
  
5. **PUBLIC HEARING PUBLIC HEARING TYPE III  
QUASI-JUDICIAL PROCEDURE**  
**Case File No. 15-010 Troutdale Market Center**  
Multi-phased tenant improvement project consisting of exterior remodel of an existing retail shopping center. Conditional Use permit for a community service use in the Community Commercial zone.
  
6. **NEW BUSINESS - None**
  
7. **OLD BUSINESS - None**
  
8. **WORK SESSION (if needed)**
  
9. **DEPARTMENT REPORTS**

**10. COMMISSION INITIATIVES AND CONCERNS**

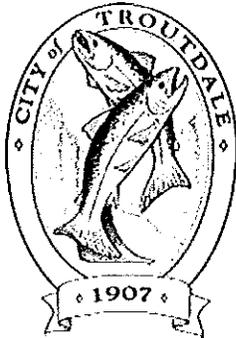
**11. ADJOURN**

*This meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for persons with disabilities should be made in writing at least 48 hours prior to the meeting to Elizabeth Walstead, 503-674-7228, or by email at [liz.walstead@troutdaleoregon.gov](mailto:liz.walstead@troutdaleoregon.gov)*

## Procedure for Quasi-Judicial Land Use Hearings

Quasi-judicial public hearings are held in accordance with Oregon law and procedures contained in the Troutdale Development Code. The hearing proceeds as follows:

1. Staff Presentation
  - City staff presents their report which includes applicable criteria and standards for the matter under consideration in the land use application.
  - All testimony and evidence should be directed toward these criteria.
  - If you believe that other criteria in the Comprehensive Plan, Development Code, or other city land use regulations apply, you must identify these criteria and explain why they apply to the decision.
2. Public Testimony
  - The Planning Commission accepts public testimony relating to the application.
  - The applicant is allowed to speak first, followed by proponents, then by opponents, and then by any parties neutral to the application.
  - An opportunity will be provided to anyone testifying to clarify any issues raised.
3. Raising Issues
  - All issues raised by a participant during the public hearing must be sufficiently clear and specific to allow the Planning Commission and other parties an opportunity to respond to those issues.
  - Failure to raise an issue during this public hearing may invalidate a future appeal based on that issue.
4. Requesting Additional Time
  - Prior to closing of the public hearing, any participant may request an opportunity to present additional evidence or testimony regarding the application.
  - The Planning Commission must grant the request either by continuing the public hearing to a future date, or by leaving the record open for at least seven days to admit only that specific additional written evidence or testimony.
  - If the record is left open for the additional written evidence or testimony, any participant may file a written request for an opportunity to respond to new evidence submitted during the period the record was left open.
  - If such a request is filed, the Planning Commission shall reopen the record to allow any person to raise new issues which relate to the new evidence, testimony, or criteria for decision-making.



**CITY OF TROUTDALE  
STAFF REPORT**

**TYPE III PROCEDURE  
CONDITIONAL USE PERMIT AND SITE/DESIGN  
REVIEW**

**FILE NO. 15-010 TROUTDALE MARKET CENTER  
TENANT IMPROVEMENTS AND CHARTER SCHOOL**

<b>Applicant</b>	Steven Maguire, Axis Design Group
<b>Property Owner</b>	Yoshida Real Estate Holdings XV, LLC Matthew Wand, General Counsel
<b>Proposal</b>	Multi-phased tenant improvement project consisting of exterior remodel of an existing retail shopping center. Conditional Use permit for a community service use for a charter school for middle school aged students in the Community Commercial zone.
<b>Location</b>	26816 SE Stark Street (multiple addresses)
<b>Site Size</b>	9.75 Acres
<b>Tax Map &amp; Tax Lot</b>	1S3E01BA 02000
<b>Plan Designation</b>	Commercial
<b>Zoning District</b>	Community Commercial

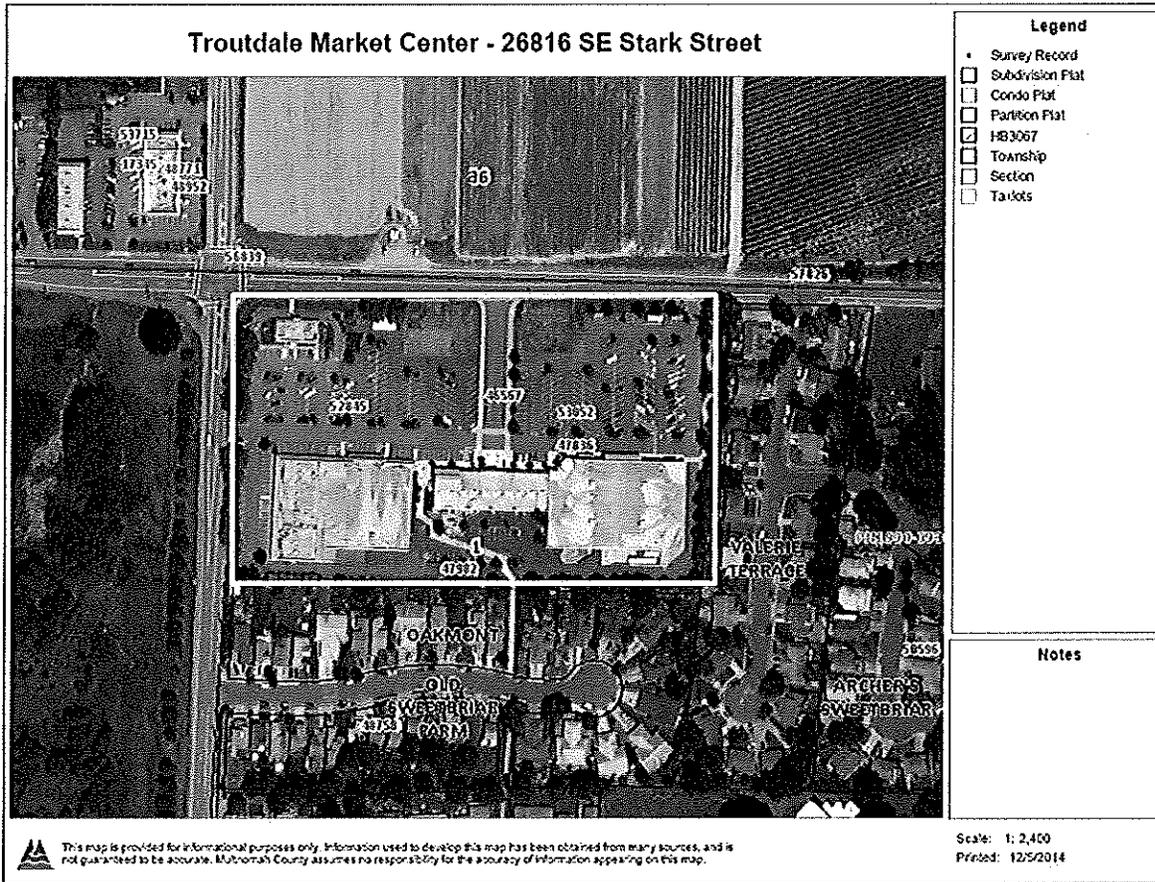
**APPLICABLE CRITERIA**

- Troutdale Development Code (TDC): 1.000 Introductory Provision; 2.000 Procedures for Decision Making; 3.110 Community Commercial; 5.600 Erosion Control and Water Quality; 5.800 Stormwater Management; 6.300 Conditional Use; 8.000 Site Orientation and Design Standards; 9.000 Off-Street Parking and Loading; 11.000 Landscaping and Screening
- Troutdale Municipal Code Outdoor Lighting
- *Construction Standards for Public Works Facilities*
- Building and Fire Codes
- Multnomah County Transportation / Road Rules

**PRIOR LAND USE APPROVALS**

- 13-061: Tentative 3-lot Partition Plat
- 98-022: 4/3/1998 Type II SDR
- 98-002: 1/15/1998 Type III Variance Troutdale Retail Center/Troutdale Thriftway Special Variance From 50 Ft Setback
- 84-4-6: 4/9/1984 Type II SDR Troutdale Center / Thriftway

**VICINITY MAP**



**OVERVIEW**

The subject property is zoned Community Commercial (CC) and is surrounded by the Oakmont subdivision to the south, vacant land zoned Industrial Park to the west, a raspberry farm zoned CC to the north, and the Valerie Terrace subdivision to the east.

The applicant requests site and design review to make exterior improvements to an existing multi-building and multi-tenant retail and commercial development located in the CC zone. The applicant also requests a Conditional Use permit for the

establishment of a community service use for a charter school for middle school aged students.

#### **Site and Design Review for Phased Development**

The 9 acre site is substantially developed with 3 shopping center buildings on the southern portion of the property and a Dairy Queen drive-thru building on the northwest corner. Two pad sites adjacent to the SE Stark Street mid-block entrance remain undeveloped. These sites were originally approved to be developed as a restaurant and a bank at a later time per land use file 98-022; however, a condition of approval of file 98-022 indicates that a separate Type II Site and Design review application will be required for the development of the restaurant and bank on these pad sites. This requirement is still in effect for new building proposals on the pads (see Condition 1E of the Final Order).

#### **Conditional Use for Chartered Middle School**

The trip generation analysis submitted with the land use application indicates that the proposed conditional use is for a conversion of 22,000 square feet of retail space within building 100 to use as a charter school with up to 330 students. Because the applicant identifies a chartered middle school in the proposal narrative and the submitted trip generation analyses for this land use application are based on a maximum enrollment of 330 students, the Planning Commission may want to consider adding as a condition of approval a requirement for an annual meeting between City and County staff and the operators of the charter school to review any proposed changes or expansions with student enrollment. Condition 1G of the Final Order indicates that the conditional use approval is for a chartered middle school and will require additional land use approval if the school wishes to expand their services at a later date.

A note that the 1998 site and design review decision allows retail use in building 100. If the proposed charter school is not established, or if the school vacates the building at a later date, a retail use may occupy the building in accordance with the 1998 land use decision (see Exhibit G File no. 98-022).

Per request from Multnomah County Transportation, the applicant submitted two additional site circulation memos and an updated trip generation analysis. The intent of the memos was to clarify how the Charter school would manage traffic on site and when and how morning drop-off and afternoon pick-up of students would be coordinated. The memos and the updated trip generation analysis letter are attached as Exhibits E and F respectively.

#### **PROCEDURE**

A pre-application for the proposed improvements was held on December 18, 2014. Pre-application comments were received from Building, Public Works, Multnomah County Transportation, and Gresham Fire. A detailed report identifying applicable development code provisions was provided to the applicant by Planner, Mark McCaffery.

The land use application was received on February 13, 2015 and deemed complete on March 4, 2015. Contents included a completed supplemental site and design review application, a title report with mailing labels for properties within 250 of the development site, a project proposal narrative, written responses to applicable Development Code approval criteria, a trip generation analysis, a site plan with vicinity map, existing conditions, parking calculations and proposed phased development. Additional plans included a site circulation and fire access sheet, a demolition plan for building 100, and existing and proposed exterior elevations of buildings 100, 200 and 300. An erosion control plan with inlet protection details, a parking lot and loading dock modification detail and a luminaire schedule was also submitted.

Type III Conditional Use Permit with Site and Design Review (SDR) applications request comments and conditions from affected City departments and agencies and requires notice to be sent to adjacent property owners within 250 feet of the subject development property. The request for comments was sent to the Chief Engineer, Building Official, Gresham Fire, and Multnomah County Transportation. Request for comments from affected agencies and notice to adjacent property owners was sent on March 6, 2015. No comments were received from adjacent property owners as of April 7, 2015. Comments from affected City departments and agencies are listed in the Exhibit section and attached to this report.

#### **EXHIBITS**

- A. Troutdale Market Type II Site and Design Review Type III Conditional Use Permit Submittal Package, 2/13/2015
- B. Comments/conditions from Steve Winstead, Building Official, 3/11/2015
- C. Comments/conditions from John Bushard, Civil Engineer, Public Works, 3/24/2015
- D. Comments/conditions from Shawn Durham, Deputy Fire Marshal, Gresham Emergency Fire, 3/6/2015
- E. Site Circulation for Charter School Use Memos – 3/10/15 and 4/3/15
- F. Updated Trip Generation and Analysis Letter – 4/3/15
- G. Site and Design Review File No. 98-022

#### **STAFF RECOMMENDATION**

The submittal package provided by the applicant (Exhibit A) substantially and accurately demonstrates compliance with the applicable development code provisions for the proposed exterior improvements to buildings 100, 200 and 300 and the proposed conditional use for a charter school for middle school aged students. Staff hereby adopts the applicant narrative addressing relevant approval criteria for the purposes of this report and recommends the conditional use permit for a charter school and site and design review for improvements to the Troutdale Market Center be approved subject to the conditions identified in the Final Order.



**CITY OF TROUTDALE  
 PLANNING COMMISSION TYPE III CONDITIONAL USE  
 PERMIT AND SITE/DESIGN REVIEW**

**FINDINGS OF FACT, FINAL ORDER and  
 CONDITIONS OF APPROVAL**

**FILE NO. 15-010 TROUTDALE MARKET CENTER TENANT  
 IMPROVEMENTS AND CHARTER SCHOOL**

**REPORT DATE: April 7, 2015  
 HEARING DATE: April 15, 2015**

<b>Applicant</b>	Steven Maguire, Axis Design Group
<b>Property Owner</b>	Yoshida Real Estate Holdings XV, LLC Matthew Wand, General Counsel
<b>Proposal</b>	Multi-phased tenant improvement project consisting of exterior remodel of an existing retail shopping center. Conditional Use permit for a community service use for a charter school for middle school aged students in the Community Commercial zone.
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**FINDINGS OF FACT**

The staff report dated April 7, 2015 with Exhibits A through G, is hereby adopted as the Findings of Fact in this matter.

**FINAL ORDER**

Based upon the foregoing, the Planning Commission approves the following with conditions of approval:

**CONDITIONS CODE**

The color-coded markings are intended to provide timely guidance to the applicant through the permitting process. These markings are for informational purposes only. For questions about submittal requirements for each condition, please contact the corresponding Department or Agency for more information.

 Submit prior to building permit applications

 Submit with building permit applications

 Prior to issuance of permit

 Prior to use of new development

**CONDITIONS OF APPROVAL**

**1. Planning Conditions:**

A.  Modify existing and proposed site plans and legends (sheet nos. C-002 and G-003) to indicate that Pad C is a previously approved unbuilt bank.

- B. Approval of the proposed improvements shall be void after 2 years of the notice of decision date unless substantial completion has taken place.
- C. Please note that permits can be issued only after all conditions of approval have been met from authorities having jurisdiction over this project.
- D. Permits may be applied for after the appeal period provided no appeal has been requested by the applicant or parties with standing.
- E. A separate Type II Site and Design review application is required for the development of the bank and restaurant, as previously approved and conditioned in land use file 98-022.
- F. Sign permits will require a Type I land use application.
- G. This conditional use approval is for a chartered middle school only. Should the charter school want to expand the building space occupied by students or the number of grades served, another conditional use application will be required as that would be a change of what is currently being proposed.

**2. Building Conditions:**

- A. Permits are required for this project in accordance with Section 105.1 of Reference (a).
- B. The applicant can submit for interior structural element improvements as well as any seismic upgrades prior to land use approval if these upgrades are considered volunteer.
- C. Section 508.3 of reference (a) permits non-separated uses when the structure is provided with an automatic sprinkler system and when it is designed with the most restrictive provisions of Chapter 9.
- D. Since this is a change in occupancy, accessibility will be required in accordance with the provisions of Section 3411. New accessibility work will need to be done in accordance with Chapter 11 and ANSI A1171.1-09.

**3. Public Works Conditions:**

- A. Following issuance of a land use decision approval, **the applicant shall revise plans for the project incorporating any adopted land use conditions and submit for review.**
- B. Applicant shall prepare and submit an SDC Worksheet and Agreement form for review and confirmation by Public Works and pay any applicable incremental SDC's prior to receiving building permits.
- C. Applicant shall **submit an erosion control plan and site development permit application to the City with the building permit application,** obtain approval of the permit and pass an initial field inspection of installed erosion control measures

prior to commencing any ground-disturbance at the site (other than disturbance necessary to install erosion control measures).

#### 4. Multnomah County Transportation Conditions:

#### 5. Gresham Fire Conditions:

- A. **Addresses of 6' shall be provided at EACH entrance.** They shall be visible at all hours, color contrast with the background. OFC 505
- B. **All Fire Dept. Access Roads shall be drawn to scale and shown clearly on building permit plans at time of building permit submittal.** The access roads shall be constructed and maintained prior to and during construction. The minimum width is 20' for buildings under 30' in height and 26' wide for locations where buildings are over 30' in height. Access roads in areas where fire hydrants are located are required to be a minimum width is 26' for a length of 20'. OFC 1410, 503.2.1 & D103.1
- C. Required Fire Dept. Access Roads on site shall be designed to support an apparatus weighing 75,000 lb. gross vehicle weight. OFC, Appendix D, Section D102.1
- D. The turning radius for all emergency apparatus roads shall be: 28' inside and 48' outside radius. OFC 503.2.4
- E. No Parking Fire Lane signage or curb marking will be required. Fire access roads 20' – 26' wide require the marking on both sides. Indicate on the building permit plans. Please contact Sharon Cummins, Gresham Fire Marshal's Office at 503.618.2355 for a copy of this policy. OFC D 103.6
- F. **Prior to applying for a building permit provide a fire flow test and report.** The fire flow report will verify that the correct fire flow is available and will be required to have been conducted within the last 12 months. OFC 507.3 & B-101.1
- G. If a gate is installed on a fire access road, it must meet the requirements of the Gresham Fire Gate Policy. This policy can be faxed to you if requested. OFC 506.1
- H. Fire access roads shall be provided with fire hydrants leading to all building (s). Spacing will be required to be indicated on plans per OFC Appendix C and 507.
- I. Each private fire hydrant on site shall have a 5-inch Storz adapter with National Standard Threads installed on the 4 ½ -inch fire hydrant outlet. The adapter shall be constructed of high-strength aluminum alloy, have a Teflon coating on the seat and threads, and use a rubber gasket and two (2) set screws to secure it in place. The adapter shall be provided with an aluminum alloy pressure cap. The

cap shall be attached to the hydrant barrel or Storz adapter with a cable to prevent theft of the cap. Adapter shall be Harrington HPHA50-45NHWCAP or equal approved by Gresham Fire.

- J. Fire hydrant locations shall be identified by the installation of reflective markers. The markers shall be BLUE. They shall be located adjacent and to the side of the centerline of the access road way that the fire hydrant is located on. In case that there is no center line, then assume a centerline, and place the marker accordingly. OFC 508.5.4

**6. General Conditions**

- A. Any other conditions or regulations required by Multnomah County, Gresham Fire and Emergency Services, or to comply with state or federal codes are hereby made a part of this decision.

**APPROVED this 15th DAY OF APRIL 2015**

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Tanney Staffenson, Chair  
Troutdale Planning Commission

Exhibit     A    

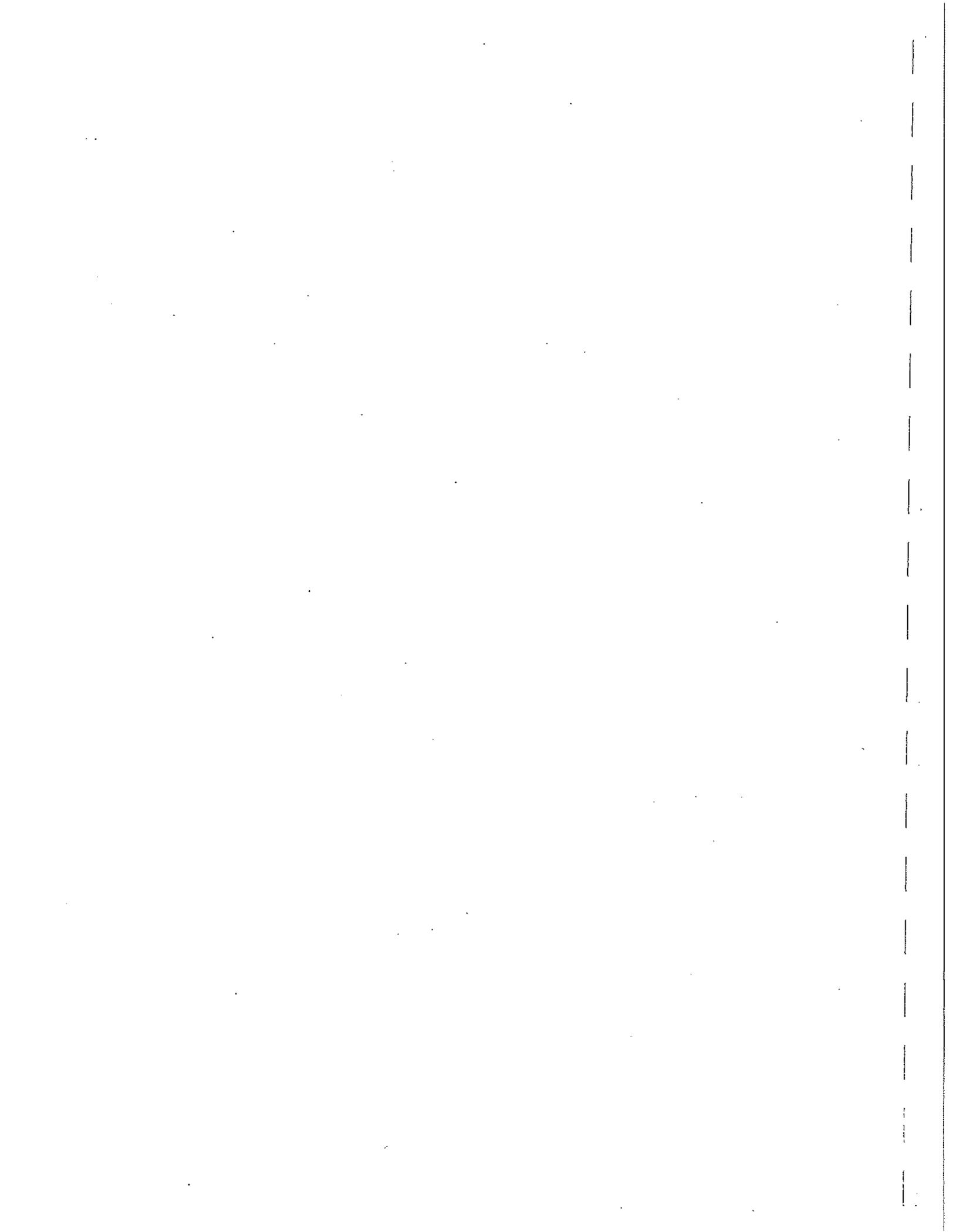
**TROUTDALE MARKET**

26816 SE Stark Street  
Troutdale, OR 97060

February, 13 2015

**TYPE II SITE AND DESIGN REVIEW  
TYPE III CONDITIONAL USE PERMIT  
SUBMITTAL PACKAGE**





## Troutdale Market

Type II Site and Design Review  
Type III Conditional Use Permit  
Application

### Table of Contents

Tab	Description
PART 1	Project Proposal
PART 2	Development Code Relevant Approval Criteria
PART 3	Traffic : Trip Generation Analysis
PART 4	Reduced Drawings



**TROUTDALE MARKET  
LAND USE APPLICATION SITE DESIGN  
AND  
CHARTER SCHOOL  
CONDITIONAL USE PERMIT**  
26816 SE Stark Street  
Troutdale, Oregon 97060



February 13, 2015

**TROUTDALE MARKET**

**PROJECT ADDRESS:**

26816 SE Stark Street  
Troutdale, Oregon 97060

**APPLICANT/OWNER:**

Yoshida Real Estate Holdings XV, LLC  
Contact: Matthew Wand – General Counsel  
8440 NE Alderwood Road, Suite A  
Portland, Oregon 97220

**APPLICANT REPRESENTATIVE:  
ARCHITECT:**

Timothy R. Brunner A.I.A.  
AXIS Design Group  
Contact: Steven Maguire  
11104 SE Stark St  
Portland, Oregon 97216  
[t] 503 284 0988  
[f] 503 546 9276  
[e] stevenjmaguire@gmail.com

**PROPERTY ID NUMBER:**

R337251

**ALTERNATE NUMBER:**

R993010690

**STATE ID NUMBER:**

1S3E01BA 2000

**LEGAL:**

Section 01 1S 3E, TL 2000 9.75 ACRES

**ASSESSOR'S MAP & TAX LOT**

1S3E01BA-2000  
11S3E OLD

**ZONING:**

CC – Community Commercial

**OVERLAY ZONING:**

None

**COMPREHENSIVE PLAN DESIGNATION:**

None

**REQUESTED PROCEDURE:**

Type II – Site Design Review  
Type III – Conditional Use Permit

**PROPOSAL:**

*Site design Review and Conditional Use Permit*

The applicant seeks a Type II Site Design Review to make site and façade improvements to an existing multi-building and multi-tenant retail and commercial development located in a Community Commercial Zone.

The applicant also seeks a Type III Conditional Use Permit to allow the establishment of an Education Use for Charter Middle School in a portion of one of the existing buildings.

This retail/business development exists on a 426,006 square foot property and comprised of 3 buildings and 1 pad site already built as well as 2 pad sites previously approved by Land Use application 98-002 and 98-022 but undeveloped to date. The main buildings are located on the South (back) portion of the property and in this application identified, from West to East, as Building 100, Building 200, and Building 300. Of these, Building 100 was the earliest established with Buildings 200 and 300 being added at a later time. Pad Site A in the Northwest corner of the site is an existing Dairy Queen restaurant with drive through facilities. Pad Sites B and C are unbuilt but approved as an additional restaurant with drive through and bank with drive through respectively.

While the majority of the site, its parking and circulation, as well as landscaping exist and are code compliant, this application presents the owner's intention to provide a facelift of the existing buildings which are dated and have fallen into disrepair. The majority of the improvements consist of cosmetic changes – repainting existing walls, removing old finish materials and replacing with modern, fresh finishes. The use of stone façade already existing on site will be expanded and used as an accent in more locations. Additionally, a composite fiber siding made from sustainable natural products that is 100% wood free while still giving a wood appearance, will be featured as a major design element. Also, new building mounted lighting will be installed to create an attractive street presence and provide a safer environment for pedestrians. In terms of site changes, the application proposes the elimination of an existing loading dock on the South side of building 100. This area will be filled in to create an area for loading and unloading of passengers for a future Chartered Middle School Tenant. Finally, a modification to the existing accessible parking facilities on the West side of Building 100 is proposed in anticipation of a coming Chartered Middle School tenant improvement for the space immediately adjacent to this area.

Once completed the development will continue to operate as a commercial and business development providing a mix of opportunities for retail, restaurant, and services. At this time the potential of this site has already attracted the attention of an established Charter School for Middle School aged students. While this use is not listed as a permitted in the zone it is similar to a Community Service use and therefore should be allowed as a Conditional Use. The specific criteria for approval are addressed below.

In order to meet the requirements of the Site Design Review and Conditional Use Permit trip generation analysis was conducted by a licensed traffic engineer as well as a review of the Troutdale Development Code and Municipal Code. Responses are presented in this document.

**RELEVANT APPROVAL CRITERIA:**

*City of Troutdale Development Code*

- Chapter 3            Zoning Districts
  - 3.110 – CC Community Commercial
- Chapter 5            Other Issues and Procedures
  - 5.600 ER Erosion Control and Water Quality Standards
  - 5.800 STMA Stormwater Management
- Chapter 6            Permits and Procedures
  - 6.300 – Conditional Use
- Chapter 8            Site Orientation and Design Standards
- Chapter 9            Off Street Parking and Loading
- Chapter 11           Landscaping and Screening

*City of Troutdale Municipal Code*

- Section 8.26        Outdoor Lighting

**RELEVANT APPROVAL CRITERIA:**

**City of Troutdale Development Code**

**CHAPTER 3 - ZONING DISTRICTS**

*All areas within the city limits of Troutdale are divided into the following zoning districts. The use of each tract and ownership of land within the corporate limits of the City of Troutdale shall be limited to those uses permitted within the applicable zoning district.*

**Response:** This project is located in a CC – Community Commercial Zone.

**3.110 COMMUNITY COMMERCIAL CC**

3.111 Purpose. This district is intended for the shopping needs of several neighborhoods in locations easily accessible to such neighborhoods. [Adopted by Ord. 550, ef. 9/25/90]

3.112 Siting Criteria. A CC district may be established where:

- A. No commercial establishments exist, or are planned, within a minimum half-mile radius from the proposed site.
- B. Direct access to at least a minor arterial street is provided.
- C. A community commercial site does not exceed 20 acres. [Adopted by Ord. 550, ef. 9/25/90]

**Response:** This development and the CC district it is located in exists.

3.113 Permitted Uses. The following uses and their accessory uses are permitted in the CC district:

- A. Any use permitted in the Neighborhood Commercial (NC) district except for single-family detached dwellings, duplex, triplex, attached, and multiple-family dwellings.
- B. Retail establishments, not to exceed 60,000 square feet of gross floor area per building or business including, but not limited to, barber or beauty shops, shoe repair stores, groceries,

*dressmaking or tailoring shops, photography studios, florist shops, book or stationary stores, gift shops, and art supply stores.*

- C. *Banks or savings and loan associations.*
- D. *Laundromat/dry cleaning establishments.*
- E. *Medical or dental clinics or laboratories.*
- F. *Motels or hotels.*
- G. *Newsstands.*
- H. *Restaurants (including drive-through) or taverns.*
- I. *Studios for art, dance, etc.*
- J. *Professional offices.*
- K. *Utility facilities, minor.*
- L. *Other uses similar in nature to those listed above. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 669, ef. 3/4/99; Amended by Ord. 779, ef. 5/23/06]*

**Response:** This development exists as a multi-tenant retail/business center. As such, the typical uses, existing and future, are consistent with the permitted uses. Any future use which does not conform to the permitted uses will be addressed by a request for approval of a conditional use.

This current application includes a request for approval of a conditional use for a tenant space within the South Portion of the existing Building 100. See below for specific information.

**3.114 Conditional Uses.** *The following uses and their accessory uses are permitted as conditional uses in the CC district:*

- A. *Retail stores or businesses, exceeding 60,000 square feet of gross floor area per building or business.*
- B. *Automotive service stations where no repair work is conducted.*
- C. *Motion picture theaters.*
- D. *Secondhand stores with all merchandise displayed and stored completely within a building.*
- E. *Community service uses.*
- F. *Utility facilities, major.*
- G. *Other uses similar in nature to those listed above. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 669, ef. 3/4/99]*

**Response:** This application proposes a Middle School level Charter School as a tenant improvement to a portion of the existing Building 100. This use, along with necessary office support space, is similar in nature to the community service conditional use and is therefore allowed. Specific approval criteria is addressed elsewhere in this document.

**3.115 Dimensional Standards.**

- A. *Lot Area, Lot Width, and Lot Depth: No minimum requirement.*
- B. *Street Frontage: Minimum 20 feet.*
- C. *Setbacks.*

1. *Front yard setback: Minimum of 20 feet.*
2. *Side yard setback: None, except property abutting a residential zoning district shall have the same side yard setback as required by the abutting district.*
3. *Street side yard setback: Minimum of ten feet.*
4. *Rear yard setback: None, except property abutting a residential zoning district shall have the same rear yard setback as required by the abutting district, but in no case shall be less than 15 feet.*
5. *Setbacks for insufficient right-of-way: The minimum front, side, or other setbacks shall be increased where such yard or setback abuts a street having right-of-way width less than the applicable City or County standard. The necessary right-of-way widths and the additional yard or setback requirements in such cases shall be based upon the Comprehensive Land Use Plan and applicable ordinances and standards.*

D. *Height Limitation. The maximum height of a structure shall be 45 feet. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 770, ef. 2/23/06]*

Response: The lot and its dimensions, its setbacks, and developed structures exist. No modifications to the site's dimensions or its developments are proposed as part of this application.

3.116 Additional Requirements.

- A. *Design review and landscaping is required for all uses.*
- B. *All lots shall have frontage or approved access to public streets, public water, and public sewer before development is allowed.*
- C. *Off-street parking spaces shall be provided in accordance with the requirements of Chapter 9, Off-Street Parking and Loading, of this code. [Adopted by Ord. 550, ef. 9/25/90]*

Response: The site, its landscaping, frontage, public street access, water and sewage facilities, off street parking, and structures exist. No modifications to the site or its development are proposed as part of this application.

## CHAPTER 5 - OTHER ISSUES AND PROCEDURES

### 5.000 OTHER PERMIT AND ISSUE DETERMINATIONS

#### 5.040 Clear Vision Areas.

- A. *A clear vision area shall be maintained on each corner of property adjacent to the intersection of two streets, a street and a railroad, and on driveways providing vehicular access to a public way, including alleys.*

Response: The clear vision areas at the corner of the property adjacent to the abutting public streets, and at the intersection between the public street and driveway access to the site exist and no changes are proposed in this application that would alter them.

### 5.600 EROSION CONTROL AND WATER QUALITY STANDARDS

5.610 Purpose. The purpose of these standards is to:

- A. Prevent erosion and restrict the discharge of sediments and other contaminants from entering protected water features, public streets, and the sanitary sewer system during construction.
- B. Require permanent erosion prevention measures including, but not limited to, restoration or enhancement of vegetation corridors (pursuant to sections 4.316, Width of Vegetation Corridor, and 4.317, Method for Determining Vegetation Corridors Next to Primary Protected Water Features, of this code) between the development and the protected water feature.  
[Adopted by Ord. 607, ef. 8/11/94; Amended by Ord. 702, ef. 11/24/00]

5.611 Applicability. An erosion control and mitigation plan shall be required and approved by the Director, or the Director's representative, under any of the following circumstances:

- A. Prior to final plat approval for any subdivision, in accordance with section 7.100, Final Plat Submission, of this code.
- B. Prior to site orientation and design review, in accordance with Chapter 8, Site Orientation and Design Standards, of this code.
- C. Prior to any activity listed herein, or approval of any building permit, site development application, flood hazard permit, grading permit, or fill permit.
  1. Prior to disturbance of any vegetation, mining, dredging, paving, filling, or grading that disturbs an area of 1,000 square feet or greater outside of the vegetation corridor and slope district or flood hazard area.
  2. Prior to any vegetation removal, mining, dredging, paving, filling, or grading on sites within the vegetation corridor and slope district or flood district areas.
- D. Upon a finding that visible or measurable erosion has entered, or is likely to enter, the public storm and surface water system.
- E. Exemptions:
  1. Farming activities as defined in ORS 30.930 and farm uses defined in ORS 215.203, except construction or reconstruction of buildings on the site associated with farm practices, are exempt from the provisions of this chapter, provided that the specific land area has been cultivated within the last three years.
  2. Construction of residential accessory structures that do not require a building permit that are outside of the vegetation corridor and slope district and the flood hazard area.  
[Adopted by Ord. 607, ef. 8/11/94; Amended by Ord. 702, ef. 11/24/00]

Response: This application proposes the infill of an existing loading dock ramp. As this will alter an area of more than 1000 square feet an erosion control plan is required.

5.612 Reference Authority. The current edition of the Technical Guidance Handbook, Erosion Prevention and Sediment Control Plans, published by the City of Portland Bureau of Environmental Services and the Unified Sewerage Agency of Washington County (hereinafter called "The Handbook") shall be the primary guide for the City in establishing and reviewing erosion control techniques, methods, and requirements. [Adopted by Ord. 702, ef. 11/24/00]

5.613 Erosion and Sediment Control Plan Submission Requirements.

- A. A site development permit application shall be completed and submitted with the erosion and sediment control plan, and with other applicable land use application forms or building permit forms prior to the start of construction.
- B. *Schedule of Installation.* A schedule of planned erosion control and revegetation measures shall be provided which sets forth the progress of construction activities and mitigating erosion control measures. The developer shall call for an inspection to certify that erosion control measures are installed in accordance with the approved erosion control plan.  
*[Adopted by Ord. 607, ef. 8/11/94; Amended by Ord. 702, ef. 11/24/00]*

**Response: An erosion control plan has been developed by a licensed Civil Engineer and is included in the drawings accompanying this application.**

5.614 Approval Standards for Erosion Control.

- A. Plans shall show compliance with the standards of "The Handbook" and applicable standards of this code.
- B. *Responsibility and Records.*
  - 1. The applicant shall be the responsible person, or shall designate a specific person, herein identified as the developer, to be responsible for carrying out the erosion and sediment control plan.
  - 2. The City shall maintain records of erosion and sediment control plans in the Community Development Department.
- C. The duration of exposure of soils shall be kept to a minimum during construction. Exposed soils shall be covered by mulch, use of erosion blankets, sheeting, temporary seeding, or other suitable material following grading or construction, until soils are stabilized and new vegetation has been established. During the rainy season (November 1 through April 30), soils shall not be exposed for more than seven consecutive days. All disturbed land areas which will remain unworked for 21 days or more during construction shall be mulched, seeded, or tarped.
- D. *Control Runoff.* Ensure that where erosion cannot be completely avoided, the sediment control measures will be adequate to prevent erosion from entering onto public right-of-ways, or into the public stormwater system, surface water system, or protected water feature.
  - 1. During construction, runoff from the site shall be controlled and sediment resulting from soil disturbance shall be retained onsite. Temporary diversions, sediment basins, barriers, check dams, or other methods shall be provided as necessary to hold sediment and runoff.
  - 2. All such temporary diversions that are in a protected water feature shall be approved by the Oregon Division of State Lands, U.S. Army Corps of Engineers, and/or the Oregon Department of Fish and Wildlife prior to submission of the plan to the City for approval, as applicable.
- E. *Limit the Rate of Discharge.* In no case shall soil erosion and sediment transported from the site exceed the rate of one ton per acre per year, nor result in more than ten percent cumulative increase in natural stream turbidity, as measured relative to a control point immediately upstream of the turbidity causing activity. However, limited duration activities necessary to address an emergency or to accommodate essential dredging, construction, or other legitimate activities, and that cause the standard to be exceeded, may be authorized, provided all practicable turbidity control techniques have been applied.
- F. *Keep Site Clean.*

1. No mud, dirt, rock, or other debris shall be deposited upon a public street or any part of a private or public stormwater system or surface water system. Eroded sediment shall be removed immediately from pavement surfaces, offsite areas, and from the surface water management system, including storm drainage inlets, ditches, and culverts. In the event that sediment is inadvertently deposited in a wetland or stream, the developer shall immediately contact the Oregon Division of State Lands and Oregon Department of Fish and Wildlife to implement remedial actions. The developer shall send the Community Development Director copies of correspondence between the Oregon Division of State Lands, the Oregon Department of Fish and Wildlife, and the developer.
  2. The removal of all sediments which are carried into the streets or onto adjacent property are the responsibility of the developer. The developer shall be responsible for cleaning and repairing streets, catch basins, and adjacent properties where such properties are affected by sediments or mud. In no case shall sediments be washed into storm drains, ditches, drainageways, streams, or wetlands. (See also chapter 12.09, Erosion Control, of the Troutdale Municipal Code, related to public facilities.)
- G. *Filter Water.* Water containing sediment shall not be flushed into the surface water management system, wetlands, or streams without first passing through an approved sediment filtering facility or device.
1. Pollutants such as fuels, lubricants, bitumens, raw sewage, and other harmful materials shall not be discharged into or near rivers, streams, or impoundments, and shall be properly stored and disposed.
  2. Direct discharge of storm and/or construction waters into a protected waterfeature, including known streams, wetlands, or rivers, is prohibited unless approval is obtained from the Oregon Division of State Lands, U.S. Army Corps of Engineers, and Oregon Department of Fish and Wildlife.
  3. All sediment-laden water from construction operations shall be routed through stilling basins, filtered, or otherwise treated, to reduce the sediment load in the receiving water body.
- H. *Control Dust.* Troutdale is especially susceptible to wind erosion. Therefore, the Director may require that additional dust control measures be included in the erosion and sediment control plan. Such control measures may include, but are not limited to, the following, and will be enforced depending upon the conditions of the site and weather conditions during construction:
1. Sprinkle with water or apply dust palliatives to access and haul roads and other exposed dust producing areas with water.
  2. Establish a temporary vegetation cover or use mulch as approved by the City.
  3. Hydrate cut and fill surface areas.
  4. Cover the materials in the haul equipment.
- I. *Storage.* All erodible or toxic materials delivered to the job site shall be covered and protected from the weather and stored according to appropriate health and safety guidelines.
1. Such materials shall not be exposed during storage.
  2. Waste material, rinsing fluids, and other such material shall be disposed of in such manner that pollution of groundwater, surface water, or air does not occur.
  3. In no case shall toxic materials be dumped into drainage ways or onto land.
- J. *Site Enhancement.* In addition to compliance with native vegetation removal and enhancement provisions of chapters 4.300, Vegetation Corridor and Slope District, and

4.600, Flood Management Area, of this code, the developer shall be responsible for enhancement of the vegetation corridor adjacent to protected water features, on slopes of 25% or greater, public and private open spaces, utility easements, and on developed or undeveloped right-of-ways adjacent to and/or affected by the development. Submit a landscape plan showing compliance with the standards of "The Handbook", and the following:

1. If the vegetation existing prior to site development is non-native or invasive, it shall be replaced with native or non-invasive plant species from the Metro Native Plant List.
2. Work areas on the immediate site shall be carefully identified and marked to reduce potential damage to trees and vegetation. Establish a root protection zone around all existing trees that will be preserved on the construction site, through the use of construction fencing, or equivalent, that clearly marks the protection zone on the site.
3. Trees shall not be used as anchors for stabilizing working equipment.
4. During clearing operations, trees and vegetation shall not be permitted to fall or be placed outside the work area.
5. In areas designated for selective cutting or clearing, care in falling and removing trees and brush shall be taken to avoid injuring trees and shrubs to be left in place.
6. Stockpiling of soil, or soil mixed with vegetation, shall not be permitted on a permanent basis. Topsoil removal for development shall be stockpiled and reused onsite to the degree necessary to restore disturbed areas to their original or enhanced condition, or to assure a minimum of six inches of stable topsoil for revegetation. Additional soil shall be provided, if necessary, to support revegetation. [Adopted by Ord. 607, ef. 8/11/94; Amended by Ord. 702, ef. 11/24/00]

**Response:** An erosion control plan addressing the applicable standards of this section is included in the drawings accompanying this application. Please refer to sheet C2 for specifics. Further information if necessary will be included at the time the application for building permit is filed.

5.615 Duration of Maintenance. Continuous maintenance of the erosion and sediment control devices approved with the site development permit application, after development, including revegetation of all graded areas, shall be the responsibility of the developer, subsequent developers, or property owners.

- A. Inspect Erosion Control Measures. During active construction, the developer shall inspect erosion control measures daily during rainy periods. Spot checks will be conducted by the City during construction. In all cases, the developer shall be responsible for maintenance, adjustment, repair, and replacement of erosion control measures to ensure that they are functioning properly without interruption.
- B. Written Records. When required by the Director, the developer shall maintain written records of all site inspections of erosion control measures which shall be provided to the Director upon request.
- C. Call for Inspection. The developer shall call for City inspection, prior to the foundation inspection for any building, to certify that erosion control measures are installed in accordance with the erosion control plan.
- D. Erosion control measures shall be maintained during construction and for one year after development is completed. The Director may, upon a finding that soils are completely stabilized, reduce this period. [Adopted by Ord. 702, ef. 11/24/00]

Response: All required erosion control measures will be maintained and inspected by the developer as specified above. Measures are to remain in place for the duration of construction work and up to one year from the date of competition or less as approved by the Director.

5.616 Correction of Ineffective Measures. If the facilities and techniques approved in the erosion control plan are not effective or sufficient to meet the purpose of this chapter based on an onsite inspection, the Director may require a revised plan.

- A. Upon receiving notice, the developer shall immediately install interim erosion and sediment control measures as specified in "The Handbook" and call within 24 hours for a reinspection.
- B. The revised erosion control plan shall be provided within five working days if written notification by the Director was required.
- C. The developer shall implement fully the revised plan within five working days of approval by the Director. [Adopted by Ord. 702, ef. 11/24/00]

Response: The developer recognizes the Director's authority to direct corrections to ineffective measures. Responses will be provided as directed by this code.

5.617 Penalties. In addition to those penalties available under section 17.110, Abatement and Penalty, of this code, the Director may enforce the following additional penalties to this chapter:

- A. Issue a stop work order where erosion control measures are not being properly maintained or are not functioning properly due to faulty installation or neglect.
- B. Refuse to accept any further permit applications until erosion control measures have been installed properly and maintained in accordance with this chapter.
- C. The owner of the property from which the erosion occurs, together with any person or parties who cause such erosion, shall be responsible for mitigating the impacts of the erosion and for preventing future erosion.
- D. The City Attorney may institute appropriate action in any court to enjoin development of a site or building project which is in violation of this chapter, or to require conformance with this chapter. [Adopted by Ord. 607, ef. 8/11/94; Renumbered from 5.618 and amended by Ord. 702, ef. 11/24/00]

Response: The developer recognizes the Director's authority to direct penalties for non-compliance with necessary Erosion Control Measures.

5.618 Security. Except as provided for in subsection (B) of this section, after an erosion control plan is approved by the Director, and prior to the issuance of a grading or building permit, the applicant shall provide a performance bond or other financial guarantee in the amount of 120% of the value of the erosion control measures necessary to stabilize the site and maintain water quality.

- A. Duration. The performance bond shall be in effect for a period of at least one year after the erosion control measures are installed. The performance bond or other financial guarantee shall be released when the Director determines that the erosion control measures are operating adequately. All, or a portion, of the performance bond or financial guarantee may be withheld by the City for a period of up to five years beyond the one year maintenance period, if it has been determined by the Director that the erosion control measures are not operating adequately.

- B. *Exemptions. Single-family and two-family residential residences on individual lots shall be exempt from posting a performance bond or other financial guarantee.*
- C. *Conflict. Due to the immediate threat to water quality posed by failure to comply with the strict provisions of the erosion control measures required under this chapter, the provisions of this section shall supersede the more general provisions of sections 17.050, Bond or Cash Deposit, 17.060, Noncompliance with Provisions Under Obligation, and 17.070, Adjusting Bond or Deposit for Future Obligation, of this code, where conflicts exist. [Adopted by Ord. 607, ef. 8/11/94; Renumbered from 5.617 and amended by Ord. 702, ef. 11/24/00]*

Response: The developer will secure the necessary bond prior to the issuance of grading and or building permits.

**5.800 STORMWATER MANAGEMENT STMA**

5.810 *Purpose. The purpose of the stormwater management standards is to protect water quality by providing adequate facilities for the management of stormwater or floodwater runoff, and to prevent the degradation of, and promote the enhancement of, primary or secondary protected water features, floodplains, wetlands, and groundwater. [Adopted by Ord. 702, ef. 11/24/00; Amended by Ord. 731, ef. 6/26/03; Amended by Ord. 792, ef. 9/25/08]*

5.820 *Reference Authority.*

- A. *The current edition of the Stormwater Management Manual, City of Portland Environmental Services and addendums adopted by the Troutdale Public Works Department, is adopted into this code by reference and shall be the guide for requirements and design standards for the water quality facilities. Where conflict exists between this code and any of these documents, the more restrictive shall apply.*
- B. *The current edition of the City of Troutdale Construction Standards for Public Works Facilities is adopted into this code by reference. Where conflict exists between this code and any of these documents, the more restrictive shall apply.*
- C. *Other publications or maps adopted by reference to implement the standards of this chapter are the Metro Title 3 Water Quality and Flood Management Area Map, the Federal Emergency Management Agency's Flood Insurance Rate Maps and Flood Insurance Studies published for the City and the City's Urban Planning Areas, and the National Wetlands Inventory Map.*
- D. *Wetland determinations made by the Oregon Department of State Lands record in the Community Development Department.*
- E. *The current edition of the City of Troutdale's "North Troutdale Storm Drainage Master Plan."*
- F. *The current edition of the City of Troutdale's "South Troutdale Storm Drainage Master Plan." [Adopted by Ord. 702, ef. 11/24/00; Amended by Ord. 792, ef. 9/25/08]*

5.830 *Applicability. No land use action shall be approved which does not make adequate provisions for stormwater or floodwater runoff. The stormwater drainage system shall be separate and independent of any sanitary sewer system. Water quality treatment for stormwater is required under any of the following:*

- A. *The site contains vegetation corridor established in Chapter 4.300, Vegetation Corridor and Slope District, of this code; is next to or drains directly to a protected water feature(s) as*

defined by this code; or the site drains to or is within the Flood Management Area established in chapter 4.600 of this code.

- B. The development occurs on natural slopes of 25% or greater.
- C. The development involves fuel storage or dispensing areas, vehicle wash areas, or vehicle maintenance dismantling areas.
- D. There is 2,000 square feet or more of uncovered impervious parking area and/or streets.
- E. Other development characteristics exist that may degrade water quality. [Adopted by Ord. 702, ef. 11/24/00; Amended by Ord. 731, ef. 6/26/03; Amended by Ord. 792, ef. 9/25/08]

**Response:** The site and its stormwater management system exist. No changes that would affect more than 2,000 square feet of uncovered impervious parking area and/or streets is proposed therefore no new stormwater management plan or changes to existing systems is required.

## CHAPTER 6 - PERMITS AND PROCEDURES

### 6.300 CONDITIONAL USE CU

6.310 Purpose. This section provides for uses specified in the zoning districts as conditional uses. A conditional use permit may be considered under the Type III procedure provided that any such conditional use would not be detrimental to the adjoining properties or to the purpose and intent of the Comprehensive Land Use Plan. [Adopted by Ord. 550, ef. 9/25/90]

6.320 Scope. Approval of a conditional use permit shall not constitute a zone change and shall be granted only for the specific use requested. Any change of use, modification, or limitation of conditions from an approved conditional use shall be subject to Planning Commission approval after a public hearing, except as authorized in section 6.395 of this chapter. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 791, ef. 2/21/08]

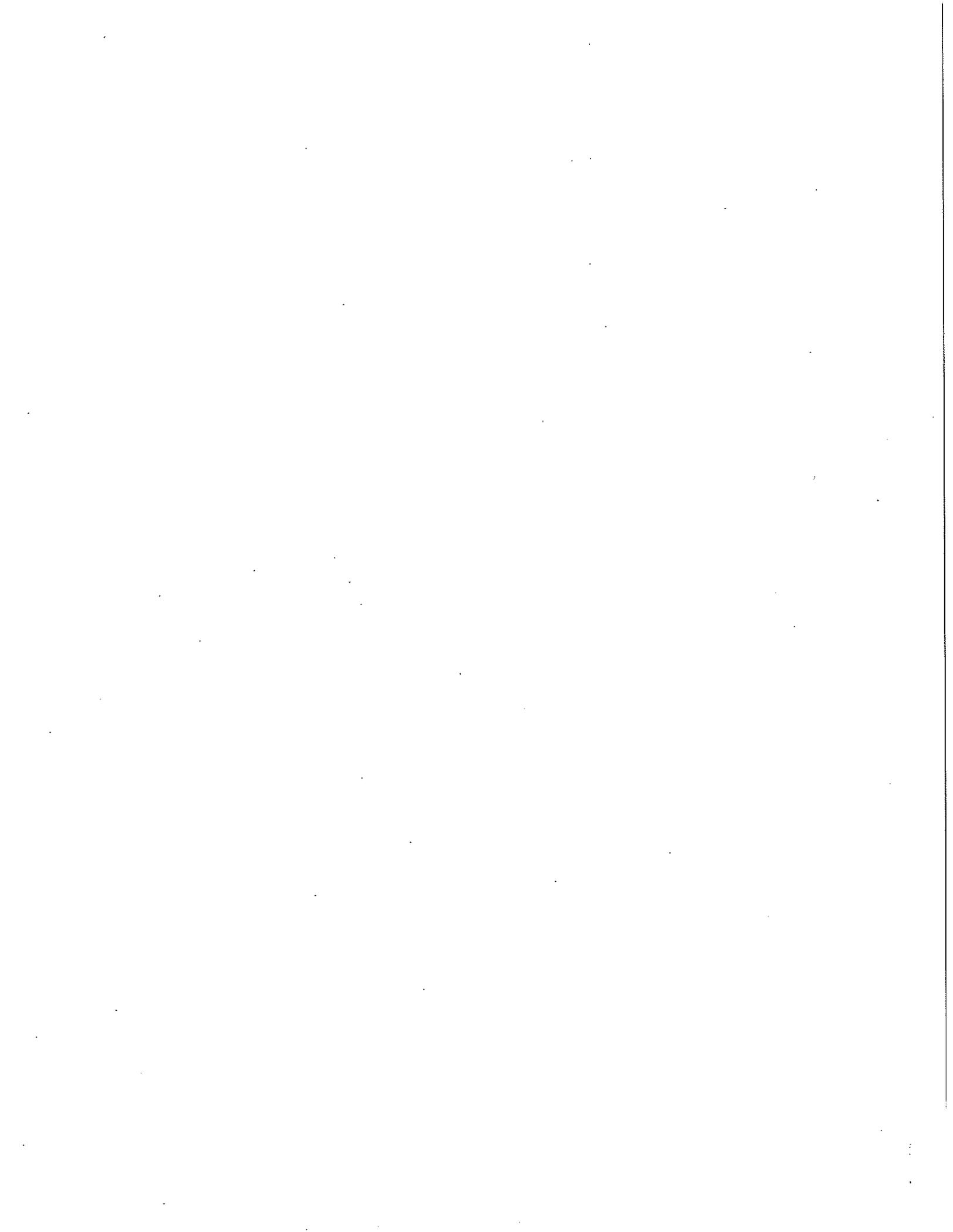
6.330 Application. A written application for a conditional use by a property owner or authorized representative shall be filed with the Planning Division indicating the section of this code under which the conditional use is sought on forms provided by the Planning Division. The application shall include site plans, drawn to scale, showing the dimension and layout of the proposed use with other information and drawings as may be required to provide an understanding of the proposed conditional use and its relationship to surrounding property. [Adopted by Ord. 550, ef. 9/25/90]

**Response:** This project is located in an CC – Community Commercial Zone and a portion of its proposed use is allowed as a Conditional Use for that zone. The applicant seeks a Type III review procedure to approve a Conditional Use Permit to allow for an educational and support office use in the form of a Chartered Middle School.

This document has been filed along with the appropriate application. Included are the appropriate sections of the code under which the conditional use is sought.

Also included are the necessary drawings – specifically a site plan showing existing conditions of the development and its relation to the surrounding properties.





6.340 Approval Criteria. *The Planning Commission may approve an application, approve with modifications, or deny an application for a conditional use after a hearing. The applicant must submit evidence substantiating that all requirements of this code relative to the proposed use are satisfied and demonstrate that the proposed use also satisfies the following criteria:*

A. *The use is listed as a conditional use in the underlying district, or approved by the Planning Commission for consideration as a conditional use.*

Response: The underlying zoning district is CC – Community Commercial. The education use is considered community service and is listed as a permitted conditional use in Section 3.114.E of the Troutdale Development Code.

B. *The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features.*

Response: The site is fully developed and its existing parking areas, and pedestrian and vehicular circulation systems are more than adequate to support the proposed conditional use. In addition the proposed use will not have negative impact on the existing retail development as it is planned to be located in the rear of the existing Building 100 - away from the frontage facing retail spaces.

C. *The proposed use of the site is timely, considering the adequacy of transportation systems, public facilities, and services existing or planned for the area affected by the use.*

Response: The existing public infrastructure such as transportation systems are adequate to accommodate the proposed use. An informal analysis of the impacts of the use on surrounding traffic has been considered by a Licensed Traffic Engineer and is included in the appendix of this application.

D. *The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district.*

Response: As previously stated, the proposed location for this use is situated away from the existing and potential future retail, commercial, and business uses. The proposed drop-off and pick-up areas for the arrival and departure of students has been directed away from areas where it might interfere with the daily operations of the existing development. Please refer to the Circulation Plan on sheet G-004 included in the drawings that accompany this application.

E. *The proposed use will provide adequate open space, landscaping, and aesthetic design to mitigate any possible adverse effect on surrounding properties and uses.*

Response: The majority of the proposed use's activities will take place inside the building and as such not negatively impact the surrounding properties. In addition, any effects of vehicular

traffic in the area planned for arrival and departure of students at the rear of Building 100 is mitigated by an existing 6'-0" high cement block "sound wall" and established landscape screening.

- F. *The proposed use will not result in use of the land for any purpose which may create, or cause to be created, any public nuisance including, but not limited to, air, land, or water degradation, noise, glare, heat, vibration, or other considerations which may be injurious to public health, safety, and welfare.*

Response: As previously stated, the majority of activities involved in the proposed use will take place within the building and existing improvements limit the possible effects of vehicular traffic associated with the pick-up and drop-off of students. All new proposed lights in the back of Building 100 adjacent to the proposed use will replace existing fixtures which currently have no provision to reduce glare on the adjoining residential properties. The new fixtures will be directed in a manner to provide adequate and safe lighting levels while eliminating glare onto adjacent properties. Therefore, the proposed use will not only not cause a public nuisance in the areas mentioned above but will in fact correct potential existing negative conditions.

- G. *The proposal satisfies the goals and policies of the Comprehensive Land Use Plan which apply to the proposed use, as well as the purposes of this section and applicable provisions of this code.*

Response: The use proposed in this Conditional Use Permit application satisfies the following applicable goals of the City of Troutdale's Comprehensive Land Use Plan.

Goal 1. Citizen Involvement: Public notice and public hearing are required for the approval of this C.U.P. As such, the goal is met.

Goal 2. Land Use: Community commercial uses provide for a limited range of goods and services and are generally compatible with adjacent neighborhoods. The proposed educational use is well suited to the adjacent residential neighborhoods and as a community service fits within the context of the existing development.

Goal 6. Air, Water, and Land Resources Quality: The development exists and provides currently provides stormwater facilities, appropriate amounts of vegetation and landscaping, as well as facilities for the storage of solid waste in a manner that does not negatively impact the surroundings. In addition this application addresses the requirements for erosion control methods to be implemented during the proposed renovation as outlined in the Troutdale Development Code section 5.600.

Goal 9. Economic Development: The proposed educational use will create additional jobs for the community by providing jobs for teachers and support staff for the school.

Goal 11. Public Facilities and Services: The site and its utilities exist and are adequate for the proposed use. Any modifications proposed will be connected to existing systems on-site and no new connections to the public system are proposed in this application.

Goal 12. Transportation: The site and its internal pedestrian and vehicular circulation and parking areas exist and provide appropriate connections to the neighborhoods, and system of public streets and sidewalks surround the site.

Goal 13. Energy Conservation: This application proposes the removal of the majority of exterior building mounted lighting and its replacement with modern, more energy efficient LED fixtures - especially adjacent to the proposed Conditional Use. In addition, there is the potential for replacement of older HVAC and interior lighting with more modern units to provide additional conservation. Finally, any interior renovation for the proposed use will meet current energy and building codes as required. These codes specify certain energy efficiency requirements be met.

H. Owners of property within 250 feet of the boundary of the subject property have been notified of the hearing. [Adopted by Ord. 550, ef. 9/25/90]

Response: This application includes the required Radius Search to identify adjacent property owners within 250 feet of the site. This information along with the enclosed preprinted mailing labels can be utilized by the city to provide appropriate notification.

6.350 Conditions. The Planning Commission may attach to an approved conditional use reasonable conditions, restrictions, or safeguards that would uphold the purpose and intent of this section and mitigate any adverse impact upon adjoining properties which may result by reason of the approved conditional use. A list of conditions may include, but is not limited to, the following:

- A. Increasing the required lot size or yard dimensions.
- B. Increasing street width.
- C. Increasing the number of off-street parking or loading spaces or area.
- D. Improving public facilities such as:
  - 1. Water supply;
  - 2. Sanitary sewers;
  - 3. Storm drainage;
  - 4. Sidewalks, curbs, and other street improvements; and
  - 5. Fire hydrants.
- E. Controlling the location and number of vehicular access points to and from the site.
- F. Limiting lot coverage or height of buildings.
- G. Undergrounding of utilities.
- H. Public safety and crime prevention measures.
- I. Requiring landscaping, fencing, diking, screening, or berms.
- J. Limiting the number, size, and location of signs.
- K. Land dedication or money in lieu of dedication for public purposes.
- L. Bonds or other suitable security to ensure that requirements are met.
- M. Submittal of final detailed plans indicating conformance with conditions. [Adopted by Ord. 550, ef. 9/25/90]

Response: The applicant understands that the Planning Commission may attach conditions, restrictions, and safeguards to the proposed CUP and will address them on a case by case basis as necessary.

6.360 Conditional Use Permit. A conditional use permit shall be obtained before site development. The permit shall specify any conditions, limitations, and/or restrictions imposed by the Planning Commission in addition to those specifically set forth in this section. [Adopted by Ord. 550, ef. 9/25/90]

Response: This application seeks a Conditional Use Permit and the applicant understands that no site development permits can be issued prior to the completion of this application process.

6.370 Expiration. Approval of a conditional use permit shall be void after two years, or such lesser time as the Planning Commission may specify, unless substantial construction has taken place. However, the Director may grant a one-time, one-year extension if the applicant requests such an extension before the expiration of the initial time limit. Extensions beyond one-year may be granted by the Planning Commission if the applicant requests such an extension before the expiration of the initial time limit or the expiration of the Director's one-year extension, where one has been granted.. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 791, ef. 2/21/08]

6.380 Building Permit. A building permit for all or any portion of a conditional use shall be issued only on the basis of the plan as approved by the Planning Commission. Any change in the approved plan shall be submitted to the Planning Commission as a new application, except as authorized in section 6.395 of this chapter. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 791, ef. 2/21/08]

Response: All required building permits will be obtained prior to any work commencing. Any future modifications to the plans approved in this application will be submitted to the Planning Commission as a modification to the existing newly approved CUP.

6.390 Revocation. A conditional use permit shall be subject to revocation by the Planning Commission if the application is found to include false information, or if the conditions of approval have not been complied with or are not being maintained.

- A. The Planning Commission shall hold a public hearing in order for the applicant to show cause why the permit should not be revoked.
- B. If the Planning Commission finds that the conditions of approval have not been complied with or are not being maintained, a reasonable time shall be given for making correction. If corrections are not made within that time, revocation of the conditional use permit shall become effective ten days after the time specified.
- C. Reapplication for a conditional use which has been denied or revoked cannot be made within one year after the date of the Planning Commission's action, except that the Planning Commission may allow a new application to be considered if there is new evidence or a change in circumstances. [Adopted by Ord. 550, ef. 9/25/90]

6.395 Changes and Modifications

- A. *Minor Changes. Minor changes to an approved conditional use may be approved under a Type I or a Type II procedure depending on the nature of the change, provided that such changes meet all of the following:*
1. *Do not violate any previous conditions of approval for the conditional use.*
  2. *Do not change the use.*
  3. *Do not change the boundaries of the development.*
  4. *Individual or cumulative changes do not increase the floor area on the site by more than ten percent, up to a maximum of 10,000 square feet, or in those cases not involving structures, individual or cumulative changes do not increase the exterior improvement area on the site by more than ten percent, up to a maximum of 10,000 square feet.*
  5. *Do not increase traffic volumes to the site more than ten percent over current conditions.*
- B. *Major Changes. Any change to an approved conditional use that does not qualify as a minor change shall be considered a major change. Major changes shall be processed as a new application and shall be made in accordance with the procedures specified in this chapter. [Adopted by Ord. 791, ef. 2/21/08]*

Response: This application is for a new Conditional Use Permit and not a modification of an existing CUP.

## CHAPTER 8 - SITE ORIENTATION AND DESIGN STANDARDS

- 8.010 *Purpose. This section establishes a process for the review of development proposals in order to promote functional, safe, innovative, and attractive development that is compatible with the natural and manmade environment. [Adopted by Ord. 550, ef. 9/25/90]*
- 8.020 *Applicability. The provisions of this section apply to all zones and uses with the exception of single-family and two-family dwellings, and uses accessory to these dwellings. Site and design review considerations include the layout and design of all existing and proposed improvements including, but not limited to, buildings, structures, parking and circulation areas, outdoor storage, landscaping, service and delivery areas, outdoor recreation areas, retaining walls, cut and fill actions, accessways, pedestrian walkways, and buffering and screening. All applications for site and design review are subject to the requirements of this chapter and other applicable City ordinances. The Director shall refer applicants to the Planning Commission if any variances from the standards are required according to the provisions of chapter 6.200, Variance, of this code. [Adopted by Ord. 550, ef. 9/25/90]*

Response: This application is for modifications to an existing commercial development in a Commercial Zone therefore it is subject to the provisions of this section.

- 8.030 *Powers and Duties. Staff shall review all plans for compliance with this code and other applicable regulations of any jurisdiction. Staff may tailor the extent of the review by deleting or combining steps when not warranted by the scale of the development to ensure compliance. [Adopted by Ord. 550, ef. 9/25/90]*
- 8.040 *Additional Requirements - Site and Design Review. Conditions of approval may be imposed on a development subject to site and design review by advising the applicant of the reasons, in writing,*

that the conditions are necessary to meet the intent and purpose of the Comprehensive Land Use Plan, this code, and other applicable ordinances. Conditions may include the following:

- A. Include as part of the landscaped area, clearances from specified trees, rocks, water ponds or courses, or other natural features.
- B. Establish the suitability of the landscape plan by having it prepared by a licensed landscape architect.
- C. Obtain city engineer's approval of a grading and drainage plan for the collection and transmission of stormwater or groundwater.
- D. Establish vehicle and pedestrian access facilities with due consideration to size, location, and grade.
- E. Require dedication of public street right-of-way; a pedestrian way; or an easement for utilities, waterway, slope protection, or open spaces.
- F. Install sidewalks.
- G. Support a future street improvement in an agreement that will run with the land.
- H. Modify elements of the design or proposed materials, color, texture, or shape of a structure, sign, or other feature of the development, providing that a specific design feature is so inappropriate, incongruous with the surrounding area, or in some other way sufficiently detrimental to the aesthetics, property values, general stability, or other public welfare concern for the area or the City as a whole, that correction is necessary. In requiring modification, an alternate means of solution shall be provided, but the applicant is free to propose other alternatives.
- I. Install an on-site fire hydrant with a protective barricade.
- J. Install lighting for outdoor circulation and parking areas, including approval of the type and placement of the outdoor lighting.
- K. In case of commercial or industrial development, provide access by a frontage road having limited and controlled access onto an arterial street by means of traffic signals, traffic control islands, or other means that will preserve the traffic carrying capacity and safety of the arterial street, and that will avoid the cumulative effect of individual access points directly onto the arterial street.
- L. In the case of development that is not required to provide a frontage road, provide access to a street that intersects an arterial street instead of directly to the arterial street, preserve the traffic carrying capacity and safety of the arterial street, and avoid the cumulative effect of individual access points. [Adopted by Ord. 550, ef. 9/25/90]

8.050 Procedure and Submission Requirements.

- A. Site and design review shall be a Type II procedure. However, the Director shall refer a development proposal to the Planning Commission when the applicant requests variances or exceptions to this code which require a Type III level review. The Director may refer a development proposal which is particularly complex in nature to the Planning Commission for public hearing. Site and design review may also be conducted by the Planning Commission in conjunction with a conditional use application.
- B. Pre-Application Conference. Prior to filing site and design plans, the applicant shall confer with staff. The purpose of this conference is to provide an opportunity for the applicant to describe the proposed development, and for the staff to explain relevant land use policies, ordinances, standards, opportunities, and constraints which may be applicable to the site and type of the proposed development before the applicant has invested substantial time and resources or becomes committed to particular concepts or design solutions. An applicant should submit drawings, sketches, and descriptions that describe the proposed development at the time of pre-application conference.

- C. *Filing Plans. A complete application with final drawings for site and design review shall be submitted to the Planning Division. An application shall not be deemed complete unless all information requested is provided and fees paid. Upon completion of a technical review by staff and approval by the Site and Design Review Committee, the site plan and landscape plan shall act as the official approved development plan, and any construction, addition, or extension of the buildings or structures to occur on that site shall be in strict compliance with the approved site plan. If the property owner finds it necessary to vary from the approved landscape plan, an application shall be filed with the Planning Division requesting an amendment to the approved plan. Plans shall include all items listed below:*
1. *A project summary shall accompany the application, when deemed necessary, to describe any special circumstances which may require approval of variances or special exceptions by the Planning Commission. In addition, plans shall include the following, which may be combined, as appropriate, onto one or more drawings:*
  2. *The site analysis will provide the basis for the proper design relationship of the proposed development to the site, adjacent properties, existing manmade improvements (including, but not limited to, buildings and roads), and hillsides (slopes), streams and rivers, and other natural features. A site analysis shall include:*
    - a. *A fully dimensional vicinity map, drawn to scale, showing property lines of the lot being developed, all right-of-ways (roads and railroad tracks), and property lines of lots within 250 feet of the site.*
    - b. *A fully dimensional site map, drawn to scale, showing all existing structures, proposed structures, and phasing lines.*
    - c. *A site survey map showing the following features of the development area within 50 feet of the site is required:*
      - i. *Roads.*
      - ii. *Pedestrian and bicycle ways.*
      - iii. *Utility access.*
      - iv. *Easements (recorded or unrecorded).*
      - v. *Fences.*
      - vi. *Any features which cross property boundaries.*
    - d. *Depict the natural hazard areas, including potential flood or high groundwater; landslides; erosion, drainageways, and weak foundation soils; all seasonal and perennial streams, creeks, or rivers; marshes or wetland areas; underground springs; wildlife habitat areas; wooded areas; and surface features such as earth mounds and large rock outcroppings.*
    - e. *Show drainage patterns of the site and adjacent lands for a minimum distance of 250 feet around the perimeter of the site.*
    - f. *Wetlands shall be delineated by a scientist following established State of Oregon procedures, as administered by the Oregon Division of State Lands.*
    - g. *A contour map based upon an actual field survey. The map shall be at two-foot intervals and delineated by a licensed surveyor if the site is mapped on the Title 3 Water Quality and Flood Management Area Map, has slopes in excess of 25%, or is on the Flood Insurance Rate Map. All other sites may be mapped at five or ten foot intervals. The contour map shall include a delineation of the vegetation corridor and slopes based upon sections 4.316, Width of Vegetation Corridor, and 4.317, Method for Determining Vegetation Corridors Next to Primary Protected Water Features, of this code.*
    - h. *The location of trees over six inches in caliper diameter as measured at 4½ feet from the ground; wooded areas, significant clumps or groves of trees; and specimen conifers, oaks, and other large deciduous trees.*

- i. *In order to establish the pre-development vegetation coverings on sites mapped on the Metro Title 3 Water Quality Resource Areas and Flood Management Overlay District Map, submit either a complete vegetation inventory of the site or a current aerial photograph of the site if the site is mapped on the Title 3 map.*
- j. *A hydrology and soils report, for any site subject to review under chapters 4.300, Vegetation Corridor and Slope District, and 4.600, Flood Management Area, of this code.*
- k. *A traffic impact analysis when required pursuant to Section 2.150 of this code. [Adopted by Ord. No. 819, ef. 4/11/2014]*
- 4. *Site plan. The site plan is to show how the site will look after development. The site plan is not the construction plans, which will be submitted following site and design review or conditional use approvals, but may contain some of the elements of a construction plan. Structural calculations for buildings are not reviewed at this stage. The site plan shall be fully dimensional, drawn to scale, and include the following:*
  - a. *The footprint of existing and new buildings, the layout of the parking lot and loading areas, and the points of ingress and egress.*
  - b. *Boundary lines and dimensions for the property and all proposed lot lines. Future building in phased developments shall be indicated.*
  - c. *A map key and identification information, including names and addresses of project designers.*
  - d. *Natural features which will be utilized as part of the required landscaping.*
  - e. *Location, dimensions, and names of all existing or platted streets or other public ways, easements, railroad right-of-ways, on or adjacent to the property.*
  - f. *The location of at least one protected temporary benchmark, the nearest survey pin of record, and spot elevations when needed.*
  - g. *Location and dimensions of all existing structures, improvements, or utilities, noting structures to be removed.*
  - h. *Community resources.*
  - i. *Approximate location and size of stormwater retention or detention facilities and storm drains.*
  - j. *Location, exterior dimensions, and calculations of square footage of the footprint of all proposed structures and impervious surfaces.*
  - k. *Relation to transit, location and dimension of parking and loading areas, pedestrian and bicycle circulation, and related accessways. Individual parking spaces shall be shown.*
  - l. *Orientation of structures showing windows and doors, entrances and exits.*
  - m. *Outdoor lighting. The fixtures shall be constructed or fully shielded in such a manner that all light emitted by the luminaire, either directly from the lamp or indirectly from the luminaire, is projected below the horizontal plane through the luminaire's lowest light emitting part. The fixtures shall also comply with the requirements of Troutdale Municipal Code, Chapter 8.26, Outdoor Lighting.*
  - n. *Service areas for waste disposal, recycling, loading, and delivery.*
  - o. *Location of mailboxes.*
- 5. *Grading plan. A preliminary grading plan indicating where, and to what extent, grading will take place, including general contour lines, slope ratios, slope stabilization proposals, and natural resource protection proposals consistent with the natural resource protection section of this ordinance.*
- 6. *Architectural drawings.*

- a. *Building elevations.*
- b. *Building materials: color and type.*
- 7. *Landscape plan. The landscape plan shall be at the same scale as the site plan. All identification information required on the site plan shall be shown on the landscaping and open space plan. It shall show:*
  - a. *Property and lot boundaries, and right-of-ways.*
  - b. *Structures and impervious surfaces, including parking lots.*
  - c. *General landscape development plan, including plant specifications keyed to Plan Map and including botanical names, common names, sizes, numbers, methods of planting and maintenance, the location of existing plants, and groups of plants proposed.*
  - d. *Description of soil conditions and plans for soil treatment such as stockpiling of topsoil, addition of soil amendments, and plant selection requirements relating to soil conditions.*
  - e. *Erosion control, including plant materials and soil stabilization, if any.*
  - f. *Details of automatic irrigation system.*
  - g. *Landscape-related structures such as fences, terraces, decks, patios, shelters, play areas, etc.*
  - h. *Boundaries of open space, recreation, or reserved areas.*
  - i. *Location of pedestrian or bikeway circulation.*
- 8. *Signs.*
  - a. *Freestanding signs:*
    - i. *Location of sign on site plan.*
    - ii. *Elevation of sign (indicate size, total height, height between bottom of sign and ground, color, materials, and means or illumination).*
  - b. *Wall or projecting signs:*
    - i. *Building elevation with location of sign (indicate size, color, materials, and means of illumination).*
    - ii. *Plot plan showing location of sign on building in relation to adjoining property. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 653, ef. 9/12/97; Amended by Ord. 702, ef. 11/24/00; Amended by Ord. 716, ef. 5/9/02]*

**Response:** The appropriate documents required for this application have been included in this submittal.

**8.052 Pedestrian Walkways.** All industrial parks, commercial developments, and community service uses shall meet the following requirements for pedestrian walkways:

- A. *Number and Placement:*
  - 1. *At least one pedestrian walkway shall be provided to each street, other than limited access freeways, abutting the property.*
  - 2. *Pedestrian walkways shall connect building entrances to one another, to public street entrances, and to existing or planned transit stops.*
  - 3. *Where practicable, on-site walkways shall connect with walkways, sidewalks, bike paths, alleyways, and other bicycle or pedestrian connections on adjacent properties used as, or planned for, industrial parks, commercial, multiple-family, or community service uses.*

4. *Where practicable, pedestrian walkways and driveways shall provide a direct connection to walkways and driveways on abutting developments.*
  5. *A required walkway or walkway connection need not be provided where another required sidewalk or walkway route provides a reasonably direct alternate route. An alternate route is reasonably direct if the walking distance increases by less than 50%, but not more than 100 feet, over the other required route.*
  6. *Pedestrian walkways are required between those parts of a site that people on the site normally would walk between. Walkways are not required between buildings or portions of a site which are not intended for, or likely to be used by, pedestrians. Such buildings and features include truck loading docks, warehouses not including office/warehouse combinations, automobile sales lots, temporary uses, outdoor storage areas, etc.*
- B. Routing.**
1. *Pedestrian walkways shall be as direct as possible and avoid unnecessary meandering unless integrated into an overall site design which necessitates meandering.*
  2. *Driveway crossings shall be minimized. Internal parking lot circulation and design shall maintain ease of access for pedestrians from streets and transit stops.*
  3. *The on-site pedestrian circulation system shall connect adjacent streets to the main entrance of the primary structure on the site in the most direct route possible.*
- C. Design.**
1. *Pedestrian walkways shall be at least five feet in unobstructed width and shall be constructed to sidewalk standards as found in City of Troutdale Construction Standards for Public Works Facilities or according to Multnomah County or ODOT standards as applicable, except for portions of walkways in driveways and other vehicle maneuvering areas which shall be paved with a material different in color, texture, or composition than the surrounding driveway, or striped to city specifications. [Amended by Ord. 819, ef. 4/11/2014]*
  2. *Walkways bordering perpendicular or angular parking spaces shall be at least eight feet wide unless concrete bumpers, bollards, curbing and landscaping, or other similar improvements are provided which prevent parked vehicles from overhanging and obstructing the walkway. [Amended by Ord. 819, ef. 4/11/2014]*
  3. *In parking lots three acres and larger intended for use by the general public, the walkway shall be raised or separated from parking, parking aisles and travel lanes by a raised curb, concrete bumpers, bollards, landscaping or other physical barrier. If a raised walkway is used, curb ramps shall be provided in accordance with the Americans with Disabilities Act Accessibility Guidelines. [Adopted by Ord. 819, ef. 4/11/2014]*
  4. *Stairs or ramps shall be provided where necessary to provide a direct route. Walkways without stairs shall have a maximum slope of eight percent and a maximum cross slope of two percent.*
- D. ADA Compliance.** *The Americans with Disabilities Act (ADA) contains different and stricter standards for some walkways. For example, the maximum slope for walkways subject to ADA is five percent. Walkways up to eight percent slope are treated as ramps with special standards for railings and landings. The ADA applies primarily to the walkway which is the principal building entrance and walkways that connect transit stops to building entrances. Where ADA applies to a walkway, the stricter standards of ADA should apply. [Adopted by Ord. 622, ef. 4/13/95]*

**Response:** The site and its pedestrian walkways exist. No changes which would negatively impact this exiting system are proposed in this application.

8.054 Accessways. Any Type II land division where further divisions are possible, Type III land divisions, industrial, commercial, and planned developments along existing and identified future transit routes shall meet the following requirements for accessways:

- A. *Pedestrian Accessways to Adjacent Development*. Potential pedestrian accessways connecting a proposed development to existing or future development on adjacent properties other than connections via the street system shall be identified. The development application shall designate these connections on the proposed site plan.
- B. *Requirements*. Accessways shall be provided in the following situations unless the city determines on the basis of physical constraints, logical development patterns, and similar factors that construction of a separate accessway is infeasible or inappropriate:
  - 1. When an accessway would reduce walking or cycling distance to an existing or planned transit stop, school, commercial or industrial development, or park by 300 feet and by at least 50% over the other available pedestrian routes and a street connection is not feasible. Other available pedestrian routes include sidewalks and walkways, including walkways within commercial centers, planned developments, and industrial parks. Routes may be across parking lots on adjoining properties if the route is open to public pedestrian use, hard surfaced, and unobstructed, e.g., not through landscaped areas unless step stones are provided.
  - 2. For cul-de-sacs and dead end streets where a street connection is determined to be infeasible or inappropriate.
  - 3. For residential and mixed-use developments, bicycle and pedestrian connections shall be provided on public easements or right-of-ways when full street connections are not possible, with spacing of no more than 330 feet as measured from the near side right-of-way or easement line, except where prevented by topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers.
- C. *Routing*. Accessways shall be located to provide a reasonably direct connection between likely pedestrian destinations. A reasonably direct connection is a route which minimizes out of direction travel for most of the people likely to use the accessway considering terrain, safety, and likely destinations.
- D. *Design*.
  - 1. Accessways shall include at least a 15-foot wide right-of-way and a ten-foot wide usable surface.
  - 2. Accessways shall be as short as possible, and where possible, straight enough to allow one end of the accessway to be seen from the other.
  - 3. Where possible, accessways shall connect to street intersection corners. Mid-block accessway openings shall be avoided.
  - 4. Stairways shall be at least five feet wide and constructed to current building code specifications.
  - 5. Accessways shall be lighted either by streetlights on adjacent streets or pedestrian scale lighting along the accessway. Lighting shall comply with the requirements of Troutdale Municipal Code, Chapter 8.26, Outdoor Lighting.
  - 6. Bollards or similar devices shall be installed at entry points to prevent vehicles from traveling upon accessways.
- E. *Fencing*. Fences along accessways shall conform with section 5.050, Fences and Windscreens, of this code. Landscaping along the accessway shall not exceed 50% opacity at maturity. [Adopted by Ord. 622, ef. 4/13/95; Amended by Ord. 690, ef. 7/27/00; Amended by Ord. 716, ef. 5/9/02]

Response: The site and its pedestrian accessways exist. No changes which would negatively impact this exiting system are proposed in this application.

8.056 *Transit Facility Design.* Any Type II land divisions where further divisions are possible, and all Type III land divisions, multiple-family developments, community services uses, and commercial or industrial uses located on an existing or future transit route shall meet the requirements of Tri-Met for transit facilities. Applicants shall consult with Tri-Met to determine necessary transit facility improvements in conjunction with the proposed development. Proposals shall be consistent with the road crossing improvements that are identified in the City Transportation System Plan on streets with existing or planned transit service. [Adopted by Ord. 622, ef. 4/13/95; Amended by Ord. No. 819, ef. 4/11/2014]

Response: This site and its development exists. It is not located on a Tri-Met transit route.

8.058 *Building Orientation.* All commercial and community service uses, and any industrial use with 50 or more employees, located on parcels within 600 feet of existing or planned transit routes shall meet the following requirements:

A. *Building Entrances.*

1. Where practicable, buildings shall be oriented on the property in a transit friendly manner. At least one building entrance shall be oriented toward the transit street and shall be accessed from a public sidewalk. Public sidewalks shall be provided adjacent to public streets along the street frontage.
2. Buildings within 30 feet of the transit street shall have an entrance for pedestrians directly from the street to the building interior. This entrance shall be designed to be attractive and functional, and shall be open to the public during all business hours.
3. All uses in commercial zones must provide a public entrance on the façade of a building nearest to, and facing, a transit street or route. If the lot has frontage on more than one transit street, the building need only have one entrance oriented to a transit street, or to the corner where two transit streets intersect.

B. *Setbacks.*

1. Buildings shall be setback no more than 50 feet from a transit street, except that when a building is adjacent to a transit street that has a major transit stop within 500 feet of the building entrance, the building shall be setback no more than 20 feet from the transit street. Where the site is adjacent to more than one transit street, a building is required to meet the maximum setback standard on only one of the streets. [Amended by Ord. 819, ef. 4/11/2014]

Response: This development and its buildings and building entrances exist.

The existing and proposed entrances are oriented toward the existing public street system though current building location does not allow direct access to a public sidewalk.

The proposed improvements do not involve any building located within 30 feet of a transit street.

The buildings and their setbacks exist and were approved by a previous Land Use applications. No changes are proposed in this application.

8.059 Utility Undergrounding. Development subject to site and design review shall be required to install underground utilities including, but not limited to, natural gas, electric power, telecommunications facilities to serve the development and to convert existing overhead utilities to underground in accordance with Chapter 12.11 of the Troutdale Municipal Code. [Adopted by Ord. 792, ef. 9/25/08]

Response: All on site utilities exist and are located underground. No new utility facilities are proposed in this application.

8.060 Maintenance. All approved on-site improvements shall be the ongoing responsibility of the property owner or occupant. The owner, occupant, or agent shall be jointly and severally responsible for the maintenance of all landscaping which shall be maintained in good condition so as to present a healthy, neat, and orderly appearance, and shall be kept free of refuse and debris. All on-site improvements shall be controlled by maintaining, pruning, trimming, or otherwise so that:

- A. It will not interfere with the maintenance or repair of any public facility;
  - B. It will not restrict pedestrian or vehicular access; and
  - C. It will not constitute a traffic hazard because of reduced visibility. [Adopted by Ord. 550, ef. 9/25/90] 8.070 Compliance.
- A. The development site shall be checked by the staff to ensure compliance with final approved plans prior to issuance of an occupancy permit.
  - B. The development must be completed as per the approved final plans including landscaping and recreation areas before the occupancy permit is issued.
  - C. It shall be the duty of the Director to enforce these regulations, and to assure that conditions of final development approval are carried out. [Adopted by Ord. 550, ef. 9/25/90]

Response: The applicant/owner wishes to maintain an attractive and enjoyable environment for tenants and customers and therefore understands that, as the owner, they are responsible for the regular maintenance of all landscaping and keeping it in good health and free of debris and refuse.

## CHAPTER 9 - OFF-STREET PARKING AND LOADING

9.000 Off-Street Parking Required. Off-street parking and loading space shall be provided for all developments. For purposes of this chapter, in computing the total number of required off street parking spaces, if the total contains a fraction, then the number shall be rounded up to the next higher whole number. The provision for, and maintenance of, off-street parking and loading facilities shall be a continuing obligation of the property owner. No building permit, or any other required permit for a structure or use under this or any other applicable rule, ordinance, or regulation, shall be issued with respect to off-street parking and loading, or land served by such facilities, until satisfactory evidence is presented that the property is, and will remain, available for the designated use as a parking or loading facility. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 664, ef. 8/13/98]

9.010 Residential Off-Street Parking Space Requirements. The minimum and maximum offstreet parking space requirements are as follows:

Response: The development exists and is not a residential use.

9.020 *Commercial Off-Street Parking Space Requirements.* The minimum and maximum offstreet parking space requirements are as follows:

Type of Use	Minimum	Maximum
General retail or personal service, including shopping centers and grocery stores	4.1 spaces per 1,000 square feet of gross floor area	6.2 spaces per 1,000 square feet of gross floor area
General retail with bulky merchandise, such as a furniture/appliance store	Two spaces per 1,000 square feet of gross floor area	Three spaces per 1,000 square feet of gross floor area
Auto, boat, or trailer sales, or nursery	One space per 1,000 square feet of gross floor area	Two spaces per 1,000 square feet of gross floor area
General, professional, or banking office	2.7 spaces per 1,000 square feet of gross floor area	4.1 spaces per 1,000 square feet of gross floor area
Banking office with drive-up window	4.3 spaces per 1,000 square feet of gross floor area	6.5 spaces per 1,000 square feet of gross floor area
Medical or dental office, or clinic	3.9 spaces per 1,000 square feet of gross floor area	5.9 spaces per 1,000 square feet of gross floor area
Eating or drinking establishment	Ten spaces per 1,000 square feet of gross floor area	19.1 spaces per 1,000 square feet of gross floor area
Eating or drinking establishment with drive-up window	Eight spaces per 1,000 square feet of gross floor area	12.4 spaces per 1,000 square feet of gross floor area
Theater, racetrack, stadium, or similar use	One space per four seats or eight-foot bench length	1.5 spaces per four seats or eight-foot bench length
Bowling alley	Two spaces per lane	Three spaces per lane
Sports club/recreation facilities, including health club, gymnasium, skating rink, or dance hall	4.3 spaces per 1,000 square feet of gross floor area	6.5 spaces per 1,000 square feet of gross floor area
Amusement park	One space per 100 square feet of recreation area	1.5 spaces per 100 square feet of recreation area
Service station	0.5 space per 1,000 square feet of gross lot area	One space per 1,000 square feet of gross lot area

[Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 664, ef. 8/13/98]

Response: The development exists as a commercial use and contains mixed and varied uses. The proposed conditional use is Institutional (Education) and will be addressed below. Please refer to the site plan drawing on Sheet G-003 for existing and proposed uses which include:

Eating or Drinking Establishment with Drive up Window - Approximately 6,833 S.F.

Minimum Required: 8 spaces : 1000 S.F. = 55 Spaces

Maximum Allowed: 12.4 spaces : 1000 S.F. = 85 Spaces

Banking Office with Drive up Window - Approximately 4,000 S.F.

Minimum Required: 4.3 spaces : 1000 S.F. = 17 Spaces

Maximum Allowed: 6.5 spaces : 1000 S.F. = 26 Spaces

General Retail / Personal Service (Shopping Centers) - Approximately 66,069 S.F.

Minimum Required: 4.3 spaces : 1000 S.F. = 271 Spaces

Maximum Allowed: 6.5 spaces : 1000 S.F. = 429 Spaces

9.030 *Institutional, Public, and Semi-Public Uses Off-Street Parking Space Requirements. The minimum and maximum off-street parking space requirements are as follows:*

Type of Use	Minimum	Maximum
Child care center or kindergarten	One space per two employees, plus one space per five children	1.5 spaces per two employees, plus two spaces per five children
School: elementary, junior high, or middle school	Two spaces per teacher	Three spaces per teacher
School: high or college, university, or trade school	0.2 space per number of students and staff	0.3 space per number of students and staff
Library or museum	2.5 spaces per 1,000 square feet of gross floor area, plus one space per two employees	Three spaces per 1,000 square feet of gross floor area, plus 1.25 spaces per two employees
Church, chapel, mortuary, or auditorium	One space per four seats or seven feet of bench length	Two spaces per four seats or seven feet of bench length
Nursing or convalescent home	0.5 space per bed for patients and residents	One space per bed for patients and residents
Congregate housing facility	One space per three residents	1.5 spaces per three residents
Hospital	1.5 spaces per bed	Two spaces per bed
Golf course	Six spaces per hole	Eight spaces per hole

[Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 664, ef. 8/13/98]

Response: The development exists as a commercial use and contains mixed and varied uses. The proposed conditional use is Institutional (Education). Please refer to the site plan drawing on Sheet G-003 for existing and proposed uses which include:

School (Middle School) - Approximately 6,833 S.F. - 10 Teachers + 20 Volunteers = 30

Minimum Required: 2 spaces : 1 Teacher = 60 Spaces

Maximum Allowed: 3 spaces : 1 Teacher = 90 Spaces

Combined with the previously calculated Commercial Use parking requirements the total number of parking stalls required is 403.

9.040 Industrial Off-Street Parking Space Requirements. The minimum and maximum off-street parking space requirements are as follows:

Response: The development exists and is not an industrial use.

9.045 Off-Street Parking within the Town Center Overlay District.

Response: This project is not located in the Town Center Overlay District.

9.050 Other Developments Not Listed. Requirements for a building or development not specifically listed herein shall be determined based upon the requirements of comparable uses listed. The Director may refer any question of interpretation to the Planning Commission for determination. [Adopted by Ord. 550, ef. 9/25/90]

9.055 Reduction of Required Parking Spaces.

- A. Any existing or proposed use subject to minimum off-street parking requirements and located within 400 feet of an existing transit route may reduce the number of required parking spaces by up to ten percent by providing a transit stop and related amenities including a public plaza, pedestrian sitting areas, or additional landscaping, provided such landscaping does not exceed 25% of the total area dedicated for transit-oriented uses.
- B. Required parking spaces may be reduced at a ratio of one parking space for each 100 square feet of transit amenity space provided above and beyond the minimum required by this code.
- C. Required off-street parking spaces may be reduced by one parking space for every on-street parallel parking space located adjacent to the subject site. For purposes of calculating the amount of adjacent on-street parking spaces, the following applies: [Adopted by Ord. No. 819, ef. 4/11/2014]
  - 1. Adjacent shall mean on the same side as the use.
  - 2. The minimum length of each on-street, parallel parking space shall be 22 feet.
  - 3. If a continuous section being measured contains a fractional portion of 22 feet, then the number of on-street spaces for that continuous section shall be rounded down to the next lower whole number.
  - 4. Breaks in the on-street parking for driveways or similar parking restrictions, such as fire hydrants, shall not be counted.

- D. *Uses which are not eligible for these reductions include truck stops, building materials and lumber sales, nurseries, and similar uses not likely to be visited by pedestrians or transit customers. [Adopted by Ord. 622, ef. 4/13/95] [Renumbered by Ord. 819, ef. 4/11/2014]*

**Response: The site is existing and does not qualify for any of the above listed reductions in parking.**

**9.060 Landscaping and Screening.**

- A. *Except for a residential development which has landscaped yards, parking facilities shall include landscaping to cover not less than ten percent of the area devoted to parking facilities. The landscaping shall be uniformly distributed throughout the parking area and may consist of trees, shrubs, or groundcover.*
- B. *Parking areas shall be divided into bays of not more than 20 parking spaces in parking areas with 20 or more spaces. Between, and at the end of each parking bay, there shall be planters which have a minimum width of five feet and be at least 17 feet in length. Each planter shall contain one major structural tree and groundcover which has been deemed appropriate by the Director. Truck parking and loading areas are exempt from this requirement.*
- C. *Parking area setbacks shall be landscaped with major trees, shrubs, and groundcover as specified in Chapter 8, Site Orientation and Design Standards, of this code.*
- D. *Wheel stops, bumper guards, or other methods to protect landscaped areas shall be provided. No vehicles may project over a property line. No vehicle shall overhang a public right-of-way, sidewalk, or landscaped area unless adequate area is provided for safe pedestrian circulation.*
- E. *Fences, walls, or hedges shall not be placed within front or street side setback areas except at the street side edge of parking lots when allowed within setbacks.*
- F. *Where parking adjoins a residential zoning district, there shall be a sight-obscuring screen which is at least 80% opaque when viewed horizontally from between two and eight feet above average ground level. The screening shall be composed of materials which are an adequate size so as to achieve the required degree of screening within three years after installation. [Adopted by Ord. 550, ef. 9/25/90]*

**Response: The site, development, and its parking, and landscaping and screening exist and is compliant with this section as required.**

**For more information please refer to the site plan drawings on sheet G-002 and G-003 included in this application.**

**No changes that would negatively impact the existing systems are proposed in this application.**

**9.070 Paving.**

- A. *Parking areas, driveways, aisles, and turnarounds shall be paved with concrete, asphalt, or comparable impervious surfacing. Porous concrete, grasscrete, or comparable porous paving surfacing may be used in place of impervious surfacing to reduce stormwater runoff, when approved by the director. Gravel and similar erodable surfaces are not acceptable.*
- B. *Approaches shall be paved with concrete surfacing constructed to City standards. If a street is not paved, the approach may be maintained to the same standard as the street until the street is paved.*

- C. *Temporary overflow parking in conjunction with community events, special events, events of citywide interest, or sporting events, as such events are defined in section 10.015 of this code, is allowed on an unpaved parking area on a parcel of at least one half acre in size, provided such parking does not occur within the Vegetation Corridor and Slope District. If a fee is charged for parking, it shall not be considered a commercial parking lot for purposes of zoning compliance. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 731, ef. 6/26/03; Amended by Ord. 781, ef. 10/12/06]*

Response: The site, development, and its parking exist and is compliant with this section as required. For more information please refer to the site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

No temporary or overflow parking exists on the site nor is any proposed in this application.

- 9.080 Drainage. *Parking areas, aisles, and turnarounds shall have provisions made for the on-site collection of drainage waters to eliminate sheet flow of such waters onto sidewalks, public right-of-ways, and abutting private property. [Adopted by Ord. 550, ef. 9/25/90]*

Response: The site parking area surface stormwater drainage systems exist and are compliant with this section as required.

This application proposes the revision of an existing surface drain in the shallow portion of the existing loading dock on the South side of Building 100. AS this dock ramp is to be filled in the surface drain is to be removed and relocated at the elevation of the new concrete surface. For more information please refer to the site plan drawings on sheet G-002 and G-003 and the Civil drawings included in this application.

No other changes that would negatively impact the existing systems are proposed in this application.

- 9.090 Lighting. *Artificial lighting shall be provided in all required off-street parking areas. Lighting shall be deflected so as not to shine directly into adjoining dwellings or other types of living units and so as not to create a hazard to the public use of a street. Lighting shall be provided in a bicycle parking area so that all facilities are thoroughly illuminated and visible from adjacent sidewalks or motor vehicle parking lots during all hours of use. Lighting fixtures shall also comply with the requirements of Troutdale Municipal Code, Chapter 8.26, Outdoor Lighting. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 622, ef. 4/13/95; Amended by Ord. 716, ef. 5/9/02]*

Response: The site and its parking area lighting exist and is compliant with the above criteria with the exception of the existing wall mounted fixtures located on the South wall of Building 100.

The current fixtures which provide illumination for the adjacent drive aisle do not provide adequate lighting levels. Additionally, they do not have a provision to reduce or eliminate the potential for glare on to the adjacent residential properties. This application proposes the removal of these fixtures and their replacement with new LED fixtures that can be angled back toward the face of the building. The new fixtures will improve the lighting levels and increase safety in the area while reducing the visibility of the light source from adjacent properties.

In addition two new fixtures will be added to the South side of the 10'-0" high screening wall at the existing loading area behind Building 300. These fixtures will improve lighting levels and safety in the adjacent drive aisle and will match in appearance and function the existing fixtures along the East and South sides of Building 300. These existing fixtures employ cut-off shields to reduce glare.

For more information please refer to the Architectural and Lighting drawings as well as fixture cut sheets included in this application.

No other changes that would negatively impact the existing systems are proposed in this application.

9.100 Shared Use of Parking Facilities.

- A. *Except for residential uses, required parking facilities may be located on an adjacent parcel of land or separated only by an alley, provided the adjacent parcel is maintained in the same ownership as the use it is required to serve.*
- B. *In the event that several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements for the several uses computed separately with a reduction of up to 25% to account for shared parking between adjacent businesses and services.*
- C. *Required parking facilities of two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that it can be shown by the owners or operators that the need for the facilities does not materially overlap (e.g., uses primarily of a daytime vs. nighttime nature) and provided that such right of joint use is evidenced by a deed, lease, contract, or similar written instrument establishing such joint use. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 664, ef. 8/13/98]*

**Response:** This is an existing retail shopping center development and as such the existing development has several uses occupying a few building on the same site and sharing parking facilities therefore the development is eligible for the 25% reduction in total number of parking stalls.

The number of stalls required (see above calculations) is 403 less the 25% reduction = 302 parking spaces. There are existing 365 total parking spaces on site so the standard is met.

9.110 Driveways.

- A. *A driveway to an off-street parking area shall be improved from the public roadway to the parking area a minimum width of 20 feet for a two-way drive or 12 feet for a one-way drive, but in either case not less than the full width of the approach for the first 20 feet of the driveway. The improvement shall be constructed to the standards for private drives.*
- B. *A driveway for a single-family or two-family dwelling shall have a minimum width of ten feet.*
- C. *Driveways, aisles, turnaround areas, and ramps shall have a minimum vertical clearance of 12 feet for their entire length and width, but such clearance may be reduced in parking structures. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 622, ef. 4/13/95]*
- D. *Parking lots more than three acres in size intended for use by the general public shall provide street-like features along driveways, including curbs, sidewalks, street trees or planting strips, and bicycle routes. [Adopted by Ord. 819, ef. 4/11/14]*

Response: The site, development, and driveways to the off-street parking areas exist and are compliant with this section as required. For more information please refer to the site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

9.120 On-Site Circulation.

- A. Groups of more than three parking spaces shall be permanently marked.
- B. Except for a single-family or two-family dwelling, groups of more than three parking spaces shall be provided with adequate aisles or turnaround areas so that all vehicles may enter the street in a forward manner. No backing movements or other maneuvering shall be permitted within a street right-of-way other than an alley. [Adopted by Ord. 550, ef. 9/25/90]
- C. Pedestrian walkways, separation, and differentiation of materials in parking lots three acres or larger intended for public use shall be provided pursuant to section 8.052 of this code. [Adopted by Ord. 819, ef. 4/11/2014]

Response: The site, development, and its on-site vehicular and pedestrian circulation exist and are compliant with this section as required. For more information please refer to the site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

9.130 Public Transit Facilities. [Adopted by Ord. 550, ef. 9/25/90; Repealed by Ord. 622, ef. 4/13/95]

Response: This development is not a Public Transit Facility.

9.130 Bicycle Parking Facilities. Multiple-family developments; industrial, commercial and community service uses; transit transfer stations; and park and ride lots; shall meet the following standards for bicycle parking facilities:

- A. Number/Type. [Amended by Ord. 819, ef. 4/11/2014]
  - 1. The required minimum number of short-term bicycle parking spaces (stays of less than four hours) shall be five percent of the total number of automobile parking spaces provided for the use. In no case shall less than one bicycle parking space be provided even when no automobile parking spaces are being provided.
  - 2. The required number of long-term bicycle parking spaces (stays of more than four hours and all-day/monthly) shall be three percent of the total number of vehicle parking spaces provided for the use and fractions rounded down.
  - 3. For transit centers, high capacity transit stations, inter-city bus and rail stations, and park-and-ride lots, at least eight long-term and at least two short-term bicycle parking spaces are required. For other major transit stops (frequent-service bus stops) at least two short-term spaces are required.

Response: The site, development, and its bicycle parking facilities exist.

Based on the required number of 302 vehicle parking spaces the number of short term bicycle parking spaces is:  $302 \times 0.05 = 15$

Based on the required number of 302 vehicle parking spaces the number of long term bicycle parking spaces is:  $302 \times 0.03 = 9$

The existing number of bicycle parking spaces on site is 26 with 15 considered short-term and 11 considered long-term.

*B. Location.*

- 1. Bicycle parking shall be located on-site, convenient to building entrances, and have direct access to both the public right-of-way and to the main entrance of the principal use.*
- 2. For facilities with multiple buildings or parking lots, bicycle parking shall be located in areas of greatest use and convenience to bicyclists.*
- 3. Bicycle parking may be provided within the public right-of-way in areas without building setbacks, subject to approval of the appropriate governing official and provided it meets the other bicycle parking requirements.*

Response: The site, development, and its bicycle parking facilities exist.

The bicycle parking is adequately spread throughout the multiple buildings on site and conveniently located adjacent to entrances.

No changes to the existing bicycle parking facilities are proposed in this application.

- C. Parking Space Dimensions. Each required bicycle parking space shall be at least 2½'x6', and when covered, provide vertical clearance of at least seven feet. An access aisle of at least five feet wide shall be provided and maintained beside or between each row of bicycle parking. Vertical or upright bicycle storage structures are exempted from the parking space length standard.*
- D. Parking Facilities. Bicycle parking facilities shall offer security. Long-term bicycle parking shall be in the form of a lockable enclosure, a designated bicycle storage area inside a building on-site, a covered rack, or another form of secure parking where the bicycle can be stored, as approved by the Director. Short-term bicycle parking shall be in the form of a stationary object (i.e., a "rack") or other approved structure, covered or uncovered, to which the bicycle can be locked. Bicycle racks shall be securely anchored to the ground or to a structure and shall be designed to hold bicycles securely by means of the frame. Bicycle parking facilities shall be constructed so as to not obstruct walkways. [Amended by Ord. 819, ef. 4/11/2014]*
- E. Signing. Where bicycle parking facilities are not directly visible and obvious from the public right-of-way, entry and directional signs shall be provided to direct bicyclists from the public right-of-way to the bicycle parking facility.*
- F. Exemptions. Temporary street side sales and temporary uses, such as fireworks stands and Christmas tree sales, and single-family and two-family residences, are exempt from these standards. [Adopted by Ord. 622, ef. 4/13/95]*

Response: The site, development, and its bicycle parking facilities exist.

The bicycle parking is conforms to this code in dimension and vertical clearance.

All bicycle parking is in the form of racks securely anchored to the ground to which the bicycle can be locked to. Long term bicycle parking is protected from weather by its location under existing building overhangs.

All bicycle parking is located in areas easily identifiable so no direction signage is required.

For more information please refer to the site plan drawings on sheet G-002 and G-003 included in this application. No changes to the existing bicycle parking facilities are proposed in this application.

9.140 Setbacks.

- A. *Parking areas which abut a residential zoning district shall meet the building setback of the most restrictive adjoining residential zoning district.*
- B. *Required parking shall not be located in a required front or side yard setback area abutting a public street except in industrial districts. For single-family dwellings, required parking may be located in front of a garage.*
- C. *In industrial districts, when greater setbacks are required for structures, parking lots may be within 20 feet of any front, side street, or rear property line and within five feet of any side property line. Screening shall be maintained to obscure all parking from the property lines.*
- D. *Parking areas shall be set back from a lot line adjoining a street the same distance as required building setbacks. Regardless of other provisions, a minimum setback of ten feet shall be provided along the property fronting on a public street in an industrial district. The setback area shall be landscaped as provided in this code. [Adopted by Ord. 550, ef. 9/25/90]*

Response: The site, development, and its parking areas exist and is compliant with the setbacks as required in this section. For more information please refer to the site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

9.150 Truck Parking. *In residential zoning districts, no overnight parking of trucks or other equipment on wheels or tracks exceeding one-ton capacity used in the conduct of a business activity shall be permitted, except vehicles and equipment necessary for farming and truck gardening on the premises where such use is permitted. [Adopted by Ord. 550, ef. 9/25/90]*

Response: This development is not located in a Residential Zone.

9.160 Handicapped Parking Facilities. *The required number of handicapped parking spaces shall be in conformance with the State of Oregon Structural Specialty Code, Chapter 11 Accessibility. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 664, ef. 8/13/98]*

Response: This development and its Handicapped Parking Facilities exist and no changes that would negatively impact them are proposed in this application with the exception noted below.

According to State of Oregon Structural Specialty Code, Chapter 11 Accessibility, with 365 total number of parking stalls provided the site is required to have 8 accessible stalls with 2 of those designated "Wheelchair Use Only." The site currently has 12 accessible spaces. As

these spaces were established under a previous code, 2 of the existing stalls are labeled "Van Accessible Only." This application proposes relabeling of these stalls as "Wheelchair Use Only."

The two accessible stalls located on the West side of Building 100 have been found to be noncompliant due to the slope of the asphalt surface. In anticipation of the upcoming tenant improvement permit application for the proposed Charter Middle School adjacent to this parking area, this application proposes the relocation of these stalls to an area where the asphalt surface is code compliant. In addition a new sidewalk ramp will be provided to allow movement from the parking area onto the raised sidewalk adjacent to the building entrance.

For more information please refer to the Architectural site plan drawings on sheet G-002 and G-003 and Civil Drawings included in this application.

9.165 Carpool and Vanpool Parking. New industrial, commercial, and community service developments with 50 or more employees shall meet the following requirements for carpool and vanpool parking:

- A. *Number/Marking.* At least ten, but not less than one, percent of the employee parking spaces shall be marked and signed for use as a carpool/vanpool space. The carpool/vanpool spaces shall be clearly marked "Reserved - Carpool/Vanpool Only".
- B. *Location.* Designated carpool/vanpool spaces shall be the closest employee parking spaces to the building entrance normally used by employees except for any handicapped spaces provided. [Adopted by Ord. 622, ef. 4/13/95]

Response: This is an existing commercial development therefore it is not subject to the above requirements.

9.170 Off-Street Parking Restrictions.

- A. *Parking spaces in a public street, including an alley, shall not be considered required parking.*
- B. *Required parking shall be available for parking of operable passenger vehicles of residents, customers, and employees only, and shall not be used for the storage or display of vehicles or materials. [Adopted by Ord. 550, ef. 9/25/90]*

Response: This development and its off-street parking facilities exist. None of the required parking is used for the storage or display of vehicles or materials.

9.180 Design Requirements for Off-Street Parking. The following off-street parking development and maintenance shall apply in all cases:

- A. *Size.*
  - 1. *The standard size of a parking space shall be 9'x18' (162 s.f.).*
  - 2. *The compact size of a parking space shall be 8'x16' (128 s.f.). Up to 35% of required parking spaces may be compact spaces.*
  - 3. *Handicapped parking spaces shall be in conformance with the State of Oregon Structural Specialty Code, Chapter 11 Accessibility.*
  - 4. *For parallel parking, the length of the parking space shall be increased to 22 feet.*

- B. Aisles shall not be less than:
1. 25 feet in width for 90° parking.
  2. 20 feet in width for 60° parking.
  3. 20 feet in width for 45° parking.
  4. 12 feet in width for parallel parking on one side.
  5. 16 feet in width for parallel parking on both sides. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 664, ef. 8/13/98]

Response: The site, development, and its parking areas and drive aisles exist. For more information please refer to the architectural site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

9.190 Loading Facilities.

- A. The minimum area required for commercial and industrial loading spaces is as follows:
1. 250 square feet for buildings of 5,000 to 19,999 square feet of gross floor area.
  2. 500 square feet for buildings of 20,000 to 49,999 square feet of gross floor area.
  3. 750 square feet for buildings in excess of 50,000 square feet of gross floor area.
- B. The required loading area shall not be less than ten feet in width by 25 feet in length and shall have an unobstructed height of 14 feet.
- C. Loading areas shall be screened from public view, public streets, and adjacent properties.
- D. Required loading facilities shall be installed prior to final building inspection and shall be permanently maintained as a condition of use.
- E. A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading children shall be located on the site of a school having a capacity greater than 25 students. [Adopted by Ord. 550, ef. 9/25/90]
- F. Exceptions and Adjustments. Loading areas within a street right-of-way in the Central Business District may be approved when all of the following conditions are met:
1. Short in duration (i.e., less than one hour);
  2. Infrequent (less than three operations occur daily between 5:00 a.m. and 12:00 a.m. or all operations occur between 12:00 a.m. and 5:00 a.m. at a location that is not adjacent to a residential zone);
  3. Does not unreasonably obstruct traffic;
  4. Does not obstruct a primary emergency response route; and
  5. Is acceptable to the applicable roadway authority. [Amended by Ord. No. 819, ef. 4/11/2014]

Response: The site, development, and its loading facilities exist. For more information please refer to the architectural site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

9.200 Off-Street Parking Plan. A plan drawn to scale, indicating how the off-street parking and loading requirement is to be provided, shall accompany the application for a development permit. The plan shall show all those elements necessary to indicate that these requirements are being fulfilled, and shall include, but not be limited to:

- A. Delineation of individual parking spaces.
- B. Circulation area necessary to serve spaces.
- C. Access to streets, alleys, and properties to be served.
- D. Curb cuts.
- E. Dimensions, continuity, and substance of screening.
- F. Grading, drainage, surfacing, and subgrading details.
- G. Delineations of all structures or other obstacles to parking and circulation on the site.
- H. Specifications as to signs and bumper guards. [Adopted by Ord. 550, ef. 9/25/90]

Response: The site, development, it's off-street parking, and loading facilities exist. For more information please refer to the architectural site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

9.210 Off-Street Parking Construction. Required parking spaces shall be improved and available for use at the time of final building inspection. [Adopted by Ord. 550, ef. 9/25/90]

## CHAPTER 11 - LANDSCAPING AND SCREENING

11.010 Minimum Basic Improvements. These standards apply to developments other than single-family and attached two-family dwelling units.

- A. The minimum area of a site to be retained in landscaping shall be as follows:

ZONING DISTRICT OR USE		PERCENTAGE
A-2 - Apartment Residential		25%
MHP - Manufactured Home Park		25%
CBD - Central Business District		5%
MO/H - Mixed Office/Housing District	If residential use is provided	15%
	If no residential use is provided	5%
NC - Neighborhood Commercial		20%
CC - Community Commercial		15%
GC - General Commercial		15%
IP - Industrial Park		15%
LI - Light Industrial		15%
GI - General Industrial		10%

- B. *In the case of multiple-family residential development, usable recreation areas shall be provided for developments containing more than five dwelling units at the rate of 200 square feet per dwelling unit. Such areas shall be counted as part of the required landscaping. Examples include, but are not limited to, playgrounds, exercise trails, swimming pools, etc. Usable recreation areas shall be considered required landscaping.*
- C. *Except for portions allowed for parking, loading, or traffic maneuvering, a required setback area abutting a public street, and open area between the property line and the roadway in the public street, shall be landscaped. That portion of the landscaping within the street right-of-way shall not count as part of the lot area percentage to be landscaped.*
- D. *Site-obscuring shrubbery or a berm, wall, or fence shall be placed along a property line between residential, and industrial and commercial zones, and around unsightly areas such as a trash or equipment storage area, or an industrial or commercial activity.*
- E. *Landscaping shall be irrigated by an underground system. Attached two-family dwelling units are exempt.*
- F. *At least 75% of the required landscaped area shall be planted with a suitable combination of trees, shrubs, or evergreen groundcover.*
- G. *Plant Material:*
1. *Trees shall be species having an average mature spread of crown of greater than 15 feet and trunks which can be maintained in a clean condition with over five feet of clear wood. Trees having an average mature spread of crown less than 15 feet may be substituted by grouping the same so as to create the equivalent of a 15-foot crown spread.*
  2. *Trees shall be a minimum of seven feet in overall height or 1½ inches in caliper immediately after planting. Adjacent to any public right-of-way or easement, the following species shall be prohibited: poplar, willow, cottonwood, fruit trees, nut trees, and ailanthus. Selected conifers may be planted adjacent to public right-of-ways or easements if approved by the Director. See the City's list of recommended tree species.*
  3. *Shrubs shall be a minimum of one gallon in size or two feet in height when measured immediately after planting. Hedges, where required to screen and buffer off-street parking from adjoining properties, shall be planted with an evergreen specie maintained so as to form a continuous, solid, visual screen at time of planting.*
  4. *Vines for screening purposes shall be a minimum of one gallon in size or 30 inches in height immediately after planting and may be used in conjunction with fences, screens, or walls to meet physical barrier requirements as specified.*
  5. *Groundcovers used in lieu of turf, in whole or in part, shall be planted in such a manner as to provide complete coverage within one year.*
  6. *Turf areas shall be planted in species normally grown as permanent lawns in Troutdale. Acceptable varieties include improved perennial rye and fescues.*
  7. *The use of native plants throughout the site is encouraged if the site abuts vegetation corridors, steep slopes, wetlands, or floodplain. If native plants are used exclusively, a reduction of five percent of the minimum landscaping requirement will be authorized.*
  8. *Plants listed in the current Oregon Department of Fish & Wildlife Oregon Invasive Species Action Plan as invasive are prohibited. The list is available in the Community Development Department or on the State website.*
- H. *Landscaped areas may include architectural features or artificial groundcovers such as sculptures, benches, masonry or stone walls, fences, rock groupings, bark dust (medium coarse), decorative hard paving, and gravel areas, interspersed with planted areas. The exposed area developed with such features shall not exceed 25% of the required landscaped area. Artificial plants are prohibited in any required landscaped area.*

- I. Existing trees with a trunk diameter of six inches or greater shall be preserved except when removal is specifically authorized by the Site and Design Review Committee and/or the Planning Commission.
- J. The area of the vegetation corridor on a site being developed counts toward the required landscape area. [Adopted by Ord. 550, ef. 9/25/90; Amended by Ord. 639, ef. 2/23/96; Amended by Ord. 658, ef. 3/12/98; Repealed and re-amended by Ord. 661, ef. 7/23/98; Amended by Ord 814, ef. 7/12/2012]

Response: The site and its landscaping exist.

As it is located in a CC - Community Commercial Zone a minimum of 15 % of the total site area is required to be reserved for landscaping. The total site area is 426,006 S.F. therefore 63,901 S.F. of landscaping is required. There is currently 64,263 S.F. of landscaping on the site.

The existing landscaping represents a variety of trees, shrubs, and groundcover.

For more information please refer to the Architectural site plan drawings on sheet G-002 and G-003 included in this application. No changes that would reduce the existing amount of landscaping is proposed in this application.

11.015 Garbage and Recycling Container Enclosures. All enclosures used to contain garbage and recycling containers at multiple-family, commercial, industrial, or institutional developments must conform to the following minimum standards:

- A. Screening. All enclosures for garbage and recycling containers must be screened from public view. Screening shall consist of six-foot high walls constructed of any of the following materials:
  - 1. Cyclone fencing with slats.
  - 2. Wooden fencing.
  - 3. Concrete blocks.
  - 4. Materials other than the above-mentioned as approved on a case-by-case basis.
- B. Gates. Gates must meet the following requirements:
  - 1. Must have a latch or some type of device which will keep the gate shut after it is closed. The device can be above or below ground.
  - 2. Must have a mechanism to keep them open during trash removal. The device can be above or below ground.
  - 3. Wheels are not required; however, the hinge must be adequate to support the weight of the gate.
- C. Base Material/Flooring. The entire base dimension must meet the following requirements:
  - 1. Must be made out of concrete. Concrete shall have a nominal thickness of four inches. Exceptions to the base materials may be approved by the Director where warranted.
  - 2. Must be positively sloped to the drainage system. [Adopted by Ord. 770, ef. 2/23/06]

Response: The site and its garbage and recycling container enclosures exist.

They are constructed of 6'-0" high concrete masonry units with chain link fence gates with sight obscuring slats and a base material of concrete and therefore they are compliant with this code.

For more information please refer to the architectural site plan drawings on sheet G-002 and G-003 included in this application. No changes that would negatively impact the existing systems are proposed in this application.

11.020 Performance Bond or Security. If weather conditions or other circumstances beyond the control of the developer or owner make completion of the landscaping impossible, an extension of up to six months may be applied for by posting "security" equal to 125% of the cost of the landscaping with the City, assuring installation within six months. "Security" may consist of a performance bond payable to the City, cash, certified check, time certificates of deposit, assignment of a savings account, or other such assurance of access to funds necessary for completion as shall meet the approval of the City Attorney. Upon acceptance of the approved security, the owner may be allowed occupancy for a period of 180 days. If the installation of the landscaping improvement is not completed within 180 days, the City shall have access to the security to complete the installation and/or revoke occupancy. Upon completion of the installation, any portion of the remaining security minus administrative charges of 25% shall be returned to the owner. Costs in excess of posted security shall be assessed against the property, and the City shall thereupon have a valid lien against the property which will come due and payable. [Adopted by Ord. 550, ef. 9/25/90]

11.030 Guarantee. All landscape materials and workmanship shall be guaranteed by the installer and/or developer for a period of time not to exceed two years. This guarantee shall insure that all plant materials survive in good condition and shall guarantee replacement of dead or dying plant materials. [Adopted by Ord. 550, ef. 9/25/90]

### City of Troutdale Municipal Code Chapter 8.26 - OUTDOOR LIGHTING

8.26.020 - Conformance with applicable codes. All outdoor light fixtures shall be installed in conformance with the provisions of this chapter, the building code, the electrical code, and the sign code of the city. No provision of this chapter is intended to preempt applicable state codes.  
(Ord. 712 § 1, Exh. A (part), 2001)

Response: While the much of the lighting on site exists, all new proposed fixtures will be installed in accordance with the provisions of this chapter, the building code, the electrical code, and the sign code of the city.

8.26.025 - Approved materials and methods of construction or installation/operation. The provisions of this chapter are not intended to prevent the use of any design, material, or method of installation or operation not specifically prescribed by this chapter, provided any such alternative has been approved. The director may approve any such proposed alternative that provides an equivalent alternative design or operation of outdoor light fixtures that meet the purpose and intent of the regulations of this chapter.  
(Ord. 712 § 1, Exh. A (part), 2001)

8.26.030 - Requirements for installation of outdoor lighting. The installation of outdoor light fixtures shall be subject to the provisions of this ordinance, except as exempted herein. The only provisions applicable to street lights are those in Section 8.26.065.

(Ord. 712 § 1, Exh. A (part), 2001)

8.26.035 - Shielding. All nonexempt outdoor light fixtures, other than street lights, shall have shielding as set forth in Table A.

(Ord. 712 § 1, Exh. A (part), 2001)

**TABLE A  
SHIELDING REQUIREMENTS**

Lamp Type	Wattage									
	25	30	35	40	50	60	75	100	110 or more	
Low Pressure Sodium	Unshielded	Directed Shield								
High Pressure Sodium	Unshielded	Unshielded	Directed Shield							
Metal Halide	Unshielded	Unshielded	Directed Shield							
Fluorescent	Unshielded	Unshielded	Unshielded	Directed Shield						
Quartz Halogen	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Directed Shield				
Tungsten Halogen	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Directed Shield				
Mercury Vapor	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Directed Shield				
Incandescent	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Unshielded	Directed Shield

Notes:

1. Wattage ratings for lamp types will be for either a single lamp source or multiple lamp sources when installed in a cluster.
2. Lamp types not listed in the table may be approved for use by the director provided installation of these lamps and operation of the light fixture meets the purpose and intent of the regulations of this chapter.
3. Glass tubes filled with argon, neon or krypton do not require shielding.

Response: The site and much of its lighting exist.

All new proposed lighting will be shielded as required by this code as necessary.

8.26.040 - Height restriction.

- A. No outdoor light fixture shall exceed twenty-five feet in height.
- B. For commercial, industrial, or institutional developments abutting residentially zoned property, the maximum height of an outdoor light fixture located within fifty feet of any property line abutting the residential zone shall be fifteen feet.
- C. Outdoor light fixtures used to illuminate athletic fields, stadiums, race tracks and similar outdoor recreational facilities shall be exempt from the provisions of this section.  
(Ord. 712 § 1, Exh. A (part), 2001)

Response: The site and the majority of the development's lighting fixtures exist.

New fixtures proposed on the building elevations will not exceed 25'-0" in height. The new fixtures on the south side of the development adjacent to and within 50'-0" of the residential development will not exceed 15'-0" in mounting height.

For more information please refer to the architectural elevation drawings on sheet A-221 through A-224 included in this application.

8.26.045 - Maximum light level. For commercial, industrial, institutional or apartment residential developments abutting residentially zoned property, the light level emitted from outdoor light fixtures associated with the development shall not exceed one-half foot-candles measured at any point along a common property line between the development and the abutting residentially zoned property.

(Ord. 712 § 1, Exh. A (part), 2001)

Response: The site and the majority of the development's lighting fixtures exist.

Where new fixtures are proposed on the building elevations adjacent to the property lines abutting the residentially zoned properties to the South, the light output will not exceed 0.5 foot-candles as measured at the common property line.

For more information please refer to the architectural site plan drawings on sheets G-002 and G-003 as well as the Lighting Plan / Photometric Drawing included in this application.

8.26.050 - Submission of lighting plans and evidence of compliance for new development.

- A. All proposed development, other than a detached single-family dwelling, that includes outdoor light fixtures shall submit a lighting plan in compliance with this chapter as part of any required application for land use approval. The plan shall include, but is not limited to, the following, all or part of which may be in addition to the information required with the application for the land use approval:
  - 1. Plans showing the location on the premises of all outdoor light fixtures and the type of light fixtures, lamps, supports, reflectors and other devices that may be part of or related to any part of an outdoor light fixture.

2. *Descriptions of the light fixtures, lamps, supports, reflectors and other devices. The description may include, but is not limited to, catalog cuts by manufacturers and drawings.*
  3. *The wattage for each light fixture.*
  4. *A photometric report containing a numerical grid of light levels, measured in tenths of foot-candles, that the fixtures will produce on the ground. For developments subject to the maximum light levels of Section 8.26.045, the numerical grid shall include light level measurements at property lines abutting residentially zoned property.*
  5. *For light fixtures requiring direct shielding, photometric data, or similar data showing the angle of cut off or line of sight of the fixture's lamp in relation to the property's boundaries.*
- B. Additional Submission. The above required plans, descriptions and data shall be sufficiently complete to enable the director to readily determine compliance with the requirements of this chapter. If the director is unable to determine compliance with the requirements of this chapter from the plans, descriptions and data initially submitted by an applicant as required by this section, the director may require the applicant to submit additional information as is necessary to make such a determination. Additional information may include certified reports of tests performed by a recognized testing laboratory.*
- C. Any proposed detached single-family dwelling that includes a light fixture subject to the shielding requirements of Section 8.26.035 shall submit a lighting plan as part of the electrical permit application.*
- (Ord. 712 § 1, Exh. A (part), 2001)*

**Response:** The existing and proposed lighting fixture locations are shown on the Architectural site plans and elevations included in this application.

Additionally a photometric drawing has been provided showing the effect of the new fixtures on lighting levels in the areas adjacent to the residential property.

8.26.055 - Installing new light fixture within existing developments.

- A. *No new outdoor light fixture shall be installed within an existing developed property without first obtaining an electrical permit. Except for detached single-family dwellings, a lighting plan for a new outdoor light fixture shall be submitted as part of the electrical permit application. The lighting plan shall consist of the information described in Section 8.26.050 of this chapter.*
  - B. *No new outdoor light fixtures subject to the shielding requirements of Section 8.26.035 shall be installed in conjunction with an existing detached single-family dwelling without submitting a lighting plan as part of the electrical permit application.*
- (Ord. 712 § 1, Exh. A (part), 2001)*

**Response:** All new proposed lighting fixtures will only be installed under the required electrical permit.

A schematic lighting plan is submitted as part of this application. More accurate plans will be submitted at such time as an electrical permit for the installation of those lights is applied for.

8.26.060 - Replacement or relocation of nonconforming light fixture. *All outdoor light fixtures lawfully installed prior to, and operable on, the effective date of this chapter may continue to be operated as nonconforming light fixtures. Any nonconforming light fixture that is replaced or relocated must meet the requirements of this chapter according to the following procedures:*

- A. If the replacement or relocation of the light fixture requires an electrical permit, a lighting plan for the light fixture shall be submitted along with the electrical permit application.
- B. If the replacement or relocation of the light fixture does not require an electrical permit, application for a development permit from the director shall be made. A lighting plan for the light fixture shall be submitted as part of the development application.
- C. A lighting plan required under this section shall consist of the information described in Section 8.26.050 of this chapter.
- D. A lighting plan shall only be required of a detached single-family dwelling when the replacement or relocated outdoor light fixture is subject to the shielding requirements of Section 8.26.035  
(Ord. 712 § 1, Exh. A (part), 2001)

**Response:** All light fixtures designated to remain are allowed to exist as they were installed prior to the establishment of this code.

All proposed replacement or new fixtures will be installed according to the provisions in this code.

A schematic lighting plan is provided as part of this application.

**8.26.065 - Street lights.**

- A. Street lights shall have a cutoff type light fixture so that the cutoff angle of light rays emitted by the lamp, light source or luminaire is ninety degrees or less. In determining the cutoff angle, street lights on hills should be adjusted to provide as uniform a lighting pattern as possible. The light fixture may be oriented so that its cutoff angle is measured perpendicular to the grade line of the street rather than level with the ground beneath the fixture. The cutoff angle is formed by a line drawn from the direction of light rays at the light source to the grade line of the street.
- B. Decorative style street lights shall be exempt from the provisions of this section.  
(Ord. 712 § 1, Exh. A (part), 2001)

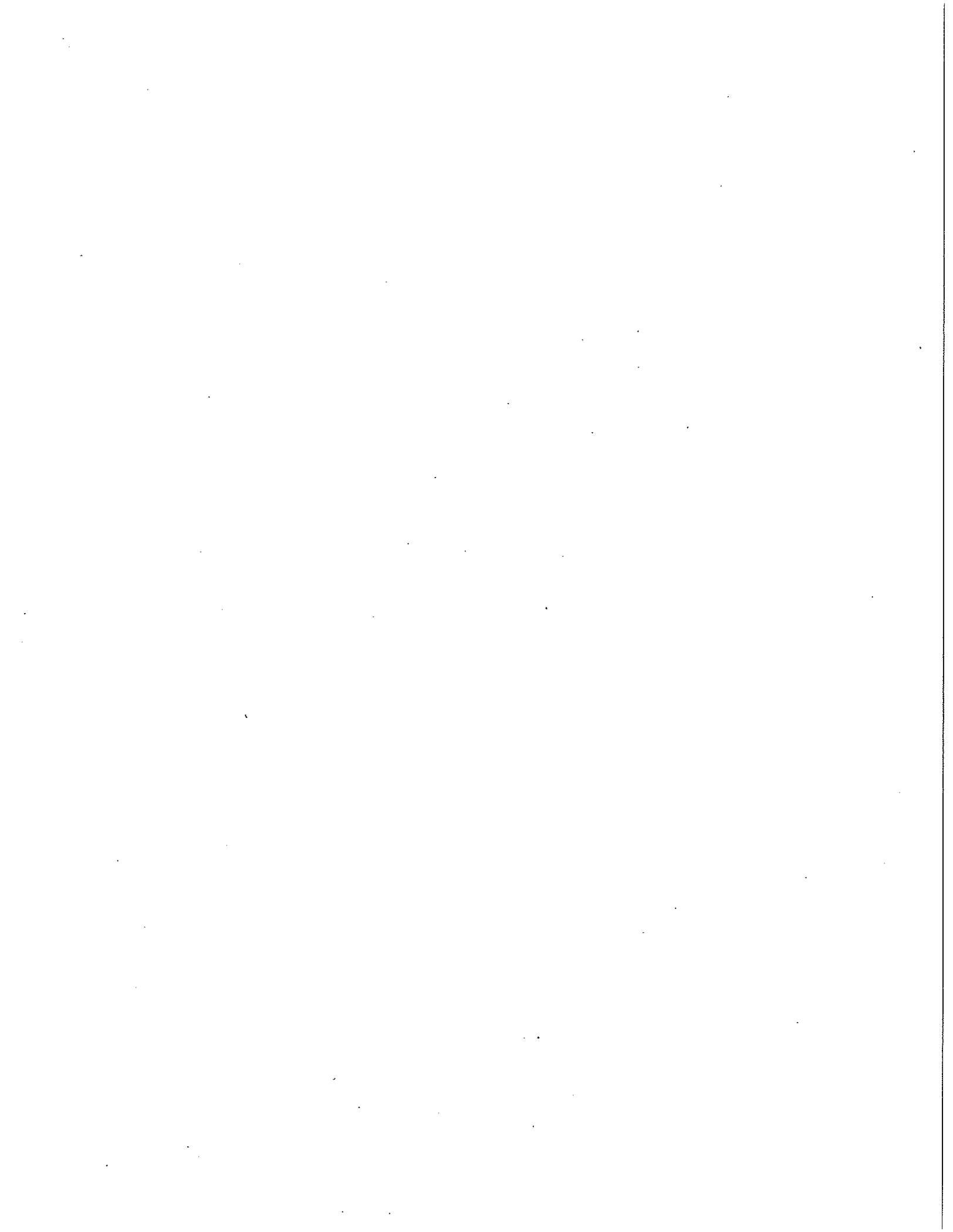
**Response:** This application does not propose the installation of street lights.

**8.26.070 - Variance.** A variance may be obtained from the provisions of this chapter. A variance shall be sought under this section in accordance with the procedures contained in Troutdale Development Code Chapter 6.200.  
(Ord. 712 § 1, Exh. A (part), 2001)

**Response:** This application does not request a variance for lighting.

**8.26.075 - Prohibitions. Recreational facilities.** No outdoor recreational facility, public or private, shall be illuminated after eleven p.m., except to conclude a specific recreational or sporting event or any other similar activity conducted at or in the facility which was in progress under such illumination prior to eleven p.m., except that any outdoor recreational facility, public or private, which is illuminated with outdoor light fixtures conforming to this chapter may operate any time with such illumination.  
(Ord. 712 § 1, Exh. A (part), 2001)





**Response:** This application does not involve an outdoor recreational facility.

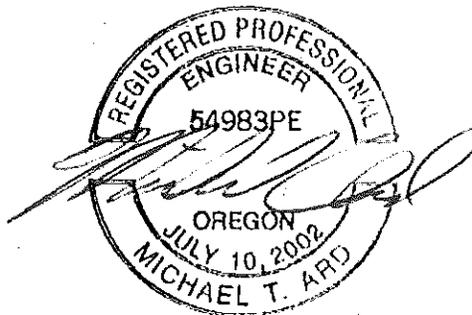
8.26.080 - *Externally lighted outdoor signs. All externally lighted signs shall comply with the standards in the Troutdale Development Code, Chapter 10, Signs, and the following provisions:*

- A. *Top mounted fixtures shall conform to the shielding requirements as set forth in Section 8.26.035*
- B. *Bottom mounted fixtures shall be shielded either by application of an external device or manufactured in such a way that upward and side directed light is confined to an area within four inches of the outermost surface of the sign's top and sides (Figure 1). Shielding must be constructed in such a manner that no reflective surface of the lighting fixture will extend past the limit of the shielding in the vertical plane when viewed from directly above (Figure 2). (Ord. 712 § 1, Exh. A (part), 2001)*

**Response:** No signage is proposed in this application.

February 12, 2015

Timothy Brunner, A.I.A.  
Axis Design Group A&E, Inc.  
11104 SE Stark Street  
Portland, OR 97216



EXPIRES: 12/31/15



**LANCASTER  
ENGINEERING**

321 SW 4<sup>th</sup> Ave., Suite 400  
Portland, OR 97204  
phone: 503.248.0313  
fax: 503.248.9251  
lancasterengineering.com

*RE: Troutdale Market Site – Proposed Charter School  
Trip Generation Letter*

Dear Mr. Brunner,

This letter is written to provide information regarding the projected changes in trip generation for the Troutdale Market site if a conditional-use charter school is permitted within an area previously proposed for retail uses. To fully address the projected changes, trip generation was analyzed for the site assuming full development in conformance with the 1998 approvals for the site as well as for the site following conversion of a portion of the retail site to a charter school with up to 330 students.

Under existing conditions, the subject property includes the following approved uses:

**APPROVED SITE USES**

Troutdale Market Site

Building	Use	
Building 100	Retail (Shopping Center)	34,780 sf
Building 200	Retail (Shopping Center)	12,860 sf
Building 300	Grocery Store/Supermarket	38,230 sf
Building 400	Bank with Drive-Through	4,198 sf
Building 500	Restaurant with Drive-Through	4,198 sf
Dairy Queen	Restaurant with Drive-Through	2,670 sf

The current request would result in conversion of 22,000 square feet of retail space within Building 100 to use as a 330-student charter school.

Trip generation for the background (allowed uses) conditions and for the proposed conditions including the charter school was calculated based on data from the *TRIP GENERATION MANUAL*, Ninth Edition, published by the Institute of Transportation Engineers (ITE). The trip data used was for land use categories 820, *Shopping Center*, 850, *Supermarket*, 912, *Drive-in Bank*, 934, *Fast Food Restaurant with Drive-Through*, and 534, *Private School (K-8)*.

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Timothy Brunner  
 February 12, 2015  
 Page 2 of 3

It should be noted that a charter school is a public facility. However, for purposes of trip generation charter schools are more closely related to typical private schools than typical public schools. This is because charter schools typically do not offer extensive bus service and most students would be expected to be dropped off and picked up by parents, similar to travel patterns for private schools.

Since detailed trip generation data is not available for the evening peak hour and overall daily traffic for the *Private School (K-8)* land use, additional data documenting the relationship between morning peak hour volumes and both daily and evening peak hour traffic volumes was drawn from available data for land use code 536, *Private School (K-12)*.

A summary of the trip generation calculations for the approved and proposed development scenarios is provided in the tables below. Detailed trip generation worksheets are included in the attached technical appendix.

**TRIP GENERATION SUMMARY**

Troutdale Market Site - Approved Uses

	Size (ksf)	AM Peak Hour			PM Peak Hour			Weekday		
		In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	47.64	29	17	46	85	92	177	1,017	1,017	2,034
Supermarket	38.23	79	51	130	185	177	362	1,954	1,954	3,908
Bank with Drive-Through	4.20	29	22	51	51	51	102	311	311	622
Fast-Food with Drive-Through	6.87	159	153	312	116	108	224	1,704	1,704	3,408
<b>Total Trips</b>		<b>296</b>	<b>243</b>	<b>539</b>	<b>437</b>	<b>428</b>	<b>865</b>	<b>4,986</b>	<b>4,986</b>	<b>9,972</b>

**TRIP GENERATION SUMMARY**

Troutdale Market Site - Proposed Uses

	Size (ksf)	AM Peak Hour			PM Peak Hour			Weekday		
		In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	25.64	16	9	25	46	49	95	547	547	1,094
Supermarket	38.23	79	51	130	185	177	362	1,954	1,954	3,908
Bank with Drive-Through	4.20	29	22	51	51	51	102	311	311	622
Fast-Food with Drive-Through	6.87	159	153	312	116	108	224	1,704	1,704	3,408
Private School (K-8) w/ 330 Students		163	134	297	27	35	62	455	455	910
<b>Total Trips</b>		<b>446</b>	<b>369</b>	<b>815</b>	<b>425</b>	<b>420</b>	<b>845</b>	<b>4,971</b>	<b>4,971</b>	<b>9,942</b>

It is projected that the proposed conditional-use charter school will result in a reduction in site trips during the evening peak hour and over the course of a typical day as compared to full development of the site with the approved uses. Since schools generate their highest traffic volumes during the

Timothy Brunner  
February 12, 2015  
Page 3 of 3

morning peak hour, The proposed conditional use would be projected to result in an overall increase in site trips during the morning peak hour. However, site traffic volumes will remain lower during the morning peak hour than they will be during the evening peak hour. Since background traffic volumes also typically are highest during the evening peak hour, the PM peak hour is projected to remain the critical period for analysis, and will be slightly benefitted upon approval of the proposed conditional use.

Based on the detailed trip generation analysis, the proposed charter school would not be projected to result in degradation of traffic conditions in the site vicinity as compared to full development with the already-approved uses. Accordingly, no mitigation is necessary or recommended in conjunction with the proposed school.

If you have any questions regarding this analysis or if you need any further assistance, please don't hesitate to contact us.

Sincerely,

Michael Ard, PE  
Senior Transportation Engineer



## APPENDIX

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## TRIP GENERATION CALCULATIONS

*Land Use:* Shopping Center  
*Land Use Code:* 820  
*Variable:* 1,000 Sq Ft Gross Leasable Area  
*Variable Value:* 47.6

### AM PEAK HOUR

*Trip Rate:* 0.96

	Enter	Exit	Total
Directional Distribution	62%	38%	
Trip Ends	29	17	46

### PM PEAK HOUR

*Trip Rate:* 3.71

	Enter	Exit	Total
Directional Distribution	48%	52%	
Trip Ends	85	92	177

### WEEKDAY

*Trip Rate:* 42.7

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,017	1,017	2,034

### SATURDAY

*Trip Rate:* 49.97

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,190	1,190	2,380

2e

### TRIP GENERATION CALCULATIONS

*Land Use:* Supermarket  
*Land Use Code:* 850  
*Variable:* 1000 Sq Ft Gross Floor Area  
*Variable Value:* 38.2

#### AM PEAK HOUR

*Trip Rate:* 3.40

	Enter	Exit	Total
Directional Distribution	61%	39%	
Trip Ends	79	51	130

#### PM PEAK HOUR

*Trip Rate:* 9.48

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	185	177	362

#### WEEKDAY

*Trip Rate:* 102.24

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,954	1,954	3,908

#### SATURDAY

*Trip Rate:* 177.59

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	3,395	3,395	6,790

Source: TRIP GENERATION, Ninth Edition

1e

### TRIP GENERATION CALCULATIONS

*Land Use:* Drive-in Bank  
*Land Use Code:* 912  
*Variable:* 1000 Sq Ft Gross Floor Area  
*Variable Quantity:* 4.198

#### AM PEAK HOUR

*Trip Rate:* 12.08

	Enter	Exit	Total
Directional Distribution	57%	43%	
Trip Ends	29	22	51

#### PM PEAK HOUR

*Trip Rate:* 24.3

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	51	51	102

#### WEEKDAY

*Trip Rate:* 148.15

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	311	311	622

#### SATURDAY

*Trip Rate:* 86.32

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	181	181	362

Source: TRIP GENERATION, Ninth Edition

26

## TRIP GENERATION CALCULATIONS

*Land Use:* Fast Food Restaurant with Drive-Through Window

*Land Use Code:* 934

*Variable:* 1000 Sq Ft Gross Floor Area

*Variable Quantity:* 6.868

### AM PEAK HOUR

*Trip Rate:* 45.42

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	159	153	312

### PM PEAK HOUR

*Trip Rate:* 32.65

	Enter	Exit	Total
Directional Distribution	52%	48%	
Trip Ends	116	108	224

### WEEKDAY

*Trip Rate:* 496.12

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,704	1,704	3,408

### SATURDAY

*Trip Rate:* 722.03

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	2479	2479	4,958

1e

## TRIP GENERATION CALCULATIONS

*Land Use:* Shopping Center  
*Land Use Code:* 820  
*Variable:* 1,000 Sq Ft Gross Leasable Area  
*Variable Value:* 25.6

### AM PEAK HOUR

*Trip Rate:* 0.96

	Enter	Exit	Total
Directional Distribution	62%	38%	
Trip Ends	16	9	25

### PM PEAK HOUR

*Trip Rate:* 3.71

	Enter	Exit	Total
Directional Distribution	48%	52%	
Trip Ends	46	49	95

### WEEKDAY

*Trip Rate:* 42.7

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	547	547	1,094

### SATURDAY

*Trip Rate:* 49.97

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	641	641	1,282

2e

## TRIP GENERATION CALCULATIONS

*Land Use:* Private School (K-8)  
*Land Use Code:* 534  
*Variable:* Students  
*Variable Value:* 330

### AM PEAK HOUR

*Trip Rate:* 0.90

	Enter	Exit	Total
Directional Distribution	55%	45%	
Trip Ends	163	134	297

### PM PEAK HOUR OF GENERATOR

*Trip Rate:* 0.60

	Enter	Exit	Total
Directional Distribution	47%	53%	
Trip Ends	93	105	198

1e

### TRIP GENERATION CALCULATIONS

*Land Use:* Private School (K-12)  
*Land Use Code:* 536  
*Variable:* Students  
*Variable Value:* 330

#### AM PEAK HOUR

*Trip Rate:* 0.81

	Enter	Exit	Total
Directional Distribution	61%	39%	
Trip Ends	163	104	267

#### PM PEAK HOUR

*Trip Rate:* 0.17

	Enter	Exit	Total
Directional Distribution	43%	57%	
Trip Ends	24	32	56

#### WEEKDAY

*Trip Rate:* 2.48

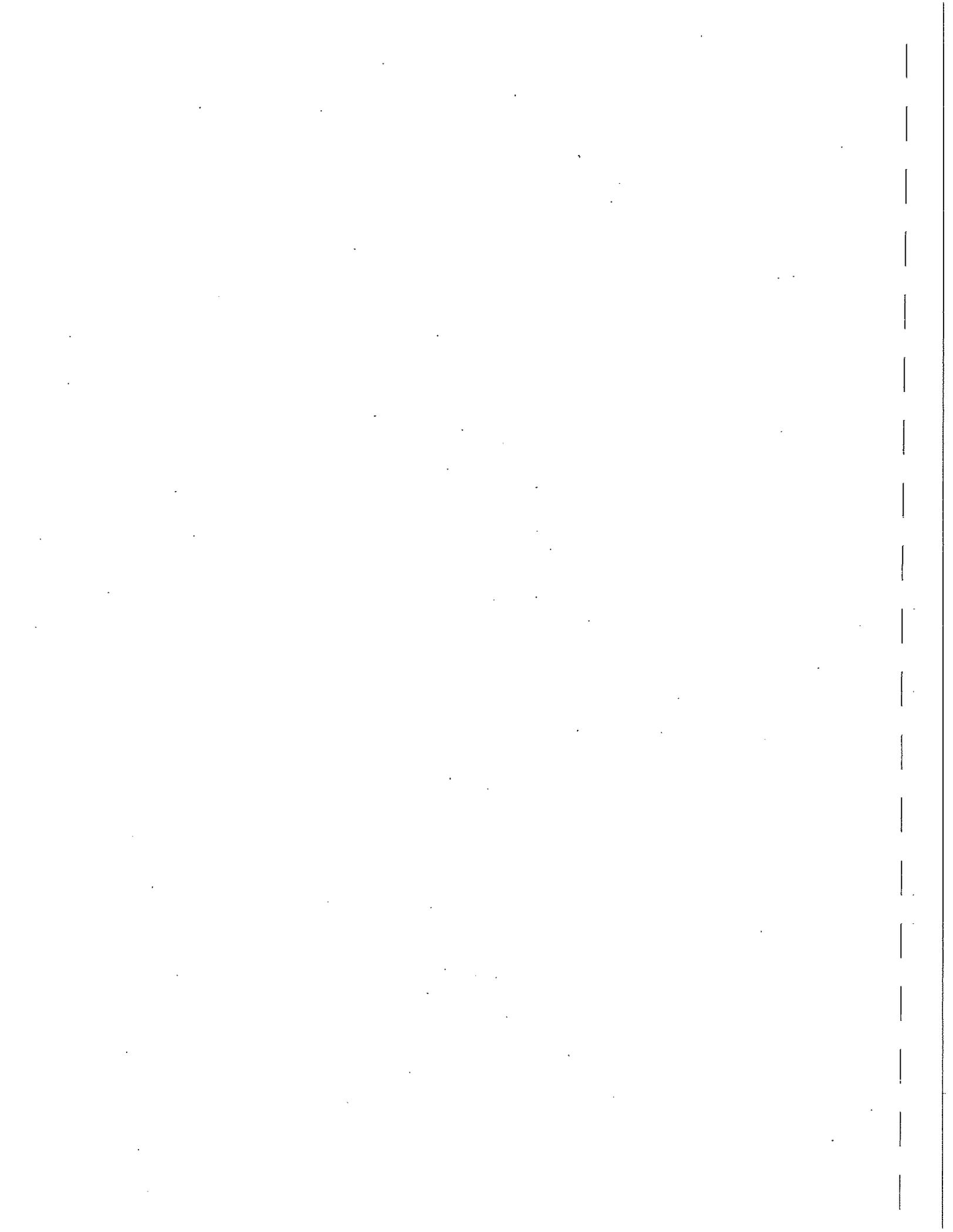
	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	409	409	818

#### PM PEAK HOUR OF GENERATOR

*Trip Rate:* 0.58

	Enter	Exit	Total
Directional Distribution	42%	58%	
Trip Ends	80	111	191

Source: TRIP GENERATION, Ninth Edition

















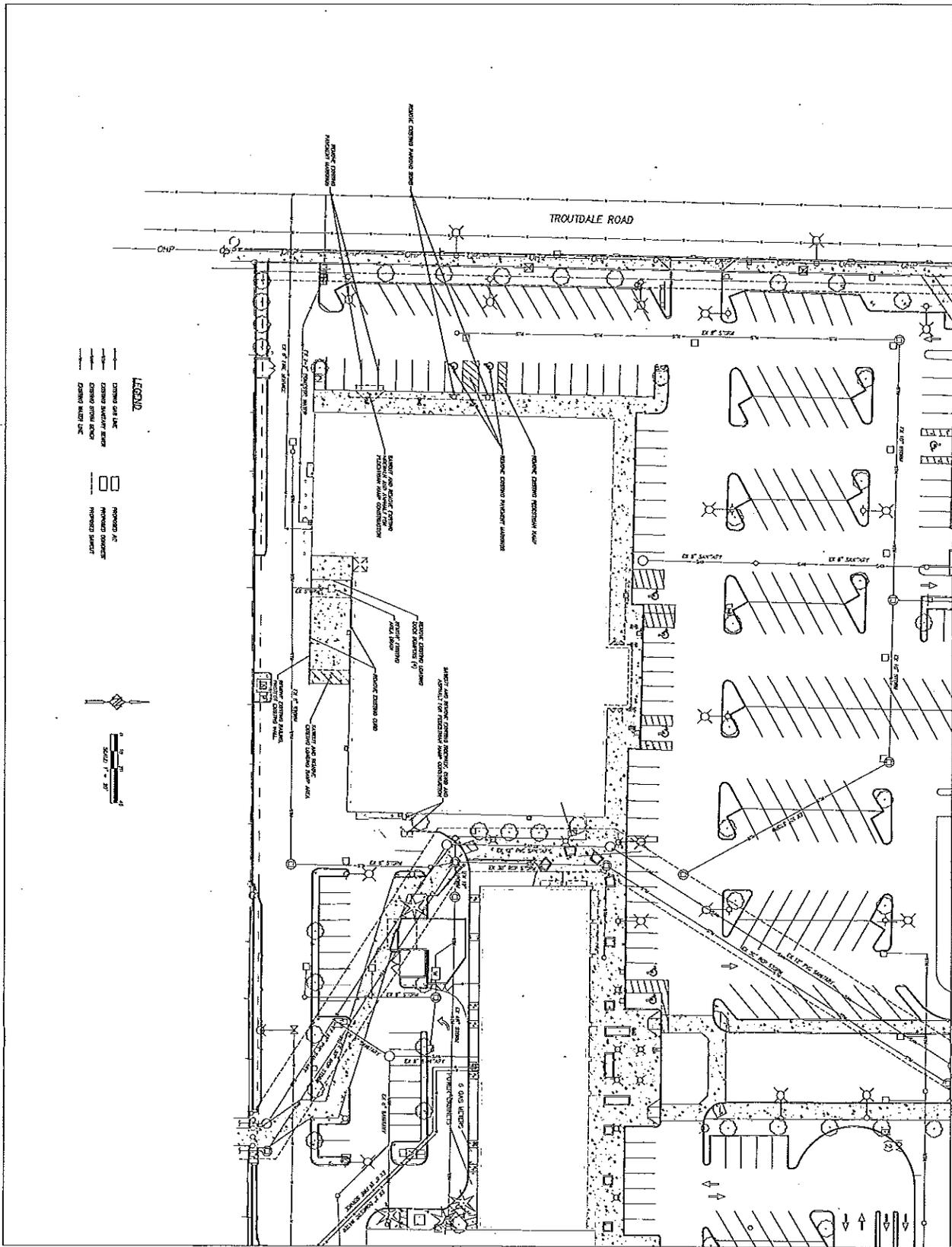












**LEGEND**

--- CHANGING SITE LINE  
 --- EXISTING SITE LINE  
 --- EXISTING DRIVEWAY  
 --- EXISTING DRIVEWAY  
 --- EXISTING DRIVEWAY  
 --- EXISTING DRIVEWAY

□ PROPOSED DRIVEWAY  
 □ PROPOSED DRIVEWAY  
 □ PROPOSED DRIVEWAY



**PROJECT INFORMATION**

**PROJECT NAME:** TROUTDALE MARKET MARKET CENTER  
**PROJECT ADDRESS:** 3800 S. MARKET STREET, TROUTDALE, OREGON 97136  
**PROJECT OWNER:** CITY OF TROUTDALE  
**PROJECT CONTACT:** JENNIFER HARRIS, CITY MANAGER  
**PROJECT PHONE:** 503.646.2200  
**PROJECT FAX:** 503.646.2200  
**PROJECT EMAIL:** JHARRIS@CITYOF.TROUTDALE.OREGON.US

**DESIGNER:** HARRIS HARRIS ARCHITECTS  
**DESIGNER ADDRESS:** 1000 S. MARKET STREET, TROUTDALE, OREGON 97136  
**DESIGNER PHONE:** 503.646.2200  
**DESIGNER FAX:** 503.646.2200  
**DESIGNER EMAIL:** JHARRIS@HARRISHARRISARCHITECTS.COM

**DATE:** 11/13/2014  
**SCALE:** AS SHOWN  
**STATUS:** PRELIMINARY

**APPROVED BY:** JENNIFER HARRIS, CITY MANAGER  
**DATE:** 11/13/2014

**PROJECT NO.:** 14-023  
**DATE:** 11/13/2014  
**SCALE:** AS SHOWN  
**STATUS:** PRELIMINARY

**PROJECT NO.:** 14-023  
**DATE:** 11/13/2014  
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**STATUS:** PRELIMINARY

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**DATE:** 11/13/2014  
**SCALE:** AS SHOWN  
**STATUS:** PRELIMINARY

**PROJECT NO.:** 14-023  
**DATE:** 11/13/2014  
**SCALE:** AS SHOWN  
**STATUS:** PRELIMINARY







BUILDING DEPARTMENT  
CITY OF TROUTDALE

Exhibit B

11 MAR 15

MEMORANDUM FOR MARK MCCAFFERY, CITY PLANNER

FROM: Stephen Winstead  
Building Official

SUBJECT: Response to request for comments on 15-010, Troutdale Market

References: (a) Oregon Structural Specialty Code (2014)

1. Permits are required for this project in accordance with Section 105.1 of Reference (a).
2. The applicant can submit for interior structural element improvements as well as any seismic upgrades prior to landuse approval if these upgrades are consider volunteer.
3. Section 508.3 of reference (a) permits non separated uses when the structure is provided with an automatic sprinkler system and when it is designed with the most restrictive provisions of Chapter 9.
4. Since this is a change in occupancy, accessibility will be required in accordance with the provisions of Section 3411. New accessibility work will need to be done in accordance with Chapter 11 and ANSI A1171.1-09.
5. Please note that permits can be issued only after the all conditions of approval have been met from authorities having jurisdiction over this project.
6. Permits may be applied for after the appeal period and when approved by the planning department.

Stephen Winstead  
Building Official  
City of Troutdale

copy to: John Morgan, Planning Director  
Craig Ward, City Manager

## MEMO



**Date:** March 24, 2015  
**To:** Mark McCaffrey, Associate Planner  
**CC:** File  
David Schaffer, Water & Streets Superintendent  
Mike Sorensen, Wastewater Superintendent  
Travis Hultin, Chief Engineer  
Amy Pepper, Civil Engineer  
**From:** John J. Bushard, Civil Engineer  
**RE:** **Type III Conditional Use Permit and Site Design Review**

**Troutdale Market Center Tenant Improvements and Charter School (File No. 15-010)**

The Public Works Department has reviewed the Type III Conditional Use Permit and Site Design Review (CU/SDR) application for Troutdale Market Center Tenant Improvements and Charter School. My comments are divided into two categories: general comments and proposed conditions. General comments are informational points to guide the applicant in the proper planning of public works infrastructure for this project, to alert the applicant to possible extraordinary issues and/or to provide the basis for findings. Proposed conditions are requirements that Public Works recommends be formally imposed on the developer in the final order. Note that references to the "City Standards" herein refer to the *Construction Standards for Public Works Facilities*.

**General Comments/Findings**

1. Any and all utility and transportation plans submitted with this application have been reviewed for the purpose of determining the feasibility of providing utility and transportation facilities for the project in accordance with City Standards. This land use approval does not constitute final approval of details, including but not limited to alignments, materials and points of access, connection or discharge, that are depicted or suggested in the application. The applicant is required to submit detailed construction drawings for this project. The City of Troutdale will review construction plans, in detail, when they are submitted and approve, reject or require modifications to the plans or drawings based upon conformance with City standards, the Troutdale Development Code and the professional engineering judgment of the Chief Engineer. See proposed condition 1.
2. It is the opinion of the Public Works Department that the proposed Troutdale Market Center tenant improvements and charter school can be redeveloped in accordance with the requirements of the Troutdale Development Code (as it pertains to Public Works requirements) and City Standards, provided it fully addresses the comments and conditions contained herein, and can be approved.
3. The proposed tentative improvements and redevelopment may result in incremental System Development Charges (SDC). All changes in tenancy and redevelopment projects are required to submit an SDC Worksheet and Agreement form and pay any applicable SDC's prior to receiving building permits. See proposed condition 2.

4. This project is proposing to disturb more than 1,000 square feet of impervious surfaces, therefore a Site Development Permit for erosion control is required. The applicant has acknowledged this requirement in their application and provided a preliminary erosion control plan, as required, that is in general conformance with standards. See proposed condition 3.
5. The water service configuration for Building 100 does not meet the City's Industrial/Commercial Water Service Configuration standard. Consolidation and reconfiguration of these services is not required for approval of this CU/SDR application, but will be required with partitioning, development or significant redevelopment of the property.
6. No modifications are proposed to the sanitary sewer or stormwater service connections to the property, and none are required with approval of this CU/SDR application.
7. Troutdale Municipal Code states there shall be no more than one tax lot served by the same water meter or sanitary sewer lateral. Consolidation and/or separation of services to meet this standard is not required for approval of this CU/SDR application, but may be required with partitioning, development or significant redevelopment of the property.
8. The applicant shall be aware that a grease trap may be required if the school includes a kitchen or similar food preparation area, as determined by the Building Official.
9. The application proposes less than 2,000 ft<sup>2</sup> of new or replacement impervious area, and new impervious areas do not drain directly to a floodplain or protected water feature. Stormwater quality improvements are therefore not required.
10. All street frontages are on Multnomah County roadways. The applicant has submitted a Traffic Impact Analysis prepared under the supervision of Registered Professional Engineer Michael T. Ard (Lic. No. 54983), and no impacts to the City's streets are apparent. Any street-related requirements shall be per Multnomah County.

### **Proposed Conditions**

1. Following issuance of a land use decision approval, the applicant shall revise plans for the project incorporating any adopted land use conditions and submit for review.
2. Applicant shall prepare and submit an SDC Worksheet and Agreement form for review and confirmation by Public Works and pay any applicable incremental SDC's prior to receiving building permits.
3. Applicant shall submit an erosion control plan and site development permit application to the City with the building permit application, obtain approval of the permit and pass an initial field inspection of installed erosion control measures prior to commencing any ground-disturbance at the site (other than disturbance necessary to install erosion control measures).

**Troutdale File # 15-010**

**FROM:** Shawn Durham ([Shawn.Durham@GreshamOregon.gov](mailto:Shawn.Durham@GreshamOregon.gov))

**DATE:** 3-6-15

**FIRE COMMENTS:**

***NOTE: Limited information at this time. Exterior remodel.***

1. Addresses of 6" shall be provided at EACH entrance. They shall be visible at all hours, color contrast with the background. **OFC 505**
2. All Fire Dept. Access Roads shall be drawn to scale and shown clearly on plans. The access roads shall be constructed and maintained prior to and during construction. The minimum width is 20' for buildings under 30' in height and 26' wide for locations where buildings are over 30' in height. Access roads in areas where fire hydrants are located are required to be a minimum width is 26' for a length of 20'. **OFC 1410, 503.2.1 & D103.1**
3. Required Fire Dept. Access Roads on site shall be designed to support an apparatus weighing 75,000 lb. gross vehicle weight. **OFC, Appendix D, Section D102.1**
4. The turning radius for all emergency apparatus roads shall be: 28' inside and 48' outside radius. **OFC 503.2.4**
5. No Parking Fire Lane signage or curb marking will be required. Fire access roads 20' – 26' wide require the marking on both sides. Indicate on the building permit plans. I can email you our policy. **OFC D 103.6**
6. Prior to applying for a building permit provide a fire flow test and report. The fire flow report will verify that the correct fire flow is available and will be required to have been conducted within the last 12 months. **OFC 507.3 & B-101.1**
7. If a gate is installed on a fire access road, it must meet the requirements of the Gresham Fire Gate Policy. This policy can be faxed to you if requested. **OFC 506.1**
8. Fire access roads shall be provided with fire hydrants leading to all building (s). Spacing will be required to be indicated on plans per OFC Appendix C and 507.
9. Each private fire hydrant on site shall have a 5-inch **Storz** adapter with National Standard Threads installed on the 4 ½ -inch fire hydrant outlet. The adapter shall be constructed of high-strength aluminum alloy, have a Teflon coating on the seat and threads, and use a rubber gasket and two

(2) set screws to secure it in place. The adapter shall be provided with an aluminum alloy pressure cap. The cap shall be attached to the hydrant barrel or Storz adapter with a cable to prevent theft of the cap. Adapter shall be Harrington HPHA50-45NHWCAP or equal approved by Gresham Fire.

10. Fire hydrant locations shall be identified by the installation of reflective markers. The markers shall be BLUE. They shall be located adjacent and to the side of the centerline of the access road way that the fire hydrant is located on. In case that there is no center line, then assume a centerline, and place the marker accordingly. **OFC 508.5.4**

## AXIS MEMO

Date	March 10, 2015
To	Joanna Valencia
Company	Multnomah County Department of Transportation
From	Steven Maguire
Project	Troutdale Market
Subject	Site Circulation for Charter School Use

Joanna Valencia.

This letter is written to provide supplemental information to describe the on-site circulation patterns and their relation to the surrounding public street infrastructure. Please refer to the drawing marked G-004A for graphical representation of the following information.

- **Morning Drop-off: Occurs between approximately 7:45 and 8:30 AM.**

Vehicles will enter the site from the easternmost entry off of SE Stark Street and the mid-block entry from S Troutdale Road. They are directed around the rear of the existing buildings into the service access.

Once the students have been dropped off, the vehicles will then exit either directly onto S Troutdale Road at the south exit, or turn to the right and into the on-site parking circulation to disperse among the several exit points onto Troutdale Road and SE Stark Street.

The drop-off procedure is staggered due to parents and students arriving at differing times. As such, the number of cars entering, stacking, and exiting is spread out over a period of time and does not reach a density. In addition, some parents may choose to park and walk their children into the facility further relieving the impact on the drop-off circulation system.

- **Afternoon Pick-up: Occurs between 3:00 and 3:30 PM.**

Like drop-off, vehicles will enter the site from the easternmost entry off of SE Stark Street and the mid-block entry from S Troutdale Road. They are directed around the rear of the existing buildings into the service access.

Once the students have been picked-up, the vehicles will then exit either directly onto S Troutdale Road at the south exit, or turn to the right and into the on-site parking circulation to disperse among the several exit points onto Troutdale Road and SE Stark Street.

Unlike the drop-off, the pick-up procedure is more focused around the time the students are released from school. This time of day would see the largest number of cars stacked at any one time, however, through experience at their other location the charter school tenant has informed us that this number never exceeds more than 12-15 cars at a time. As with drop off, some parents may also choose to park and walk in to receive their children relieving the impact on the pick-up circulation system.

Due to the time of day the students are let go, it is unlikely the pick-up procedure will negatively affect the surrounding public street system as all cars will be gone before peak drive time.

- **Note:** The Charter School Tenant is aware of the need to minimize potential impacts to the on-site access for other tenants and their customers having had to address similar concerns at their current location. As such, they will provide a plan for traffic management to the parents whose children attend the school. This will provide detailed information about pick-up and drop-off procedures, including site access points and circulation, location of stacking area, and a limited window of time prior to school open and close to reduce the overall time that cars will be on-site.

Thank you for your time. If you have any additional questions please feel free to contact us.

**STEVEN J. MAGUIRE**  
*PROJECT MANAGER / ASSOC. AIA*  
AXIS DESIGN GROUP A&E, INC.  
11104 SE Stark Street  
Portland, Oregon 97216  
(t) 503 284 0988  
(f) 503 546 9276  
[stevenm@axisdesigngroup.com](mailto:stevenm@axisdesigngroup.com)





RECEIVED

APR 3 2015

City of Troutdale  
ARCHITECTURAL DESIGN INTERIORS SITE MASTER PLANNING LAND USE PLANNING  
Community Development Dept.

AXIS MEMO

Exhibit     E    

Date April 3, 2015  
To Joanna Valencia  
Company Multnomah County Department of Transportation  
From Steven Maguire  
Project Troutdale Market  
Subject Site Circulation and Traffic Analysis for Charter School Use

Joanna Valencia.

This letter is written in response to an e-mail from you on March 31, 2015 containing questions which are a result of your review of the Lancaster Engineering memo dated March 17, 2015.

One additional note: It should be mentioned that this MLA Charter School location only holds classes 4 days a week – typically Monday through Thursday. Occasionally there are classes on Fridays when the Monday of that week is an observed holiday. This limits the number of days the drop-off and pick-up procedure takes place. Staff is on site on Fridays even though students are not present.

**Item 1.**

In response to your question please see the attached Analysis Addendum Letter prepared by Lancaster Engineering and dated April 1, 2015.

**Item 2.**

The proposed MLA Charter School has experience working with similar conditions at their existing location in the City of Fairview. It is their intent to address the traffic management in the same manner at this location.

- A letter and map will be sent home to parents explaining the drop-off and pick-up procedure, times, and locations. A copy of this letter addressing procedures at the existing school location is attached as an example at the end of this document. This information will also be published on the school's website.
- Several A-frame signs and orange traffic cones will be placed in appropriate locations on site during the drop-off and pick-up times to serve as a method of directing traffic.
- The school will provide staff to actively direct traffic during drop-off and pick-up times.

This notification and enforcement procedure was implemented at the existing school location where it met with the approval of the Gresham Fire Department. The plan as proposed for this location has also been approved by Gresham Fire.

**Item 3.**

The school engages in a handful of special events throughout the year. The majority of them, such as a Science Fair, Job Fair, Book Fair, etc., take place during regular school hours and usually in the afternoons on Thursdays (the last day of classes for the week).

In addition there are a couple of planned after-hours events that will take place such as an Open House, and Back-To-School night. These types of events typically last about 2 hours and the



nature of the activity involves a revolving number of visitors. In other words, not everyone shows up at the start time and leaves at the end but rather come and go over the course of the event which reduces any impact on the rest of the site.

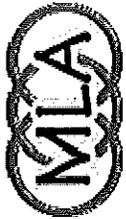
There is also the possibility that the school might hold an after-hours dance on site. If so this would most likely be held on a Thursday evening.

Thank you for your time. If you have any additional questions please feel free to contact us.

A handwritten signature in black ink, appearing to read "Steven J. Maguire", with a long horizontal line extending to the right.

**STEVEN J. MAGUIRE**

*PROJECT MANAGER / ASSOC. AIA*  
AXIS DESIGN GROUP A&E, INC.  
11104 SE Stark Street  
Portland, Oregon 97216  
[t] 503 284 0988  
[f] 503 546 9276  
[stevenm@axisdesigngroup.com](mailto:stevenm@axisdesigngroup.com)

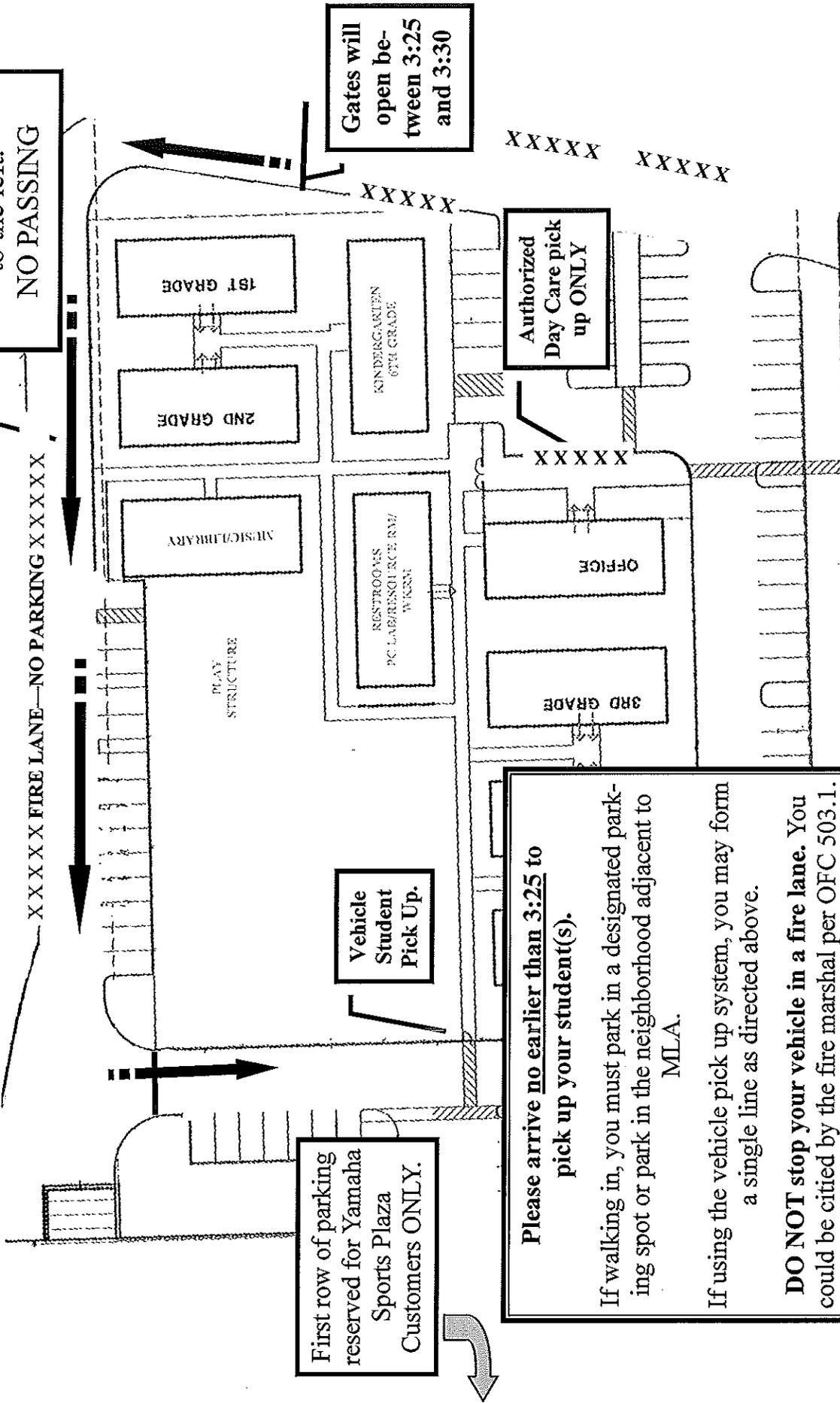


A Public Charter School in the  
 Reynolds School District  
 Serving K-8 Grades

# Pick up

ALL cars must be in  
 a **SINGLE** line  
 to the left.  
**NO PASSING**

XXXXX FIRE LANE—NO PARKING XXXXX



First row of parking  
 reserved for Yamaha  
 Sports Plaza  
 Customers **ONLY**.

Vehicle  
 Student  
 Pick Up.

Please arrive **no earlier than 3:25** to  
 pick up your student(s).

If walking in, you must park in a designated park-  
 ing spot or park in the neighborhood adjacent to  
 MLA.

If using the vehicle pick up system, you may form  
 a single line as directed above.

**DO NOT stop your vehicle in a fire lane.** You  
 could be cited by the fire marshal per OFC 503.1.

Gates will  
 open be-  
 tween 3:25  
 and 3:30

Authorized  
 Day Care pick  
 up **ONLY**

# Pick up Guidelines for Families

"XXXXX" indicates NO PARKING/FIRE LANE



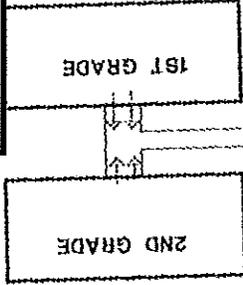
A Public Charter School in the  
 Reynolds School District  
 Serving K-9 Grades

# Drop Off

XXXXXX FIRE LANE—NO PARKING XXXXX

ALL cars must be in  
 a **SINGLE** line  
 to the left.  
**5 MPR**  
*Students getting out  
 of vehicles*

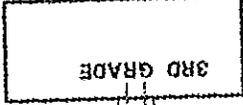
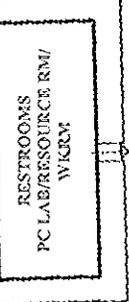
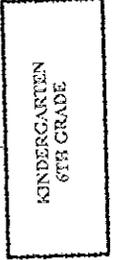
Gates will  
 open by  
 7:25



North Gate for  
 Primary Student  
 drop

West Gate for  
 Intermediate  
 Student drop

First row of parking  
 reserved for Yamaha  
 Sports Plaza  
 Customers **ONLY**.



NO Student  
 vehicle drop  
 off in this area

Authorized Day  
 Care drop off  
**ONLY**.  
 Main door will  
 open for breakfast  
 service at 7:15

Please arrive **no earlier than 7:25 to drop off your student(s)**.  
*Unless for student breakfast drop off at 7:15 at the main door.*

If walking in, you must park in a designated parking spot or park in the neighborhood adjacent to MLA.

If using the vehicle drop off system, you may form a single line as directed above.

**DO NOT stop your vehicle in a fire lane.** You could be cited by the fire marshal per OFC 503.1.

# Drop Off Guidelines for Families

"XXXXXX" indicates NO PARKING/FIRE LANE



**LANCASTER  
ENGINEERING**

321 SW 4<sup>th</sup> Ave., Suite 400  
Portland, OR 97204  
phone: 503.248.0313  
fax: 503.248.9251  
lancasterengineering.com

April 3, 2015

Timothy Brunner, A.I.A.  
Axis Design Group A&E, Inc.  
11104 SE Stark Street  
Portland, OR 97216

*RE: Troutdale Market Site – Proposed Charter School  
Trip Generation and Analysis Letter*

Dear Mr. Brunner,

This letter is written to provide information regarding the projected changes in trip generation for the Troutdale Market site if a conditional-use charter school is permitted within an area previously proposed for retail uses. To fully address the projected changes, trip generation and future operation of study area intersections was analyzed for the site assuming full development in conformance with the 1998 approvals for the site as well as for the site following conversion of a portion of the retail site to a charter school with up to 330 students.

Under existing conditions, the subject property includes the following approved uses:

**APPROVED SITE USES**  
Troutdale Market Site

Building	Use	
Building 100	Retail (Shopping Center)	34,780 sf
Building 200	Retail (Shopping Center)	12,860 sf
Building 300	Grocery Store/Supermarket	38,230 sf
Building 400	Bank with Drive-Through	4,198 sf
Building 500	Restaurant with Drive-Through	4,198 sf
Dairy Queen	Restaurant with Drive-Through	2,670 sf

The current request would result in conversion of 22,000 square feet of retail space within Building 100 to use as a 330-student charter school.

**Trip Generation**

Trip generation was calculated based on data from the *TRIP GENERATION MANUAL*, Ninth Edition, published by the Institute of Transportation Engineers (ITE). The trip data used was for



Timothy Brunner  
 April 3, 2015  
 Page 2 of 5

land use categories 820, *Shopping Center*, 850, *Supermarket*, 912, *Drive-in Bank*, 934, *Fast Food Restaurant with Drive-Through*, and 534, *Private School (K-8)*.

It should be noted that a charter school is a public facility. However, for purposes of trip generation charter schools are more closely related to typical private schools than typical public schools. This is because charter schools typically do not offer extensive bus service and most students would be expected to be dropped off and picked up by parents, similar to travel patterns for private schools.

Since detailed trip generation data is not available for the evening peak hour and overall daily traffic for the *Private School (K-8)* land use, additional data documenting the relationship between morning peak hour volumes and both daily and evening peak hour traffic volumes was drawn from available data for land use code 536, *Private School (K-12)*.

Summaries of the trip generation calculations for the approved, existing, build-out and proposed build-out with charter school scenarios are provided in the tables below. Detailed trip generation worksheets are also included in the attached technical appendix.

**TRIP GENERATION SUMMARY**  
 Troutdale Market Site - Approved Uses

	Size (ksf)	AM Peak Hour			PM Peak Hour			Weekday		
		In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	47.64	29	17	46	85	92	177	1,017	1,017	2,034
Supermarket	38.23	79	51	130	185	177	362	1,954	1,954	3,908
Bank with Drive-Through	4.20	29	22	51	51	51	102	311	311	622
Fast-Food with Drive-Through	6.87	159	153	312	116	108	224	1,704	1,704	3,408
<b>Total Trips</b>		<b>296</b>	<b>243</b>	<b>539</b>	<b>437</b>	<b>428</b>	<b>865</b>	<b>4,986</b>	<b>4,986</b>	<b>9,972</b>

**TRIP GENERATION SUMMARY**  
 Troutdale Market Site - Existing Uses

	Size (ksf)	AM Peak Hour			PM Peak Hour			Weekday		
		In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	34.07	20	13	33	60	66	126	727	727	1,454
Fast-Food with Drive-Through	2.67	62	59	121	45	42	87	662	662	1,324
<b>Total Trips</b>		<b>82</b>	<b>72</b>	<b>154</b>	<b>105</b>	<b>108</b>	<b>213</b>	<b>1,389</b>	<b>1,389</b>	<b>2,778</b>



Timothy Brunner  
 April 3, 2015  
 Page 3 of 5

**TRIP GENERATION SUMMARY**  
 Troutdale Market Site - Build-Out w/o Charter School

	Size (ksf)	AM Peak Hour			PM Peak Hour			Weekday		
		In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	85.87	51	32	83	152	166	318	1,833	1,833	3,666
Bank with Drive-Through	4.20	29	22	51	51	51	102	311	311	622
Fast-Food with Drive-Through	6.87	159	153	312	116	108	224	1,704	1,704	3,408
<b>Total Trips</b>		<b>239</b>	<b>207</b>	<b>446</b>	<b>319</b>	<b>325</b>	<b>644</b>	<b>3,848</b>	<b>3,848</b>	<b>7,696</b>

**TRIP GENERATION SUMMARY**  
 Troutdale Market Site - Build-Out w/ Charter School

	Size (ksf)	AM Peak Hour			PM Peak Hour			Weekday		
		In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center	63.87	38	24	62	113	123	236	1,363	1,363	2,726
Bank with Drive-Through	4.20	29	22	51	51	51	102	311	311	622
Fast-Food with Drive-Through	6.87	159	153	312	116	108	224	1,704	1,704	3,408
Private School (K-8) w/ 330 Students		163	134	297	27	35	62	455	455	910
<b>Total Trips</b>		<b>389</b>	<b>333</b>	<b>722</b>	<b>307</b>	<b>317</b>	<b>624</b>	<b>3,833</b>	<b>3,833</b>	<b>7,666</b>

It is projected that the proposed conditional-use charter school will result in a reduction in site trips during the evening peak hour and over the course of a typical day as compared to full development of the site with the approved uses. Since schools generate their highest traffic volumes during the morning peak hour, the proposed conditional use would be projected to result in an overall increase in site trips during the morning peak hour. However, site traffic volumes will remain lower during the morning peak hour than the originally-approved site development volumes were during the evening peak hour. Since background traffic volumes are also highest during the evening peak hour, operation of the area intersections with full development including the proposed charter school will be better than under full development including the originally-approved site uses.

**Operational Analysis**

An operational analysis was conducted for the morning and evening peak hours for the site access intersections as well as the nearby signalized intersection of SE Stark Street at SE Troutdale Road. The analysis was conducted in accordance with the signalized and unsignalized intersection analysis methodologies described in the *Highway Capacity Manual*, published by the Transportation Research Board. Multnomah County generally requires that intersections in urbanized areas operate at level of service "D" or better.



Timothy Brunner  
April 3, 2015  
Page 4 of 5

Turning-movement count data was collected on March 12, 2015 to determine existing traffic volumes in the site vicinity. The traffic count data is included in the attached technical appendix. Also included in the appendix are diagrams showing the existing traffic volumes, full build-out volumes for the proposed development without the proposed charter school, and full build-out volumes for the proposed development with the addition of the proposed charter school. The turning-movement volume projections and detailed operational analysis were prepared for the weekday morning and evening peak hours.

Based on the operational analysis, the intersection of SE Stark Street at S Troutdale Road is currently operating at level of service C during the morning peak hour and level of service B during the evening peak hour. Under future conditions with full build-out of the Troutdale Market site (either with or without the proposed charter school), the intersection is projected to operate at level of service C during the morning and evening peak hours. Intersection operation is acceptable and no mitigations are necessary or recommended.

The west site access driveway on SE Stark Street is currently operating at level of service B during the morning and evening peak hours. The intersection is projected to continue to operate at level of service B during the morning and evening peak hours at full build out either with or without the proposed conditional-use charter school. Intersection operation is acceptable and no mitigations are necessary or recommended.

The east site access driveway on SE Stark Street is currently operating at level of service B during the morning and evening peak hours. Upon full occupancy of the Troutdale Market site, the intersection is projected to operate at level of service B during the morning peak hour and level of service C during the evening peak hour either with or without the proposed conditional-use charter school. Intersection operation is acceptable and no mitigations are necessary or recommended.

The north site access driveway on S Troutdale Road is currently operating at level of service B during the morning and evening peak hours. Upon full occupancy of the Troutdale Market site as currently permitted, the intersection is projected to operate at level of service B during the morning peak hour and level of service C during the evening peak hour. With completion of the proposed conditional-use charter school the intersection is projected to operate at level of service C during the morning and evening peak hours. Intersection operation is acceptable and no mitigations are necessary or recommended.

The south site access driveway on S Troutdale Road is currently operating at level of service B during the morning and evening peak hours. Upon full occupancy of the Troutdale Market site as currently permitted, the intersection is projected to continue to operate at level of service B during

Timothy Brunner  
April 3, 2015  
Page 5 of 5

the morning and evening peak hours. With completion of the proposed conditional-use charter school the intersection is projected to operate at level of service D during the morning peak hour and level of service B during the evening peak hour. Again, intersection operation is acceptable and no mitigations are necessary or recommended. Since this analysis was conducted assuming that all school drop-off trips would exit via this driveway, it is projected that the driveway will operate acceptably without the need for driver to deviate to other points of egress.

### Queuing Analysis

In order to ensure that the egress queue at the southwest site access driveway does not extend to and interfere with the student drop-off zone, a queuing analysis was conducted for future traffic conditions with the school in place.

Based on the analysis, the average queue length exiting from the driveway is projected to be 58 feet (approximately 2-3 vehicles), and the 95<sup>th</sup> percentile queue is projected to be 148 feet (approximately 6 vehicles). The distance between the back of sidewalk at the southwest driveway and the near side of the drop-off area is approximately 160 feet, so the current plan provides sufficient space between the driveway and the drop-off area to accommodate the projected queues.

Based on the analysis, sufficient queue storage is available for efficient operation of the site egress and the nearby student drop-off zone. No queuing-related mitigations are recommended. Detailed queuing analysis results are included in the attached technical appendix.

### Conclusions

Based on the detailed analysis, the study area intersections are projected operate acceptably during the morning and evening peak hours either with or without conversion of 22,000 square feet of retail space within the Troutdale Market site for use as a 330-student charter school. No mitigations are necessary or recommended in conjunction with the proposed change in use.

If you have any questions regarding this analysis or if you need any further assistance, please don't hesitate to contact us.

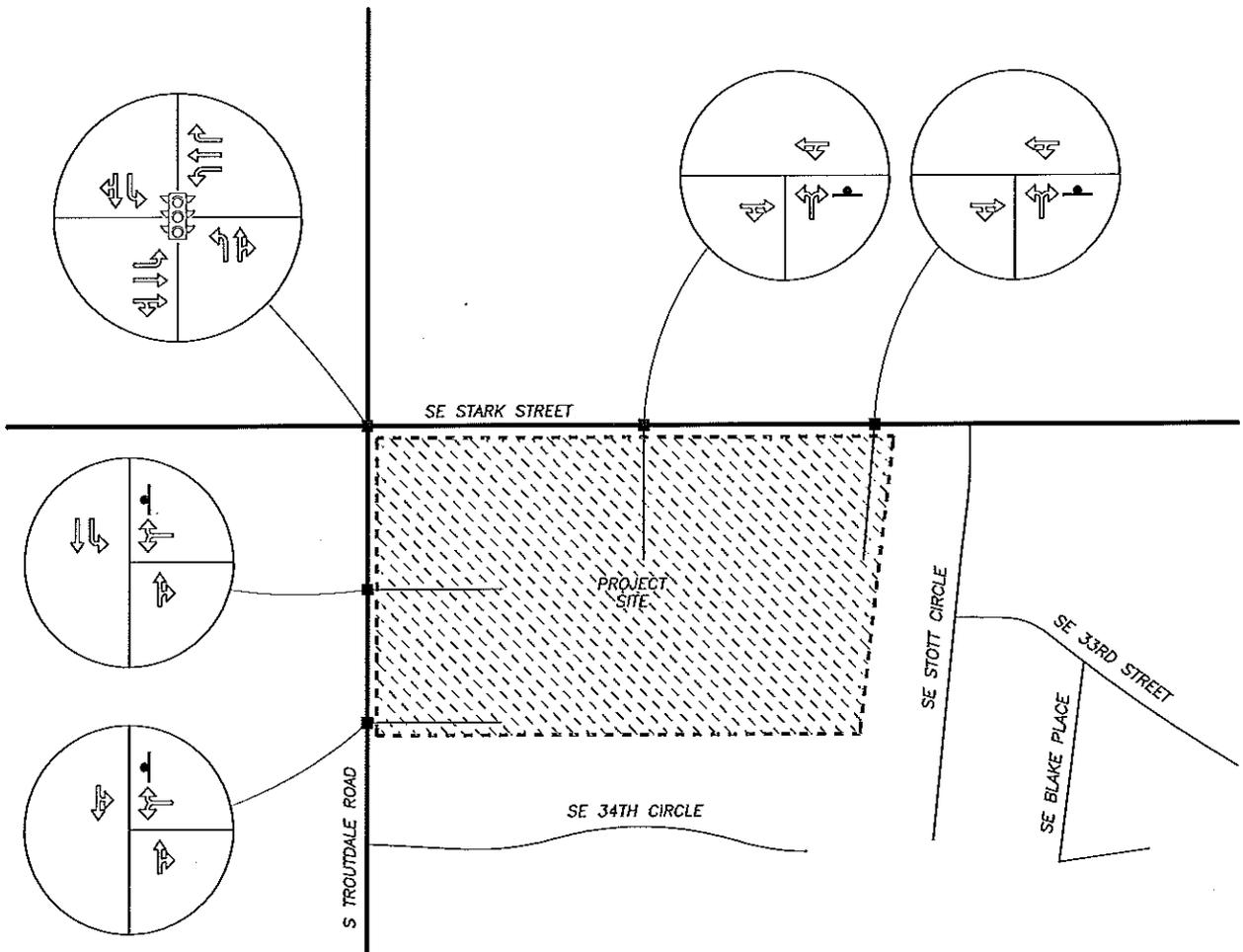
Sincerely,

Michael Ard, PE  
Senior Transportation Engineer

## APPENDIX

LEGEND

- STUDY INTERSECTION
- ⊥ STOP SIGN
- ▨ PROJECT SITE
- 🚦 TRAFFIC SIGNAL

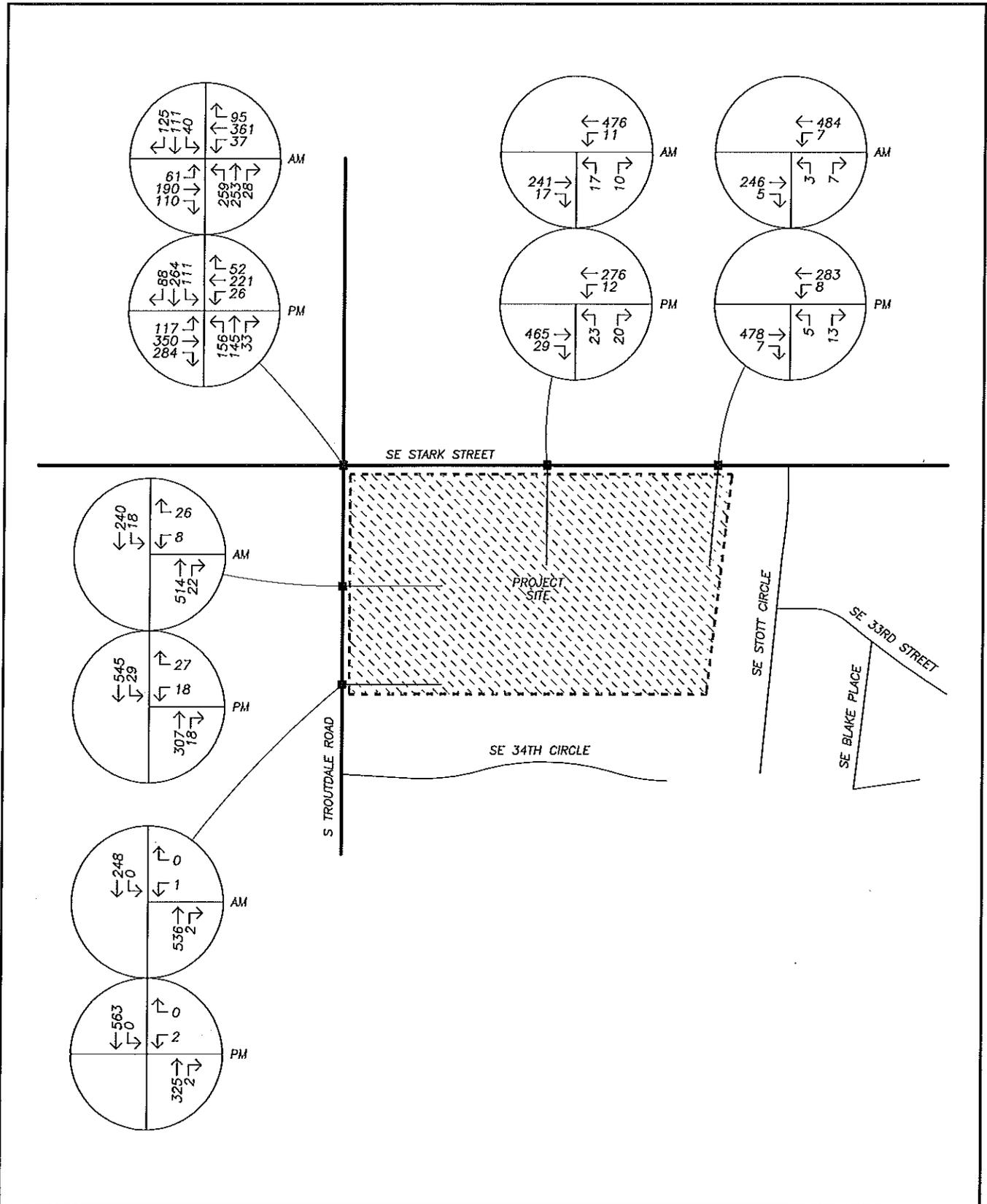


VICINITY MAP



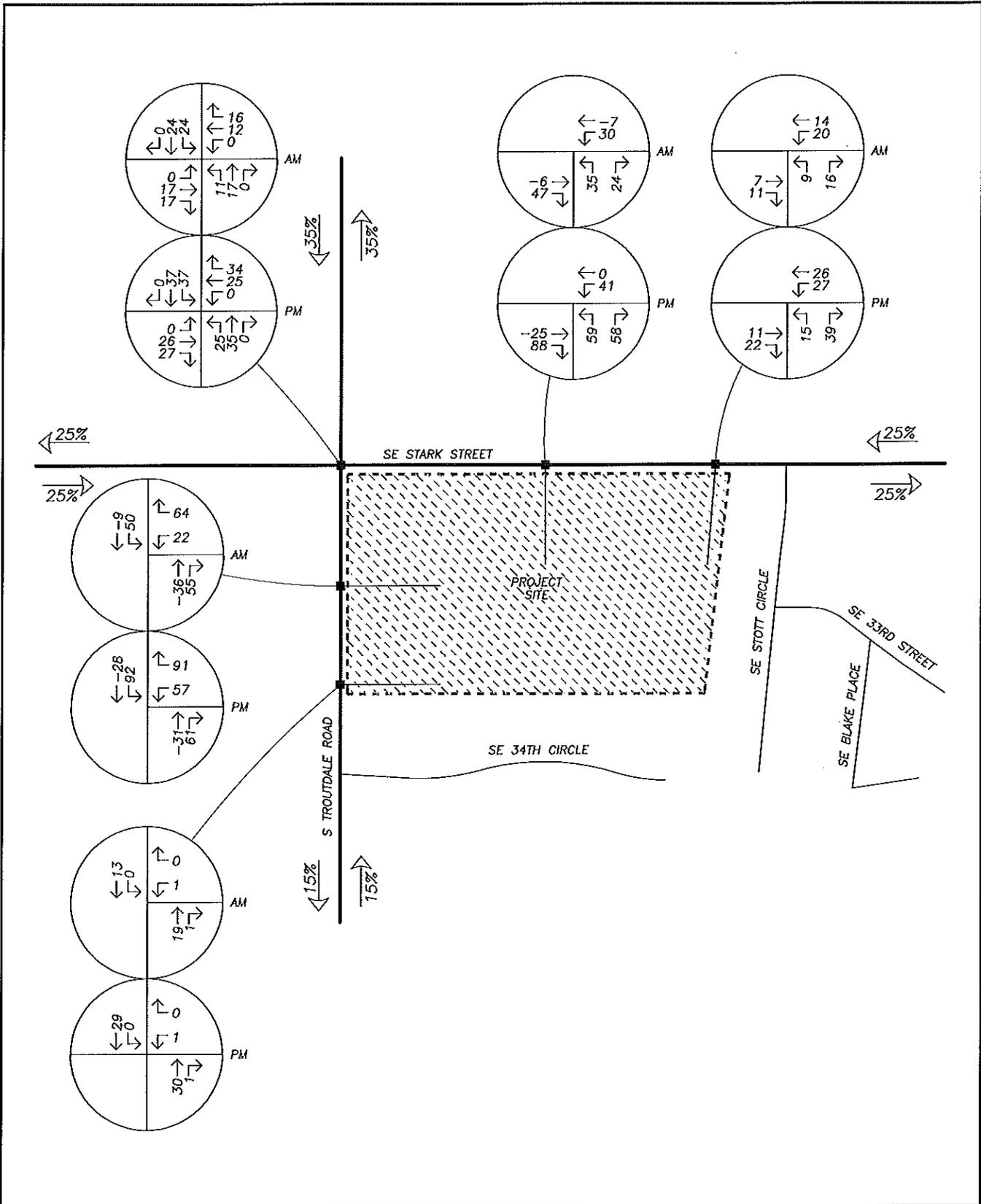
FIGURE 1

PAGE APP1



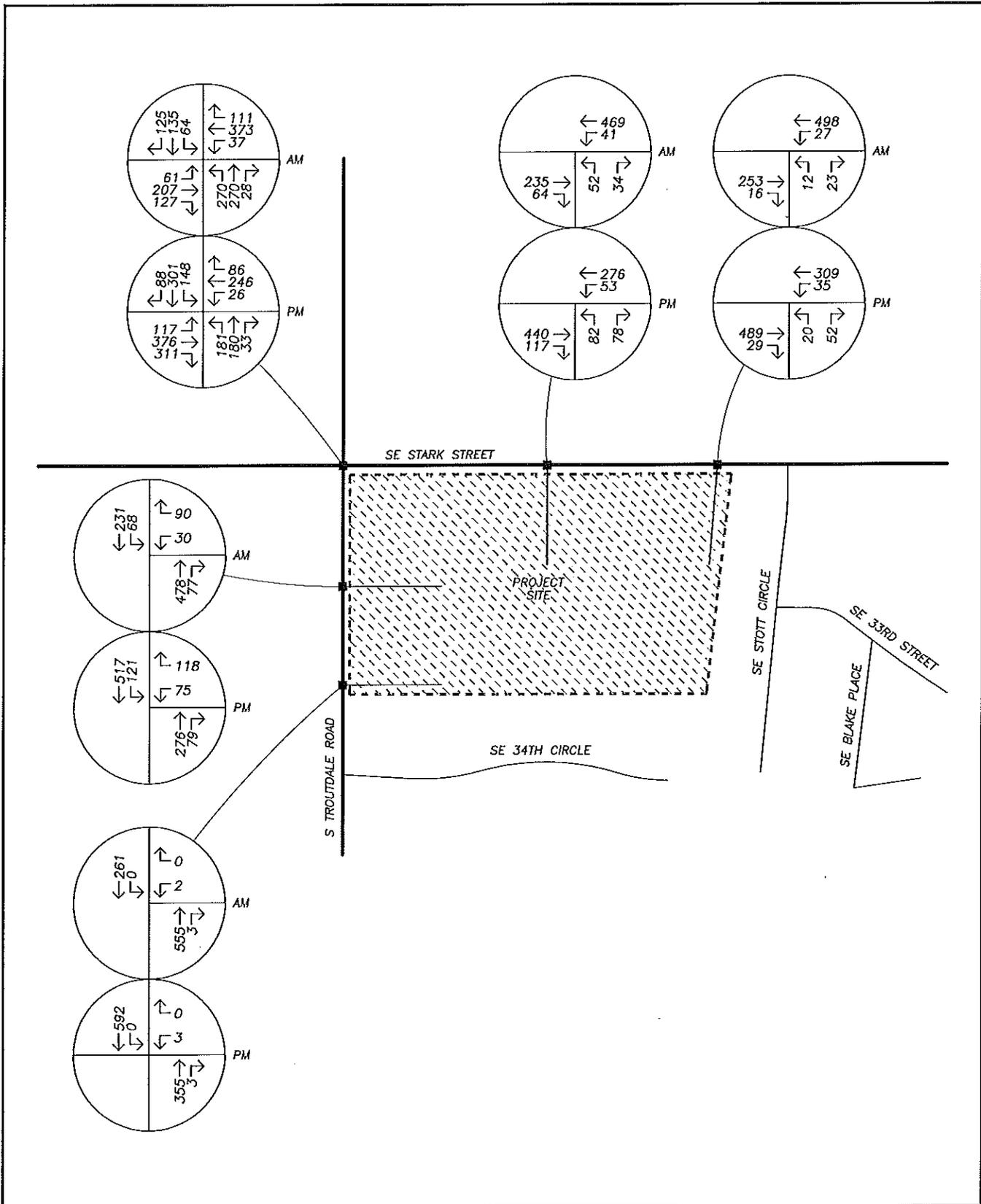
**TRAFFIC VOLUMES**  
**Existing Conditions**  
**AM & PM Peak Hours**





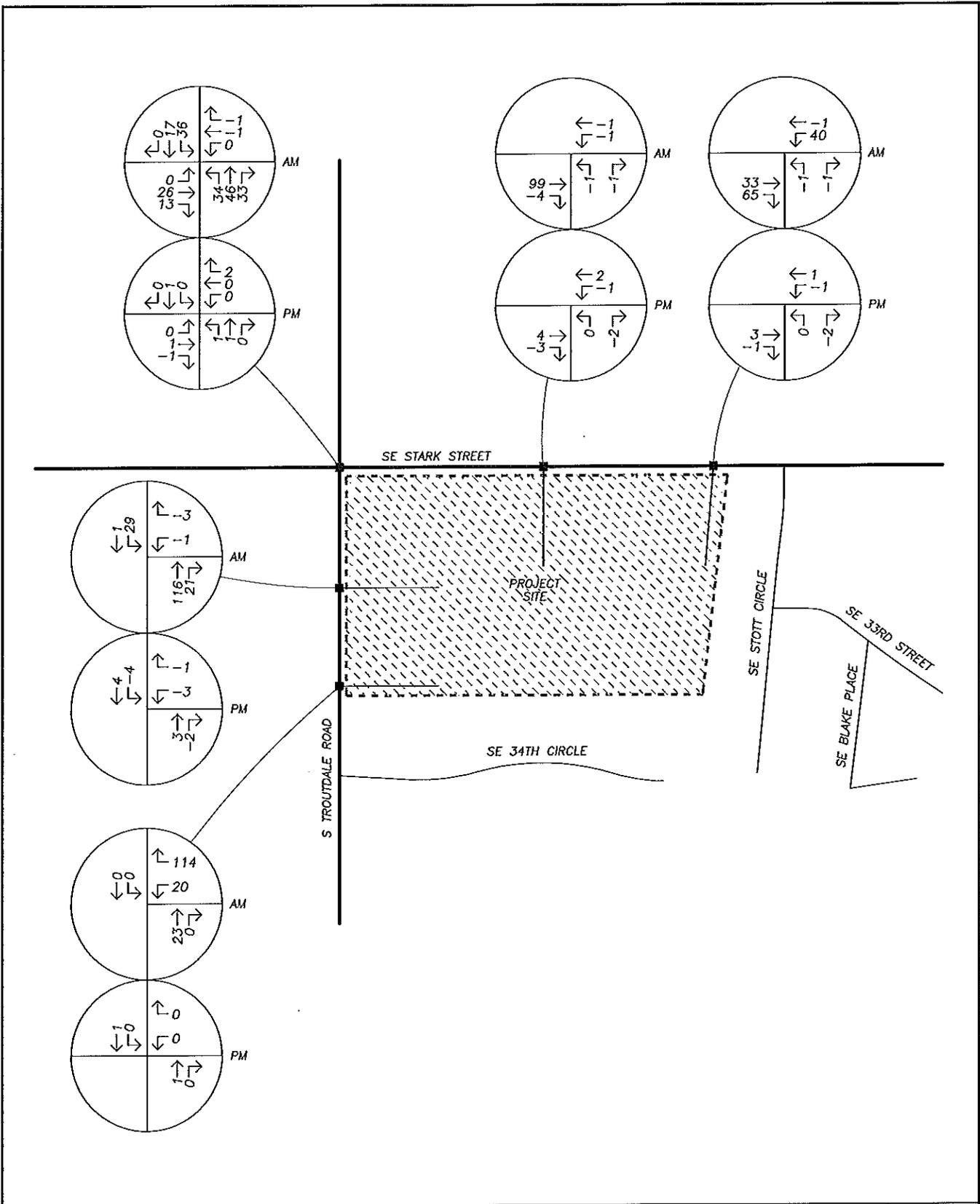
**TRAFFIC VOLUMES**  
 In-Process Trips (Background Additions)  
 AM & PM Peak Hours





**TRAFFIC VOLUMES**  
 Background Conditions – Development w/o Charter School  
 AM & PM Peak Hours



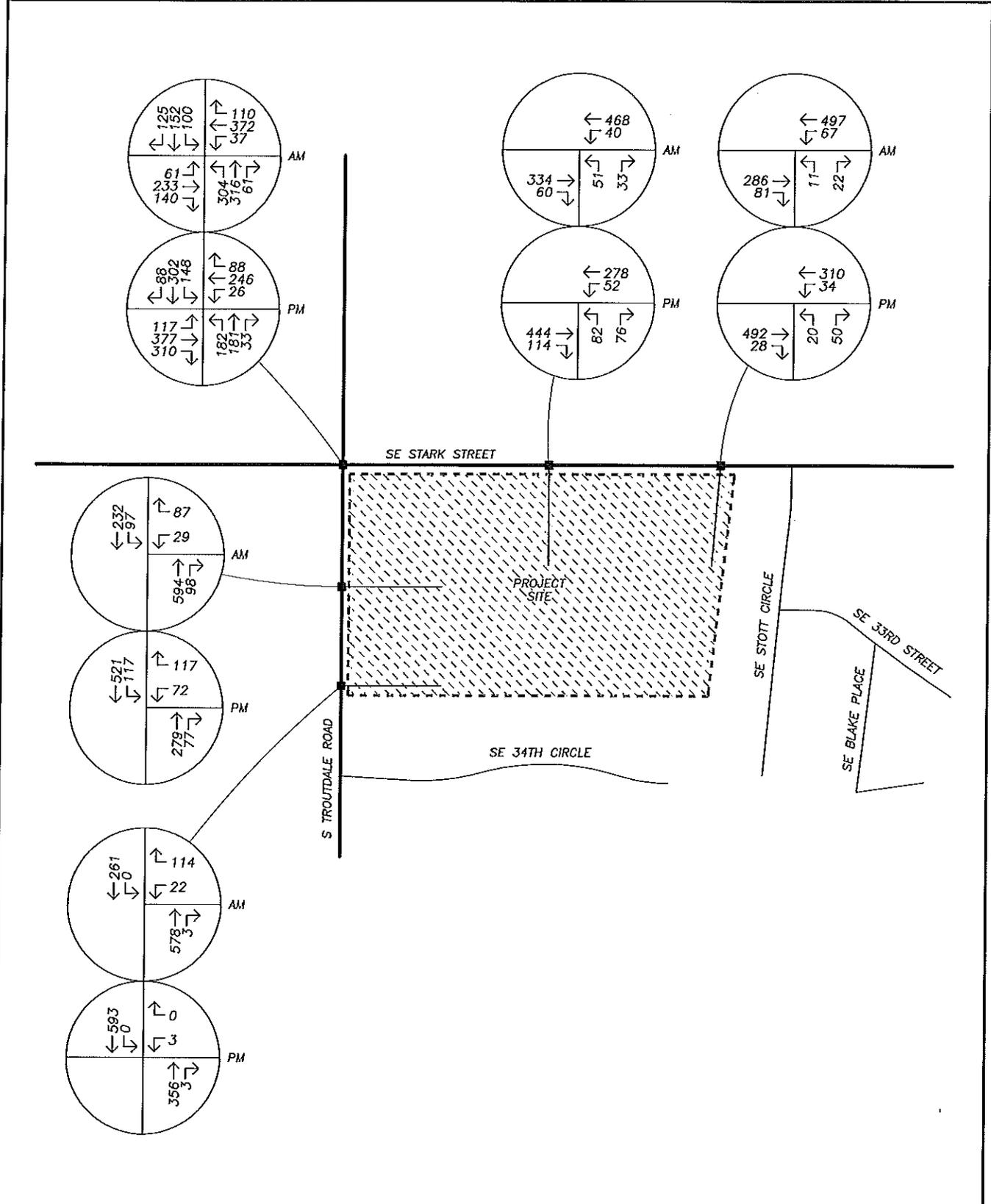


**TRAFFIC VOLUMES**  
 Charter School Trips (Net Change Due to Site Trips)  
 AM & PM Peak Hours



FIGURE 5

PAGE APP5



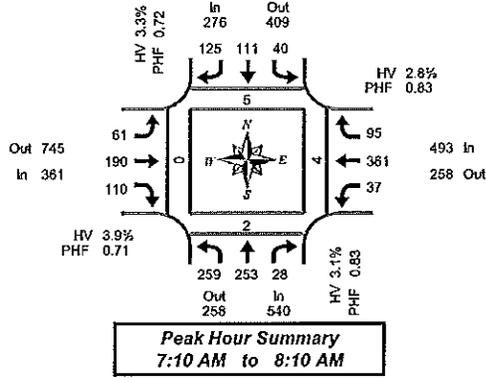
**TRAFFIC VOLUMES**  
 Background plus Proposed Charter School  
 AM & PM Peak Hours



# Total Vehicle Summary



Clay Carney  
(503) 833-2740



## S Troutdale Rd & SE Stark St

Thursday, March 12, 2015  
7:00 AM to 9:00 AM

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	19	23	0	0	2	4	8	0	1	6	11	0	2	24	7	1	107	0	0	0	0
7:05 AM	13	10	3	0	3	11	5	0	3	8	12	0	5	25	9	0	107	0	0	0	0
7:10 AM	22	15	1	0	0	4	7	0	4	6	8	0	0	27	7	0	101	0	1	0	0
7:15 AM	26	25	2	0	3	13	8	0	3	18	18	0	5	24	5	0	150	1	0	1	0
7:20 AM	30	19	0	0	2	9	7	0	8	16	18	0	4	36	5	0	154	0	0	0	0
7:25 AM	19	28	1	0	6	9	6	0	5	24	18	0	4	23	10	0	153	0	0	0	0
7:30 AM	29	27	1	0	4	3	7	0	2	16	4	0	1	22	6	0	122	0	1	0	0
7:35 AM	19	21	5	0	7	11	8	0	5	13	7	0	2	18	8	0	124	0	0	0	0
7:40 AM	27	30	4	0	3	7	14	0	6	24	6	1	5	36	6	1	168	0	0	0	0
7:45 AM	22	20	2	0	1	9	12	0	7	18	4	0	3	32	8	0	138	1	0	1	0
7:50 AM	20	17	1	0	6	13	20	0	6	17	5	0	2	32	14	0	153	2	0	1	0
7:55 AM	14	20	5	0	3	12	19	0	5	14	10	0	1	38	11	0	152	0	0	0	0
8:00 AM	15	17	3	0	3	10	10	0	7	19	7	0	5	32	6	0	134	1	0	1	0
8:05 AM	16	14	3	0	2	11	7	0	3	5	5	0	5	41	9	0	121	0	0	0	0
8:10 AM	16	10	0	0	4	9	4	0	1	9	9	0	1	21	2	0	88	0	0	0	1
8:15 AM	17	20	0	0	0	11	4	0	4	12	10	0	1	23	8	0	110	0	1	0	0
8:20 AM	15	19	0	0	0	15	4	0	1	5	21	0	1	19	2	0	102	0	0	0	0
8:25 AM	23	21	1	0	2	6	5	0	2	13	15	0	1	14	3	0	106	0	0	0	0
8:30 AM	32	23	1	0	0	14	7	0	3	6	19	0	1	15	2	0	123	0	0	0	1
8:35 AM	31	15	3	0	3	9	5	0	2	8	15	0	2	13	5	0	111	0	0	0	0
8:40 AM	24	11	1	0	3	6	13	0	2	11	10	0	2	15	1	0	99	0	0	0	0
8:45 AM	22	9	1	0	1	13	7	0	3	18	9	0	3	27	4	0	117	0	0	0	0
8:50 AM	15	13	1	0	0	4	13	0	1	4	4	0	2	16	2	0	75	0	0	0	0
8:55 AM	24	12	3	0	1	14	8	0	5	5	8	0	0	12	4	0	96	0	0	0	2
Total Survey	510	439	42	0	59	227	208	0	89	295	253	1	58	585	144	2	2,909	5	3	4	4

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	54	48	4	0	5	19	20	0	8	20	31	0	7	76	23	1	315	0	1	0	0
7:15 AM	75	72	3	0	11	31	21	0	16	58	54	0	13	83	20	0	457	1	0	1	0
7:30 AM	75	78	10	0	14	21	29	0	13	53	17	1	8	76	20	1	414	0	1	0	0
7:45 AM	56	57	8	0	10	34	51	0	18	49	19	0	6	102	33	0	443	3	0	2	0
8:00 AM	47	41	6	0	9	30	21	0	11	33	21	0	11	94	17	0	341	1	0	1	1
8:15 AM	55	60	1	0	2	32	13	0	7	30	46	0	3	56	13	0	318	0	1	0	0
8:30 AM	87	49	5	0	6	29	25	0	7	25	44	0	5	43	8	0	333	0	0	0	1
8:45 AM	61	34	5	0	2	31	28	0	9	27	21	0	5	55	10	0	288	0	0	0	2
Total Survey	510	439	42	0	59	227	208	0	89	295	253	1	58	585	144	2	2,909	5	3	4	4

### Peak Hour Summary 7:10 AM to 8:10 AM

By Approach	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	540	258	798	0	276	409	685	0	361	745	1,106	1	493	258	751	1	1,670	5	2	4	0
%HV	3.1%				3.3%				3.9%				2.8%				3.2%				
PHF	0.83				0.72				0.71				0.83				0.91				

By Movement	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	259	253	28	540	40	111	125	276	61	190	110	361	37	361	95	493	1,670
%HV	3.1%	3.2%	3.6%	3.1%	5.0%	3.6%	2.4%	3.3%	3.3%	4.2%	3.6%	3.9%	10.8%	2.2%	2.1%	2.8%	3.2%
PHF	0.83	0.81	0.64	0.83	0.59	0.79	0.61	0.72	0.80	0.81	0.51	0.71	0.71	0.81	0.72	0.83	0.91

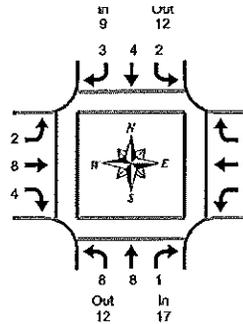
### Rolling Hour Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	260	255	25	0	40	105	121	0	55	160	121	1	34	337	96	2	1,629	4	2	3	0
7:15 AM	253	248	27	0	44	116	122	0	58	193	111	1	38	355	90	1	1,655	5	1	4	1
7:30 AM	233	236	25	0	35	117	114	0	49	165	103	1	28	328	83	1	1,518	4	2	3	1
7:45 AM	245	207	20	0	27	125	110	0	43	137	130	0	25	295	71	0	1,435	4	1	3	2
8:00 AM	250	184	17	0	19	122	87	0	34	115	132	0	24	248	48	0	1,280	1	1	1	4

# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



## S Troutdale Rd & SE Stark St

Thursday, March 12, 2015  
7:00 AM to 9:00 AM

**Peak Hour Summary**  
7:10 AM to 8:10 AM

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
7:05 AM	0	0	0	0	0	0	1	1	1	0	0	1	0	3	0	3	5
7:10 AM	1	0	0	1	0	0	0	0	0	0	1	1	0	1	1	2	4
7:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	4	0	0	4	6
7:20 AM	1	2	0	3	0	0	1	1	0	2	0	2	0	1	0	1	7
7:25 AM	1	0	0	1	0	1	0	1	0	1	1	2	0	0	0	0	4
7:30 AM	0	1	0	1	1	0	0	1	1	0	0	1	0	2	1	3	6
7:35 AM	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	3
7:40 AM	1	1	0	2	0	0	1	1	0	1	0	1	0	1	0	1	5
7:45 AM	2	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
7:50 AM	0	1	0	1	0	1	0	1	0	0	1	1	0	0	0	0	3
7:55 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	2	0	2	4
8:00 AM	2	0	0	2	0	0	0	0	1	0	0	1	0	1	0	1	4
8:05 AM	0	0	0	0	1	2	1	4	0	0	1	1	0	0	0	0	5
8:10 AM	1	1	0	2	0	1	0	1	0	1	1	2	0	0	0	0	5
8:15 AM	0	1	0	1	0	1	1	2	1	0	0	1	0	0	0	0	4
8:20 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
8:25 AM	0	0	0	0	0	0	0	0	0	2	3	5	0	1	0	1	6
8:30 AM	2	1	0	3	0	0	0	0	0	1	3	4	0	0	0	0	7
8:35 AM	5	1	0	6	0	0	0	0	0	0	2	2	0	0	0	0	8
8:40 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	2	0	2	4
8:45 AM	0	0	0	0	0	1	0	1	0	0	2	2	0	1	0	1	4
8:50 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
8:55 AM	0	0	0	0	0	1	0	1	0	1	1	2	0	0	0	0	3
Total Survey	17	13	1	31	2	10	6	18	4	14	17	35	4	17	2	23	107

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	0	1	0	0	2	2	1	0	1	2	0	5	1	6	11
7:15 AM	2	3	0	5	0	1	1	2	0	4	1	5	4	1	0	5	17
7:30 AM	1	3	1	5	1	0	1	2	1	2	0	3	0	3	1	4	14
7:45 AM	2	2	0	4	0	1	0	1	0	2	1	3	0	2	0	2	10
8:00 AM	3	1	0	4	1	3	1	5	1	1	2	4	0	1	0	1	14
8:15 AM	0	2	0	2	0	2	1	3	1	2	3	6	0	2	0	2	13
8:30 AM	8	2	0	10	0	0	0	0	0	2	5	7	0	2	0	2	19
8:45 AM	0	0	0	0	0	3	0	3	0	1	4	5	0	1	0	1	9
Total Survey	17	13	1	31	2	10	6	18	4	14	17	35	4	17	2	23	107

### Heavy Vehicle Peak Hour Summary 7:10 AM to 8:10 AM

By Approach	Northbound S Troutdale Rd			Southbound S Troutdale Rd			Eastbound SE Stark St			Westbound SE Stark St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	17	12	29	9	12	21	14	19	33	14	11	25	54
PHF	0.71			0.56			0.70			0.50			0.79

By Movement	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	8	8	1	17	2	4	3	9	2	8	4	14	4	8	2	14	54
PHF	0.67	0.67	0.25	0.71	0.50	0.50	0.75	0.58	0.50	0.50	1.00	0.70	0.25	0.67	0.50	0.50	0.79

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	6	8	1	15	1	2	4	7	2	8	3	13	4	11	2	17	52
7:15 AM	8	9	1	18	2	5	3	10	2	9	4	15	4	7	1	12	55
7:30 AM	6	8	1	15	2	6	3	11	3	7	6	16	0	8	1	9	51
7:45 AM	13	7	0	20	1	6	2	9	2	7	11	20	0	7	0	7	66
8:00 AM	11	5	0	16	1	8	2	11	2	6	14	22	0	6	0	6	55

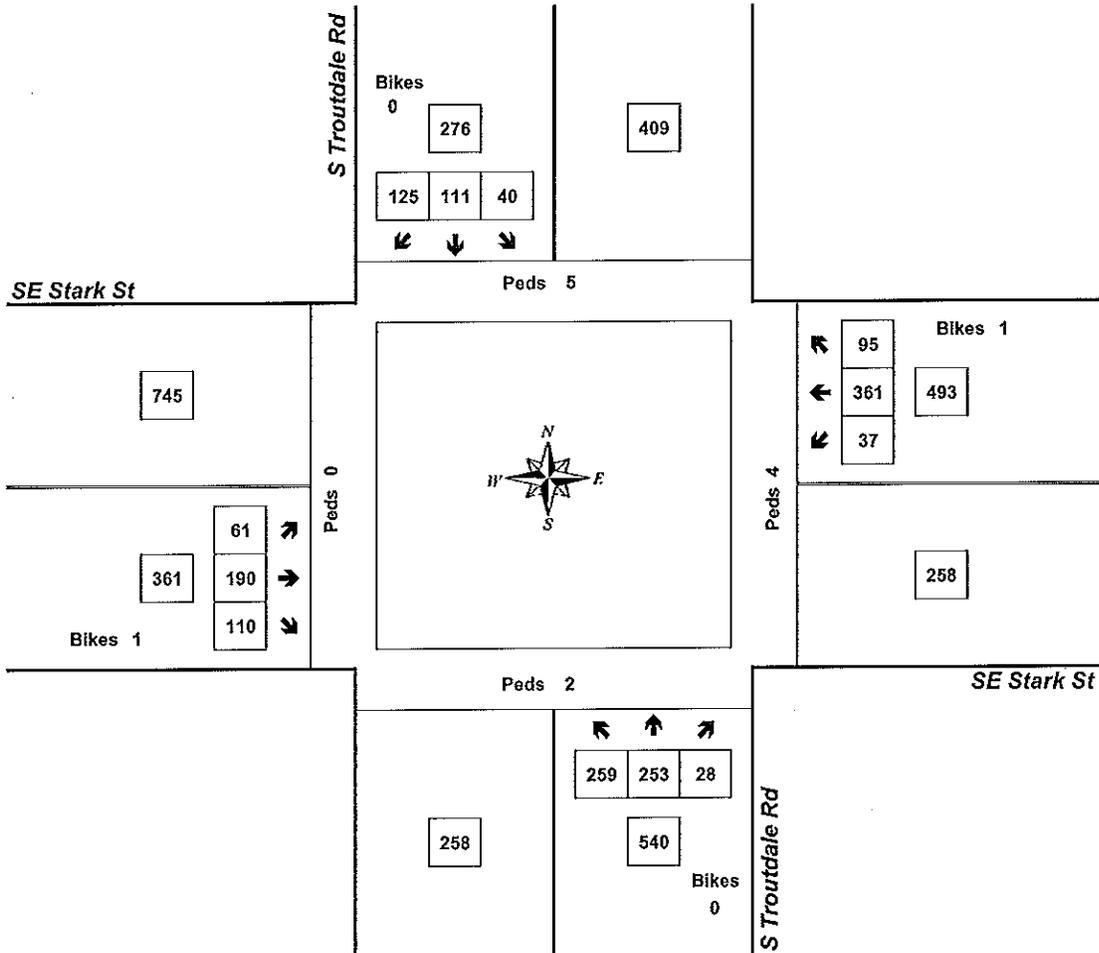
# Peak Hour Summary



Clay Carney  
(503) 833-2740

## S Troutdale Rd & SE Stark St

7:10 AM to 8:10 AM  
Thursday, March 12, 2015



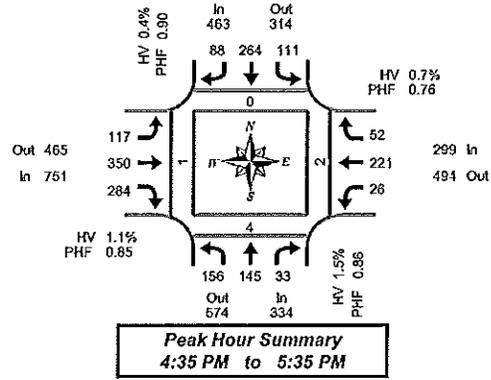
Approach	PHF	HV%	Volume
EB	0.71	3.9%	361
WB	0.83	2.8%	493
NB	0.83	3.1%	540
SB	0.72	3.3%	276
<b>Intersection</b>	<b>0.91</b>	<b>3.2%</b>	<b>1,670</b>

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

# Total Vehicle Summary



Clay Carney  
(503) 833-2740



## S Troutdale Rd & SE Stark St

Wednesday, March 11, 2015  
4:00 PM to 6:00 PM

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total	Pedestrians Crosswa'k			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	31	10	4	0	6	20	6	0	4	30	22	0	2	31	7	0	173	0	0	1	0
4:05 PM	23	15	4	0	10	19	6	0	12	28	20	0	3	22	2	0	164	0	0	3	0
4:10 PM	13	15	0	0	7	19	7	0	2	18	19	0	2	16	4	0	122	0	1	0	0
4:15 PM	15	11	4	0	7	29	4	0	7	26	22	0	2	20	7	1	154	0	0	0	0
4:20 PM	13	11	2	0	4	24	9	0	8	38	16	0	4	27	2	0	158	0	0	0	0
4:25 PM	8	7	3	0	7	18	3	0	12	16	36	0	1	20	3	0	134	0	0	0	0
4:30 PM	8	8	1	0	8	13	9	0	5	28	20	0	2	27	4	0	133	0	0	0	0
4:35 PM	16	13	3	0	9	18	4	0	10	24	29	0	1	15	0	0	142	0	0	1	0
4:40 PM	17	5	2	0	6	12	6	0	11	29	14	0	5	27	8	0	142	0	0	0	0
4:45 PM	13	13	4	0	13	23	13	0	5	29	23	0	5	23	2	0	166	0	0	0	0
4:50 PM	10	18	2	0	13	21	9	0	9	28	16	0	3	19	6	0	154	0	0	0	0
4:55 PM	11	12	3	0	4	22	2	0	6	27	16	0	0	15	5	0	123	0	2	0	0
5:00 PM	11	11	1	0	10	20	9	0	10	31	31	0	2	16	4	0	156	0	1	1	0
5:05 PM	8	11	5	0	7	24	6	0	10	33	29	0	4	16	1	0	154	0	0	0	1
5:10 PM	17	19	3	0	9	27	7	0	13	29	28	0	0	18	4	0	174	0	0	0	0
5:15 PM	13	13	0	0	10	23	8	0	17	37	25	0	3	19	6	0	174	0	0	0	0
5:20 PM	15	12	5	0	11	25	5	0	7	26	22	0	0	17	1	0	146	0	0	0	0
5:25 PM	14	9	4	0	7	29	10	0	8	21	27	0	2	19	12	0	162	0	1	0	0
5:30 PM	11	9	1	0	12	20	9	0	11	36	24	0	1	17	3	1	154	0	0	0	0
5:35 PM	13	6	5	0	5	15	4	0	9	37	18	0	2	18	2	0	134	0	0	0	0
5:40 PM	9	8	4	0	8	24	10	0	10	20	20	0	3	24	4	0	144	0	0	0	0
5:45 PM	19	16	2	0	12	22	9	0	11	22	24	0	1	16	3	0	157	0	0	0	0
5:50 PM	10	15	1	0	8	14	11	0	19	30	22	0	3	23	3	0	159	1	0	1	0
5:55 PM	9	7	1	0	6	18	9	0	6	32	18	0	3	14	2	0	125	0	1	0	0
Total Survey	327	274	64	0	199	499	175	0	222	675	541	0	54	479	95	2	3,604	1	6	7	1

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total	Pedestrians Crosswa'k			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	67	40	8	0	23	58	19	0	18	76	61	0	7	69	13	0	459	0	1	4	0
4:15 PM	36	29	9	0	18	71	16	0	27	80	74	0	7	67	12	1	445	0	0	0	0
4:30 PM	41	26	6	0	23	43	19	0	26	81	63	0	8	69	12	0	417	0	0	1	0
4:45 PM	34	43	9	0	30	66	24	0	20	84	55	0	8	57	13	0	443	0	2	0	0
5:00 PM	38	41	9	0	26	71	22	0	33	93	88	0	6	50	9	0	484	0	1	1	1
5:15 PM	42	34	9	0	28	77	23	0	32	84	74	0	5	55	19	0	482	0	1	0	0
5:30 PM	33	23	10	0	25	59	23	0	30	93	62	0	6	59	9	1	432	0	0	0	0
5:45 PM	38	38	4	0	26	64	29	0	36	84	64	0	7	53	8	0	441	1	1	1	0
Total Survey	327	274	64	0	199	499	175	0	222	675	541	0	54	479	95	2	3,604	1	6	7	1

### Peak Hour Summary 4:35 PM to 5:35 PM

By Approach	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Total	Pedestrians Crosswa'k			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	334	574	908	0	463	314	777	0	751	465	1,216	0	299	494	793	1	1,847	0	4	2	1
%HV	1.6%				0.4%				1.1%				0.7%				0.9%				
PHF	0.88				0.90				0.85				0.76				0.92				

By Movement	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	156	145	33	334	111	264	88	463	117	350	284	751	26	221	52	299	1,847
%HV	1.3%	1.4%	3.0%	1.5%	0.0%	0.4%	1.1%	0.4%	2.6%	0.3%	1.4%	1.1%	3.8%	0.0%	1.9%	0.7%	0.9%
PHF	0.85	0.82	0.83	0.86	0.87	0.86	0.79	0.90	0.73	0.88	0.81	0.85	0.50	0.80	0.68	0.76	0.92

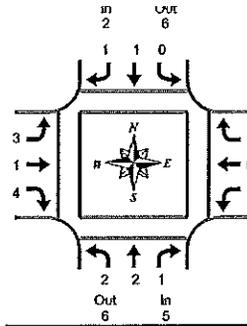
### Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total	Pedestrians Crosswa'k			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	178	138	32	0	94	238	78	0	91	321	253	0	30	262	50	1	1,765	0	3	5	0
4:15 PM	147	139	33	0	97	251	81	0	106	338	280	0	29	243	46	1	1,790	0	3	2	1
4:30 PM	153	144	33	0	107	257	88	0	111	342	260	0	27	231	53	0	1,826	0	4	2	1
4:45 PM	145	141	37	0	109	273	92	0	115	354	279	0	25	221	50	1	1,841	0	4	1	1
5:00 PM	149	138	32	0	105	261	97	0	131	354	288	0	24	217	45	1	1,839	1	3	2	1

# Heavy Vehicle Summary



Clay Carney  
(503) 833-2740



Out 3  
In 8

**Peak Hour Summary**  
4:35 PM to 5:35 PM

## S Troutdale Rd & SE Stark St

Wednesday, March 11, 2015  
4:00 PM to 6:00 PM

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	0	1	1	3
4:05 PM	0	1	2	3	0	1	0	1	0	0	0	0	0	0	0	0	4
4:10 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
4:15 PM	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
4:20 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
4:25 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
4:50 PM	0	1	0	1	0	0	0	0	0	0	2	2	0	0	0	0	3
4:55 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	1	3
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
5:15 PM	0	1	0	1	0	0	1	1	1	0	0	1	0	0	0	0	3
5:20 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Survey	5	6	4	15	0	4	2	6	4	3	5	12	1	1	2	4	37

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	1	3	5	0	1	0	1	1	1	0	2	0	0	1	1	9
4:15 PM	2	2	0	4	0	1	1	2	0	0	1	1	0	0	0	0	7
4:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	1	0	2	0	0	0	0	0	1	3	4	1	0	0	1	7
5:00 PM	0	0	1	1	0	1	0	1	2	0	0	2	0	0	1	1	6
5:15 PM	0	1	0	1	0	0	1	1	1	0	1	2	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total Survey	5	6	4	15	0	4	2	6	4	3	5	12	1	1	2	4	37

### Heavy Vehicle Peak Hour Summary 4:35 PM to 5:35 PM

By Approach	Northbound S Troutdale Rd			Southbound S Troutdale Rd			Eastbound SE Stark St			Westbound SE Stark St			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	6	11	2	6	8	8	3	11	2	2	4	17
PHF	0.42			0.25			0.33			0.50			0.53

By Movement	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	2	1	5	0	1	1	2	3	1	4	8	1	0	1	2	17
PHF	0.25	0.50	0.25	0.42	0.00	0.25	0.25	0.25	0.38	0.25	0.33	0.33	0.25	0.00	0.25	0.50	0.53

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

Interval Start Time	Northbound S Troutdale Rd				Southbound S Troutdale Rd				Eastbound SE Stark St				Westbound SE Stark St				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	5	4	3	12	0	2	1	3	1	2	4	7	1	0	1	2	24
4:15 PM	4	3	1	8	0	2	1	3	2	1	4	7	1	0	1	2	20
4:30 PM	2	2	1	5	0	1	1	2	3	1	4	8	1	0	1	2	17
4:45 PM	1	2	1	4	0	1	1	2	3	2	4	9	1	0	1	2	17
5:00 PM	0	2	1	3	0	2	1	3	3	1	1	5	0	1	1	2	13

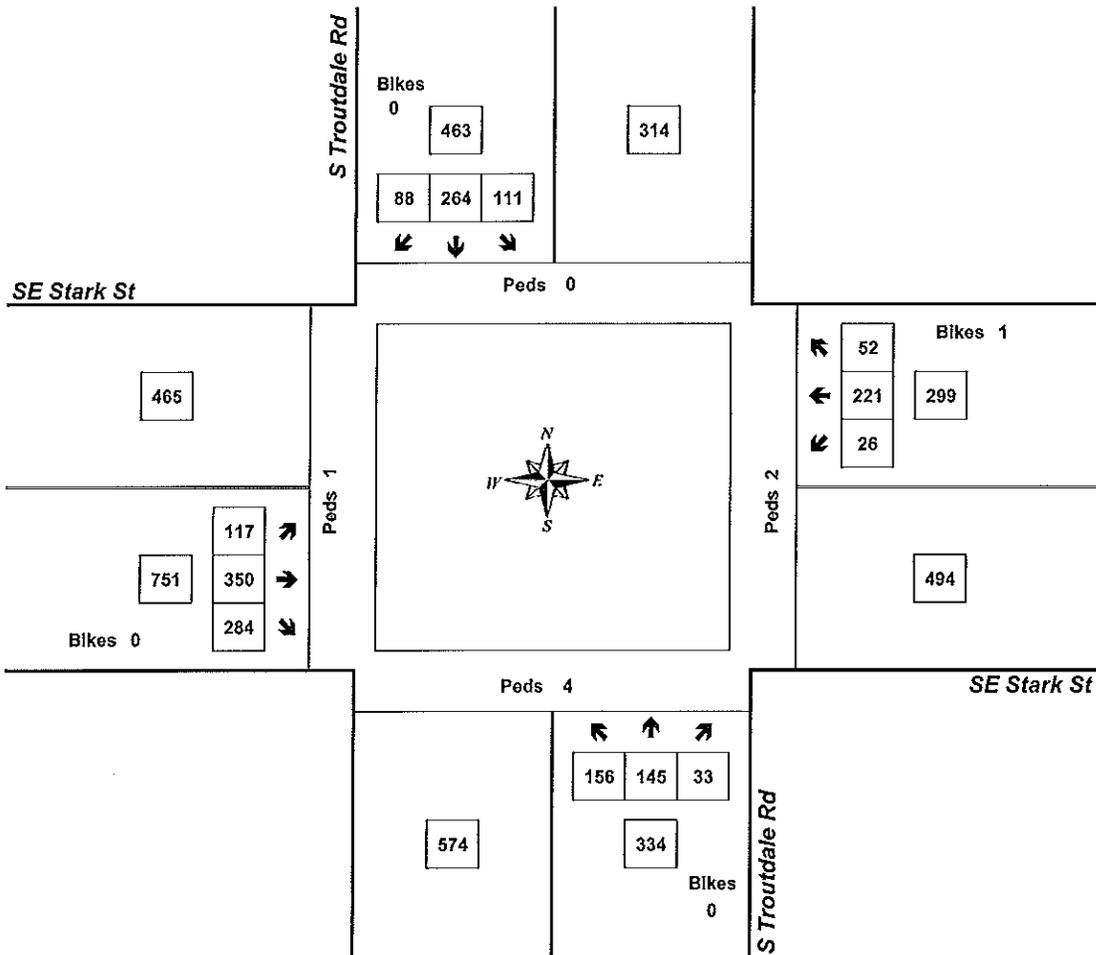
# Peak Hour Summary



Clay Carney  
(503) 833-2740

## S Troutdale Rd & SE Stark St

4:35 PM to 5:35 PM  
Wednesday, March 11, 2015



Approach	PHF	HV%	Volume
EB	0.85	1.1%	751
WB	0.76	0.7%	299
NB	0.86	1.5%	334
SB	0.90	0.4%	463
<b>Intersection</b>	<b>0.92</b>	<b>0.9%</b>	<b>1,847</b>

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

2e

### TRIP GENERATION CALCULATIONS

*Land Use:* Fast Food Restaurant with Drive-Through Window  
*Land Use Code:* 934  
*Variable:* 1000 Sq Ft Gross Floor Area  
*Variable Quantity:* 2.67

#### AM PEAK HOUR

*Trip Rate:* 45.42

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	62	59	121

#### PM PEAK HOUR

*Trip Rate:* 32.65

	Enter	Exit	Total
Directional Distribution	52%	48%	
Trip Ends	45	42	87

#### WEEKDAY

*Trip Rate:* 496.12

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	662	662	1,324

#### SATURDAY

*Trip Rate:* 722.03

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	964	964	1,928

2e

## TRIP GENERATION CALCULATIONS

*Land Use:* Shopping Center  
*Land Use Code:* 820  
*Variable:* 1,000 Sq Ft Gross Leasable Area  
*Variable Value:* 34.1

### AM PEAK HOUR

*Trip Rate:* 0.96

	Enter	Exit	Total
Directional Distribution	62%	38%	
Trip Ends	20	13	33

### PM PEAK HOUR

*Trip Rate:* 3.71

	Enter	Exit	Total
Directional Distribution	48%	52%	
Trip Ends	60	66	126

### WEEKDAY

*Trip Rate:* 42.7

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	727	727	1,454

### SATURDAY

*Trip Rate:* 49.97

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	851	851	1,702

1e

### TRIP GENERATION CALCULATIONS

*Land Use:* Shopping Center  
*Land Use Code:* 820  
*Variable:* 1,000 Sq Ft Gross Leasable Area  
*Variable Value:* 51.8

#### AM PEAK HOUR

*Trip Rate:* 0.96

	Enter	Exit	Total
Directional Distribution	62%	38%	
Trip Ends	31	19	50

#### PM PEAK HOUR

*Trip Rate:* 3.71

	Enter	Exit	Total
Directional Distribution	48%	52%	
Trip Ends	92	100	192

#### WEEKDAY

*Trip Rate:* 42.7

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,106	1,106	2,212

#### SATURDAY

*Trip Rate:* 49.97

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,294	1,294	2,588

2e

### TRIP GENERATION CALCULATIONS

*Land Use:* Drive-in Bank  
*Land Use Code:* 912  
*Variable:* 1000 Sq Ft Gross Floor Area  
*Variable Quantity:* 4.198

#### AM PEAK HOUR

*Trip Rate:* 12.08

	Enter	Exit	Total
Directional Distribution	57%	43%	
Trip Ends	29	22	51

#### PM PEAK HOUR

*Trip Rate:* 24.3

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	51	51	102

#### WEEKDAY

*Trip Rate:* 148.15

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	311	311	622

#### SATURDAY

*Trip Rate:* 86.32

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	181	181	362

Source: TRIP GENERATION, Ninth Edition

1e

## TRIP GENERATION CALCULATIONS

*Land Use:* Fast Food Restaurant with Drive-Through Window  
*Land Use Code:* 934  
*Variable:* 1000 Sq Ft Gross Floor Area  
*Variable Quantity:* 4.198

### AM PEAK HOUR

*Trip Rate:* 45.42

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	97	94	191

### PM PEAK HOUR

*Trip Rate:* 32.65

	Enter	Exit	Total
Directional Distribution	52%	48%	
Trip Ends	71	66	137

### WEEKDAY

*Trip Rate:* 496.12

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,041	1,041	2,082

### SATURDAY

*Trip Rate:* 722.03

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1516	1516	3,032

2e

### TRIP GENERATION CALCULATIONS

Land Use: Shopping Center  
Land Use Code: 820  
Variable: 1,000 Sq Ft Gross Leasable Area  
Variable Value: 22.0 (Reduction in gross leasable area)

#### AM PEAK HOUR

Trip Rate: 0.96

	Enter	Exit	Total
Directional Distribution	62%	38%	
Trip Ends	~13	~8	~21

#### PM PEAK HOUR

Trip Rate: 3.71

	Enter	Exit	Total
Directional Distribution	48%	52%	
Trip Ends	~39	~43	~82

#### WEEKDAY

Trip Rate: 42.7

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	~470	~470	~940

#### SATURDAY

Trip Rate: 49.97

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	~550	~550	~1,100

Source: TRIP GENERATION, Ninth Edition

2e

### TRIP GENERATION CALCULATIONS

Land Use: Private School (K-8)  
Land Use Code: 534  
Variable: Students  
Variable Value: 330

#### AM PEAK HOUR

Trip Rate: 0.90

	Enter	Exit	Total
Directional Distribution	55%	45%	
Trip Ends	163	134	297

#### PM PEAK HOUR OF GENERATOR

Trip Rate: 0.60

	Enter	Exit	Total
Directional Distribution	47%	53%	
Trip Ends	93	105	198

$$PM = \text{Peak Hour of Generator} \cdot \frac{0.17}{0.58}$$

⇒ 58 trips

- OR -

Source: TRIP GENERATION, Ninth Edition

$$PM = \text{Peak Hour AM} \cdot \frac{0.17}{0.81}$$

⇒ 62 trips

∴ Use 62 trips for conservative analysis  
43% entering = 27 trips, 57% exiting = 35 trips

2e

## TRIP GENERATION CALCULATIONS

*Land Use:* Private School (K-12)  
*Land Use Code:* 536  
*Variable:* Students  
*Variable Value:* 330

### AM PEAK HOUR

*Trip Rate:* 0.81

	Enter	Exit	Total
Directional Distribution	61%	39%	
Trip Ends	163	104	267

### PM PEAK HOUR

*Trip Rate:* 0.17

	Enter	Exit	Total
Directional Distribution	43%	57%	
Trip Ends	24	32	56

### WEEKDAY

*Trip Rate:* 2.48

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	409	409	818

### PM PEAK HOUR OF GENERATOR

*Trip Rate:* 0.58

	Enter	Exit	Total
Directional Distribution	42%	58%	
Trip Ends	80	111	191

HCM Signalized Intersection Capacity Analysis  
 1: S Troutdale Road & SE Stark Street

Troutdale Market Charter School  
 2015 Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	190	110	37	361	95	259	253	28	40	111	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.98		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	3262		1751	1845	1521	1752	1814		1750	1698	
Flt Permitted	0.24	1.00		0.55	1.00	1.00	0.46	1.00		0.55	1.00	
Satd. Flow (perm)	430	3262		1019	1845	1521	844	1814		1008	1698	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	67	209	121	41	397	104	285	278	31	44	122	137
RTOR Reduction (vph)	0	88	0	0	0	77	0	6	0	0	59	0
Lane Group Flow (vph)	67	242	0	41	397	27	285	303	0	44	200	0
Confl. Peds. (#/hr)	5		2	2		5			4	4		
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	20.3	17.6		18.5	16.7	16.7	29.4	23.8		23.6	20.9	
Effective Green, g (s)	20.3	17.6		18.5	16.7	16.7	29.4	23.8		23.6	20.9	
Actuated g/C Ratio	0.32	0.28		0.29	0.26	0.26	0.46	0.37		0.37	0.33	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	191	898		315	482	397	467	675		403	555	
v/s Ratio Prot	c0.01	0.07		0.00	c0.22		c0.05	0.17		0.00	0.12	
v/s Ratio Perm	0.10			0.03		0.02	c0.23			0.04		
v/c Ratio	0.35	0.27		0.13	0.82	0.07	0.61	0.45		0.11	0.36	
Uniform Delay, d1	16.3	18.1		16.5	22.2	17.7	12.2	15.1		13.0	16.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.2		0.2	10.9	0.1	2.4	2.2		0.1	1.8	
Delay (s)	17.4	18.3		16.7	33.1	17.8	14.5	17.3		13.2	18.2	
Level of Service	B	B		B	C	B	B	B		B	B	
Approach Delay (s)		18.1			29.0			16.0			17.5	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	63.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 2: West Site Access & SE Stark Street

Troutdale Market Charter School  
 2015 Existing AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Volume (veh/h)	241	17	11	476	17	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	265	19	12	523	19	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage (veh)	2					
Upstream signal (ft)	485					
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			284		821	274
vC1, stage 1 conf vol					274	
vC2, stage 2 conf vol					547	
vCu, unblocked vol			176		761	166
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	99
cM capacity (veh/h)			1281		526	807

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	284	535	30
Volume Left	0	12	19
Volume Right	19	0	11
cSH	1700	1281	604
Volume to Capacity	0.17	0.01	0.05
Queue Length 95th (ft)	0	1	4
Control Delay (s)	0.0	0.3	11.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	11.3
Approach LOS			B

Intersection Summary		
Average Delay		0.6
Intersection Capacity Utilization	43.9%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 3: East Site Access & SE Stark Street

Troutdale Market Charter School  
 2015 Existing AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Volume (veh/h)	246	5	7	484	3	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	270	5	8	532	3	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	835					
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			276		820	273
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			209		783	206
iC, single (s)			4.1		6.4	6.2
iC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	99
cM capacity (veh/h)			1286		341	791

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	276	540	11
Volume Left	0	8	3
Volume Right	5	0	8
cSH	1700	1286	567
Volume to Capacity	0.16	0.01	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.2	11.5
Lane LOS		A	B
Approach Delay (s)	0.0	0.2	11.5
Approach LOS			B

Intersection Summary		
Average Delay		0.3
Intersection Capacity Utilization	41.1%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 4: S Troutdale Road & Main West Site Access

Troutdale Market Charter School  
 2015 Existing AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑		Y	↑
Volume (veh/h)	8	26	514	22	18	240
Sign Control	Stop		Free		Stop	Free
Grade	0%		0%		0%	0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	9	29	565	24	20	264
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWTL		TWTL	
Median storage veh			2		2	
Upstream signal (ft)					278	
pX, platoon unblocked						
vC, conflicting volume	880	577			589	
vC1, stage 1 conf vol	577					
vC2, stage 2 conf vol	303					
vCu, unblocked vol	880	577			589	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	94			98	
cM capacity (veh/h)	504	516			981	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	37	589	20	264
Volume Left	9	0	20	0
Volume Right	29	24	0	0
cSH	513	1700	981	1700
Volume to Capacity	0.07	0.35	0.02	0.16
Queue Length 95th (ft)	6	0	2	0
Control Delay (s)	12.6	0.0	8.7	0.0
Lane LOS	B		A	
Approach Delay (s)	12.6	0.0	0.6	
Approach LOS	B			

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization		38.4%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 5: S Troutdale Road & Southwest Site Access

Troutdale Market Charter School  
 2015 Existing AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	1	0	536	2	0	248
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	1	0	589	2	0	273
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage (veh)				2		
Upstream signal (ft)				505		
pX, platoon unblocked						
vC, conflicting volume	863	590			591	
vC1, stage 1 conf vol	590					
vC2, stage 2 conf vol	273					
vCu, unblocked vol	863	590			591	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	508	507			980	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	1	591	273			
Volume Left	1	0	0			
Volume Right	0	2	0			
cSH	508	1700	980			
Volume to Capacity	0.00	0.35	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	12.1	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	12.1	0.0	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			38.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis  
1: S Troutdale Road & SE Stark Street

Troutdale Market Charter School  
2015 Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	350	284	26	221	52	156	145	33	111	264	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3309		1787	1881	1564	1769	1806		1785	1801	
Flt Permitted	0.42	1.00		0.26	1.00	1.00	0.35	1.00		0.64	1.00	
Satd. Flow (perm)	792	3309		492	1881	1564	647	1806		1195	1801	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	127	380	309	28	240	57	170	158	36	121	287	96
RTOR Reduction (vph)	0	208	0	0	0	44	0	11	0	0	16	0
Lane Group Flow (vph)	127	481	0	28	240	13	170	183	0	121	367	0
Confl. Peds. (#/hr)			4	4			1		2	2		1
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	21.5	17.5		17.1	15.3	15.3	29.4	23.9		26.8	22.6	
Effective Green, g (s)	21.5	17.5		17.1	15.3	15.3	29.4	23.9		26.8	22.6	
Actuated g/C Ratio	0.33	0.27		0.26	0.23	0.23	0.45	0.37		0.41	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	321	885		164	440	365	385	659		527	622	
v/s Ratio Prot	c0.02	c0.15		0.00	0.13		c0.04	0.10		0.01	c0.20	
v/s Ratio Perm	0.11			0.04		0.01	0.16			0.08		
v/c Ratio	0.40	0.54		0.17	0.55	0.04	0.44	0.28		0.23	0.59	
Uniform Delay, d1	16.1	20.5		18.3	22.0	19.4	11.6	14.7		12.2	17.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.7		0.5	1.4	0.0	0.8	1.0		0.2	4.1	
Delay (s)	16.9	21.2		18.8	23.4	19.4	12.4	15.7		12.4	21.7	
Level of Service	B	C		B	C	B	B	B		B	C	
Approach Delay (s)		20.5			22.3			14.2			19.4	
Approach LOS		C			C			B			B	

Intersection Summary

HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 2: West Site Access & SE Stark Street

Troutdale Market Charter School  
 2015 Existing PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Volume (veh/h)	465	29	12	276	23	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	505	32	13	300	25	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWTL			None		
Median storage (veh)	2					
Upstream signal (ft)	485					
pX, platoon unblocked			0.79		0.79	0.79
vC, conflicting volume			537		847	521
vC1, stage 1 conf vol					521	
vC2, stage 2 conf vol					326	
vCu, unblocked vol			274		669	254
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	96
cM capacity (veh/h)			1017		538	618

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	537	313	47
Volume Left	0	13	25
Volume Right	32	0	22
cSH	1700	1017	573
Volume to Capacity	0.32	0.01	0.08
Queue Length 95th (ft)	0	1	7
Control Delay (s)	0.0	0.5	11.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.5	11.8
Approach LOS			B

Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization		36.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 3: East Site Access & SE Stark Street

Troutdale Market Charter School  
 2015 Existing PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Volume (veh/h)	478	7	8	283	5	13
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	520	8	9	308	5	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	835					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			527		848	523
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			316		707	312
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			1027		328	601

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	527	316	20
Volume Left	0	9	5
Volume Right	8	0	14
cSH	1700	1027	488
Volume to Capacity	0.31	0.01	0.04
Queue Length 95th (ft)	0	1	3
Control Delay (s)	0.0	0.3	12.7
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	12.7
Approach LOS			B

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		35.6%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 4: S Troutdale Road & Main West Site Access

Troutdale Market Charter School  
 2015 Existing PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↘	↙	↑
Volume (veh/h)	18	27	307	18	29	545
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	29	334	20	32	592
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage veh			2		2	
Upstream signal (ft)					278	
pX, platoon unblocked	0.86					
vC, conflicting volume	999	343			353	
vC1, stage 1 conf vol	343					
vC2, stage 2 conf vol	655					
vCu, unblocked vol	921	343			353	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	96			97	
cM capacity (veh/h)	453	702			1211	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	49	353	32	592
Volume Left	20	0	32	0
Volume Right	29	20	0	0
cSH	575	1700	1211	1700
Volume to Capacity	0.09	0.21	0.03	0.35
Queue Length 95th (ft)	7	0	2	0
Control Delay (s)	11.8	0.0	8.1	0.0
Lane LOS	B		A	
Approach Delay (s)	11.8	0.0	0.4	
Approach LOS	B			

Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization		38.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 5: S Troutdale Road & Southwest Site Access

Troutdale Market Charter School  
 2015 Existing PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↘	↙	↘
Volume (veh/h)	2	0	325	2	0	563
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	353	2	0	612
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		TWTL	
Median storage (veh)					2	
Upstream signal (ft)					505	
pX, platoon unblocked	0.90					
vC, conflicting volume	966	354			355	
vC1, stage 1 conf vol	354					
vC2, stage 2 conf vol	612					
vCu, unblocked vol	904	354			355	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	481	692			1209	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	2	355	612
Volume Left	2	0	0
Volume Right	0	2	0
cSH	481	1700	1209
Volume to Capacity	0.00	0.21	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	12.5	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.5	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		39.6%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis  
1: S Troutdale Road & SE Stark Street

Troutdale Market Charter School  
Background AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (vph)	61	207	127	37	373	111	270	270	28	64	135	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Fipb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.99		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	3254		1751	1845	1520	1752	1816		1750	1712	
Flt Permitted	0.23	1.00		0.48	1.00	1.00	0.39	1.00		0.56	1.00	
Satd. Flow (perm)	422	3254		892	1845	1520	714	1816		1036	1712	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	67	227	140	41	410	122	297	297	31	70	148	137
RTOR Reduction (vph)	0	104	0	0	0	91	0	5	0	0	45	0
Lane Group Flow (vph)	67	263	0	41	410	31	297	323	0	70	240	0
Confl. Peds. (#/hr)	5		2	2		5			4	4		
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	20.0	17.3		20.0	17.3	17.3	34.5	27.2		24.2	21.4	
Effective Green, g (s)	20.0	17.3		20.0	17.3	17.3	34.5	27.2		24.2	21.4	
Actuated g/C Ratio	0.29	0.25		0.29	0.25	0.25	0.51	0.40		0.36	0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap. (vph)	176	827		296	469	386	493	726		398	538	
v/s Ratio Prot	c0.02	0.08		0.01	c0.22		c0.08	0.18		0.01	0.14	
v/s Ratio Perm	0.10			0.04		0.02	c0.23			0.06		
v/c Ratio	0.38	0.32		0.14	0.87	0.08	0.60	0.45		0.18	0.45	
Uniform Delay, d1	18.5	20.6		17.4	24.3	19.3	10.7	14.9		14.7	18.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	0.2		0.2	16.4	0.1	2.1	2.0		0.2	2.7	
Delay (s)	19.9	20.8		17.6	40.7	19.4	12.8	16.9		14.9	21.3	
Level of Service	B	C		B	D	B	B	B		B	C	
Approach Delay (s)		20.6			34.5			14.9			20.0	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 2: West Site Access & SE Stark Street

Troutdale Market Charter School  
 Background AM Peak Hour



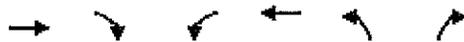
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Volume (veh/h)	235	64	41	469	52	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	258	70	45	515	57	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWTL			None		
Median storage veh	2					
Upstream signal (ft)	485					
pX, platoon unblocked			0.90		0.90	0.90
vC, conflicting volume			329		899	293
vC1, stage 1 conf vol					293	
vC2, stage 2 conf vol					605	
vCu, unblocked vol			204		835	165
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			96		88	95
cM capacity (veh/h)			1231		483	795

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	329	560	95
Volume Left	0	45	57
Volume Right	70	0	37
cSH	1700	1231	571
Volume to Capacity	0.19	0.04	0.17
Queue Length 95th (ft)	0	3	15
Control Delay (s)	0.0	1.0	12.5
Lane LOS		A	B
Approach Delay (s)	0.0	1.0	12.5
Approach LOS			B

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization		58.2%	ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 3: East Site Access & SE Stark Street

Troutdale Market Charter School  
 Background AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Volume (veh/h)	253	16	27	498	12	23
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	278	18	30	547	13	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	835					
pX, platoon unblocked			0.96		0.96	0.96
vC, conflicting volume			296		893	287
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			243		867	233
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		96	97
cM capacity (veh/h)			1262		303	772

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	296	577	38
Volume Left	0	30	13
Volume Right	18	0	25
cSH	1700	1262	504
Volume to Capacity	0.17	0.02	0.08
Queue Length 95th (ft)	0	2	6
Control Delay (s)	0.0	0.7	12.7
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	12.7
Approach LOS			B

Intersection Summary		
Average Delay		1.0
Intersection Capacity Utilization	55.3%	ICU Level of Service B
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 4: S Troutdale Road & Main West Site Access

Troutdale Market Charter School  
 Background AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	30	90	478	77	68	231
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	33	99	525	85	75	254
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage (veh)			2		2	
Upstream signal (ft)					278	
pX, platoon unblocked						
vC, conflicting volume	971	568			610	
vC1, stage 1 conf vol	568					
vC2, stage 2 conf vol	403					
vCu, unblocked vol	971	568			610	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3			2.2	
p0 queue free %	93	81			92	
cM capacity (veh/h)	469	523			964	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	132	610	75	254		
Volume Left	33	0	75	0		
Volume Right	99	85	0	0		
cSH	508	1700	964	1700		
Volume to Capacity	0.26	0.36	0.08	0.15		
Queue Length 95th (ft)	26	0	6	0		
Control Delay (s)	14.5	0.0	9.0	0.0		
Lane LOS	B		A			
Approach Delay (s)	14.5	0.0	2.1			
Approach LOS	B					
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			50.8%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 5: S Troutdale Road & Southwest Site Access

Troutdale Market Charter School  
 Background AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↘	↙	↘
Volume (veh/h)	2	0	555	3	0	261
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	2	0	610	3	0	287
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		TWTL	
Median storage (veh)					2	
Upstream signal (ft)					505	
pX, platoon unblocked						
vC, conflicting volume	898	612			613	
vC1, stage 1 conf vol	612					
vC2, stage 2 conf vol	287					
vCu, unblocked vol	898	612			613	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	495	493			961	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	2	613	287
Volume Left	2	0	0
Volume Right	0	3	0
cSH	495	1700	961
Volume to Capacity	0.00	0.36	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	12.3	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.3	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		39.4%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis  
1: S Troutdale Road & SE Stark Street

Troutdale Market Charter School  
Background PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	376	311	26	246	86	181	180	33	148	301	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3307		1787	1881	1564	1769	1815		1785	1808	
Flt Permitted	0.37	1.00		0.25	1.00	1.00	0.27	1.00		0.61	1.00	
Satd. Flow (perm)	702	3307		476	1881	1564	510	1815		1154	1808	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	127	409	338	28	267	93	197	196	36	161	327	96
RTOR Reduction (vph)	0	213	0	0	0	71	0	9	0	0	15	0
Lane Group Flow (vph)	127	534	0	28	267	22	197	223	0	161	408	0
Confl. Peds. (#/hr)			4	4			1		2	2		1
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	21.8	17.9		17.6	15.8	15.8	32.7	25.3		27.7	22.8	
Effective Green, g (s)	21.8	17.9		17.6	15.8	15.8	32.7	25.3		27.7	22.8	
Actuated g/C Ratio	0.32	0.26		0.26	0.23	0.23	0.48	0.37		0.41	0.34	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	287	871		158	437	363	382	676		516	607	
v/s Ratio Prot	c0.03	c0.16		0.00	0.14		c0.06	0.12		0.02	c0.23	
v/s Ratio Perm	0.12			0.04		0.01	0.19			0.10		
v/c Ratio	0.44	0.61		0.18	0.61	0.06	0.52	0.33		0.31	0.67	
Uniform Delay, d1	17.2	22.0		19.3	23.3	20.3	11.6	15.2		13.1	19.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.3		0.5	2.5	0.1	1.2	1.3		0.3	5.9	
Delay (s)	18.3	23.2		19.9	25.8	20.3	12.7	16.5		13.4	25.2	
Level of Service	B	C		B	C	C	B	B		B	C	
Approach Delay (s)		22.5			24.1			14.8			22.0	
Approach LOS		C			C			B			C	

Intersection Summary		
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.64	
Actuated Cycle Length (s)	67.9	Sum of lost time (s) 18.0
Intersection Capacity Utilization	71.0%	ICU Level of Service C
Analysis Period (min)	15	

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 2: West Site Access & SE Stark Street

Troutdale Market Charter School  
 Background PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Volume (veh/h)	440	117	53	276	82	78
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	478	127	58	300	89	85
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage (veh)	2					
Upstream signal (ft)	485					
pX, platoon unblocked			0.73		0.73	0.73
vC, conflicting volume			605		957	542
vC1, stage 1 conf vol					542	
vC2, stage 2 conf vol					415	
vCu, unblocked vol			283		761	196
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			94		82	86
cM capacity (veh/h)			945		489	623

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	605	358	174
Volume Left	0	58	89
Volume Right	127	0	85
cSH	1700	945	546
Volume to Capacity	0.36	0.06	0.32
Queue Length 95th (ft)	0	5	34
Control Delay (s)	0.0	2.0	14.6
Lane LOS		A	B
Approach Delay (s)	0.0	2.0	14.6
Approach LOS			B

Intersection Summary		
Average Delay		2.9
Intersection Capacity Utilization	67.1%	ICU Level of Service C
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 3: East Site Access & SE Stark Street

Troutdale Market Charter School  
 Background PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Volume (veh/h)	489	29	35	309	20	52
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	532	32	38	336	22	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	835					
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			563		959	547
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			380		854	362
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		92	90
cM capacity (veh/h)			990		266	574

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	563	374	78
Volume Left	0	38	22
Volume Right	32	0	57
cSH	1700	990	434
Volume to Capacity	0.33	0.04	0.18
Queue Length 95th (ft)	0	3	16
Control Delay (s)	0.0	1.3	15.1
Lane LOS		A	C
Approach Delay (s)	0.0	1.3	15.1
Approach LOS			C

Intersection Summary		
Average Delay		1.6
Intersection Capacity Utilization	56.5%	ICU Level of Service B
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 4: S Troutdale Road & Main West Site Access

Troutdale Market Charter School  
 Background PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	LT	RT	TH	TH	LT	TH
Volume (veh/h)	75	118	276	79	121	517
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	128	300	86	132	562
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLT		TWLT	
Median storage (veh)			2		2	
Upstream signal (ft)					278	
pX, platoon unblocked	0.86					
vC, conflicting volume	1168	343			386	
vC1, stage 1 conf vol	343					
vC2, stage 2 conf vol	825					
vCu, unblocked vol	1115	343			386	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3			2.2	
p0 queue free %	76	82			89	
cM capacity (veh/h)	347	702			1178	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	210	386	132	562
Volume Left	82	0	132	0
Volume Right	128	86	0	0
cSH	502	1700	1178	1700
Volume to Capacity	0.42	0.23	0.11	0.33
Queue Length 95th (ft)	51	0	9	0
Control Delay (s)	17.2	0.0	8.4	0.0
Lane LOS	C		A	
Approach Delay (s)	17.2	0.0	1.6	
Approach LOS	C			

Intersection Summary			
Average Delay		3.7	
Intersection Capacity Utilization	47.4%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 5: S Troutdale Road & Southwest Site Access

Troutdale Market Charter School  
 Background PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑			↑
Volume (veh/h)	3	0	355	3	0	592
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	386	3	0	643
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage (veh)						2
Upstream signal (ft)						505
pX, platoon unblocked	0.91					
vC, conflicting volume	1031	388			389	
vC1, stage 1 conf vol	388					
vC2, stage 2 conf vol	643					
vCu, unblocked vol	984	388			389	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	459	663			1175	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	3	389	643
Volume Left	3	0	0
Volume Right	0	3	0
cSH	459	1700	1175
Volume to Capacity	0.01	0.23	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	12.9	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.9	0.0	0.0
Approach LOS	B		

Intersection Summary		
Average Delay		0.0
Intersection Capacity Utilization	41.2%	ICU Level of Service A
Analysis Period (min)	15	

HCM Signalized Intersection Capacity Analysis  
 1: S Troutdale Road & SE Stark Street

Troutdale Market Charter School  
 Background Plus School AM Peak Hour

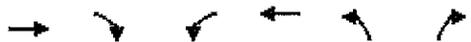
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	233	140	37	372	110	304	316	61	100	152	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Fipb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.98		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1734	3257		1752	1845	1520	1752	1795		1751	1720	
Flt Permitted	0.23	1.00		0.44	1.00	1.00	0.36	1.00		0.43	1.00	
Satd. Flow (perm)	422	3257		820	1845	1520	656	1795		801	1720	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	67	256	154	41	409	121	334	347	67	110	167	137
RTOR Reduction (vph)	0	114	0	0	0	90	0	9	0	0	40	0
Lane Group Flow (vph)	67	296	0	41	409	31	334	405	0	110	264	0
Confl. Peds. (#/hr)	5		2	2		5			4	4		
Confl. Bikes (#/hr)			1			1						
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	20.0	17.3		20.0	17.3	17.3	33.4	25.0		24.2	20.3	
Effective Green, g (s)	20.0	17.3		20.0	17.3	17.3	33.4	25.0		24.2	20.3	
Actuated g/C Ratio	0.30	0.26		0.30	0.26	0.26	0.50	0.37		0.36	0.30	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	179	842		282	477	393	468	670		345	521	
v/s Ratio Prot	c0.02	0.09		0.01	c0.22		c0.09	0.23		0.02	0.15	
v/s Ratio Perm	0.10			0.04		0.02	c0.26			0.10		
v/c Ratio	0.37	0.35		0.15	0.86	0.08	0.71	0.60		0.32	0.51	
Uniform Delay, d1	17.9	20.2		16.9	23.6	18.8	11.3	16.9		14.6	19.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.3		0.2	14.1	0.1	5.1	4.0		0.5	3.5	
Delay (s)	19.2	20.5		17.1	37.8	18.9	16.4	21.0		15.2	22.7	
Level of Service	B	C		B	D	B	B	C		B	C	
Approach Delay (s)		20.3			32.3			18.9			20.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 2: West Site Access & SE Stark Street

Troutdale Market Charter School  
 Background Plus School AM Peak Hour



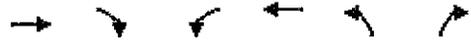
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↖	↖	
Volume (veh/h)	334	60	40	468	51	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	367	66	44	514	56	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage (veh)	2					
Upstream signal (ft)	485					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			433		1002	400
vC1, stage 1 conf vol					400	
vC2, stage 2 conf vol					602	
vCu, unblocked vol			275		929	237
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			96		88	95
cM capacity (veh/h)			1117		462	698

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	433	558	92
Volume Left	0	44	56
Volume Right	66	0	36
cSH	1700	1117	533
Volume to Capacity	0.25	0.04	0.17
Queue Length 95th (ft)	0	3	16
Control Delay (s)	0.0	1.1	13.2
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	13.2
Approach LOS			B

Intersection Summary		
Average Delay		1.7
Intersection Capacity Utilization	62.9%	ICU Level of Service
Analysis Period (min)	15	B

HCM Unsignalized Intersection Capacity Analysis  
 3: East Site Access & SE Stark Street

Troutdale Market Charter School  
 Background Plus School AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	↗
Volume (veh/h)	286	81	67	497	11	22
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	314	89	74	546	12	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	835					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			403		1052	359
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			316		1017	268
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		95	97
cM capacity (veh/h)			1147		228	714

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	403	620	36
Volume Left	0	74	12
Volume Right	89	0	24
cSH	1700	1147	418
Volume to Capacity	0.24	0.06	0.09
Queue Length 95th (ft)	0	5	7
Control Delay (s)	0.0	1.7	14.4
Lane LOS		A	B
Approach Delay (s)	0.0	1.7	14.4
Approach LOS			B

Intersection Summary		
Average Delay		1.5
Intersection Capacity Utilization	63.2%	ICU Level of Service B
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 4: S Troutdale Road & Main West Site Access

Troutdale Market Charter School  
 Background Plus School AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑		↘	↑
Volume (veh/h)	29	87	594	98	97	232
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	32	96	653	108	107	255
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLT		TWLT	
Median storage (veh)			2		2	
Upstream signal (ft)					278	
pX, platoon unblocked						
vC, conflicting volume	1175	707			760	
vC1, stage 1 conf vol	707					
vC2, stage 2 conf vol	468					
vCu, unblocked vol	1175	707			760	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	78			87	
cM capacity (veh/h)	396	436			847	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	127	760	107	255
Volume Left	32	0	107	0
Volume Right	96	108	0	0
cSH	425	1700	847	1700
Volume to Capacity	0.30	0.45	0.13	0.15
Queue Length 95th (ft)	31	0	11	0
Control Delay (s)	17.1	0.0	9.9	0.0
Lane LOS	C		A	
Approach Delay (s)	17.1	0.0	2.9	
Approach LOS	C			

Intersection Summary			
Average Delay		2.6	
Intersection Capacity Utilization		59.6%	ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 5: S Troutdale Road & Southwest Site Access

Troutdale Market Charter School  
 Background Plus School AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↘	↙	↘
Volume (veh/h)	22	114	578	3	0	261
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.40	0.40	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	55	285	635	3	0	287
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		TWTL	
Median storage (veh)					2	
Upstream signal (ft)					505	
pX, platoon unblocked						
vC, conflicting volume	924	637			638	
vC1, stage 1 conf vol	637					
vC2, stage 2 conf vol	287					
vCu, unblocked vol	924	637			638	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3			2.2	
p0 queue free %	89	40			100	
cM capacity (veh/h)	483	477			941	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	340	638	287
Volume Left	55	0	0
Volume Right	285	3	0
cSH	478	1700	941
Volume to Capacity	0.71	0.38	0.00
Queue Length 95th (ft)	139	0	0
Control Delay (s)	29.0	0.0	0.0
Lane LOS	D		
Approach Delay (s)	29.0	0.0	0.0
Approach LOS	D		

Intersection Summary			
Average Delay		7.8	
Intersection Capacity Utilization		45.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis  
1: S Troutdale Road & SE Stark Street

Troutdale Market Charter School  
Background plus School PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	377	310	26	246	88	182	181	33	148	302	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Ftpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3308		1787	1881	1564	1769	1816		1785	1808	
Flt Permitted	0.37	1.00		0.25	1.00	1.00	0.27	1.00		0.61	1.00	
Satd. Flow (perm)	702	3308		476	1881	1564	508	1816		1153	1808	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	127	410	337	28	267	96	198	197	36	161	328	96
RTOR Reduction (vph)	0	210	0	0	0	74	0	9	0	0	15	0
Lane Group Flow (vph)	127	537	0	28	267	22	198	224	0	161	409	0
Confl. Peds. (#/hr)			4	4			1		2	2		1
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	21.8	17.9		17.6	15.8	15.8	32.7	25.3		27.7	22.8	
Effective Green, g (s)	21.8	17.9		17.6	15.8	15.8	32.7	25.3		27.7	22.8	
Actuated g/C Ratio	0.32	0.26		0.26	0.23	0.23	0.48	0.37		0.41	0.34	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	287	872		158	437	363	382	676		515	607	
v/s Ratio Prot	c0.03	c0.16		0.00	0.14		c0.06	0.12		0.02	c0.23	
v/s Ratio Perm	0.12			0.04		0.01	0.19			0.10		
v/c Ratio	0.44	0.62		0.18	0.61	0.06	0.52	0.33		0.31	0.67	
Uniform Delay, d1	17.2	22.0		19.3	23.3	20.3	11.6	15.2		13.1	19.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.3		0.5	2.5	0.1	1.2	1.3		0.3	5.9	
Delay (s)	18.3	23.3		19.9	25.8	20.4	12.8	16.6		13.4	25.3	
Level of Service	B	C		B	C	C	B	B		B	C	
Approach Delay (s)		22.6			24.1			14.8			22.0	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	67.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis  
 2: West Site Access & SE Stark Street

Troutdale Market Charter School  
 Background plus School PM Peak Hour



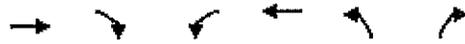
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Volume (veh/h)	444	114	52	278	82	76
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	483	124	57	302	89	83
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh	2					
Upstream signal (ft)	485					
pX, platoon unblocked			0.73		0.73	0.73
vC, conflicting volume			607		960	545
vC1, stage 1 conf vol					545	
vC2, stage 2 conf vol					415	
vCu, unblocked vol			283		764	199
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)					5.4	
IF (s)			2.2		3.5	3.3
p0 queue free %			94		82	87
cM capacity (veh/h)			944		488	620

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	607	359	172
Volume Left	0	57	89
Volume Right	124	0	83
cSH	1700	944	544
Volume to Capacity	0.36	0.06	0.32
Queue Length 95th (ft)	0	5	34
Control Delay (s)	0.0	2.0	14.6
Lane LOS		A	B
Approach Delay (s)	0.0	2.0	14.6
Approach LOS			B

Intersection Summary		
Average Delay		2.8
Intersection Capacity Utilization	67.0%	ICU Level of Service C
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 3: East Site Access & SE Stark Street

Troutdale Market Charter School  
 Background plus School PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Volume (veh/h)	492	28	34	310	20	50
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	535	30	37	337	22	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	835					
pX, platoon unblocked			0.83		0.83	0.83
vC, conflicting volume			565		961	550
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			380		854	362
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		92	90
cM capacity (veh/h)			988		265	572

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	565	374	76
Volume Left	0	37	22
Volume Right	30	0	54
cSH	1700	988	430
Volume to Capacity	0.33	0.04	0.18
Queue Length 95th (ft)	0	3	16
Control Delay (s)	0.0	1.2	15.2
Lane LOS		A	C
Approach Delay (s)	0.0	1.2	15.2
Approach LOS			C

Intersection Summary		
Average Delay		1.6
Intersection Capacity Utilization	55.5%	ICU Level of Service B
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis  
 4: S Troutdale Road & Main West Site Access

Troutdale Market Charter School  
 Background plus School PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑	↘	↙	↑
Volume (veh/h)	72	117	279	77	117	521
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	127	303	84	127	566
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage (veh)			2		2	
Upstream signal (ft)					278	
pX, platoon unblocked	0.86					
vC, conflicting volume	1166	345			387	
vC1, stage 1 conf vol	345					
vC2, stage 2 conf vol	821					
vCu, unblocked vol	1111	345			387	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	78	82			89	
cM capacity (veh/h)	349	700			1177	

Direction, Lane #	WB-1	NB-1	SB-1	SB-2
Volume Total	205	387	127	566
Volume Left	78	0	127	0
Volume Right	127	84	0	0
cSH	506	1700	1177	1700
Volume to Capacity	0.41	0.23	0.11	0.33
Queue Length 95th (ft)	49	0	9	0
Control Delay (s)	16.9	0.0	8.4	0.0
Lane LOS	C		A	
Approach Delay (s)	16.9	0.0	1.5	
Approach LOS	C			

Intersection Summary			
Average Delay		3.5	
Intersection Capacity Utilization		47.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis  
 5: S Troutdale Road & Southwest Site Access

Troutdale Market Charter School  
 Background plus School PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕	↔		↕
Volume (veh/h)	3	0	356	3	0	593
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	0	387	3	0	645
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			TWLTL
Median storage (veh)						2
Upstream signal (ft)						505
pX, platoon unblocked	0.90					
vC, conflicting volume	1033	389			390	
vC1, stage 1 conf vol	389					
vC2, stage 2 conf vol	645					
vCu, unblocked vol	984	389			390	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)	5.4					
IF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	459	662			1174	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	3	390	645
Volume Left	3	0	0
Volume Right	0	3	0
cSH	459	1700	1174
Volume to Capacity	0.01	0.23	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	12.9	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.9	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		41.2%	ICU Level of Service A
Analysis Period (min)		15	

Queuing and Blocking Report  
Background Plus School AM Peak Hour

4/3/2015

Intersection: 1: S Troutdale Road & SE Stark Street

Movement	EB	EB	EB	WB	WB	WB	B9	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	R	T	L	TR	L	TR
Maximum Queue (ft)	77	179	88	171	293	68	117	125	226	146	227
Average Queue (ft)	30	82	37	32	183	47	11	109	155	43	97
95th Queue (ft)	63	142	68	102	293	81	63	147	246	99	178
Link Distance (ft)		449	449		212		148		210		475
Upstream Blk Time (%)				0	8		0		3		
Queuing Penalty (veh)				0	44		1		24		
Storage Bay Dist (ft)	185			170		35		100		140	
Storage Blk Time (%)		0			54	8		15	14	0	2
Queuing Penalty (veh)		0			80	34		57	44	0	2

Intersection: 2: West Site Access & SE Stark Street

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	11	115	85
Average Queue (ft)	0	22	39
95th Queue (ft)	5	79	72
Link Distance (ft)	148	293	187
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: East Site Access & SE Stark Street

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	15	135	50
Average Queue (ft)	1	28	20
95th Queue (ft)	6	87	47
Link Distance (ft)	293	353	148
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: S Troutdale Road & Main West Site Access

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	150	166	107	5
Average Queue (ft)	61	27	39	0
95th Queue (ft)	115	102	79	4
Link Distance (ft)	181	170	210	210
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	2		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: S Troutdale Road & Southwest Site Access

Movement	WB	NB
Directions Served	LR	TR
Maximum Queue (ft)	201	23
Average Queue (ft)	58	1
95th Queue (ft)	148	12
Link Distance (ft)	196	305
Upstream Blk Time (%)	4	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 289

Queuing and Blocking Report  
 Background plus School PM Peak Hour

4/3/2015

Intersection: 1: S Troutdale Road & SE Stark Street

Movement	EB	EB	EB	WB	WB	WB	B9	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	R	T	L	TR	L	TR
Maximum Queue (ft)	190	256	222	77	239	61	33	123	205	164	306
Average Queue (ft)	60	133	76	21	126	45	2	72	85	69	134
95th Queue (ft)	136	214	144	64	220	76	20	119	157	147	245
Link Distance (ft)		449	449		212		148		210		475
Upstream Blk Time (%)				0	1				0		
Queuing Penalty (veh)				0	6				1		
Storage Bay Dist (ft)	185			170		35		100		140	
Storage Blk Time (%)		2			48	7		4	4	0	8
Queuing Penalty (veh)		3			55	19		8	7	0	11

Intersection: 2: West Site Access & SE Stark Street

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	16	121	159
Average Queue (ft)	1	27	61
95th Queue (ft)	11	82	116
Link Distance (ft)	148	293	187
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: East Site Access & SE Stark Street

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	107	60
Average Queue (ft)	18	33
95th Queue (ft)	60	55
Link Distance (ft)	353	148
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report  
Background plus School PM Peak Hour

4/3/2015

Intersection: 4: S Troutdale Road & Main West Site Access

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	182	26	68
Average Queue (ft)	72	2	32
95th Queue (ft)	134	14	64
Link Distance (ft)	181	170	210
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: S Troutdale Road & Southwest Site Access

Movement	WB
Directions Served	LR
Maximum Queue (ft)	24
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	196
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 109



# COMMUNITY DEVELOPMENT DEPARTMENT

104 SE KIMBING AVENUE • TROUTDALE OR 97060-2099  
INSPECTION REQUESTS AFTER 5:00 PM • 665-9038  
(503) 665-5175 • FAX (503) 667-0724

## SITE AND DESIGN REVIEW COMMITTEE REPORT

File No. 98-002-<sup>022</sup>  
TROUTDALE RETAIL CENTER

- APPLICANT:** Sienna Architecture Company  
Warren Tyler  
411 SW Sixth Avenue  
Portland, Oregon 97204
- PROPERTY OWNER:** Rex Holland  
24529 Peachland Avenue  
Newall, California 91321
- PROJECT NAME:** Troutdale Retail Center
- LEGAL DESCRIPTION:** Tax Lots 1900 and 2000, Multnomah County Tax Assessor's Map 1S3E01BA
- LOCATION:** 26942 SE Stark Street  
Southeast corner of SE Stark Street and South Troutdale Road
- REQUEST:** Site and Design Review Approval to construct a new 38,000 square foot Lamb's Thriftway grocery store, a new 12,000 square foot retail store, associated parking and two future commercial pads to be developed at a later time.
- PLAN DESIGNATION:** C (Commercial)
- ZONING DESIGNATION:** CC (Community Commercial)
- CRITERIA:** Troutdale Development Code: Chapter 3.110 Community Commercial; Chapter 8.000 Site Orientation and Design Standards.

COMMUNITY DEVELOPMENT

Chapter 9.000 Off Street Parking and Loading; Chapter 11  
Landscaping and Screening.

**PROJECT SUMMARY**

The site is located east of South Troutdale Road, south of SE Stark Street, north of SE 34th Circle and west of SE Stott Circle. The site is comprised of two tax lots: Tax Lot 1900 and 2000 on Multnomah County Tax Assessor's Map Number 1S3E01BA, and totals 9.75 acres in area. Tax Lot 2000 is currently developed in the southwest corner with retail shops and a Lamb's Thriftway grocery store and in the northwest corner is a Dairy Queen. The existing grocery store will be remodeled for a future tenant and given a face-lift to complement the new buildings. Tax Lot 1900 is vacant.

The properties were one tax lot during development of the existing buildings and parking lot. Buildings are not permitted to straddle property lines, therefore, lot consolidation will be necessary prior to construction.

The properties surrounding the site are developed as follows: North - raspberry field zoned CC and A2 (Multi-Family Residential); South - Oakmont subdivision zoned R4 (Two-Family Residential); East - Valerie Terrace subdivision zoned R4 (Two-Family Residential) and West - vacant land zoned IP (Industrial Park).

**COMMENTS RECEIVED**

The following agencies have made comments regarding this application and they have been incorporated into the Conditions of Approval:

Community Development  
Code Compliance  
Building Official  
Parks and Facilities  
Public Works  
Troutdale Police Department  
Deputy Fire Marshal, Gresham Fire and Emergency Services  
Multnomah County Transportation and Land Use Planning Division  
Gresham Transportation and Planning

**PUBLIC COMMENTS RECEIVED**

April 5, 1998, from Dot Weisgerber, 3233 SE Stott Circle, Troutdale, Oregon 97060.

**DISCUSSION**

The applicant was granted a Special Variance by the Planning Commission on March 18, 1998, from the standards of Troutdale Development Code 8.058 Building Orientation Setbacks permitting the grocery store and retail store buildings to exceed the maximum setback of 50 feet from a transit street (Case File No. 98-002). The future building pads for a proposed bank and restaurant must comply with this standard. The conditions of that variance are:

1. *Submit a tree inventory of all trees over six-inches in diameter on the undeveloped parcel with the Site and Design Review application and identify which trees are proposed for removal.*

The tree inventory was submitted with the Site and Design Review application. If it is practical, modify the parking lot to retain the existing clump of larger trees in the upper center of the new parking area in lieu of landscape planters in that section of the parking lot. Also, the trees in the north east corner of the lot on SE Stark Street could be retained along the walkway and built in such a way to prevent root damage to those trees.

2. *Integrate wider pedestrian-oriented plazas along the SE Stark Street frontage adjacent to the proposed restaurant end bank. The entrance for pedestrians for the proposed new restaurant and bank shall connect directly from the sidewalk on SE Stark Street to the building interiors.*

The landscape and concept plan sheet L.1 submitted with Site and Design Review application shows connections from the SE Stark Street sidewalk to the front of these building pads, but a "plaza" is not shown between the proposed restaurant and the Stark Street sidewalk. As a drive-through restaurant is shown on this plan, it may need modified in order to accommodate a pedestrian plaza on the north side of this restaurant. When the Site and Design Review applications are submitted for the restaurant, the applicant is to integrate a wider pedestrian-oriented plaza on the SE Stark Street frontage.

3. *Widen the pedestrian walkway along the east property line to incorporate trash receptacles and benches, creating a parkway experience.*

A park-like pathway is shown on the site plan. There are two pedestrian connections to adjoining neighborhoods: one on the south side of the site between Lots 14 and 15 of the Oakmont

subdivision, and one on the east side of the site in an easement in Valerie Terrace (not a dedicated tract) between Lots 3 and 4. The access tract in the Oakmont subdivision is owned by the City. Improvements and maintenance of that tract is the City's responsibility. The Site and Design Review proposal shows compliance with this condition, and the applicant has indicated that the proposal will include connection of the walkway on the east side of the site to the Valerie Terrace sidewalk. The walkway in Valerie Terrace is concrete; however, no maintenance agreements are found in the City's records, and the landscaping is in danger of falling into decay and the sidewalk is cracked at the west corner.

4. *Modify pedestrian access to the Dairy Queen so that pedestrians may walk directly to the Dairy Queen from the sidewalk on both SE Stark Street and South Troutdale Road.*

A new pedestrian sidewalk is shown at the east end from Stark Street and at the west end coming from South Troutdale Road, to pedestrian walkways around the building.

5. *Include a predominate pedestrian plaza at the entrance to the new grocery and retail stores that is readily identified as the entrance to pedestrians from either Stark Street or Troutdale Road, and connects to the pedestrian access to the Oakmont subdivision.*

On the north elevation, a "silo" type architectural feature is proposed at the entrance between the grocery and retail stores. It is 45 feet from grade and does not exceed the height standards of the Community Commercial zone.

No south elevation plans were submitted. The City of Gresham raised the same question that staff did during the variance hearing regarding the alignment of the pedestrian access from Oakmont to the store. The Planning Commission has already analyzed and approved this proposed layout for this access.

6. *The total number of parking spaces for the site shall not exceed 394 spaces. Eliminate the entire row of parking spaces (13 spaces) on the east property line and reduce the number of employee parking spaces to 31. Designate three (3) of the employee parking spaces as carpool/vanpool pursuant to TDC 9.165.*

A total of 388 parking stalls are proposed (32 are compact parking spaces) and 13 handicap accessible spaces. The parking spaces on the east property line were eliminated. There are 36 employee parking spaces and none are designated employee carpool/vanpool. The condition to reduce the number of employee parking spaces to 31 was a means by which to not exceed 394 parking spaces on the site.

It is unclear as to whether the narrow elliptical areas in the parking lot are the grocery cart returns or skinny landscape islands.

7. *Bicycle parking is required. A minimum of 20 bike parking spaces (5% of the total parking spaces) shall be provided on-site and distributed evenly between main entrances to each primary building.*

A total of 20 bicycle spaces are proposed. A bike rack is proposed at this entrance to the retail center as it connects to the neighborhood to the south. Additional bike racks are sited on the north frontage of the existing Lamb's Thriftway store, the new retail store and at the east end of the proposed new Lamb's Thriftway.

8. *Install a sound wall along the entire south property line between the parking lot and loading areas with a break for the access to Oakmont subdivision, and along the east property line from the south property line to the front of the new grocery store. The wall should "match" the existing wall and shall be bordered by a five-foot landscaped area and be constructed of textured blocks, bricks, or cement.*

The existing six foot tall concrete masonry wall will be extended to the east along the south property line, breaking at the pedestrian access to Oakmont, and then north on the east property line ending with the north face of the proposed new grocery store. A five-foot landscape area is proposed between the wall and the loading aisle and area.

There is a pedestrian connection on the south side of the site between Lots 14 and 15 of the Oakmont subdivision, and on the east side of the site between Lots 3 and 4 of the Valerie Terrace subdivision (Though not a recorded tract, at the May 16, 1979, meeting of the Troutdale Planning Commission, a 5-foot meandering path within a 10-foot easement [for use by the public] between Lots 3 and 4 was approved as a condition of the subdivision.). The proposal includes pedestrian connections to these existing walkways. The walkway in Valerie Terrace is concrete; however, no maintenance agreements are found in the City's records, and the landscaping is in danger of falling into decay and the sidewalk is cracked at the west corner. The access tract in the Oakmont subdivision is owned by the City. Improvements and maintenance of that tract is the City's responsibility.

One of the neighboring property owners has concerns about how well the wall will absorb the noise from delivery trucks and whether the wall will attract more loitering by "gangs." The proposal does not give a sound absorption analysis of the wall, and with respect to "gang" activity, the parking lot between Oakmont and the stores is the employee parking lot that can be made inaccessible to other

vehicles. Security lighting and cameras may be needed to prevent pedestrian loitering within this area.

9. *A Type II Site and Design Review is required. Issues pertaining to fire and building codes will be more fully addressed during that review.*

The application before us is the Type II Site and Design Review. The Deputy Fire Marshal submitted comments and they are included in the conditions. Additional review is made of the construction plans for conformance to fire codes.

10. *Development shall comply with all other city, Gresham Fire and Emergency Services, state and federal regulations. It is the developer's responsibility to assure compliance with the state and federal regulations.*

These concerns will be addressed during the building permit review.

An existing sanitary sewer is located on the property and is proposed to be relocated west of the present location. The sanitary sewer line is an active easement for the benefit of the City. As such, the revised location of the sanitary sewer will need a recorded easement.

A comment was received from Multnomah County Transportation regarding the monument sign on Troutdale Road. There are two existing free-standing signs on the property. Any changes to those signs (as to sizing) or new signs shall require a separate Type I sign permit.

### **CONDITIONS OF APPROVAL**

The development as proposed is in basic conformance with the requirements of the Troutdale Development Code (TDC), subject to the following conditions: being satisfied prior to commencement of any work on this site:

#### Community Development

1. Record a lot consolidation for Tax Lots 1900 and 2000 on Multnomah County Tax Assessor's Map 1S3E01BA. Submit a copy of the approved Site and Design Review conditions with the appropriate paperwork to the Multnomah County Recorder's office to effect this lot consolidation. Submit a copy of the recorded lot consolidation to the Community Development Department prior to submitting the construction plans.
2. Submit an erosion control plan pursuant to Troutdale Development Code Chapter 5.600 prior to beginning site preparation. An NPDES permit is required. Contact Jack Hanna at 665-5175.

3. All standard parking space must be no less than 18 feet deep by 9 feet wide and all compact parking spaces shall be no less than 16 feet deep by 8 feet wide.
4. Install wheel stops between parking spaces and landscaping and/or sidewalks unless the sidewalks are 8 feet wide or the landscaping is sod or low-growing ground cover.
5. In lieu of the standards in Troutdale Development Code 9.180 A.3. for the handicap-accessible parking space, contact the City's building official for design standards.
6. Designate three (3) of the employee parking spaces carpool/vanpool pursuant to the standards of the Troutdale Development Code and the special variance condition.
7. Install bollards at the pedestrian connections to the retail center between Valerie Terrace and Oakmont subdivision.
8. The sound wall should be designed so as to reduce the noise of idling delivery trucks at the receiving end (measured at the adjacent property line of the neighboring residence) not to exceed 55 decibels. (From Troutdale Municipal Code 8.24.040.) Baffles or some other architectural element may be required on the south walls of the grocery store in order to meet this standard. Prior to issuance of either a Temporary Occupancy permit or a Certificate of Occupancy, submit supporting technical reports to the Community Development Department that certify compliance with this standard.
9. Delivery and parking lot lighting on the south side of the buildings shall be directed to shine away from the residential dwellings abutting the property.
10. Submit a separate Type I sign permit application for all proposed free standing, monument and wall signs. A master sign is required for this retail center pursuant the standards in Troutdale Development Code Chapter 10.050 D and 10.060. A master sign is permitted for each street frontage.
11. A separate Type II Site and Design review is required for the bank and the restaurant.

Parks and Facilities

12. Substitute the *Viburnum Davidii* with hardier plants such as *dw f euonymus, sarcococca, Oregon grape*, which are more tolerate of Troutdale's microclimate.
13. Preserve the existing trees in the northeast corner of the site on the SE Stark Street frontage Meander the pedestrian walkway through the existing trees in the north east corner on Stark

Street to lessen the S of the curve. Use interlocking concrete paving stones on the pedestrian walkway around the dripline of the existing tree roots.

Public Works

14. Grant an easement to the City for access to the sanitary sewer and storm sewer main. The developer and/or engineer must prepare all legal language necessary to relinquish the existing public utility easement and to acquire the new one. Public Works will then present them to the City Council for action. The easement shall include language to hold harmless the City from damage incurred during possible repairs.
15. The sanitary sewer and storm sewer main shall be installed parallel to each line.
16. Steel casing is required around sanitary sewer and/or storm sewer mains built under or near an upright structure and be approved by the City.
17. The maximum distance between manholes (sanitary and storm) shall not exceed 300 feet.
18. Clean and permanently cap all ends of the abandoned sanitary sewer system.
19. Remove sanitary sewer lines that would be under the proposed buildings.
20. Submit storm water runoff calculations for the new addition to Public Works.
21. Submit a utilities plan to Public Works prior to submitting construction plans to the Building Department.
22. A sanitary sewer sampling manhole must be installed to allow for monitoring of discharge.
23. A grease trap must be installed at the proposed grocery store. Provide a detail of the trap on the plans and indicate its location.
24. Trash and recycling containers must be screened from view in an enclosure constructed in accordance with Construction Standards for Public Works Facilities May 1997. Submit a clear detail of the enclosure (and its location) with the construction drawings. Indicate such details as its size, material, locking devices, etc.
25. An oil/water separator will be required to treat all stormwater runoff prior to discharging to the public storm system.

26. All applicable System Development Charges (SDCs) must be paid. Contact Mr. Travis Hultin in Public Works (665-5175).

Building Department

27. Submit a geo-technical report for the structures with the plans.
28. Submit complete engineering calculations with the building plans.
29. Submit engineering calculations for 90 MPH Exp. B. loads.

Gresham Fire and Emergency Services

30. Ensure fire apparatus access to the south side of the existing shops, existing building, proposed retail and proposed grocery store. The access road for fire apparatus is required to be a minimum of 20 feet wide with a 13 foot 6 inch vertical clearance.
31. Ensure that fire hydrants are installed before combustible building materials are delivered to the site. Combined fire flow that is required is 5,250 gallons per minute at 20 pounds per square inch residual pressure. Fire flow may be reduced due to change in type of construction and/or installation of a fire sprinkler system.

Troutdale Police Department

32. Security lighting and associated measures are needed in the south plaza, employee parking lot. Motion detector-type lighting within corners may help eliminate some of the loitering. Contact the Troutdale Police Department for some recommended features.

Multnomah County Transportation

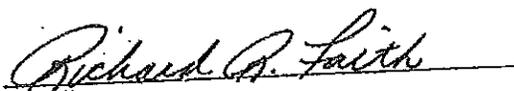
33. Dedicate a 25-foot right-of-way radius at the SE corner of SE Stark Street and Troutdale Road. Contact John Dorst at 248-3599 or Craig S. Yasuda at 736-6936. [Submit a copy of the recorded dedication to the Community Development Department at the time construction plans are submitted.]
34. Dedicate a 5-foot slope/utility/sidewalk/drainage easement along the frontage of Tax Lots 1900 and 2000 adjacent to SE Stark Street and Troutdale Road and adjacent to the proposed 25-foot right-of-way radius dedication. [Submit a copy of the recorded dedication to the Community Development Department at the time construction plans are submitted.]
35. All access points to the retail center will have driveway drops instead of curb returns.

36. Match the south end of the sidewalk on Troutdale Road with the existing sidewalk.
37. Locate a monument sign on Troutdale Road so it does not impair sight distance for vehicles using the retail center access. [Staff comments: there are existing signs, this standard will apply to new signage and complies with the clear vision area of the Troutdale Development Code. New sign permits will be needed if existing signs are replaced.]
38. Construct storm drainage facilities as required.
39. Furnish street lighting facilities as required.
40. Pay to Multnomah County \$16,800.00 for a proportional share of the intersection/signalization improvements at SE Stark Street and Troutdale Road. [A copy of the receipt or bond shall be submitted to the City prior to obtaining the Certificate of Occupancy from the City.]

General Comments

41. The proposed development shall be constructed in substantial conformance with the plans submitted as part of this site and design review and specific site plan approval and all conditions imposed by the Site and Design Review Committee (SDRC).
42. Any other conditions or regulations required by Multnomah County, Gresham Fire and Emergency Services, or state or federal agencies are hereby made a part of this permit.
43. Approved Site and Design Review applications shall be void after two years, unless substantial completion has taken place.

APPROVED THIS 4th DAY OF JUNE 1998.



Richard Faith  
Community Development Director

Staff Contact: Elizabeth McCallum, Associate Planner

