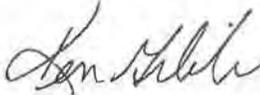


Memorandum

To: Mayor and City Council

From: Ken Gibb, Community Development Director 

Date: March 27, 2013

Subject: OSU Campus Master Plan Major Adjustment and Land Development Code Text Amendment (PLD13-00001, LDT12-00002)

Issue

Evaluation of a Land Development Code (LDC) Text Amendment application (LDT12-00002) affecting LDC Chapter 3.36 – OSU zone.

Background

Land Development Code Chapter 3.36 – OSU Zone implements the OSU Campus Master Plan. This zone splits the campus into 10 Sectors, A – J. Each sector has a maximum future development allocation (shown in LDC Table 3.36-2), which limits the amount of building square footage that can be constructed in each zone. OSU proposes to construct a new 90,000 sq. ft. residence hall in Sector D but only has 35,000 sq. ft. of development allocation in this Sector. Adjacent to campus Sector D is Sector C, which has 750,000 sq. ft. of future development allocation. OSU requests a transfer 71,000 sq. ft. of development allocation from Sector C to Sector D to make possible the construction of a new residence hall in Sector D. OSU would also like to close a portion of SW Adams Avenue and SW 14th Street, which are private streets, to provide space to construct a plaza associated with the conceptual residence hall.

Approval of a CMP Major Adjustment application is required to transfer development allocation from Sector C to Sector D and close the noted street segments, and OSU has submitted such an application (since the streets are private, vacation permits are not required). Campus Master Plan Major Adjustment applications are decided upon by the Planning Commission through the Planned Development review process. Transferring development allocation also requires the figures in LDC Table 3.36-2: Building Square Footage by Sector to be changed. To make this change to the LDC requires approval of a Land Development Code Text Amendment. Land Development Code Text Amendment applications are decided upon by the City Council. While Text Amendments are a legislative change, the subject application addresses a specific location for a particular applicant and is, therefore, considered a quasi-judicial decision.

On March 20, 2013, the Planning Commission approved the CMP Major Adjustment application (PLD13-00001), with conditions, and contingent upon City Council approval of the concurrent Land Development Code (LDC) Text Amendment application (LDT12-

00002) (**Exhibits I and II**). During the same meeting, the Planning Commission also recommended that the City Council approve the OSU Text Amendment application and related new LDC text proposed by Staff (new Section 3.36.40.01.f) (**Exhibits I and II**). The Text Amendments proposed by OSU and City Staff, and recommended for approval by the Planning Commission are shown below. Double underlined text is proposed new text, and struck-out text is proposed to be deleted.

Section 3.36.40.01 – Sector Development Allocation

- a. Sector Development Allocation represents the gross square footage of new development allowed in each Sector, regardless of the Use Type. See Table 3.36-2 - Building Square Footage by Sector.
- b. Each new development project in a Sector shall reduce that Sector's available allocation.
- c. Existing and approved development as of December 31, 2003, has been included in the existing/approved development calculations and shall not reduce the Sector Development Allocation.
- d. Demolition of existing square footage and/or restoration of non-open-space areas to open space shall count as an equivalent square footage credit to the Sector development or open space allocation.
- e. Square footage associated with a parking structure shall be included in the Development Allocation for the Sector in which the structure is located. Square footage associated with at-grade parking lots shall be calculated as impervious surface but not count as part of Development Allocation.
- f. Table 3.36-2: Building Square Footage by Sector, includes 71,000 square feet of Future Allocation that was removed, effective [date text amendment is effective] from Sector C's allocation and added to the allocation for Section D. This reallocation is contingent upon the 71,000 square feet being used for a student residence hall. The residence hall shall be constructed south of SW Adams Avenue, north of SW Washington Way, and between SW 13th and 14th Streets. If a residence hall is not constructed in this location before the expiration of the Campus Master Plan Major Adjustment approval that allowed such construction (PLD13-00001), the 71,000 square feet allocated for the residence hall shall not be used in Sector D, but shall revert to Sector C.

Sector	Existing/Approved	Maximum Future Allocation	Total
A	281,551	250,000	531,551
B	831,426	500,000	1,331,426
C	4,685,510	750,000 <u>679,000</u>	5,435,510 <u>5,364,510</u>
D	325,506	35,000 <u>106,000</u>	360,506 <u>431,506</u>
E	253,046	120,000	373,046
F	847,166	750,000	1,597,166
G	742,092	350,000	1,092,092
H	133,535	50,000	183,535
J	41,851	350,000	391,851
Total	8,141,683	3,155,000	11,296,683

If approved, the Staff proposed LDC text in Section 3.36.40.01.f would set parameters on how and when the transferred development allocation could be used. Setting these parameters ensures that the development allocation is used for a residence hall and accessory uses, on which analysis of the proposal was based. It also ensures that the LDC Text is consistent with the Campus Master Plan as amended by the recent CMP Major Adjustment approval.

Report Format and Action Required

Attached to this memorandum is the Staff Report to the Planning Commission (**Exhibit III**). Part I of the report evaluates the CMP Major Adjustment application and Part II evaluates the LDC Text Amendment application (**Exhibit III.5, and III.24**). Unless the CMP Major Adjustment decision made by the Planning Commission is appealed, the City Council will only make a decision on the proposed Text Amendments. However, the City Council is encouraged to read the entire Planning Commission Staff Report as a great deal of the compatibility analysis provided regarding the CMP Major Adjustment application was incorporated by reference into the Text Amendment analysis.

The City Council is requested to make one of the following decisions regarding the Text Amendment proposal (including the Staff proposal):

- Option 1: Approve the application as proposed; or
- Option 2: Approve the application with the addition of Staff-recommended or similar Code language; or
- Option 3: Deny the application.

Based on findings in support of the application presented in the March 13, 2013, Staff Report to the Planning Commission and findings in support of the application made by the City Council and the Planning Commission during deliberations on the request, Staff recommend the Council choose Option 2. A decision under Option 2 would approve the application and incorporate the Staff recommended Code text limiting use of the proposed 71,000 sq. ft. of development allocation. If the City Council accepts this recommendation, the following motion is suggested:

I move to approve the OSU Land Development Code Text Amendment application (LDT12-00002) amending LDC Table 3.36-2: Building Square Footage by Sector, and adding text for a new Section 3.36.40.01.f as provided by Staff in the March 13, 2013, Staff Report, subject to approval of formal findings and an ordinance.

Exhibits

- I. Planning Commission Notice of Disposition approving the CMP Major Adjustment application and recommending City Council approval of the LDC Text Amendment (Order No. 2013-017)
- II. Draft Minutes of the March 20, 2013 Planning Commission meeting (includes written testimony received after release of the Planning Commission Staff Report and during the March 20, 2013 Planning Commission public hearing).
- III. March 13, 2013, Planning Commission Staff Report

Review and Concur:



James A. Patterson,
City Manager



Community Development
Planning Division
501 SW Madison Avenue
Corvallis, OR 97333

**CORVALLIS PLANNING COMMISSION
NOTICE OF DISPOSITION**

ORDER 2013-017

CASE: OSU Campus Master Plan Major Adjustment and Land Development Code Text Amendment (PLD13-00001, LDT12-00002)

REQUEST: The applicant requests approval of a Major Adjustment to the Oregon State University (OSU) Campus Master Plan (CMP), and a Land Development Code (LDC) Text Amendment to increase the development allocation in Campus Sector D by 71, 000 sq. ft. and reduce the development allocation in Sector C by the same amount. The stated purposed for increasing the development allocation in Sector D is to accommodate a new OSU residence hall that would be south of SW Adams, north of Washington Avenue, and between SW 13th and 14th Streets. As part of these applications, the applicant also requests approval to remove segments of SW Adams Avenue and SW 14th Street. Removing these street segments would require corresponding changes to Figure 6.2 of the Campus Master Plan

**OWNER /
APPLICANT:** David Dodson, on behalf of
Oregon State University
130 Oak Creek Building
Corvallis, Oregon 97331

LOCATION: Oregon State University Sector D is generally bound by SW 14th and 15th Streets on the west, SW 9th and 11th Streets on the east, SW Monroe Avenue on the north, and SW Washington Way on the south. Sector C is the core of campus and is generally bound on the west by SW 30th Street, on the east by SW 14th Street, on the north by SW Monroe and SW Orchard Avenues, and on the north by SW Washington Way.

EXHIBIT I.1

DECISION: On March 20, 2013, the Corvallis Planning Commission conducted a public hearing and deliberated on the subject application. The Planning Commission decided to approve the Campus Master Plan Major Adjustment application subject to conditions of approval. The Planning Commission also recommended that the City Council approve the proposed Land Development Code Text Amendment affecting LDC Table 3.36-2: Building Square Footage by Sector, and the associated Text Amendment proposed by staff, which created a new subsection "F" under LDC Section 3.36.40.01 - Sector Development Allocation. The Planning Commission's decisions were based on evidence in the record and findings made during deliberations that the proposals satisfied applicable review criteria.

If you are an affected party and wish to appeal the Planning Commission's decision, an appeal must be filed, in writing, with the City Recorder within 12 days from the date that the order is signed. The following information must be included:

1. Name and address of the appellant(s).
2. Reference the subject development and case number, if any.
3. A statement of the specific grounds for appeal.
4. A statement as to how you are an affected party.
5. Filing fee (\$782, or \$391 if a recognized Neighborhood Association)

Appeals must be filed by 5:00 p.m. on the final day of the appeal period. When the final day of an appeal period falls on a weekend or holiday, the appeal period shall be extended to 5:00 p.m. on the subsequent work day. The City Recorder is located in the City Manager's Office, City Hall, 501 SW Madison Avenue, Corvallis, Oregon.



Jennifer Gervais, Chair
Corvallis Planning Commission

Signed: March 20, 2013

Appeal Deadline: April 1, 2013 at 5:00 PM

Effective Period: April 1, 2017 (If not appealed)

CONDITIONS OF APPROVAL – CAMPUS MASTER PLAN MAJOR ADJUSTMENT

Condition Number	Condition	Page Number
1	<p>Sector D Allocation Parameters - The 71,000 sq. ft. of development allocation approved to be transferred from OSU Campus Sector C to Sector D shall only be used for a student residence hall. The residence hall shall be constructed between SW Adams Avenue and SW Washington Way, and between SW 13th and 14th Streets. If a residence hall is not constructed in this location by the expiration date for this CMP Major Adjustment (PLD13-00001), the 71,000 square feet allocated for it shall not be used in Sector D, but shall revert back to Sector C.</p> <p>Approval of this Campus Master Plan Major Adjustment application (PLD13-00001) is contingent upon approval and enactment of the Land Development Code Text Amendment application (LDT12-00002) by the City Council. If the Land Development Code Text Amendment is denied by the City Council, then approval of this Campus Master Plan Major Adjustment shall be nullified.</p>	3, 9, 12, 24
2	<p>Public Improvements - Any plans for public improvements referenced within the application or this staff report shall not be considered final engineered public improvement plans. Prior to issuance of any structural or site utility construction permits, the applicant shall obtain approval of, and permits for, engineered plans for public improvements from the City's Engineering Division. The applicant shall submit necessary engineered plans and studies for public utility and transportation systems to ensure that adequate street, water, sewer, storm drainage and street lighting improvements are provided. Final utility alignments that maximize separation from adjacent utilities and street trees shall be engineered with the plans for public improvements in accordance with all applicable LDC criteria and City, DEQ and Oregon Health Division requirements for utility separations. Public improvement plan submittals will be reviewed and approved by the City Engineer under the procedures outlined in Land Development Code Section 4.0.80.</p>	
3	<p>Traffic Impact Analysis - Prior to issuance of any permits related to construction of the new student residence hall from the City, a TIA shall be submitted and approved by the City Engineer. If the TIA determines that additional mitigation will be required to keep study intersections performing at a LOS "D" or better, the mitigation and timing of the mitigation shall be approved by the City Engineer, prior to issuance of any permits related to construction of the new student residence hall from the City. The TIA shall address the following:</p> <p>A. The application proposes to remove SW Adams Avenue from SW 13th Street to SW 15th Street, and SW 14th Street, from</p>	16, 18

SW Washington Avenue to SW Adams Avenue, from the OSU Street Ownership (Private Streets) map (Attachments G and H), figure 6.2 of the December 2004 Campus Master Plan. The TIA describes changing travel lanes and parking along portions of SW Adams Avenue and SW 14th Street and redirecting vehicular traffic to other roadways. An analysis of the proposed changes shall be provided.

B. A trip distribution shall be provided that combines both the new student residence hall and the administrative building. If any additional intersections not already analyzed for LOS are shown to have a total of 30 or more peak hour trips, they shall also be analyzed for LOS.

C. The February 26, 2013 OSU Sector D Transportation Facilities Analysis shows the intersection of SW Washington Avenue and SW 11th Street to receive more than 30 peak hour trips. This intersection shall be analyzed for LOS.

D. Trip distribution shall be based on existing traffic patterns in the area. Recent counts have been conducted for the 2010 BTM update and by the Corvallis Metropolitan Planning Organization that could be used for this purpose.

E. The trip distribution presented in graphical figure 3 from the February 26, 2013 OSU Sector D Transportation Facilities Analysis shall match what is proposed. This shall be verified by adding the trips shown and figuring the percentages and comparing the results to analysis of the existing traffic patterns.

F. All intersections that require a LOS analysis shall include an analysis of the 20 year planning horizon.

G. The OSU Campus Master Plan recommends mitigating the 15th and Washington Way intersection by realigning Washington Way with Washington Avenue at the 15th and Washington Avenue intersection. An analysis shall be provided that discusses the Master Plan's proposed mitigation and why OSU's Washington Way Improvement Plan that extends Washington Way to the east along the railroad right of way is the preferred alternative.

H. Intersection analysis for current and post conditions are presented in two different printout formats, possibly from two different software packages. The TIA shall address why results appear in two different formats and if results have been affected by this.

I. For all intersections that require LOS analysis, the analysis shall include current conditions, current conditions plus development, and a 20 year outlook with the development. Both AM and PM peak hours shall be analyzed and supporting information (printouts) shall be included for all scenarios in the appendix. All analysis sheets located in the appendix shall be

	<p>clearly labeled with intersection location, AM or PM peak, and analysis period (current conditions, current conditions plus site trips, etc.)</p> <p>J. For all intersections that require LOS analysis, pedestrian counts shall be included in the analysis.</p> <p>K. All intersection counts that are used in the report analysis shall be included in the appendix of the report.</p> <p>L. The report shall present traffic numbers in such a way that traffic counts, growth, and trip generation numbers can be easily verified throughout the report. The graphical figures showing existing conditions, the addition of site trips, and trip distribution shall clearly report the same numbers outlined above. The analysis in the appendix shall display the same numbers shown in the graphical figures.</p> <p>M. The submitted TIA shall be stamped and signed by an engineer licensed in the State of Oregon.</p>	
4	<p>SW 15th Street and SW Washington Way Intersection - Prior to any occupancy of the new student residence hall, the intersection of SW 15th Street and SW Washington Way shall be upgraded as identified in the February 26, 2013 OSU Sector D Transportation Facilities Analysis and the February 27, 2013 OSU Washington ay Improvement Transportation Analysis. Improvements are to include realignment of the intersection consistent with the OSU Washington Way Improvement plans, left turn lanes for the northern, southern, and western legs, a right turn lane on the northern leg, a street stub on the eastern leg for future extension, and full signalization of the intersection including integration with the railroad gates.</p>	16, 18
5	<p>SW 15th Street and SW Washington Avenue Intersection - In order to assure that the mitigation is constructed prior to the intersection LOS falling below an acceptable level, OSU and The City of Corvallis will monitor the LOS of the intersection through future BTM updates and future Campus Master Plans. The realignment of SW Washington Way from SW 15th Street to SW Washington Avenue, just east of SW 10th Street, consistent with the OSU Washington Way Improvement plan, including signalization at SW 11th Street, shall be complete prior to the intersection of SW 15th Street at SW Washington Avenue reaching a failing LOS. The intersection may reach a failing LOS from annual growth of traffic or from future development of a new facility in the vicinity of the intersection.</p>	16, 19
6	<p>Rail Order - Prior to issuance of a PIPC permit for the intersection of SW 15th Street and Washington Way, the applicant shall obtain a rail order from ODOT Rail to construct the improvements identified</p>	17, 19

	in the February 26, 2013 OSU Sector D Transportation Facilities Analysis and the February 27, 2013 OSU Washington Way Improvement Transportation Analysis.	
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Community Development
 Planning Division
 501 SW Madison Avenue
 Corvallis, OR 97333

DRAFT
CITY OF CORVALLIS
PLANNING COMMISSION MINUTES
March 20, 2013

Present

Jennifer Gervais, *Chair*
 Frank Hann, *Vice Chair*
 Roger Lizut
 Ronald Sessions
 Kent Daniels
 Jasmin Woodside
 Bruce Sorte, *Council Liaison*

Staff

Kevin Young, Planning Division Manager
 Bob Richardson, Associate Planner
 Jeff McConnell, Public Works
 Ted Reese, Public Works
 David Coulombe, Deputy City Attorney
 Mark Lindgren, Recorder

Excused Absence

James Feldmann
 Jim Ridlington
 G. Tucker Selko

Visitors

Robert Wilson	John Foster
David Dodson	Louise Marquering
Dan Larson	Paul Cull
Larrie Easterly	Rick Hangartner
Chris Clemow	Dick Abraham
Joanna Wilson	

Absent

SUMMARY OF DISCUSSION

	Agenda Item	Information Only	Held for Further Review	Recommendations
I.	Visitors' Propositions			Robert Wilson objected to the OSU Campus Master Plan including his house.
II.	Public Hearing- OSU Campus Master Plan Major Adjustment and LDC Text Amendment (LDT12-00002, PLD13-00001)			Motion passed to approve the Major Adjustment as conditioned. Motion passed to recommended that the City Council approve the OSU Land Development Code Text Amendment application, amending LDC Table 3.36-2 Building Square Footage By Sector, and adding text for a new section, 3.36.40.01.f.
III.	Approval of Minutes February 20, 2013 March 6, 2013			February 20, 2013 minutes approved as presented. March 6, 2013 minutes approved as presented.
IV.	Old Business			None.

EXHIBIT II.1

V.	New Business			The April 3 meeting will focus on suggestions for the Capital Improvement Program.
VI.	Adjournment			Meeting adjourned at 10:14 p.m.

Attachments to the March 20, 2013 minutes:

- A. Written testimony memo, submitted by Associate Planner Bob Richardson.
- B. Written testimony, submitted by John Foster.

CONTENT OF DISCUSSION

The Corvallis Planning Commission was called to order by Chair Jennifer Gervais at 7:00 p.m. in the Downtown Fire Station Meeting Room, 400 NW Harrison Boulevard.

I. VISITORS' PROPOSITIONS:

Robert Wilson highlighted a document that OSU submitted in tonight's application, which showed his house within Planning Sector D of the OSU Campus Master Plan, and felt that the planning area shouldn't include his house. Planner Young replied that City and OSU officials recognized that the property was private.

II. PUBLIC HEARING – OSU CAMPUS MASTER PLAN MAJOR ADJUSTMENT AND LDC TEXT AMENDMENT (LDT12-00002, PLD13-00001):

A. Opening and Procedures:

Chair Gervais welcomed citizens and reviewed the public hearing procedures. Staff will present an overview followed by the applicant's presentation. There will be a staff report and public testimony, followed by rebuttal by the applicant, limited in scope to issues raised in opposition and sur-rebuttal by opponents, limited in scope to issues raised on rebuttal. The Commission may ask questions of staff, engage in deliberations, and make a final decision. Any person interested in the agenda may offer relevant oral or written testimony. Please try not to repeat testimony offered by earlier speakers. It is sufficient to say you concur with earlier speakers without repeating their testimony. For those testifying this evening, please keep your comments brief and directed to the criteria upon which the decision is based.

Land use decisions are evaluated against applicable criteria from the Land Development Code and Comprehensive Plan. A list of the applicable criteria for this case is available as a handout at the back of the room.

Persons testifying either orally or in writing may request a continuance to address additional documents or evidence submitted in favor of the application. If this request is made, please identify the new document or evidence during your testimony. Persons testifying may also request that the record remain open seven additional days to submit additional written evidence. Requests for allowing the record to remain open should be included within a person's testimony.

Chair Gervais opened the public hearing.

B. Declarations by the Commission: Conflicts of Interest, Ex Parte Contacts, Site visits, or Objections on Jurisdictional Grounds

1. Conflicts of Interest. Commissioner Frank Hann noted he served on the City/OSU Collaboration Neighborhood Planning Committee, and during that process, statements and recommendations were made regarding OSU increasing student housing, but said that his participation shouldn't affect his ability to render an official decision. Commissioner Gervais noted that she was OSU Courtesy Faculty in the Department of Fisheries and Wildlife, and teaches OSU online classes, but that that affiliation would not prevent her from rendering a fair and impartial decision. Commissioner Kent Daniels said he lived in a neighborhood bordering OSU and attended a meeting at which Mr. Dodson made a presentation to the neighborhood association, but said that it wouldn't affect his judgment.
2. Ex Parte Contacts. Commissioner Gervais related that she was contacted by a radio station this afternoon, but she made no comment, and she felt it would not affect her decision. There were no objections to declarations.
3. Site Visits. Commissioners Daniels, Gervais, Hann and Woodside declared site visits. Commissioner Daniels stated that he hadn't seen anything not readily available or obvious from the staff report; Commissioners Gervais and Lizut concurred.
4. Objections on Jurisdictional Grounds. None declared.

C. Staff Overview:

Planner Richardson related the OSU campus was divided into nine sectors, A through J, and each sector has a maximum amount of square footage for future development allocation, which limits the amount of building square footage that can be constructed in each of the sectors.

OSU would like to construct a new 90,000 square foot residence hall in Sector D; however, that sector only has a future development allocation of 35,000 square feet. Because of that, OSU would like to transfer 71,000 square feet of development allocation from Sector C to Sector D, with an equivalent decrease in development allocation in Sector C. OSU is also proposing to close portions of SW Adams Avenue and SW 14th Street to construct a plaza associated with the proposed residence hall.

He stated that this change in development allocation required approval of the OSU Campus Master Plan Major Adjustment Application, which is evaluated through the Planned Development process. Also, since transferring the development allocation from Sector C to Sector D also results in a change in the text of the Land Development Code (LDC), specifically, Table 3.36.2: Building Square Footage by Sector, an LDC text amendment is also required to be approved.

He displayed locations of Sector D and Sector C, noting the latter was in the campus core. The subject sites are designated Public Institutional, OSU Zone. Surrounding areas contain a variety of zone designations. Areas surrounding Sector D where the residence hall would be placed are mostly Medium-High Density Residential, with some industrially zoned areas to the south of the site.

D. Legal Declaration:

Deputy City Attorney David Coulombe said the Commission will consider the applicable criteria as outlined in the staff report, and he asked that citizens direct their testimony to the criteria in the staff report or other criteria that they believe are applicable. It is necessary at this time to raise all issues

that are germane to this request. Failure to raise an issue, or failure to provide sufficient specificity to afford the decision-makers an opportunity to respond, precludes an appeal to the State Land Use Board of Appeals on that issue.

The failure of the applicant to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow the local government to respond to the issue precludes an action for damages in Circuit Court.

E. Applicant's Presentation:

OSU Campus Planning Manager David Dodson introduced Dan Larson, University Housing and Dining Services (UHDS) Associate Director, and Chris Clemow, Group McKenzie, who worked on the OSU base transportation model and the City/OSU Collaboration Planning Workgroup.

Mr. Dodson said OSU's first master plan was developed by the Olmstead brothers in 1909, and succeeding plans have sought to respect that. The most recent master plan was adopted in 2004 and is valid to 2015, and covers 570 acres.

He said the recent recommendation from the City/OSU Collaboration is a target for 28-30% of undergraduates to live on campus by 2019 (OSU currently houses 18% of its undergrads). To meet that goal, OSU will have to add 3,200 on-campus beds to the existing 4,200 beds, not counting family housing on the northwest campus. The most recent residence hall built was Halsell Hall, in 2002, with up to 207 beds. He related that the OSU President Ray recently issued a requirement that all full-term freshmen live on campus, beginning this fall, thus increasing demand for on-campus housing. Most on-campus residents are freshmen, and also dine on campus.

He outlined locations that were considered and rejected for various reasons to site the new residence hall; after deliberation, campus planners selected the site of a gravel parking lot just south of Wilson Hall. He said the proposed building was actually only 77,000 square feet (not the 90,000 square feet listed in the application), five stories high, with about 54 suites with three rooms per suite, with one to two students per room, to accommodate up to 324 beds.

He said the OSU Campus Master Plan designates allowable uses (which differ) within each of the sectors, and allowable total square footage. The majority of campus development has occurred in Sector C. In 2004, it was anticipated Sector D would only need 35,000 square feet of additional developable area; the 77,000 square feet of the proposed residence hall would exceed that.

He said one change required to permit more developable area in Sector D was a Text Amendment, to amend Table 3.36.2 in the LDC to modify the square footage allowed in Sector D, which current has 750,000 of allowable development. The proposal would reduce the developable square footage in Sector C by 71,000, with an increase in Sector D. The grand total of developable area on campus would remain the same; it is simply traded between areas.

He said OSU managed parking campus-wide on the basis of utilization rates. OSU provides the City assurance that parking utilization is at, or less than 85%. Once reaching that 85% threshold, OSU must design additional on-campus parking facilities. Once parking utilization reaches 90%, and improvements have not been done, it essentially shuts down any campus development. The most recent parking study found a utilization rate of 68%.

Mr. Dodson related that the gravel lot where the residence hall would be located accommodates about 202 spaces; he anticipated that the project would displace a total of 218 parking spaces in the area. He stated that about 218 parking spaces were available in the area, so it could be considered a

wash, given parking utilization rates. He noted that considering utilization rates, 85% is generally considered full by most standards. Though there would not appear to be a net loss, there is also an impact of the new residence hall, with some of the residents wanting to park on campus, so there will be an increased need for vehicle parking. There are currently 7,200 general-purpose parking spaces on campus, with about 4,900 utilized, which is a 68% rate. With an 85% utilization rate, 1,200 spaces would be vacant. He said there was potential for parking impacts to surrounding neighborhoods, with some students trying to park in a neighborhood and not paying for a campus parking permit. He said students living on campus, and not driving to campus, should be a positive in terms of reducing impacts to neighborhoods, since there should be fewer vehicle trips to and from campus by dorm residents.

He said OSU's mitigation for impacts will include consideration of tiered parking rates, with economy rates to help promote parking in areas that are currently underutilized. There will also be consideration of an additional campus shuttle to get students to and from those areas. There is also consideration of a surface parking lot in southwest campus, on the shuttle route. There is also potential for a neighborhood parking district; there are currently three.

OSU will also spend \$2.8 million to improve the intersection at 15th Street and Washington Way prior to occupancy of the new residence hall. That will involve adding new turn lanes, requiring removing four buildings; the City imposed a Condition regarding this. He summarized that OSU concurred with staff's recommendation to approve the request.

Commissioner Hann asked if construction of another residence hall was underway this year; Mr. Larson replied that this was it. The International Living-Learning Center was opened three years ago, with 350 beds. Commissioner Hann asked what steps would be taken to preserve 28 free parking spaces that had been set aside for the neighborhood; Mr. Dodson replied when OSU vacated 17th Street to accommodate that building, a parking lot was established with free parking to accommodate displaced spaces to the public and the neighborhood, and those will remain. He said those spaces seem to generally be full.

Commissioner Hann asked about utilization of the recent new shuttle; Mr. Dodson replied that it was very good. Two shuttle loops both go through the Reser Stadium, but the new one goes directly from Reser to Orchard and 26th, with shorter turnaround times. A consultant will look at the economics of the tiered parking rates and shuttle routes. Commissioner Hann highlighted students coming from new housing at the Sather Addition, noting there were many safety concerns about students traveling from that area. Mr. Dodson replied that there was discussion of a new multiuse path along 35th Street, which would tie into OSU's multiuse path between the tracks and Washington Way. He anticipated that most of those students living there will probably bike to campus; there is also bus service, though the shuttle will not go that far yet. OSU is considering establishing a second transportation hub on-campus, working with the Corvallis Metropolitan Planning Organization to do an assessment.

Mr. Dodson confirmed that the developable allocation figures being quoted reflected gross square footage. Commissioner Hann asked if there was a downside in removing square footage from a central area; Mr. Dodson replied that OSU was not concerned. OSU was looking at constructing a new 2,400-seat classroom behind the Women's Building; that project will come to the HRC soon and break ground this fall. Commissioner Hann asked if any other uses were anticipated for the residence hall; Mr. Larson replied that it would include a Student Health Service satellite center. Commissioner Hann asked if 238 square feet per bed was now typical for a dormitory; Mr. Larson replied that it was.

Commissioner Sessions asked if there was any interest in LEED certification for the building; Mr. Dodson replied that new OSU buildings were built at LEED-equivalent standards, but avoid the cost of

actual certification. Commissioner Sessions asked what would happen to student parking on game day; Mr. Dodson responded that most of the cars parking with permits on campus were faculty and staff, with student permits at only about half that number. Faculty pay more for permits. Faculty and staff would likely not be on campus on the roughly seven game days, and students would be required to move their cars on those days.

Commissioner Sessions asked about the buildings to be removed to make way for the proposed 15th Street intersection widening. Mr. Dodson highlighted the need to remove two warehouse and storage buildings on the north side of Washington Way, along with a wood shop and a key shop. OSU recently purchased the large Nypro building off of Technology Loop, and will move mailing and postage there, along with Surplus Sales and some storage. A number of OSU buildings in the campus core can have their storage moved out of the core to allow more efficient usage of central areas.

Commissioner Daniels asked about the relationship between the Campus Master Plan and the LDC, noting that the LDC doesn't adopt the Campus Master Plan. Mr. Dodson replied that the Campus Master Plan includes LDC Section 3.36, devoted to the OSU Zone, with all the criteria folded into the LDC. He said when the plan was adopted, there was concern by neighbors, so then-Senior Planner Vincent Martorello worked to allay neighbors concerns, and the Campus Master Plan contains appendixes that address outreach to neighbors. There was also formation of a traffic and parking work group, similar to a current Collaboration group, intended to look at transportation issues, but the group failed to come up with recommendations, though a parking district ultimately came out of it. Commissioner Daniels noted the 2004 plan estimated 22,000 students in 2018; Mr. Dodson said no one anticipated the increase in enrollment, which is currently 23,000, including the Bend Campus.

Commissioner Daniels reported that his Central Park Neighborhood Association (an area east of campus) conducted an informal parking study in November, 2012; he said most cars parked on 10th and 11th Streets in the area never moved all day, from 7 a.m. to 5 p.m., and it wasn't clear whether they were residents' cars or student living in dorms storing their cars there, so there is a possibility that starting a parking district there will have bigger impacts on campus parking than anticipated. Mr. Dodson cited Attachment A-21, saying he did a similar study along 9th, 10th and 11th Streets, to try to determine the impact of students parking in neighborhoods versus the impact of recent higher density development that lacks adequate on-site parking. He related that he concurred with Mr. Daniels' observation.

Commissioner Daniels said there was language in the application about plans to extend 15th Street to 11th Street, asking if parking there would be lost, and if the multiuse path would be retained. Mr. Dodson confirmed that some parking would be displaced. The area is a potential site for a future parking garage, and there is a similar site to the west. He said the multiuse path was not currently on the plans, noting the multiuse path on the south was probably on railroad property. Commissioner Daniels agreed that it was a difficult intersection.

Commissioner Woodside asked if there was any consideration of using solar panels; Mr. Larson replied that they wouldn't be able to provide it. Mr. Dodson said additional funds needed for the panels were not available, though he agreed it was easier to include it if it is part of plans. Commissioner Gervais urged OSU to include planning in capability for solar for later use.

Commissioner Hann asked about using underground parking; Mr. Dodson said such spaces cost about \$20,000, much more expensive than surface parking spaces (about \$5,000), with structured parking above ground costing between \$15,000 and \$20,000 per space. He added that it was preferable to pair a parking structure with transit service.

Commissioner Hann asked what portion of population growth could be attributable to students taking longer than four years to complete a degree; Mr. Larson agreed that some upper division students were indeed taking longer, causing an impact.

Commissioner Woodside asked about the stated goal of requiring 28-30% of undergraduates to live on campus; Mr. Dodson replied that OSU has also been investigating the possibilities of public-private partnerships as a way to increase the amount of on-campus housing. Commissioner Woodside said that reaching the goal of keeping a larger number of undergrads living on campus must involve retaining students other than just the freshmen required to live there during their the first year; Mr. Larson agreed it was more difficult to retain upper division students if the rooms were deemed too small or unappealing. Commissioner Gervais said noted that parking at Reser Stadium currently costs \$8 per day and that that would be a challenge for a student to pay over a year. Mr. Dodson replied that setting a low, economy annual parking rate was a way to fill up currently underutilized parking spaces; that would help lessen impact of parking in neighborhoods.

F. Staff Report:

Planner Bob Richardson highlighted the staff recommendation for a Condition of Approval that would require the development allocation only be used for a residence hall only in the location identified by the applicant. Staff analysis looked at compatibility based on the assumption of a dorm there, rather than any other potential usage, and focused on compatibility impacts to Sector D and surrounding neighborhoods. The Major Adjustment application is evaluated through the Planned Development process, evaluating it against criteria.

Regarding Site and Vicinity Parking criteria, he highlighted existing parking lots in the vicinity of the site, with 1,076 parking spaces in the vicinity. The current average vacancy is 218, and 218 would be removed if the residence hall were constructed, so there would be zero average vacant spaces. Given LDC requirements for Group Residential parking, it would be expected to generate a demand for between 97 to 194 parking spaces, resulting in a negative 97 to 194 average vacant spaces.

He noted that the campus parking utilization threshold is 90%; if that is exceeded campus-wide, code requires that additional parking be provided. However, until parking utilization exceeds 90%, development on the campus is not required to provide new parking. Given that current parking utilization campus-wide is 68%, adding the maximum number of parking cars that would be generated from the building, plus the anticipated loss of parking from removing the parking spaces, equals about 412 spaces. Based on the most recent parking utilization study, there are an average of about 4,900 vacant parking spaces. The numbers indicate that there are enough parking spaces campus-wide to accommodate the parking demand and the removed parking.

He said the proposal for transferring development allocation and construction of a residence hall would displace cars to surrounding neighborhoods to take advantage of free parking on streets, resulting in accumulating minor impacts such as noise, extra driving to find a space, and changing neighborhood characteristics. Mitigating factors include that vicinity parking in Sector D is almost all by permit, and displaced permit parkers could look elsewhere on campus for other permit parking spaces. The proximity of the dorm to the campus core and public transit minimizes the need for those living in the hall for a car. There are also recommendations from the OSU/City Collaboration for parking districts in the area; a tiered campus parking system; and an improved campus shuttle system. Regarding the Parking and Compatibility criteria, staff found that while there would be some impact to neighborhoods, there were benefits related to parking that could balance and mitigate the negative impacts, the proposed parking was compatible with criteria, and the applicant was complying with the LDC in this regard.

Regarding Traffic, city regulations require intersections to perform to the Level of Service D or better, and staff recommended Conditions of Approval will assure Levels D or better, with the approved mitigation, and so there is compatibility with respect to traffic.

Regarding Compensating Benefits for the change in the amount of developable area from Sector C to Sector D, there would be an equivalent reduction of development potential in Sector C, and simply be a transfer in developable area across campus, with no net loss or increase. There is the potential for reduced pressure on nearby neighborhoods related to student housing by pushing more students back on campus; more efficient use of land and resources by increasing density on campus and placing new residence halls near two other residence halls and taking advantage of an existing dining facility; and by placing a large number of students close to campus, they would be able to easily access campus facilities by walking and biking, and would be close to transit.

He summarized that as conditioned, staff found that the OSU Campus Master Plan Major Adjustment proposal satisfied applicable review criteria and that on balance, the benefits of the proposal outweighed potential negative compatibility impacts.

Planner Richardson highlighted the code criteria related to Text Amendment proposals, noting that generally approval must be to the public's benefit; meet the same compatibility criteria used in Planned Development evaluations; and meet statewide planning goals. He highlighted the math in the proposed text amendment to reduce the amount of maximum future allocation in Sector C by 71,000 square feet, and a corresponding increase in development allocation of 71,000 square feet in Sector D.

He highlighted the proposed staff proposed Condition of Approval to apply to the OSU Campus Master Plan Major Adjustment proposal, which currently states that the square footage allocation shall only be used for a residence hall, where shown in the application materials. He said staff's proposed language adds additional text written into the LDC, since a text amendment may not be conditioned (it may only be approved or denied). The added language would require that the residence hall shall be constructed where shown on the application; 71,000 square feet of that allocation must be used for a residence hall; and it must be constructed within four years of the date of Campus Master Plan Major Adjustment approval.

Regarding the Text Amendment, staff analyzed the proposal against the same compatibility criteria used for the Major Adjustment, and highlighted the findings in the Text Amendment Analysis, saying that staff found that with the proposed staff-recommended text amendment, the applicant's proposal satisfies applicable review criteria, is consistent with Comprehensive Plan policies, and was compatible with surrounding uses.

He highlighted the changes recommended by staff regarding the suggested Text Amendment motion, so that the motion would read in part "*..recommends the City Council approve..*"; and with a staff report date of March 13, not March 8, as mistakenly listed.

Commissioner Sessions asked how the Level of Service was established for various locations. Ted Reese, Public Works Engineer, replied that Levels of Service were established by the current Highway Capacity Manual, including the minimum average delay through an intersection. The City adopted a Level of Service D as the minimum acceptable level, so anything less would require mitigation. Commissioner Sessions asked if traffic studies reflected OSU's conclusions; Engineer Reese replied that that was correct.

Commissioner Sessions highlighted a Condition of Approval #3 dealing with traffic studies, asking if they'd been reviewed, and if they were appropriate; Engineer Reese replied that the review was

based on the Traffic Impact Analysis (TIA), included in the staff report appendix. There was an initial traffic assessment prior to that one, which prompted a review letter in December, 2012. Not all of staff's concerns were addressed with the current TIA, so staff would like additional information so that concerns are addressed.

Commissioner Daniels asked if OSU had concerns about traffic requirements potentially delaying construction; Engineer Reese answered that staff and OSU agreed that what was in the staff report was appropriate. Commissioner Daniels said he would be a lot more concerned if there was not a proposal for a parking district for the neighborhood. He said that construction of the dorm would have an impact before construction starts in fall. He said it was his understanding that a new planned parking lot at 11th and Washington would be permit parking (it is currently free); that would also increase pressure on the neighborhood. He stated his Councilor supported a parking district, but felt nervous to depend on a decision that hasn't been made yet by the City. He related that there was a unanimous recommendation to form a parking district there by the OSU/City Collaboration Steering Committee. City Council Liaison Bruce Sorte noted that formation of a parking district could not be depended on, and the decisions must be independent of each other.

G. Public Testimony in favor of the application:

John Foster submitted written testimony (**Attachment B**) and stated that in the past, OSU has generally expanded without any thought for housing students, but OSU was now taking the first step to starting to address the issue. There are parking and traffic concerns, but this is better than housing students two miles outside town.

Louise Marquering concurred with Mr. Foster, saying she had long been concerned about lack of OSU student housing, saying a number of more dorms were needed. She spoke in favor of the Campus Master Plan change, in favor of a garage being built, and that the intersection at 30th and Washington also needed work. She advocated strongly supporting students that lose their parking on Game Days.

H. Public Testimony in opposition to the applicant's request:

Paul Cull stated he lived downtown, would be affected by the project, and objected to the presented pseudo-data. He disputed the 68% parking utilization usage rate, saying it was much higher. He objected that the number of required parking spaces was only 90 or so for 324 beds. He advocated requiring building in parking as part of every new structure on campus in order to meet demand.

He objected that he hadn't gotten notice of the hearing, saying that only people living within 300' were noticed, despite the much larger area of impact of the project. He objected to making Washington Way much more of a through street, saying that that would impact him, and asked how the extra traffic would be mitigated. He asked how students would be moved via shuttle. He recommended denial of the application unless adequate parking can be provided, saying the project would have a big negative impact on the neighborhood.

Commissioner Daniels replied that the 300' public hearing notification standard was approved by Council; Mr. Cull replied that it was inappropriate. Commissioner Sessions said citizens may place their names on an automatic email notification list. Mr. Cull said his family was on the Central Park Neighborhood Association mailing list, but hadn't heard anything about the meeting. Planner Young said neighborhood associations are typically notified. Commissioner Daniels said Mr. Cull's point was that if the study area for impacts was within a half-mile, then people living in that larger area should have been notified. Planner Young stated that 1,500 notifications were mailed. Commissioner

Gervais related that her neighborhood association had been notified; it is the responsibility of the association contact to pass on such information; she apologized that that apparently had not happened in this case.

Rick Hangartner cited 3.36.30.04.d, to preserve his rights to appeal to LUBA. He said the City had taken the position that the university may ask for an amendment to a Text Amendment under 1.2.80.0, so OSU could ask to amend parking requirements at will. He said that OSU could ask, in the spirit of good faith to Corvallis, to amend the parking requirements at will. Under guidance of the traffic engineer, OSU could request an amendment to establish stricter parking requirements; he said he would make that part of his appeal. He said that parking districts were not properly part of this decision, so he believed the City opened the door to make that part of LUBA's considerations by telling him to put it on the record at this meeting. He said a LUBA appeal would find that the entire City/OSU Collaboration initiative was not appropriate, since it prevented citizen participation, noting that both the City and OSU had refused to let him serve on a committee.

He asked if it was a threshold decision on the land use, so that if the commission denied the application, whether the Council would still be able to consider it via direct appeal, and if so, whether Conflict of Interest statutes and ethics codes would apply to commission members (since some were connected to the university); he said this could be part of his appeal to LUBA.

He said the parking studies performed and submitted by the university were all "calculator" studies; the Central Park Neighborhood Association apparently did the only verifiable parking study. Given that, there is no way to know whether the demand was accurate. He said the other studies were only calculator-based, not based on real life. He said OSU has had two years to show it can influence demand by price, and whether the numbers were accurate or whether the system was being gamed. Instead, OSU's proposal will impact everyone in town, reducing their freedom of travel, and externalizing OSU's costs. OSU could include parking within all new buildings; instead, OSU externalizes costs. The other problem with calculator studies is that they can be slanted.

Mr. Hangartner said the OSU/City Collaboration process requires people to testify before unelected citizens serving on an ad hoc group, not the Council. He advocated the dorms be built, but including parking, instead of externalizing their costs throughout the community. He said that a LUBA appeal will delay building the dorm; he said OSU has the ability to amend the text that requires OSU to mitigate on campus.

Commissioner Gervais replied that she as Chair typically doesn't vote unless there is a tie, so there wouldn't be a potential conflict of interest on her part, but the appropriate time to object to conflicts of interest was at the beginning of the hearing. Commissioner Daniels asked for an answer on whether the Council could "call-up" a decision. Attorney Coulombe replied that he wasn't aware of a provision in the LDC that provides the authority to the Council to call up a decision that has been denied without appeal, though it may exist. Commissioner Gervais asked if the only way the Council would hear this after a commission decisions was if a citizen appeals it; Attorney Coulombe confirmed that that was so.

Commissioner Woodside noted that the City Council would be hearing about the Text Amendment, which could also affect the Campus Master Plan, so there was an opportunity to testify at that point, as well. Commissioner Gervais agreed, adding that the commission was simply making a recommendation to the City Council on the Text Amendment application..

Joanna Wilson asked, if the application were approved, whether there would be any more questions when OSU decides to construct a building at the corner of 9th and Jefferson. Planner Richardson replied that there was currently 35,000 square feet of development allocation in Sector D. The

administrative building that OSU described in the application would be about 15,000 square feet, and that could be built today without any public process, as long as it met code standards. That is why there was so little discussion of it in the report; it is part of the big plan, but not dependent on this approval. If this proposal fails, OSU could still build up to 35,000 square feet of new buildings in Sector D. Planner Richardson said OSU looked at the two buildings together since they were coming up short, so they included that in their discussions and application.

Dick Abraham said he owned property within the half-mile area of impact, noting that his neighborhood was already heavily impacted by parking, traffic and noise. He said he appreciated the testimony. He asked about the amount of fee parking on campus, noting that three-quarters of fee parking was paid by staff, leaving only 25% for students. He stated that OSU's testimony was that only 1,500 students utilized fee parking, so there was a major problem with fee parking at OSU, given the fact that there were some 20,000 students. There is major underutilization or availability for students. Apart from freshman parking, there is also graduate student parking, and few of them pay for parking permits. He related that many of his neighbors were advocating that OSU change its parking fee structure, noting that OSU charges fees for things that it feels should be supported. He related his neighborhood was proposing that OSU charge students \$40 a term, since students are currently not paying that fee. He said that the Council should consider this as a Condition of Approval for future growth, since the university has fallen behind in providing parking for students, and this is putting a major burden on the population of Corvallis, in terms traffic, parking ability, and other negative impacts on living conditions.

He also suggested OSU also include consideration of grad student parking, and not just freshmen; he added that construction crews and suppliers will also require significant parking in the area, and that has not been considered. He said OSU should consider a 2,000-3,000 parking space garage in the Washington Avenue area, to be paid for by student fees.

- I. Neutral testimony: None.
- J. Commission Questions to Staff:

Commissioner Sessions asked if the studies didn't provide the results necessary to be approved, what would be a mitigation for that (such as street widening). Engineer Reese replied that from the evidence that staff had seen, they didn't expect much additional mitigation would be required beyond what had already been proposed. It is up to the City Engineer to determine whether what they submit is complete, and whether proposed mitigation is acceptable to the City. Until those two items are complete, no permits for the building will be issued.

Commissioner Woodside asked Engineering staff how accurate OSU's transportation numbers had been in the past; Engineer Reese replied that OSU used a normal Tuesday or Thursday for the studies. The City is asking for the raw count information in order to verify the numbers, but he anticipated that the numbers will be found to be accurate.

Commissioner Gervais asked whether the impact of Washington's re-alignment increasing traffic volume to the east of campus would shift traffic to inappropriate places; Engineer Reese replied by highlighting the traffic impact analyses submitted from February 26 and 27; the 27th data directly relates to the re-alignment of Washington Way as it connects near 10th Street; that was considered by staff. He noted that Washington Avenue, from 11th to the east in the City's Transportation Master Plan, is listed as a collector street.

Commissioner Hann asked about the square footage calculation in the Condition of Approval; Planner Richardson replied that the Condition states that the 71,000 square feet of development allocation approved to be transferred from OSU Campus Sector C to Sector D shall only be used for a residence hall, which shall be located in a certain place and be constructed within a certain time. Based on this OSU will potentially be allocated more than they need, but OSU may only use the additional allocation for the purposes of the residence hall at a given location.

Commissioner Hann asked about mitigating factors and proposals from the OSU/City Collaboration committees; Planner Richardson replied that staff included it as context for the project, but they were not appropriate decision-making criteria for the Commission.

K. Rebuttal by Applicant:

Regarding Mr. Cull's testimony that parking utilization was closer to 90%, Mr. Dodson countered that OSU was required to perform a parking utilization study once a year as part of the Campus Master Plan. It conducts a space verification count each fall, and that is updated in the database. In the fourth week of fall term (considered the peak of utilization), generally around October 20th, on a Tuesday or Thursday (lab days) it does a parking utilization study at mid-day throughout campus. The testimony OSU provided was for the busiest areas on the north end of campus, where many classrooms are, where utilization tends to be 85-100%. He related that parking utilization rates are lower in other areas of campus. He said data from the studies will help implement tiered parking rates, which should help smooth out parking utilization, and accommodate more on-campus parking.

He noted that the University of Oregon has roughly the same number of students as OSU, but only roughly half the amount of on-campus parking. It has a much more enhanced and efficient campus transit system. As the Campus Master Plan is updated, the priority will go first to pedestrians; then cyclists; then carpool and transit; and lastly, single-occupancy vehicles.

Regarding Mr. Cull's contention that OSU can manage utilization by increasing parking fees, he countered that not until 85% parking utilization is reached is OSU obligated to begin designing new facilities. In the design of the Linus Pauling building several years ago, a couple hundred new parking spaces were added, even though the 85% threshold had not been reached. Additional parking is currently being designed for Campus Way and 35th Street. He noted that the threshold had been approved and structured by the City Council. While OSU could theoretically drastically increase rates in order to adversely affect a low utilization rate, it chooses not to do that, as it would prefer that more people parked on campus.

Regarding Mr. Cull's concerns on the 300' notification radius, he said that the current standard has been in place for 10-15 years. Neighborhood associations are also typically contacted. He said 1,500 notices were mailed, a fairly significant number.

Regarding Mr. Cull's desire to see more parking on campus, he said that OSU agreed to an extent, but wished to first better utilize what it already has. The OSU/City Collaboration recommendation for a parking district will force some to reconsider where they park and how they get around town.

Regarding Mr. Hangartner's concern about changing parking standards, he stated that they was adopted as part of the Campus Master Plan. Regarding Mr. Hangartner's concerns about the traffic study, he concurred to a degree, but noted that industry standards regarding trip generation are used. There are not trip generation standards for dorms, so OSU used an Apartment Parking standard, resulting in a more conservative estimate.

Mr. Clemow noted that OSU was only before the commission because of the issue of transferring allocated square footage from Sector C to Sector D, and it would not have to come before the commission had it decided to build the residence hall in Sector C. There is no big-picture change on campus in terms of development capacity. Regarding student housing, he said that students have a very low trip generation, since students don't drive as much.

Mr. Dodson stated that regarding impacts to neighborhoods, his experience is that the neighborhood just to the east of the propose dorm is impacted by higher density and multi-family development, much without adequate onsite parking, so their residents must park on the street; as well as the impacts from people that want to save money by not paying for a university parking permit. He noted that the problem is compounded by the relatively little downtown on-street parking on 5th, 6th, 7th and 8th Streets. He expected that the neighborhood would continue to be impacted until something more substantial is done to deal with parking impacts, but anticipated that the OSU/City Collaboration initiative would produce solutions.

Regarding Mr. Abraham's concern about parking spaces, Mr. Dodson explained that there are about 7,200 parking spaces that are fee based. Of the 68% that choose to park on campus, two-thirds are staff and faculty and one-third are students, using about 4,900 parking spaces, leaving 2,300 vacant spaces. Regarding the impacts from contractors, the construction site will have trailers and parking on open space that won't be built on, along with some contractor parking at Reser Stadium. Contractors may also pay for closer parking.

Commissioner Hann asked if the residence hall were to be built in Sector C rather than D, whether it would likely be built on open grass or displace a parking lot; Mr. Dodson responded that either was possible. He related that several buildings have recently been built on highly utilized parking lots, as well as several which will be built on green fields. The master plan seeks a dense core of campus that emphasizes walking and cycling. He said OSU submitted an application to establish a new street standard to widen sidewalks, accommodating more pedestrians.

Commissioner Woodside asked where the 20,000-odd students not utilizing permit spaces were parking. Mr. Dodson replied that it was a very walkable campus, so many students live near the campus and walk or bicycle. There is a bicycle utilization study every two years; the last one saw a 30% increase. Commissioner Woodside asked how U of O implemented transportation, saying that OSU seemed to lagging behind. Mr. Clemow replied that the City of Eugene and U of O provided less parking, but have had the same kinds of neighborhood parking problems, and have established parking districts in response, using much higher fees than have been contemplated here. The single-occupancy auto is still the dominant mode in the U.S., and that must be accommodated, while promoting viable alternatives.

Commissioner Gervais highlighted Mr. Abraham's concern that only one-third of parking permits were purchased by students, and asked if there was any limitation on the number of permits that OSU can sell; Mr. Dodson replied that it is a supply and demand issue. Student rates were less than faculty and staff rates; there was a big increase about five years ago, and rates typically go up roughly 5% a year. He said OSU will look at that as part of the parking strategy; a certain amount of revenue is required to manage, maintain and enforce parking. Commissioner Woodside asked if a student was ever turned away from buying a parking permit; Mr. Dodson said there was not, though there could be a limit on economy spaces in the future, and students might need to be on a waiting list for that.

L. Sur-rebuttal:

Mr. Cull said OSU's figures show they reduced the number of campus parking spaces 8,192 to 7,234: a reduction of about 1,000 over five years, showing OSU is *not* serious about providing

parking. He noted that parking for the Linus Pauling Building on 30th Street was particularly bad, and new parking to replace displaced spaces there was located at 11th Street. Commissioner Sessions asked about the source for the figure on the reduction of 1,000 spaces; Mr. Cull replied that it was in the OSU's own report; Ms. Gervais said it was in Table 14.

Mr. Hangartner highlighted the text above the Table 14, noting that OSU included fairly remote new lots to boost the number of spaces to 7,234. He said traffic models were used to prevent people from gaming the system; the goal is to address reality. He said part of OSU's mission was to serve undergraduates; many must live at home and some even drive from Portland to be able to afford school. Corvallis is not well served by transportation, so we have to live with students' cars for now. U of O probably has a lower commute distance. He noted that some students are graduating with a huge debt, struggling with costs, and that OSU is helping some students with food.

He noted that OSU could have amended parking requirements that would trigger thresholds that would require them to build parking; the issue is whether OSU has showed good faith. He said that OSU, by requiring that freshmen live on campus, is showing they don't care about students. He said college was no longer affordable, and we can't blame students for their impacts on the community.

M. Additional time for applicant to submit final argument::

There was not a request for a continuance or to hold the record open, and the applicant waived additional time to submit written argument.

N. Close the public hearing:

MOTION: Commissioner Daniels moved to close the public hearing. Commissioner Hann seconded the motion and it passed unanimously.

O. Discussion and Action by the Commission:

Commissioner Sessions commented that the Commission decision was based on regulations and it was the determination by staff that OSU was in compliance; the commission must go by that. Regarding the fee structure, and how that could be manipulated, it's clear that the cost of education was met by fees charged to students and through taxes, so a fee for parking seemed reasonable and appropriate and represents cost recovery for maintaining the facility. He suggested the university provide a questionnaire to students to try to identify their transportation usage; whether by bus, car, walking; and if they drive to campus, how often; OSU needs to identify percentages. He said an on-campus residence hall would reduce student driving.

Commissioner Lizut stated that the issue cited in testimony regarding City/OSU Collaboration working groups was not relevant. He commented that the commission had a limited scope on which it could decide decisions. He stated he heard no testimony that addressed the criteria the commission must use to decide the application. Commissioner Gervais said part of the charge of the commission was to balance compatibility criteria. Commissioner Sessions said the commission must make the community aware that decisions were based on a rationale based on code.

Commissioner Daniels said he agreed with much of what Mr. Hangartner said, but it didn't relate to the criteria. He said he lived in a highly impacted neighborhood, and he *could* use criteria on traffic and impacts to vote against it, were he not to try to make a balanced decision.

Commissioner Woodside stated that she felt uncomfortable with OSU coming forth with plans just as huge OSU-City Collaboration recommendations were coming forward soon. Commissioner Gervais said she hoped OSU heard the degree of public sentiment expressed in testimony. Commissioner Daniels related that most of his neighbors felt the project was a good idea.

MOTION: Commissioner Daniels moved to approve the OSU Campus Master Plan Major Adjustment application as conditioned in the staff report, based on findings in the staff report and during deliberations; seconded by Commissioner Woodside.

In discussion, Commissioner Hann said he concurred with much of the testimony, and OSU was clearly responding to citizen concerns and the work of the Collaboration committees, but it is not an easy issue. The commission must vote on what is in the code; if you don't like the rules, you must work with the City Council to change them. He said he would vote for the application, though he was concerned about parking and overflow into neighborhoods, but OSU was asked by the community to increase on-campus housing, and they are trying to do that, and that should be supported.

Motion passed unanimously.

MOTION: Commissioner Hann recommended that the City Council approve the OSU Land Development Code Text Amendment application, amending LDC Table 3.36-2 Building Square Footage By Sector, and adding text for a new section, 3.36.40.01.f, as approved by staff in the March 13, 2013 staff report, based on findings in the staff report and during the deliberations. Seconded by Commissioner Lizut; motion passed unanimously.

Councilor Sorte said that from an economist's standpoint, it would be hard to change people's parking behavior on financial basis only. He advocated the City implement parking districts that charge different rates; that would work well with an OSU variable pricing scheme.

P. Appeal Period:

Chair Gervais stated that any participant not satisfied with the decision may appeal to the City Council within twelve days of the date that the written decision is signed (this evening), so close of business, April 1, 2013, was the deadline for the appeal. The decision will be effective 12 days from when the Notice of Disposition is signed, unless an appeal is filed with the City Recorder. Planning Manager Young noted that a commission recommendation for a text amendment may not be appealed.

III. PLANNING COMMISSION MINUTES:

A. February 20, 2013:

MOTION:

On page 2, the second sentence in the penultimate paragraph should read "Tony Howell, *also representing the ITF,*". On page 3, fifth paragraph, the first sentence should read "...important to a couple members *of the ITF*". On page 3, seventh paragraph, the first sentence should read "...designs on *deer fences*". On page 5, fourth paragraph, the first sentence should read "...this *current* meeting had been publicly noticed..".

Commissioner Woodside moved to approve the Feb. 20, 2013 minutes as corrected; seconded by Commissioner Daniels; motion passed unanimously.

B. March 6, 2013:

MOTION:

Commissioner Woodside moved to approve the March 6, 2013 minutes as presented; seconded by Commissioner Sessions; motion passed unanimously.

Commissioner Hann asked about Commissioner Selko's recommendation on page 5; Planner Young replied that he'd asked Commissioner Selko about the vegetation guidebook, and it was his sense that the motion was correct.

IV. OLD BUSINESS: None.

V. NEW BUSINESS:

A. Planning Division Update:

Planner Young highlighted an April 3 annual meeting to solicit suggestions for the Capitol Improvement Program.

Councilor Sorte noted there were a number of comments about the transit program, and suggested inviting a representative. He said the program had been very responsive to feedback. Commissioner Daniels noted that Lane County had a well-funded Transit District.

VII. ADJOURNMENT: The meeting was adjourned at 10:14 p.m.

Memorandum

To: Planning Commission

From: Bob Richardson, Associate Planner *BR*

Date: March 20, 2013

Subject: Written Testimony – OSU Campus Master Plan Major Adjustment
(PLD13-00001, LDT12-00002)

Enclosed is written testimony regarding the above referenced land use application that was received by 5:00 PM on March 20, 2013.

EXHIBIT II .17

From: [kirk.nevin](#)
To: [Richardson, Robert](#)
Subject: the new dorm
Date: Sunday, March 17, 2013 12:50:32 PM

Dear Mr. Richardson,

I write in response to the GT invitation to do so.

I'm sure you're confronted with many complex issues as a city planner. But this dorm, if properly described in the GT article, is pretty simple. So, as a creative challenge, let's add some common sense and creativity to the formula.

First, put parking below grade. This is not expensive, and it can pay for itself by fees charged for those who use the spaces created. This would minimize the impact on the community, which is a real issue in this case. Result: No net loss of parking.

Second, insist that the building have a green roof. This makes sense in many ways: Energy efficiency, water conservation, food production potential, etc. And insist that the building have a large solar array on the roof, above the green planting beds, to minimize the need for electricity (which, at OSU, is largely generated by burning fossil fuel, which creates greenhouse gases).

Third, insist that the south wall of the building have what is called 'green features'... huge planting boxes for trailing vines that insulate the building and absorb some of the greenhouse gases created by energy use in the building. Besides being beautiful.

This could be an innovative, beautiful addition to Corvallis. Or, more likely, just another hum-drum rectangular brick-and-mortar ugly addition to the campus.

Think! Create! Push the OSU planners to do a better job for Corvallis, and for the Earth!

Namaste.

Kirk Nevin
Corvallis

EXHIBIT II .18

From: [Gibb, Ken](#)
To: [Richardson, Robert](#)
Subject: FW: the new dorm
Date: Monday, March 18, 2013 12:03:17 PM

From: Ward 8
Sent: Monday, March 18, 2013 11:15 AM
To: Louie, Kathy; Gibb, Ken
Subject: Fwd: the new dorm

Comments for inclusion in the record on this matter.
Biff

----- Forwarded Message -----

From: "kirk nevin" <kirksnevin@yahoo.com>
To: "jim patterson" <jim.patterson@ci.corvallis.or.us>
Cc: "biff traber" <ward8@peak.org>, "ed ray" <ed.ray@oregonstate.edu>
Sent: Sunday, March 17, 2013 7:53:55 AM
Subject: the new dorm

Dear Mr. Patterson,

Re: "OSU taking dorm plan to city" (GT, 3/17). The proposed design lacks two critical elements: One is parking, which could easily be built under the dorm... several floors dedicated to just parking. Then charge the costs of that additional space to the users... the kids who bring a car to school. Also, it seems like gross negligence not to plan a huge solar array for the roof of the new dorm, plus a 'green roof' (compatible with the solar panels) to lessen the impact of the city's storm sewer system.

We don't expect intelligence from the university (after all, they're teachers), but we do expect common sense. This is a case where the city can have positive effects on the university by insisting on some common sense moves that will lower the environmental impact of the university growth on the Earth. Below-grade parking and a green roof, combined with solar panels above the roof, will make the building acceptable.
Please forward this letter to your planning department.

Namaste.

Kirk Nevin

EXHIBIT II .19

**John W. Foster
1205 NW Fernwood Circle
Corvallis, OR, 97330**

18 March 2013

**Testimony on the Proposal to Adjust the CMP to
build a new dorm.**

I support the proposal to build a new dormitory on campus.

According to the 2004-2015 Campus Master Plan, the number of students would grow slowly and by 2015, OSU would be providing 5,000 beds for a projected enrollment of 22,074 students. The current enrollment, according to the OSU website, is 26,393.

When OSU announced it was going to grow to 35,000 students (since reduced), it virtually ignored the need to provide housing for these additional students. Certainly there was no indication that it planned to house about 22% of students on campus as the CMP had suggested. OSU seemed to assume that it was up to the City to allow whatever might be necessary to house the new students. One result has been a boom in housing designed solely for students that is threatening the character of much of Corvallis.

The proposed dorm falls far short of what the University should be doing, but it is at least a step in the right direction. Please don't allow OSU to say they tried to build a dorm, but the City wouldn't let them do it.

Attachment B - 1

The new proposal might create some parking and traffic problems, but nothing compared to what trying to house students in private developments a good distance from campus will bring.

Corvallis Planning Division
Staff Report to the Planning Commission,
March 13, 2013
Public Hearing: March 20, 2013
Planner: Bob Richardson: (541) 766-6575

OSU Campus Master Plan Major Adjustment and Text Amendment

(LDT 12-00002 / PLD13-00001)

Case Summary

Case: Major Adjustment to the Oregon State University Campus Master Plan, and Land Development Code Text Amendment.

Request: The applicant requests approval of a Major Adjustment to the Oregon State University (OSU) Campus Master Plan (CMP), and a Land Development Code (LDC) Text Amendment to increase the development allocation in Campus Sector D by 71, 000 sq. ft. and reduce the development allocation in Sector C by the same amount. The stated purposed for increasing the development allocation in Sector D is to accommodate a new OSU residence hall that would be south of SW Adams, north of Washington Avenue, and between SW 13th and 14th Streets. As part of these applications, the applicant also requests approval to remove segments of SW Adams Avenue and SW 14th Street. Removing these street segments would require corresponding changes to Figure 6.2 of the Campus Master Plan (**Attachment A.36,37**).

Owner and Applicant: David Dodson, on behalf of
Oregon State University
130 Oak Creek Building
Corvallis, Oregon 97331

EXHIBIT I.1

Location: Oregon State University Sector D is generally bound by SW 14th and 15th Streets on the west, SW 9th and 11th Streets on the east, SW Monroe Avenue on the north, and SW Washington Way on the south. Sector C is the core of campus and is generally bound on the west by SW 30th Street, on the east by SW 14th Street, on the north by SW Monroe and SW Orchard Avenues, and on the north by SW Washington Way (**Attachment A.29**).

Comprehensive Plan: Public Institutional

Zone: Oregon State University
Portions of both Sector C and D are within the OSU National Register Historic District.

Public Notice: On February 27, 2013, 1,485 public notices were mailed, and public notice signs were posted on the site. No public testimony was received by March 8, 2013.

Background

In 1986, the City Council adopted OSU's Physical Development Plan. This plan was developed by OSU to meet its planning needs and to provide a general framework for City review of OSU development proposals. In 2004, OSU received approval for a Comprehensive Plan Map Amendment, Zoning District Change, Planned Development Major Modification, and Land Development Code Text Amendment as part of a complete rewrite of the OSU Physical Development Plan and LDC Chapter 3.36 – OSU Zone. Since receiving these approvals, the OSU Physical Development Plan has been called the OSU Campus Master Plan (CMP) (**Attachment C**). New General Development (as opposed to Special Development such as Conditional Development) within the OSU Zone is consistent with the CMP when it complies with the development standards in LDC Chapter 3.36 - OSU Zone and other applicable LDC standards. General Development proposals that comply with all applicable LDC development standards are approved through the Building Permit review processes and do not require consideration through a public hearing process, unless required for development within the National Register Historic District. Development in the OSU zone can only vary from applicable development standards through approval of a Minor or Major Adjustment to the CMP as implemented by LDC Chapter 3.36 – OSU Zone, and in some cases, through concurrent approval of an LDC Text Amendment.

As explained in more detail later in this report, to increase the permitted development allocation in Sector D by transferring development allocation from Sector C, as proposed, requires approval of a Major Adjustment. The Code required process for evaluating Major Adjustment applications is the Planned Development Major

Modification process, though using this process would not result in the application of a Planned Development Overlay.

As noted above, the applicant would like to increase the amount of development allocation in Sector D for the specific purpose of having enough allocation to construct a new residence hall in the location identified in the application. The only mechanism available to increase the development allocation in Sector D, and therefore, make possible the ability to construct a residence hall of the size desired by the applicant is through approval of a Land Development Code (LDC) Text Amendment and a CMP Major Adjustment. As explained in more detail later in this report, a CMP Major Adjustment is required because the proposal exceeds thresholds which trigger the need for this type of application. An LDC Text Amendment is required, because LDC Chapter 3.36 – OSU zone specifies the amount of development allocation in each campus Sector. To change the amount of development allocation requires the figures in the LDC to be modified accordingly.

Evaluation of the subject applications against compatibility criteria is based on the assumption that the transfer of allocation would result in a residence hall in Sector D. Recommended **Condition of Approval 1** for the Major Adjustment application requires that the requested 71,000 sq. ft. of additional development allocation only be used for a residence hall and only in the location specified in the application. This Condition of Approval is important because consistency with criteria will only be evaluated based on the assumption that the transferred development allocation will be used for a residence hall, and not some other use with different compatibility impacts.

The applicant requests to amend the Land Development Code so that if the Major Adjustment is approved, the amount of development allocation for Sectors C and D permitted in the LDC corresponds with the amount in the Campus Master Plan (and vice versa). Conditions of approval cannot be applied to Text Amendment applications, and it is possible that if the proposed Major Adjustment was approved, the approval could expire. This would result in an inconsistency between the Campus Master Plan and LDC Chapter 3.36 – OSU zone, the ordinance that implements the Campus Master Plan. Perhaps more importantly, the additional development allocation in Sector D could be used for any permitted use in the OSU zone. To resolve this potential inconsistency new LDC text under Section 3.36.40.01 – Sector Development Allocation is recommended by City Staff, which, would set parameters on how and when any approved additional allocation in Sector D could be used.

Site and Vicinity

Oregon State University Sector D is generally bound by SW 14th and 15th Streets on the west, SW 9th and 11th Streets on the east, SW Monroe Avenue on the north, and SW Washington Way on the south. Its Comprehensive Plan Map designation is Public Institutional, and it is zoned OSU. The residence hall that OSU plans to build would be located south of SW Adams Avenue and Wilson Hall, north of SW Washington Way, and west of SW 13th Street and the OSU Child Care Center, on what is now a parking lot.

Campus Sector D is surrounded by land with a variety of Comprehensive Plan Map and Zoning Map designations. Land use designations abutting the campus border near the site where a new residence hall would be located are shown in Table 1, below, as well as **Attachments A.26 and 27**. The predominant uses surrounding the area where the residence hall would be erected are multi-family residential, with some single-family residential, and industrial uses (**Attachment A.28**).

Table 1: Comprehensive Plan Designations and Zones abutting Sector D

Comprehensive Plan Map Designation	Corresponding Zone
High Density Residential	High Density (RS-20)
General Industrial	General Industrial
General Industrial	Mixed Use Employment
Medium High Density Residential	Medium High Density (RS-12)

Sector C is the core of campus and is generally bound on the west by SW 30th Street, on the east by SW 14th Street, on the north by SW Monroe and SW Orchard Avenues, and on the south by SW Washington Way. Sector C is surrounded by the OSU campus on its south, west, and east sides. These campus areas are zoned OSU and implement the Public Institutional Comprehensive Plan Designation. North of Sector C are commercial areas and residential areas. The commercial areas along NW Monroe Avenue are designated as Mixed Use Commercial on the Comprehensive Plan Map, and are zoned Neighborhood Center-Minor, except for the lot at the northwest corner of the NW Kings Blvd and NW Monroe Avenue intersection, which is zoned Planned Development – Mixed Use Commercial.

Report Format and Required Actions

To facilitate review of the subject applications, the balance of this report is divided in two parts: Part I – CMP Major Adjustment, and Part II – LDC Text Amendment. Each part contains discussion of the proposal’s conformance with applicable review criteria. Each part concludes with Staff recommendations to the Planning Commission, including separate motions for each of the applications. The Planning Commission is asked to approve, approve with conditions, or deny the CMP Major Adjustment application, and make a recommendation to the City Council regarding the LDC Text Amendment application.

Attachments

- A. Application
- B. Excerpt of OSU Parking Utilization Study
- C. City Council Order 2004-156 adopting current Campus Master Plan

D. Summary of Oregon's Statewide Planning Goals

E. Email Correspondence from ODOT

Part I – CMP Major Adjustment

Land Development Code Chapter 3.36 – OSU Zone contains the provisions and development standards that implement the aspects of the OSU Campus Master Plan (CMP) as regulated by the City. These standards, as provided in Section 3.36.40.01 – Sector Development Application, below, allocate a maximum amount of new building square footage that can be developed in each of OSU's nine campus sectors.

Section 3.36.40.01 – Sector Development Allocation

- a. **Sector Development Allocation represents the gross square footage of new development allowed in each Sector, regardless of the Use Type. See Table 3.36-2 - Building Square Footage by Sector.**
- b. **Each new development project in a Sector shall reduce that Sector's available allocation.**
- c. **Existing and approved development as of December 31, 2003, has been included in the existing/approved development calculations and shall not reduce the Sector Development Allocation.**
- d. **Demolition of existing square footage and/or restoration of non-open-space areas to open space shall count as an equivalent square footage credit to the Sector development or open space allocation.**
- e. **Square footage associated with a parking structure shall be included in the Development Allocation for the Sector in which the structure is located. Square footage associated with at-grade parking lots shall be calculated as impervious surface but not count as part of Development Allocation.**

EXHIBIT I.5

Sector	Existing/Approved	Maximum Allocation	Future	Total
A	281,551	250,000		531,551
B	831,426	500,000		1,331,426
C	4,685,510	750,000		5,435,510
D	325,506	35,000		360,506
E	253,046	120,000		373,046
F	847,166	750,000		1,597,166
G	742,092	350,000		1,092,092
H	133,535	50,000		183,535

J	41,851	350,000	391,851
Total	8,141,683	3,155,000	11,296,683

As shown in Table 3.36-2, there is 35,000 sq. ft. of building square footage allocation that can be used in Sector D, and 750,000 sq. ft. of allocation in Sector C. The applicant would like to construct an approximately 90,000 sq. ft. residence hall in Sector D and an approximately 15,000 sq. ft. administrative building, for a total of 105,000 sq. ft. of building area. This exceeds the current maximum building allocation by 70,000 sq. ft.

The applicant requests approval to transfer 71,000 sq. ft. of building allocation from Sector C to Sector D to make possible the construction of a new residence hall (there is currently enough building allocation to construct the 15,000 sq. ft. administrative building without transferring building allocation).

When development is proposed on the OSU campus that is not consistent with the standards in Chapter 3.36 – OSU Zone it must be reviewed as either a Minor or a Major Adjustment to the CMP. Land Development Code Section 3.36.30.04 lists several criteria for determining if a proposal is a Major Adjustment. If at least one criterion is met, a Major Adjustment application is required. The subject proposal meets criterion “e” and “j” in Section 3.36.30.04, and is appropriately considered as a Major Adjustment to the CMP.

Section 3.36.30.04 – Major Adjustments

A Major Adjustment shall be triggered if a proposal meets one or more of the following criteria:

- a. **Modifies more than three of the dimensional standards in Section 3.36.50;**
- b. **Modifies any of the dimensional standards in Section 3.36.50 by more than 10 percent;**
- c. **Proposes a stand-alone parking lot or structure in a location not identified in Figure 7.3 - Future Parking Facilities, of the CMP;**
- d. **Exceeds 90 percent parking usage campus wide and does not provide additional parking facilities as part of the project;**
- e. **Proposes development with a gross square footage that is within the campus total development allocation but exceeds the maximum Sector allocation;**
- f. **Proposes development such that the amount of retained open space is consistent with the campus minimum open space requirement but falls short of the minimum requirement for the Sector. Requires a commensurate increase in open space allocation in another Sector;**
- g. **Is not consistent with the Transportation Improvement Plan in Chapter 6 of the CMP;**
- h. **Adds new land area to or subtracts land area from the CMP;**
- i. **Creates new CMP policies;**

- j. Results in a change in Sector boundary or redistribution of development allocation between Sectors;
- k. Results in the cessation of intra-campus transit services - shuttle, bus, etc.;
- l. Proposes a change in use for any of the parcels associated with the College Inn and its parking;
- m. Proposes development in Sector J for building floor area in excess of 254,100 sq. ft.; or
- n. Proposes a new building within the 100-ft. transition area on the northern boundary of Sector A, B, and/or C from the western boundary of Sector A to 26th Street. In order to create a graceful edge between the campus and northwest neighborhoods, any proposed building subject to this Section shall be subject to the following criteria:
 - 1. Maximum building height shall be 35 ft. provided the following is satisfied: shadows from the new buildings shall not shade more than the lower four ft. of a south wall of an existing structure on adjacent property between 10 a.m. and 2 p.m. on March 21;
 - 2. Structures shall not have a continuous horizontal distance exceeding 60 ft. along the boundary;
 - 3. Along the vertical face of a structure, off-sets shall occur at a minimum of every 20 ft. by providing any two of the following:
 - a) Recesses of a minimum depth of eight ft.;
 - b) Extensions a minimum depth of eight ft., a maximum length of an overhang shall be 25 ft.;
 - c) Off-sets or breaks in roof elevations of three or more ft. in height.
 - 4. Building materials shall be consistent with the OSU standards for such materials, and shall also be compatible with adjacent residential houses and structures;
 - 5. New development shall be designed to minimize negative visual impacts affecting the character of the adjacent neighborhood by considering the scale, bulk and character of the nearby structures in relation to the proposed building or structure;
 - 6. Roofs shall be gabled or hip type roofs, minimum pitch 3:1, with at least a 30-in. overhang and using shingles or similar roof materials;
 - 7. A vegetative buffer shall be installed in a manner consistent with Section 3.36.50.06.c;
 - 8. Outdoor building components such as transformers and other types of mechanical equipment that produce noise shall not be permitted within the required setback;
 - 9. Buildings proposed for the Transition Area described within this Section that are in an area adjacent to the College Hill West Historic District shall have an advisory review completed by the Historic Resources Commission (HRC), or its successor. The HRC shall provide comment and recommendations to the Planning Commission for consideration; and

10. **Trash dumpsters, gas meters, and other utilities and or mechanical equipment serving a building or structure shall be screened in accordance with Section 3.36.50.14.**

Per Sections 3.36.30.02 – Adjustments, subsections “b.1” and “b.2”, below, the CMP adjustment proposed by the applicant is required to be reviewed under Section 2.5.60.03 – (Planned Development) Major Modifications, and for consistency with Chapter 1.2 – Legal Framework.

Section 3.36.30.02 – Adjustments

Development not consistent with the standards contained in this Chapter shall be reviewed as one of the following:

- b. **A Major Adjustment, as described in Section 3.36.30.04 - Major adjustments, shall be reviewed as follows:**
 1. **All proposals that meet or exceed the thresholds identified in Section 3.36.30.04 “a”, through “n”, shall be reviewed under Section 2.5.60.03 - Major Modifications in Chapter 2.5 - Planned Development.**
 2. **In addition to the process required in “1,” above, proposals that meet or exceed the thresholds identified in Section 3.36.30.04 “d” through “k” shall be reviewed for consistency with Chapter 1.2 - Legal Framework.**

As implied by its title, Chapter 1.2 – Legal Framework contains provisions that govern the interpretation and construction of the LDC. Chapter 1.2 does not contain review criteria by which to evaluate the subject proposal, however, Section 1.2.80 – Text Amendments provides direction on how to evaluate proposed Text Amendments. The applicant proposes Text Amendments that correspond with the proposed CMP Major Adjustments. Proposed Text Amendments will be evaluated in Part II of this report. Findings from that analysis are incorporated by reference as findings per LDC Section 3.36.30.02.b.2. Additionally, LDC Section 3.36.30.02.b.1 requires all Major Adjustments to be reviewed per the Planned Development Major Modification requirements in LDC Chapter 2.5. Review of the subject proposal per the Planned Development Major Modification requirements occurs below.

Planned Development Major Modification Review

Planned Development Major Modification applications, and thus CMP Major Adjustments, are required to demonstrate compatibility based on the criteria in Section 2.5.40.04 – Review Criteria. Generally speaking, there are at least two ways to consider potential compatibility impacts that might arise from the transfer of building allocation from OSU Campus Sector C to Sector D. One is to assume a “worst case” scenario where the most intensive uses permitted outright in the OSU zone would be housed in one or more buildings equaling the requested 71,000 sq. ft. in additional building allocation, and to assume that those uses would be placed near potentially incompatible existing uses. This approach is difficult because there are many combinations of potential outright permitted uses in the OSU zone which would create different combinations of potential compatibility impacts. For example one use might generate

loud noise but little traffic, and another might generate high volumes of traffic but little noise.

A second approach, and the one taken by Staff and the applicant, is to assume that the building allocation transferred from Sector C will be used to construct an approximately 90,000 sq. ft. residence hall, in the area in Sector D indicated by the applicant. To ensure that this approach is not overly narrow, and, if approved by the Planning Commission, to make clear that it is only this scenario that was found to satisfy applicable review criteria, Staff recommend **Condition of Approval 1**. This Condition requires 71,000 sq. ft. of the Maximum Future Allocation, as listed in LDC Table 3.36-2, to be used for a residence hall and associated uses within the same building (e.g. dining facilities, recreation rooms, and laundry rooms). Recommended **Condition of Approval 1** also requires a new residence hall to be constructed in the approximate building footprint indicated in the subject Major Adjustment application, and within four years of the subject application. If not constructed within four years, the allocation would transfer back to Sector C.

Major Adjustment Review Criteria

The following analysis assumes **Condition of Approval 1**, or similar condition is applied. It, therefore, focuses on the proposal's consistency with compatibility criteria based on the construction of an approximately 90,000 sq. ft. residence hall that would be constructed in Sector D, between SW Adams and Washington Avenues, and SW 13th and 14th Streets. It also considers the applicant's request to remove segments of SW Adams Avenue and SW 14th Street, in association with the contemplated residence hall. Except with regard to transportation facilities, staff analysis is not provided regarding the contemplated 15,000 sq. ft. administrative building. This is because there is enough building allocation in Sector D for this building to be constructed today, and its construction is not dependent on the proposed transfer of building allocation from Sector C.

2.5.40.04 - Review Criteria

Requests for the approval of a Conceptual Development Plan shall be reviewed to ensure consistency with the policies and density requirements of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the areas in "a," below, as applicable, and shall meet the Natural Resource and Natural Hazard criteria in "b," below:

a. Compatibility Factors -

1. Compensating benefits for the variations being requested;
2. Basic site design (the organization of Uses on a site and the Uses' relationships to neighboring properties);
3. Visual elements (scale, structural design and form, materials, etc.);
4. Noise attenuation;
5. Odors and emissions;

6. Lighting;
 7. Signage;
 8. Landscaping for buffering and screening;
 9. Transportation facilities;
 10. Traffic and off-site parking impacts;
 11. Utility infrastructure;
 12. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);
 13. Design equal to or in excess of the types of improvements required by the standards in Chapter 4.10 - Pedestrian Oriented Design Standards¹; and
 14. Preservation and/or protection of Significant Natural Features, consistent with Chapter 2.11 - Floodplain Development Permit, Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Floodplain Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, and Chapter 4.14 - Landslide Hazard and Hillside Development Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.
- b. Natural Resources and Natural Hazards Factors -
1. Any proposed variation from a standard within Chapter 2.11 - Floodplain Development Permit, Chapter 4.5 - Floodplain Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, or Chapter 4.14 - Landslide Hazard and Hillside Development Provisions shall provide protections equal to or better than the specific standard requested for variation; and
 2. Any proposed variation from a standard within Chapter 2.11 - Floodplain Development Permit, Chapter 4.5 - Floodplain Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, or Chapter 4.14 - Landslide Hazard and Hillside Development Provisions shall involve an alternative located on the same development site where the specific standard applies.
 3. Any proposed Floodplain Development Permit variation that exceeds the scope of Section 2.11.60.01.a shall also meet the Floodplain Development Permit Variance review criteria in Section 2.11.60.06 and, to the extent feasible, the base Floodplain Development Permit review criteria in Section 2.11.50.04.

¹ Redevelopment and reconstruction of buildings in existence and permitted in zoning prior to December 31, 2006, are allowed pursuant to the requirements of Section 4.10.70.01 - Applicability, of Chapter 4.10 - Pedestrian Oriented Design Standards.

An evaluation of potential compatibility impacts resulting from the proposed CMP Major Adjustment is provided below. Where relevant, this analysis also considers Comprehensive Plan Policies.

Compensating Benefits

The compensating benefits criterion only applies when an applicant requests to vary from LDC standards. The subject application does not seek to vary from any LDC standards, therefore, the Compensating Benefits criterion does not apply.

Basic Site Design and Visual Elements

As noted previously in this report, the applicant requests approval to transfer 71,000 sq. ft. of building allocation from Sector C to Sector D to make possible the construction of a new 90,000 sq. ft. residence hall. Residence halls are permitted outright in the OSU zone. The building would be located north of SW Washington Avenue, south of SW Adams Avenue, and between SW 13 and 14th Streets. The building site and areas to the south and west are currently development with parking lots. OSU buildings are located to the north and east (**Attachment A.24**).

An actual residence hall building is not proposed with the subject application, therefore, only conceptual site plans and drawings have been submitted to help illustrate the scale and location of the contemplated building. The building shown in the application would be placed on the parking lot south of Wilson Hall, and abutting the south side of SW Adams Avenue. It would be an L-shaped building with a large green area along SW 14th Street. The building would potentially include a plaza extending into SW Adams Ave, which would require this portion of the street to be removed. SW 14th Street is also proposed to cease operation as a street, and based on the conceptual site plan would be used for vehicle access and parking (**Attachments A.36, 37**).

Changes in site design and street function are not expected to affect the abutting OSU Child Care Center or surrounding uses. The streets primarily serve the parking lots, and street access to all sides of the Child Care Center will remain. A more detailed analysis of potential impacts regarding the removal of segments of these private streets is addressed later in this report under Traffic and Transportation Facilities. In summary, that section finds that, as conditioned, the proposal to remove the identified street segments is compatible with surrounding uses.

Renderings of the conceptual building are shown in **Attachments A.32-34**. The residence hall site is roughly 200-ft from the OSU Campus boundary and roughly 250-ft from the nearest off-campus use (the apartments at SW 11th and SW Washington Ave). Therefore, the site is outside of the OSU zone building transition area, which is the area within 100-ft of the campus border. As such, the maximum height for a building in the subject location would be 75-ft. The conceptual building is 53-ft tall to the top of the parapet, and 5 stories tall. Nearby buildings immediately to the north of the residence hall site are McNary, Callahan, and Wilson Halls. Each of these dormitories is 72-ft tall (**Attachment A.14**). The contemplated residence hall would also be located west of the

smaller OSU Child Care Center building, and would be separated from this building by SW 13th Street.

The nearest off-campus uses are to the south and east. Off-campus areas to the south are zoned High Density (residential) (RS-20) and General Industrial, and are developed with uses permitted in these zones. These use are roughly 350-ft from the residence hall site. Off-campus areas to the east of the site are zoned High Density (RS-20), and Medium Density (residential) (RS-12). These areas are primarily developed with multi-family dwelling units, the closest of which is approximately 250-ft from the residence hall site.

The transfer of development allocation from Sector C to Sector D, which would make possible the construction of a residence hall is compatible based on consideration of the Basic Site Design, Visual Elements for multiple reasons. One is that a residence hall will be required to comply with all applicable development standards. Per Comprehensive Plan policy 3.2.2, when a land use complies with applicable development standards it is considered to be compatible with other development within the same zone.

3.2.2 Within a land use district, primary uses and accessory uses permitted outright shall be considered compatible with each other when conforming to all standards of the district.

The contemplated residence hall would be required to comply with all applicable development standards of the LDC, including those in LDC Chapter 3.36-OSU zone. These standards include requirements for building setbacks, entrances, groundfloor windows, and other elements intended to result in compatible site design and visual elements. Since a residence hall would be required to comply with applicable development standards, potential impacts such as those related to site design and visual elements would be no greater than what is permitted to occur within Sector D of the OSU zone today.

The transfer of building allocation to Sector D would allow more development in this Sector than was contemplated when the CMP was approved. This means that there could also be compatibility impacts on surrounding uses that were not previously considered. In this case, **Condition of Approval 1** limits development to a residence hall in the area shown in the subject application. The conceptual residence hall is approximately 20-ft shorter than adjacent residence halls and is at least 250-ft from the nearest off-campus use type. Its size and distance from surrounding uses minimize potential negative compatibility impacts related to site design and visual elements. As discussed later in this report, a new residence hall in the proposed location would create some parking and traffic impacts on surrounding uses. However, in terms of the site design and visual elements criteria, a new residence hall is not expected to create new impacts, or significantly intensify any existing impacts to surrounding properties. The new building is proposed in close proximity to several existing residence halls and a dining hall, thereby adding student population in an areas that is designed to serve students. Similarly, the surrounding uses which are primarily multi-family residential with some industrial would have similar types of impacts as a residence hall. Because the

impacts of each use are similar, the residence hall is expected to be compatible with surrounding uses.

Given the above, the proposal, which would allow for a new residence hall, is compatible with surrounding uses based on consideration of the basic site design and visual elements criteria.

Noise Attenuation, Odors and Emissions

The residence hall is expected to be compatible with surrounding uses based on the Noise Attenuation, and Odors and Emissions criteria. A residence hall would generate some noise, primarily from conversations of residents entering or exiting the building, and potentially from open windows. However, as noted previously, the new residence hall will be located at least 250-ft from the nearest off-campus residential neighbor. Otherwise, the residential use itself is not expected to generate noticeable noise levels. Odors and emissions are expected to be similar to other campus residence halls, and there is no evidence that the existing uses create negative impacts on surrounding uses.

Lighting, Signage, and Landscaping

Lighting, Signage, and Landscaping will be required to comply with LDC standards. Compliance with applicable LDC standards will ensure the residence hall is compatible with surrounding uses with respect to these criteria.

Effects on Air and Water Quality

At the time of construction the residence hall would be required to comply with LDC standards which address water quality. A residence hall is not expected to create significant air quality impacts. Thus, the proposal is compatible per the above criterion.

Design Equivalent to PODS

Development in the OSU zone is not required to comply with the Pedestrian Oriented Design Standards in LDC Chapter 4.10, therefore, the above criterion is not applicable.

Natural Features, Natural Resources and Natural Hazards

The portion of Sector D where a residence hall would be constructed is a gravel parking lot. There are no protected natural features or identified natural hazards affecting this site.

Utility Infrastructure

The following are staff findings and conclusions regarding potential compatibility impacts related to utility infrastructure.

Findings

1. The proposed major modification to a planned development would transfer 71,000 square feet of future development area from Sector C to Sector D of OSU's campus.
2. The transfer of future development area does not change the types of development allowed.

3. OSU has identified that a new 90,000 square foot residence hall is planned to be constructed in the block bordered by SW Adams Avenue, SW Washington Avenue, SW 13th Street, and SW 14th Street.
4. OSU has identified that a new 15,000 square foot administrative building is planned to be constructed at the northwest corner of SW 9th Street and SW Jefferson Boulevard.
5. There are existing City utilities throughout OSU's Sector D.

Conclusions

In the vicinity of the proposed new student residence hall there are existing public waterlines, an 8" water line in SW Adams Avenue, an 8" water line in SW 11th Street, and a 16" water line in SW 15th Street. There is an existing public sanitary sewer line, a 15" sewer line in SW 11th Street as well as private sewer lines serving this portion of Campus. There are existing public storm sewer lines, an 18" storm line in SW 11th Street and an 8" storm line in SW 15th Street as well as private storm sewer lines serving this portion of Campus. Public street lights are present on the public streets in the vicinity of the new student residence hall.

In the vicinity of the proposed new administrative office there are existing public water lines, an 8" water line in SW Jefferson Avenue and a 12" water line in SW 9th Street. There are existing public combined storm/sanitary sewer lines, a 12" combined sewer in SW Jefferson Avenue and an 8" combined sewer in the alley to the west of SW 9th Street. In addition to the combined sewers there is an existing public 15" storm sewer line in SW Jefferson Avenue. Public street lights are present along SW Jefferson Avenue and SW 9th Street adjacent to the proposed administrative use.

The adjacent utilities are compatible with the transfer of 71,000 square feet of future development area from Sector C to Sector D.

Traffic and Transportation Facilities

The following section address compatibility impacts related to traffic and transportation facilities.

Transportation Facilities

The following are staff findings and conclusions regarding potential compatibility impacts related to transportation facilities.

Findings

1. The proposed CMP Major Adjustment would transfer 71,000 square feet of future development area from Sector C to Sector D of OSU's campus.
2. OSU has identified that a new 90,000 square foot residence hall is planned to be constructed in the block bordered by SW Adams Avenue, SW Washington Avenue, SW 13th Street, and SW 14th Street.

3. OSU has identified that a new 15,000 square foot administrative building is planned to be constructed at the northwest corner of SW 9th Street and SW Jefferson Boulevard.
4. The City requires a Level of Service (LOS) analysis of intersections that receive 30 or more AM or PM peak hour trips from proposed development.
5. The City requires intersections to perform at LOS D or better during the AM and PM peak hours.
6. The applicant submitted a Transportation Impact Analysis (TIA) dated November 5, 2012 with the application. Additional studies have been submitted on February 27 and 28, 2013.
7. OSU's Campus Master Plan Policy 4.1.14 states "OSU shall ensure that adequate mitigation of the identified intersections within the Base Transportation Model (BTM), or its update, that drop below an acceptable level of service as described in the City of Corvallis' Transportation System Plan (TSP) are mitigated in accordance with the mitigation measures outlined in the most recent CMP annual monitoring report or the CMP's Transportation Improvement Plan."
8. OSU's Campus Master Plan Policy 4.1.15 states "OSU shall complete the mitigation described in policy 4.1.14 within one year of when said mitigation measures are identified or in accordance with the development proposal that is projected to impact the intersection beyond an acceptable level.
9. OSU's Campus Master Plan Policy 4.1.16 states " If mitigation from projected development is not completed in accordance with said development, then the project will either be delayed until such a time that mitigation can occur in accordance with the most recent CMP annual monitoring report or CMP's Transportation Improvement Plan, or the project will be redesigned in a manner that does not impact the transportation system beyond acceptable levels.
10. The application proposes to remove SW Adams Avenue from SW 13th Street to SW 15th Street, and SW 14th Street, from SW Washington Avenue to SW Adams Avenue, from the OSU Street Ownership (Private Streets) map (Attachments G and H), figure 6.2 of the December 2004 Campus Master Plan.
11. SW Washington Way is a private Street west of SW 15th Street. SW Washington Avenue is a public street east of SW 15th Street.

Conclusions

The Campus Master Plan created a Base Transportation Model (BTM) that analyzed traffic impacts in and around the OSU campus. A BTM update has been provided to the City on an annual basis. The BTM and it's annual updates have identified intersections with failing levels of service (LOS) and has proposed mitigation. The intersection of SW

15th Street at SW Washington Way has been shown to be failing. Because of a known sub-standard LOS at an intersection that is in close proximity to the proposed new student residence hall, as well as trips generated by the proposed residence hall, staff required a Transportation Impact Analysis (TIA) to accompany the application.

The TIA identified several impacts and proposed mitigation for those impacts, however staff identified several areas of the TIA that needed more information or analysis. Two additional TIA updates were submitted that addressed the SW 15th Street at SW Washington Way and SW Washington Avenue intersections and the SW Washington Avenue Improvement Plan (discussed below). Not all of staff's concerns from the first TIA were addressed. In order to make sure all impacts are adequately addressed to insure compatibility with the transportation facilities, a TIA shall be submitted and approved by the City Engineer prior to issuance of any permits from the City related to construction of the proposed new student residence hall (**Condition of Approval 3**).

The submitted TIAs identified that the intersection of SW 15th Street at SW Washington Way is failing and mitigation was proposed. Prior to occupancy of the new student residence hall, the intersection of SW 15th Street and SW Washington Way shall be upgraded as identified in the February 26, 2013 OSU Sector D Transportation Facilities Analysis and the February 27, 2013 OSU Washington Way Improvement Transportation Analysis. Improvements are to include realignment of the intersection consistent with the OSU Washington Way Improvement plan, left turn lanes for the northern, southern, and western legs, a right turn lane on the northern leg, a street stub on the eastern leg for future extension, and full signalization of the intersection, including integration with the railroad gates (**Condition of Approval 4**).

Unrelated to the current application, OSU is designing an upgrade to SW Washington Way from SW 15th Street to SW 35th Street. The proposed realignment will move the street north, out of the railroad's right of way. OSU is also proposing to include an extension of SW Washington Way from SW 15th Street to SW 11th Street along the north side of the railroad's right of way, and then connecting the new alignment to SW Washington Avenue with a sweep in the alignment from SW 11th Street to just east of SW 10th Street.

The submitted TIA's identified that the intersection of SW 15th Street at SW Washington Avenue will have a failing LOS by 2021. The recommended mitigation is to close SW Washington Avenue to through traffic between SW 15th Street and SW 11th Street and to extend SW Washington Way east, according to the Washington Way Improvement Plan. In order to assure that the mitigation is constructed prior to the intersection LOS falling below an acceptable level, OSU and The City of Corvallis will monitor the LOS of the intersection through future BTM updates and future Campus Master Plans. The realignment of SW Washington Way from SW 15th Street to SW Washington Avenue, just east of SW 10th Street, consistent with the OSU Washington Way Improvement plan, including signalization at SW 11th Street, shall be complete prior to the intersection of SW 15th Street at SW Washington Avenue reaching a failing LOS. The intersection may reach a failing LOS from annual growth of traffic or from future

development of a new facility in the vicinity of the intersection (**Condition of Approval 5**).

The mitigation required above will also require that the applicant secure a rail order from ODOT Rail. Prior to issuance of a PIPC permit for the intersection of SW 15th Street and Washington Way, the applicant shall obtain a rail order from ODOT Rail to construct the improvements identified in the February 26, 2013 OSU Sector D Transportation Facilities Analysis and the February 27, 2013 OSU Washington Way Improvement Transportation Analysis (**Condition of Approval 6**).

The transfer of 71,000 square feet of future development area from Sector C to Sector D is compatible with the adjacent transportation facilities as conditioned.

Traffic

The following are staff findings and conclusions regarding potential compatibility impacts related to traffic.

Findings

1. The proposed CMP Major Adjustment would transfer 71,000 square feet of future development area from Sector C to Sector D of OSU's campus.
2. OSU has identified that a new 90,000 square foot residence hall is planned to be constructed in the block bordered by SW Adams Avenue, SW Washington Avenue, SW 13th Street, and SW 14th Street.
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8. OSU's Campus Master Plan Policy 4.1.15 states "OSU shall complete the mitigation described in policy 4.1.14 within one year of when said mitigation measures are identified or in accordance with the development proposal that is projected to impact the intersection beyond an acceptable level.
9. OSU's Campus Master Plan Policy 4.1.16 states " If mitigation from projected development is not completed in accordance with said development, then the project will either be delayed until such a time that mitigation can occur in accordance with the most recent CMP annual monitoring report or CMP's Transportation Improvement Plan, or the project will be redesigned in a manner that does not impact the transportation system beyond acceptable levels.
10. The application proposes to remove SW Adams Avenue from SW 13th Street to SW 15th Street, and SW 14th Street, from SW Washington Avenue to SW Adams Avenue, from the OSU Street Ownership (Private Streets) map (Attachments G and H), figure 6.2 of the December 2004 Campus Master Plan.

Conclusions

The Campus Master Plan created a Base Transportation Model (BTM) that analyzed traffic impacts in and around the OSU campus. A BTM update has been provided to the City on an annual basis. The BTM and it's annual updates have identified intersections with failing levels of service (LOS) and has proposed mitigation. The intersection of SW 15th Street at SW Washington Way has been shown to be failing. Because of a known sub-standard LOS at an intersection that is in close proximity to the proposed new student residence hall, as well as trips generated by the proposed residence hall, staff required a Transportation Impact Analysis (TIA) to accompany the application.

The TIA identified several impacts and proposed mitigation for those impacts, however staff identified several areas of the TIA that needed more information or analysis. Two additional TIA updates were submitted that addressed the SW 15th Street at SW Washington Way and SW Washington Avenue intersections and the SW Washington Avenue Improvement Plan (discussed below). Not all of staff's concerns from the first TIA were addressed. In order to make sure all impacts are adequately addressed to insure compatibility with the transportation facilities, a TIA shall be submitted and approved by the City Engineer prior to issuance of any permits from the City related to construction of the proposed new student residence hall (**Condition of Approval 3**).

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Unrelated to the current application, OSU is designing an upgrade to SW Washington Way from SW 15th Street to SW 35th Street. The proposed realignment of the will move the street north, out of the railroad's right of way. OSU is also including an extension of SW Washington Way from SW 15th Street to SW 11th Street along the north side of the railroad's right of way, and then connecting the new alignment to SW Washington Avenue with a sweep in the alignment from SW 11th Street to just east of SW 10th Street.

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The mitigation required above will also require that the applicant secures a rail order from ODOT Rail. Prior to issuance of a PIPC permit for the intersection of SW 15th Street and Washington Way, the applicant shall obtain a rail order from ODOT Rail to construct the improvements identified in the February 26, 2013 OSU Sector D Transportation Facilities Analysis and the February 27, 2013 OSU Washington Way Improvement Transportation Analysis (**Condition of Approval 6**).

The transfer of 71,000 square feet of future development area from Sector C to Sector D is compatible with the adjacent transportation facilities as conditioned.

Off-site Parking Impacts

Development in the OSU zone is regulated, in part, by the provisions in LDC Chapter 3.36 – OSU zone. Section 3.36.50.08 – Parking Improvements, subsection d states,

- d. **When usage of campus-wide parking facilities exceeds 90 percent based on the most recent parking usage inventory, any development that increases building square footage shall be subject to the provisions of Section 3.36.30.02.**

The parking utilization for all on-campus parking facilities is currently 68% (**Attachment B**). Therefore, new vehicle parking facilities are not currently required with new development. The expectation within the CMP is that parking demands generated by new development will be accommodated by existing campus-wide parking facilities.

The subject application requests to transfer building development allocation from Sector C to Sector D to provide the opportunity to construct a residence hall on the parking lot located between SW 13th and 14th Streets, and SW Adams Avenue and SW Washington Way. If constructed, the building would be required to comply with applicable LDC standards, including those in Chapter 3.36 – OSU zone, which regulate parking. As noted above, parking areas are not required to be built in association with the residence hall, because campus wide parking utilization is at 68% (**Attachment A.19**). In this case, a compatibility analysis of off-site parking is required by the LDC because a greater amount of developable area is proposed in Sector D than was contemplated in the current Campus Master Plan. This increase in development could increase parking demands and displace parking in Sector D, which could result in negative compatibility impacts to surrounding uses off-campus.

The contemplated residence hall would be built on the parking lot located between SW 13th and 14th Streets, and SW Adams Avenue and SW Washington Way. This lot is identified by the applicant as Lot 3203, and it contains 202 parking spaces (**Attachment A.19, 38**). If funding is available, the applicant would also like to construct a plaza over SW Adams Avenue, which would remove 16 parking spaces (not including 3 planned to be reconstructed behind Wilson Hall). Based on the residence hall conceptual site plan, the 20 parking spaces on SW14th Street would be moved to the west side of the street, where 29 spaces would be constructed. The 29 parking spaces on SW 13th Street would be replaced with 25 spaces. In total, there is the possibility of gaining 5 on-street parking spaces on SW 13th and SW 14th Streets (**Attachments A.30, 38**). However, because the street parking plans are only conceptual, this analysis simply assumes no net loss of parking on SW 13th and 14th Streets. Based on the above, the construction of a residence hall and plaza would remove 218 on-campus vehicle parking spaces (202 from the lot, plus 16 from SW Adams Avenue).

The LDC does not require the applicant to construct parking areas for the residence hall, and no new, associated vehicle parking facilities are proposed. The application states that the residence hall will have between 162 – 324 beds (**Attachment A.19**). Parking for residence halls is calculated using the LDC standards for the Group Residential use type. This use type requires 3 parking spaces for every 5 occupants, per the Oregon Specialty Code.

LDC Section 4.1.30.a – Residential Uses Per Building Type

4. Group Residential -

a) Vehicles -

- 1) **Fraternities, Sororities, Cooperatives, and Boarding Houses - Three spaces per five occupants at capacity, with capacity to be based on criteria set forth in the Oregon Structural Specialty Code.**

Based on the expected number of beds/residents in the residence hall, it would create a demand for 97 to 194 parking stalls.

The applicant's parking analysis of on-site parking impacts related to the construction of a new residence hall is provided in **Attachments A.18 – 22**. In summary, their analysis finds that 181 parking spaces will be removed as a result of the new residence hall (164.5 spaces, which is the average number of spaces occupied in Lot 3203, plus 16 spaces that would be removed on SW Adams Avenue), and that these 181 spaces could be absorbed by the 191 spaces that, on average, are vacant in surrounding parking areas (**Attachment A.38**).

The following staff analysis reaches somewhat different conclusions. The parking utilization study provided in **Attachment A.38** shows that there are a total of 1076 parking spaces on the lots and streets surrounding the site where the residence hall would be built (The area south of SW Jefferson Avenue, east of SW 15th Street, and north of the railroad tracks). On average, approximately 858 of the spaces were occupied and 218 were vacant during the parking study, which equals a utilization rate of 80%. However, the campus-wide parking utilization study, which finds that only 68% of total campus-wide parking spaces are utilized, indicates the presence of many other on-campus parking areas further from the site that have lower utilization rates. The application states that the residence hall would remove 218 parking spaces (**Attachment A.18**), which would leave no vacant parking spaces, based on the average number of total available parking spaces shown in **Attachment A.38**. The residence hall is expected to house 162 to 324 residents, which per LDC Section 4.1.30.a.4, above, would create a parking demand of between 97 to 194 spaces. If this new parking demand is considered, the capacity of parking areas shown in **Attachment A.38** would be exceeded by 97 to 194 spaces. The above figures are shown in Table 2, below.

Table 2: Estimated On-site Parking Impacts Related to Construction of a Residence Hall

Current Total Spaces	Current Average Vacancy	Spaces Removed by Building	Remaining Average Vacant Spaces	Parking Demand for Building	Remaining Average Vacant Spaces Less New Demand
1076	218	218	0	97 – 194	-97 to -194

As explained above, transferring development allocation from Sector C to Sector D to construct a 90,000 sq. ft. residence hall would create a potential demand for an average of 146 parking spaces $(97 + 194 / 2)$. The existing parking facilities surrounding the residence hall site, as shown in **Attachment A.38**, do not have the capacity to meet this demand. Therefore, an average of 146 vehicles would need to park in other locations, most of which would be on campus or nearby streets. While there is no information quantifying the number of cars that would actually park off-campus as the result of a new residence hall, it is reasonable to expect some additional demand for spaces on nearby streets. This is because it is currently free to park on nearby public streets, and these streets may be closer to a person's destination compared to using other campus parking lots, many of which are located on the periphery of campus.

Not all displaced cars are expected to park off-campus. This is because all of the parking lots, except lot 3227 are paid permit parking. The applicant states that, within the year, lot 3227 will become a pay lot (**Attachment A.18**). This means that everyone with a permit to use the paid lots surrounding the residence hall site will also have the option to park in other permit-parking lots on campus, and will not necessarily seek to park in free street parking spaces. Additionally, the Parking and Traffic workgroup from the City / OSU Collaboration project have recommended a significant expansion of the parking districts on public streets, including the public streets in this vicinity. If the recommendation is enacted, parking behaviors in this area would have to change, as it would no longer be allowed to park all day on the public street without a permit.

The application narrative states the following (**Attachment A.3**),

The City/OSU collaboration effort has resulted in a series of recommendations to address growth impacts from the university. One of the recommendations is for OSU to house more students on campus. As a result of this recommendation, President Ed Ray is requiring all full time freshmen attending OSU in 2013/2014 to live on campus. As of the fourth week of fall term (the week most major universities post their fall enrollment counts) OSU had 4,336 students living on campus. The students living on campus include dormitories, coops, and family housing. Of that total, roughly 2,703 were first term true freshman or 63 percent of all students living on campus. One of the dormitories (Finley Hall) was closed this year, due to a reduced demand for student housing. However, University Housing and Dining Services anticipate opening Finley Hall next year to accommodate the additional freshman living on campus. To address the anticipated shortage of on-campus housing for future years, OSU plans to construct a new residence hall with 162 bedrooms and up to 324 beds when fully occupied.

City staff concur with the statement that the current City / OSU collaboration project has resulted in recommendations for OSU to house more students on campus. There are a variety of reasons that have led to these recommendations. Most relate to concerns about the effects an increasing student population has on neighborhoods surrounding the OSU campus. Some concerns are related to the transition of existing housing stock from single-family homes to student rentals. Inherent in this transition are changes in social dynamics, replacement of older smaller buildings with newer, larger buildings, and intensified impacts resulting from an increasing number of automobiles associated with an increasing population living near or traveling to campus.

It is expected that, housing more students on campus will relieve some of the noted pressures on surrounding neighborhoods that City / OSU collaboration project is trying to address. For this reason, the construction of a residence hall is considered a benefit to the Corvallis community, which includes OSU.

If the requested development allocation transfer is approved, it would make possible the construction of a new residence hall in an area well suited for this use, because of its proximity to other residence halls and a dining facility. Building a residence hall in Sector D that can take advantage of an existing dining facility limits pressure to use land

in Sector C for housing and dining services, and retains it for its primary purpose, which is instructional uses (**Attachment A.7**). Its close proximity to McNary dining hall is particularly useful, as this is the only student dining center with additional capacity. Placing the residence hall where proposed will allow this dining facility to be fully utilized and prevent other dining facilities from being overburdened and potentially delay the need to construct a new dining facility.

Some students living in the residence hall will have cars which will add to demands on parking and transportation facilities. However, the residence hall will be within walking or biking distance of classrooms, the Valley Library, Memorial Union, and athletic facilities. It will also be within easy walking distance of transit stops on SW 15th Street and SW Jefferson Way. The close proximity of the residence hall to important campus destinations and transit lines is expected to greatly minimize the need for persons in the residence hall to need or regularly use an automobile. Supporting multiple transportation options is a benefit to the Corvallis community and to nearby neighbors who may be concerned about excessive automobile traffic in the area.

In summary, if a new residence hall is constructed in Sector D as a result of the proposed development allocation transfer, it would be required to be built to LDC development standards, including compliance with parking standards. OSU is permitted to provide parking for all uses campus-wide, rather than on a specific development site as for development in other zones. The most recent OSU Parking Utilization Study shows that on an average day 4,931, or 68% of the 7,234 available campus parking spaces are used and 32% are vacant (**Attachment E**). This shows that there is space available on campus for the combined 412 vehicles that would be either displaced or potentially added as a result of a new residence hall (Maximum anticipated parking demand plus total number of spaces removed: $194+218=412$).

Despite the availability of parking on campus, it is anticipated that construction of a residence hall will cause some drivers to park their cars off-campus on nearby streets where parking is currently free. This may make it more difficult for others who have historically relied on the same spaces to find free parking near their homes or places of work. This increased competition for free parking is expected to be mitigated in part by the fact that all of the parking that would be removed by the residence hall is permit parking, therefore, those drivers would be able to park in other permit parking spaces on campus. The potential negative impacts to surrounding uses related to parking would also be counterbalanced by the positive impacts of a new residence hall. Positive impacts include placement of a large number of student residents within walking distance of academic and recreational facilities and transit services, reduced need for residence hall residents to rely on automobiles, reduced pressure to transition traditional single family neighborhoods to student oriented neighborhoods, and efficient use of campus land and resources. Given the above, the proposal would result in benefits to the Corvallis community as a whole which outweigh the potential negative impacts related to parking.

Major Adjustment Conclusions and Recommendation

The applicant requests approval of a Major Adjustment to the OSU Campus Master Plan to transfer 71,000 sq. ft. of development allocation from Sector C to Sector D to make possible the opportunity to construct a residence hall. If the residence hall were constructed, segments of SW Adams Avenue and SW 14th Street would be closed. The previous analysis evaluated the proposal against applicable review criteria. This analysis finds that some negative compatibility impacts may be anticipated related to an increased demand for parking in areas off-campus near the site of the contemplated residence hall. However, as conditioned, no other negative compatibility impacts are expected, and the benefits of a new residence hall in this location outweigh the potential negative impacts identified.

Part II - Land Development Code Text Amendment

As explained previously in this report, the applicant is requesting approval of a Major Adjustment to the Campus Master Plan to transfer 71,000 sq. ft. of development allocation (building square footage) from Sector C to Sector D. Land Development Code Table 3.36-2 specifies the amount of existing/approved building square footage within each Sector of the OSU campus, and the amount permitted to be developed in the future. Because these numbers are listed in the Land Development Code, approval of an LDC Text Amendment is required to change them should the concurrent Campus Master Plan Major Adjustment be approved.

The stated purpose of the Major Adjustment application is to allow for the construction of a residence hall in Sector D, and it is recommended that approval of the Major Adjustment to the application be on the condition that the 71,000 sq. ft. of development allocation proposed to be transferred only be used for a residence hall in the location specified in the subject application (**Condition of Approval 1**). Conditions of approval cannot be applied to Text Amendment applications, and it is possible that if the proposed Major Adjustment was approved, the approval could expire. This would result in an inconsistency between the Campus Master Plan and LDC Chapter 3.36 – OSU zone, the ordinance that implements the Campus Master Plan. To resolve this potential inconsistency new LDC text under Section 3.36.40.01 – Sector Development Allocation is recommended by City Staff, should the Planning Commission be inclined to recommend approval of the subject application. This Code Section and LDC Table 3.36-2: Building Square Footage by Sector, which is proposed to be modified by the applicant are below. Staff recommended new text is underscored with a dashed line. Applicant proposed text is double-underlined, and applicant proposed deletions are struck-out.

Section 3.36.40.01 – Sector Development Allocation

- a. Sector Development Allocation represents the gross square footage of new development allowed in each Sector, regardless of the Use Type. See Table 3.36-2 - Building Square Footage by Sector.
- b. Each new development project in a Sector shall reduce that Sector's available allocation.

- c. Existing and approved development as of December 31, 2003, has been included in the existing/approved development calculations and shall not reduce the Sector Development Allocation.
- d. Demolition of existing square footage and/or restoration of non-open-space areas to open space shall count as an equivalent square footage credit to the Sector development or open space allocation.
- e. Square footage associated with a parking structure shall be included in the Development Allocation for the Sector in which the structure is located. Square footage associated with at-grade parking lots shall be calculated as impervious surface but not count as part of Development Allocation.
- f. Table 3.36-2: Building Square Footage by Sector, includes 71,000 square feet of Future Allocation that was removed, effective [date text amendment is effective] from Sector C's allocation and added to the allocation for Section D. This reallocation is contingent upon the 71,000 square feet being used for a student residence hall. The residence hall shall be constructed south of SW Adams Avenue, north of SW Washington Way, and between SW 13th and 14th Streets. If a residence hall is not constructed in this location before the expiration of the Campus Master Plan Major Adjustment approval that allowed such construction (PLD13-00001), the 71,000 square feet allocated for the residence hall shall not be used in Sector D, but shall revert to Sector C.

Sector	Existing/Approved	Maximum Future Allocation	Total
A	281,551	250,000	531,551
B	831,426	500,000	1,331,426
C	4,685,510	750,000 <u>679,000</u>	5,435,510 <u>5,364,510</u>
D	325,506	35,000 <u>106,000</u>	360,506 <u>431,506</u>
E	253,046	120,000	373,046
F	847,166	750,000	1,597,166
G	742,092	350,000	1,092,092
H	133,535	50,000	183,535
J	41,851	350,000	391,851
Total	8,141,683	3,155,000	11,296,683

The above table is a copy of LDC Table 3.36-2 that has been excerpted from the application. As shown in this table, the applicant proposes to reduce the Maximum Future Allocation in Sector C from 750,000 sq. ft. to 679,000 sq. ft., and to increase the Maximum Future Allocation in Sector D from 35,000 sq. ft. to 106,000 sq. ft. These changes result in a decrease in the total development allocation in Sector C from 5,435,510 sq. ft. to 5,364,510 sq. ft., and an increase in the Sector D total development allocation from 360,506 sq. ft. to 431,506 sq. ft. Simply put, the applicant proposes to transfer 71,000 sq. ft. of development allocation from Sector C to Sector D, but there would be no net change in the total amount of currently permitted development

allocation when viewed campus-wide. The staff recommended LDC Text in new section 3.36.40.01.f, would require the residence hall to be constructed in Sector D, where proposed in the subject application.

Text Amendment Process and Criteria

Land Development Code Section 1.2.80.01 describes the process and provides the review criteria for evaluating Text Amendments to the LDC.

Section 1.2.80 - TEXT AMENDMENTS

1.2.80.01 - Background

This Code may be amended whenever the public necessity, convenience, and general welfare require such amendment and where it conforms with the Corvallis Comprehensive Plan and any other applicable policies.

1.2.80.02 - Initiation

An amendment may be initiated through one of the following methods:

- a. Majority vote of the City Council; or
- b. Majority vote of the Planning Commission.

1.2.80.03 - Review of Text Amendments

The Planning Commission and City Council shall review proposed amendments in accordance with the legislative provisions of Chapter 2.0 - Public Hearings.

On November 9, 2012, the applicant submitted a letter to City Planning Staff requesting the City Council initiate consideration of the subject Text Amendment (**Attachment A.25**). On November 19, 2012, the City Council initiated the proposed Text Amendment, meaning the Council agreed to allow the request to be considered through the public hearing process required by the LDC. The applicant's request and the City Council's action to initiate the Text Amendment are consistent with Section 1.2.80.02.a. The Text Amendment is required by Section 1.2.80.03 to be reviewed by the Planning Commission and the City Council through separate public hearings. The Text Amendment is required to satisfy the criterion in Section 1.2.80.01 – Background (above), which requires Text Amendments to conform with the Comprehensive Plan and other applicable policies. In the case of Text Amendments, applicable policies include Oregon's Statewide Planning Goals. Applicable Staff identified Comprehensive Plan Policies and Statewide Planning Goals are listed below, followed by analysis of the application's conformance with those policies and goals, and whether or not the proposed Text Amendment is in the interest of public necessity, convenience, and general welfare, per Section 1.2.80.01. This analysis assumes that the Staff recommended Code text, or similar language limiting the proposed additional Sector D development allocation, is incorporated.

Statewide Planning Goals and Corvallis Comprehensive Plan Policies

Statewide Planning Goals

A summary of Oregon's Statewide Planning Goals, taken from the Oregon Department of Land Conservation and Development's website is provided in **Attachment D**.

Goal 1 – Citizen Involvement
Goal 2 – Land Use Planning
Goal 9 – Economy of the State

Goal 10 – Housing
Goal 11 – Transportation
Goal 13 – Energy

Comprehensive Plan Policies

3.2.1 The desired land use pattern within the Corvallis Urban Growth Boundary will emphasize:

- A. Preservation of significant open space and natural features;
- B. Efficient use of land;
- C. Efficient use of energy and other resources;
- D. Compact urban form;
- E. Efficient provision of transportation and other public services; and
- F. Neighborhoods with a mix of uses, diversity of housing types, pedestrian scale, a defined center, and shared public areas.

3.2.7 All special developments, lot development options, intensifications, changes or modifications of nonconforming uses, Comprehensive Plan changes, and district changes shall be reviewed to assure compatibility with less intensive uses and potential uses on surrounding lands. Impacts of the following factors shall be considered:

- A. Basic site design (i.e., the organization of uses on a site and its relationship to neighboring properties);
- B. Visual elements (i.e., scale, structural design and form, materials, etc.);
- C. Noise attenuation;
- D. Odors and emissions;
- E. Lighting;
- F. Signage;
- G. Landscaping for buffering and screening;
- H. Transportation facilities; and
- I. Traffic and off-site parking impacts.

8.4.1 The City shall encourage and support Oregon State University as a major education and research center.

- 9.3.3 The City shall encourage a mix of residential land uses and densities throughout the City through the application of the criteria of the Land Development Code and through exploration of new approaches that respect the community's values.
- 9.4.1 To meet Statewide and Local Planning goals, the City shall continue to identify housing needs and encourage the community, university, and housing industry to meet those needs.
- 9.4.7 The City shall encourage development of specialized housing for the area's elderly, disabled, students, and other groups with special housing needs.
- 9.7.2 The City shall encourage OSU to establish policies and procedures to encourage resident students to live on campus.
- 9.7.3 The City and OSU shall work toward the goal of housing 50% of the students who attend regular classes on campus in units on campus or within a 1/2 mile of campus.
- 11.2.2 The transportation system shall be managed to reduce existing traffic congestion and facilitate the safe, efficient movement of people and commodities within the community.
- 11.3.9 Adequate capacity should be provided and maintained on arterial and collector streets to accommodate intersection level-of-service (LOS) standards and to avoid traffic diversion to local streets. The level-of-service standards shall be: LOS "D" or better during morning and evening peak hours of operation for all streets intersecting with arterial or collector streets, and LOS "C" for all other times of day. Where level-of-service standards are not being met, the City shall develop a plan for meeting the LOS standards that evaluates transportation demand management and system management opportunities for delaying or reducing the need for street widening. The plan should attempt to avoid the degradation of travel modes other than the single-occupant vehicle.
- 11.12.1 The University and the City shall work together to improve traffic patterns through and around Oregon State University which will reduce negative impacts on existing residential areas and the campus.
- 11.12.2 The University shall develop and implement a transportation and parking plan that reduces the negative traffic and parking impacts on existing residential areas.

Citizen Involvement and Land Use Planning

The subject Text Amendment application will be reviewed by the Planning Commission through two separate public hearings (Planning Commission and City Council), which provide the opportunity for public participation in the planning process. Notice of both hearings shall be provided consistent with statewide noticing requirements. When reaching a decision, public testimony, Comprehensive and applicable review criteria will be considered. By following the required public hearing processes and evaluating the application against applicable review criteria, Statewide Planning Goal 1 – Citizen Involvement and Goal 2 – Land Use Planning will be achieved.

Economy of the State, Housing, Energy, and Transportation

Oregon State University is undoubtedly an important part of the local economy. If both the Campus Master Plan Major Adjustment, and Text Amendment applications are approved, OSU will have the opportunity to construct a building that would house 162 to 324 student residents. Providing on-campus housing is consistent with Comprehensive

Plan policies 8.4.1, 9.3.3, 9.4.1, 9.4.7, 9.7.2, and 9.7.3. Providing housing facilities supports OSU's needs as a major university per Policy 8.4.1. Policies 9.3.3, 9.4.1, 9.4.7, 9.7.2, and 9.7.3 encourage a mix of residential uses and densities, including university and student housing, and direct the City and OSU to encourage student residents to live on campus. Policy 9.7.3 specifically directs the City and OSU to work toward the goal of housing 50% of OSU students on campus or within a half mile of campus.

As explained in more detail in the Campus Master Plan Major Adjustment portion of this report, a Text Amendment that would allow a new residence hall in Sector D would likely result in some negative parking related impacts to surrounding uses, and would modify existing traffic patterns. Overall, however, a new residence hall would provide benefits to the Corvallis community. (The more in depth findings regarding these points, made under the Major Adjustment Review Criteria section of this report, are incorporated here by reference.) Positive impacts include the placement of a large number of student residents within walking distance of academic and recreational facilities and transit services, a reduced need for residence hall residents to rely on automobiles, a reduced pressure to transition traditional single family neighborhoods to student oriented neighborhoods, and an efficient use of campus land and resources. As conditioned in the Major Adjustment application, traffic related impacts will be mitigated in a way that is will result in compatibility with surrounding uses. These benefits are consistent with Comprehensive Plan policy 3.2.1, which encourages the efficient use of land, energy, and other resources, a compact urban form, an efficient provision of transportation, and diversity of housing types. These benefits are also consistent with Statewide Planning Goals 9 – Economy of the State, 10 - Housing, and 13 – Energy.

Comprehensive Plan policies 11.2.2, 11.3.9, 11.12.1, and 11.12.2 broadly provide direction regarding traffic and transportation management. Compatibility issues related to traffic and transportation were addressed under Part I of this report regarding the CMP Major Adjustment application. In summary, analysis in that section of this report finds that the proposal, as conditioned, is compatible with surrounding uses. For the same reasons the Text Amendment proposal is consistent with the aforementioned Comprehensive Plan policies. Findings from the CMP Major Adjustment section of this report are incorporated here, by reference.

Given the above, the proposal to transfer 71,000 sq. ft. of development allocation from Sector C to Sector D, combined with the staff recommended Code language limiting the use of this development allocation for a new residence hall, promotes the public convenience and general welfare, consistent with LDC Section 1.2.80.01.

Policy 3.2.7 - Compatibility Criteria

Comprehensive Plan Policy 3.2.7 requires special development applications, such as the subject Text Amendment application to be evaluated against nine criteria to determine compatibility with surrounding uses. These criteria are the same as those used to evaluate the CMP Major Adjustment application. The CMP Major Adjustment application and the Text Amendment application seek approval of the same request to transfer development allocation from Sector C to Sector D. In both cases, Staff have

recommended either a Condition of Approval or new LDC text that would set the same parameters around how and when the additional development allocation could be used.

Staff analysis of the CMP Major Adjustment application to transfer development allocation from Sector C to Sector D, finds that, as conditioned it would be compatible with surrounding uses based on the compatibility criteria in LDC Section 2.5.40.04. These criteria include the same compatibility criteria as in Comprehensive Plan policy 3.2.7. Given that both applications have the same requests with respect to the transfer of development allocation, and both have the same parameters on when and how that development allocation can be used, the compatibility findings for the Text Amendment application are the same as for the CMP Major Adjustment. Findings regarding the compatibility of the proposed transfer of development allocation from the CMP Adjustment portion of this report are therefore, incorporated here by reference.

Overall Conclusions and Recommendations

This report evaluated the applicant's CMP Major Adjustment and LDC Text Amendment applications to transfer 71,000 sq. ft. of development allocation from campus Sector C to Sector D. Based on consideration of applicable review criteria, analysis in this report finds that the applications, as conditioned and with additional staff proposed LDC text, satisfy applicable review criteria.

Recommendation - CMP Major Adjustment (PLD13-00001)

The Planning Commission has three options with respect to the subject CMP Major Adjustment application:

- Option 1: Approve the application as proposed; or
- Option 2: Approve the application with conditions; or
- Option 3: Deny the application.

Based on the analysis in this report, Staff recommend the Planning Commission approve the CMP Major Adjustment application subject to the Conditions of Approval provided at the end of this report. If the Planning Commission accepts this recommendation, the following motion to approve is suggested:

Recommended Motion for PLD13-00001

MOTION: I move to approve the OSU Campus Master Plan Major Adjustment, as conditioned in the March 13, 2013, staff report to the Planning Commission, and contingent upon approval and enactment of Land Development Code Text Amendment LDT12-00002 by the City Council. This motion is based on findings in support of the application presented in the staff report to the Planning Commission, and findings in support of the application made by the Planning Commission during deliberations on the request.

Recommendation – LDC Text Amendment (LDT12-00002)

The Planning Commission has three options with respect to the LDC Text Amendment application:

- Option 1: Approve the application as proposed; or
- Option 2: Approve the application with the addition of Staff-recommended or similar Code language; or
- Option 3: Deny the application.

Based on the analysis in this report, Staff recommend the Planning Commission approve the application and incorporate the Staff recommended Code text limiting use of the proposed 71,000 sq. ft. of development allocation. If the Planning Commission accepts this recommendation, the following motion is suggested:

Recommended Motion for LDT12-00002

MOTION: I move to approve the OSU Land Development Code Text Amendment application (LDT12-00002) amending LDC Table 3.36-2: Building Square Footage by Sector, and adding text for a new Section 3.36.40.01.f as provided by Staff in the March 8, 2013, Staff Report. This motion is based on findings in support of the application presented in the March 8, 2013, Staff Report to the Planning Commission, and findings in support of the application made by the Planning Commission during deliberations on the request.

EXHIBIT I.31

Conditions of Approval - CMP Major Adjustment

The following are Staff recommended conditions of approval.

Condition Number	Condition	Page Number
1	<p>Sector D Allocation Parameters - The 71,000 sq. ft. of development allocation approved to be transferred from OSU Campus Sector C to Sector D shall only be used for a student residence hall. The residence hall shall be constructed between SW Adams Avenue and SW Washington Way, and between SW 13th and 14th Streets. If a residence hall is not constructed in this location by the expiration date for this CMP Major Adjustment (PLD13-00001), the 71,000 square feet allocated for it shall not be used in Sector D, but shall revert back to Sector C.</p> <p>Approval of this Campus Master Plan Major Adjustment application (PLD13-00001) is contingent upon approval and enactment of the Land Development Code Text Amendment application (LDT12-00002) by the City Council. If the Land Development Code Text</p>	3, 9, 12, 24

	Amendment is denied by the City Council, then approval of this Campus Master Plan Major Adjustment shall be nullified.	
2	<p>Public Improvements - Any plans for public improvements referenced within the application or this staff report shall not be considered final engineered public improvement plans. Prior to issuance of any structural or site utility construction permits, the applicant shall obtain approval of, and permits for, engineered plans for public improvements from the City's Engineering Division. The applicant shall submit necessary engineered plans and studies for public utility and transportation systems to ensure that adequate street, water, sewer, storm drainage and street lighting improvements are provided. Final utility alignments that maximize separation from adjacent utilities and street trees shall be engineered with the plans for public improvements in accordance with all applicable LDC criteria and City, DEQ and Oregon Health Division requirements for utility separations. Public improvement plan submittals will be reviewed and approved by the City Engineer under the procedures outlined in Land Development Code Section 4.0.80.</p>	
3	<p>Traffic Impact Analysis - Prior to issuance of any permits related to construction of the new student residence hall from the City, a TIA shall be submitted and approved by the City Engineer. If the TIA determines that additional mitigation will be required to keep study intersections performing at a LOS "D" or better, the mitigation and timing of the mitigation shall be approved by the City Engineer, prior to issuance of any permits related to construction of the new student residence hall from the City. The TIA shall address the following:</p> <p>A. The application proposes to remove SW Adams Avenue from SW 13th Street to SW 15th Street, and SW 14th Street, from SW Washington Avenue to SW Adams Avenue, from the OSU Street Ownership (Private Streets) map (Attachments G and H), figure 6.2 of the December 2004 Campus Master Plan. The TIA describes changing travel lanes and parking along portions of SW Adams Avenue and SW 14th Street and redirecting vehicular traffic to other roadways. An analysis of the proposed changes shall be provided.</p> <p>B. A trip distribution shall be provided that combines both the new student residence hall and the administrative building. If any additional intersections not already analyzed for LOS are shown to have a total of 30 or more peak hour trips, they shall also be analyzed for LOS.</p> <p>C. The February 26, 2013 OSU Sector D Transportation Facilities Analysis shows the intersection of SW Washington Avenue and SW 11th Street to receive more than 30 peak hour trips. This intersection shall be analyzed for LOS.</p>	16, 18

- D.** Trip distribution shall be based on existing traffic patterns in the area. Recent counts have been conducted for the 2010 BTM update and by the Corvallis Metropolitan Planning Organization that could be used for this purpose.
- E.** The trip distribution presented in graphical figure 3 from the February 26, 2013 OSU Sector D Transportation Facilities Analysis shall match what is proposed. This shall be verified by adding the trips shown and figuring the percentages and comparing the results to analysis of the existing traffic patterns.
- F.** All intersections that require a LOS analysis shall include an analysis of the 20 year planning horizon.
- G.** The OSU Campus Master Plan recommends mitigating the 15th and Washington Way intersection by realigning Washington Way with Washington Avenue at the 15th and Washington Avenue intersection. An analysis shall be provided that discusses the Master Plan's proposed mitigation and why OSU's Washington Way Improvement Plan that extends Washington Way to the east along the railroad right of way is the preferred alternative.
- H.** Intersection analysis for current and post conditions are presented in two different printout formats, possibly from two different software packages. The TIA shall address why results appear in two different formats and if results have been affected by this.
- I.** For all intersections that require LOS analysis, the analysis shall include current conditions, current conditions plus development, and a 20 year outlook with the development. Both AM and PM peak hours shall be analyzed and supporting information (printouts) shall be included for all scenarios in the appendix. All analysis sheets located in the appendix shall be clearly labeled with intersection location, AM or PM peak, and analysis period (current conditions, current conditions plus site trips, etc.)
- J.** For all intersections that require LOS analysis, pedestrian counts shall be included in the analysis.
- K.** All intersection counts that are used in the report analysis shall be included in the appendix of the report.
- L.** The report shall present traffic numbers in such a way that traffic counts, growth, and trip generation numbers can be easily verified throughout the report. The graphical figures showing existing conditions, the addition of site trips, and trip distribution shall clearly report the same numbers outlined above. The analysis in the appendix shall display the same numbers shown in the graphical figures.

	M. The submitted TIA shall be stamped and signed by an engineer licensed in the State of Oregon.	
4	SW 15th Street and SW Washington Way Intersection - Prior to any occupancy of the new student residence hall, the intersection of SW 15th Street and SW Washington Way shall be upgraded as identified in the February 26, 2013 OSU Sector D Transportation Facilities Analysis and the February 27, 2013 OSU Washington Way Improvement Transportation Analysis. Improvements are to include realignment of the intersection consistent with the OSU Washington Way Improvement plans, left turn lanes for the northern, southern, and western legs, a right turn lane on the northern leg, a street stub on the eastern leg for future extension, and full signalization of the intersection including integration with the railroad gates.	16, 18
5	SW 15th Street and SW Washington Avenue Intersection - In order to assure that the mitigation is constructed prior to the intersection LOS falling below an acceptable level, OSU and The City of Corvallis will monitor the LOS of the intersection through future BTM updates and future Campus Master Plans. The realignment of SW Washington Way from SW 15th Street to SW Washington Avenue, just east of SW 10th Street, consistent with the OSU Washington Way Improvement plan, including signalization at SW 11th Street, shall be complete prior to the intersection of SW 15th Street at SW Washington Avenue reaching a failing LOS. The intersection may reach a failing LOS from annual growth of traffic or from future development of a new facility in the vicinity of the intersection.	16, 19
6	Rail Order - Prior to issuance of a PIPC permit for the intersection of SW 15th Street and Washington Way, the applicant shall obtain a rail order from ODOT Rail to construct the improvements identified in the February 26, 2013 OSU Sector D Transportation Facilities Analysis and the February 27, 2013 OSU Washington Way Improvement Transportation Analysis.	17, 19

EXHIBIT I.34

A Major Adjustment to the Oregon State University Campus Master Plan

EXHIBIT I.35



Revised February 8, 2013

Attachment A.1

Topic:	Land Development Code Text Amendment (Part I) Major Modification to a Planned Development (Part II)
Request:	Land Development Code Text Amendment to amend Table 3.36-2 by allowing Sector D to increase by 71,000 square feet Sector C to be reduced by 71,000 square feet, to accommodate two new buildings in Sector D. A Major Modification to a Planned Development to allow the development density transfer noted above and to adjust Figure 6.2 in the Campus Master Plan to remove several private streets adjacent to the new student residence.
Location:	The proposal applies to two new buildings that may be constructed in Sector D. The first is a 324 bed residence hall on the block bound by Adams Avenue, Washington Avenue, 13 th and 14 th Streets. The second is a new 15,000 square foot administrative building at the northwest corner of Jefferson Avenue and 9 th Street, (Attachment A).
Comprehensive Plan Designation:	Public Institutional (Attachment C)
Zoning:	OSU (Attachment D)

Attachments:

- A. Campus Aerial Map
- B. Letter to Initiate the Text Amendment
- C. Comprehensive Plan Map
- D. Zoning Map
- E. Existing Land Use Map
- F. Campus Development Sectors
- G. New Residence Hall Site Plan
- H. New Residence Hall Alternate Site Plan
- I. New Residence Hall Perspectives
- J. Existing OSU Street Ownership
- K. Proposed OSU Street Ownership
- L. Existing Nearby Parking Lots
- M. Neighborhood Parking Utilization Analysis
- N. OSU Sector D Transportation Facility Analysis
- O. 2011-2012 Parking Utilization Study
- P. OSU Parking Capacity

BACKGROUND

The City/OSU collaboration effort has resulted in a series of recommendations to address growth impacts from the university. One of the recommendations is for OSU to house more students on campus. As a result of this recommendation, President Ed Ray is requiring all full time freshmen attending OSU in 2013/2014 to live on campus. As of the fourth week of fall term (the week most major universities post their fall enrollment counts) OSU had 4,336 students living on campus. The students living on campus include dormitories, coops, and family housing. Of that total, roughly 2,703 were first term true freshman or 63 percent of all students living on campus. One of the dormitories (Finley Hall) was closed this year, due to a reduced demand for student housing. However, University Housing and Dining Services anticipate opening Finley Hall next year to accommodate the additional freshman living on campus. To address the anticipated shortage of on-campus housing for future years, OSU plans to construct a new residence hall with 162 bedrooms and up to 324 beds when fully occupied.

The new residence hall needs to be in close proximity to one of the three dining facilities on campus. The only dining facility that has additional capacity is McNary, on the east end of campus in Sector D. The proposed residence hall will be 90,000 square feet, yet Sector D only has a maximum future development allocation of 35,000 square feet. At the same time, a scholarship organization is looking for a west coast location, and has identified OSU as a possible candidate. They are interested in the vacant land at the corner of Jefferson Avenue and 9th Street, near the coops. To construct these two uses in Sector D requires OSU to add 71,000 square feet of development area to Sector D and to reduce the development area in Sector C by the same amount.

Part I – Land Development Code Text Amendment

A. LDC CRITERIA AND POLICY ANALYSIS

The following section lists applicable review criteria and Comprehensive Plan policies, and explains how the proposed Text Amendment is consistent with these criteria and policies.

LDC Criteria

Section 1.2.80 - TEXT Amendment

1.2.80.01 - Background

This Code may be amended whenever the public necessity, convenience, and general welfare require such amendment and where it conforms with the Corvallis Comprehensive Plan and any other applicable policies.

1.2.80.02 - Initiation

An amendment may be initiated through one of the following methods:

- a. Majority vote of the City Council; or
- b. Majority vote of the Planning Commission.

1.2.80.03 - Review of Text Amendment

The Planning Commission and City Council shall review proposed Amendment in accordance with the legislative provisions of Chapter 2.0 - Public Hearings.

Comprehensive Plan Policies

- 1.2.9 The applicable criteria in all land use decisions shall be derived from the Comprehensive Plan and other regulatory tools that implement the Plan.
- 9.2.1 City land use decisions shall protect and maintain neighborhood characteristics (as defined in 9.2.5) in existing residential areas.
- 9.3.6 The development review process shall not result in the exclusion of needed housing at densities permitted by underlying district designations or result in unreasonable cost for delay.
- 9.4.1 To meet Statewide and Local Planning goals, the City shall continue to identify housing needs and encourage the community, university, and housing industry to meet those needs.
- 9.7.2 The City shall encourage OSU to establish policies and procedures to encourage resident students to live on campus.
- 9.7.3 The City and OSU shall work toward the goal of housing 50% of the students who attend regular classes on campus in units on campus or within a ½ mile of campus.
- 11.12.1 The University and the City shall work together to improve traffic patterns through and around Oregon State University which will reduce negative impacts on existing residential areas and the campus.
- 11.13.2 The University shall develop and implement a transportation and parking plan that reduces the negative traffic and parking impacts on existing residential areas.
- 11.13.3 All-day parking of University-related vehicles on streets in proximity to the University shall be discouraged.

- 13.2.2 The City and the University shall continue to work together to assure compatibility between land uses on private and public lands surrounding and within the main campus.

Campus Master Plan Policies

- 2.1.9 OSU shall cooperatively work with adjacent property owners and neighbors to proactively maintain and protect the existing integrity of the established neighborhood character for those neighborhoods adjacent to OSU's boundaries.
- 2.3.4 Provide adequate on-campus student housing that is safe, accessible, and promotes academic and social interaction.
- 2.5.7 Arrange the campus layout and building placement to reinforce academic and operations relationships by locating functionally related programs near each other and consolidating activities with similar physical requirements. To the extent practicable, site major academic buildings within the core campus area and within a 10-minute walk of other academic buildings.
- 2.7.5 Reinforce the pedestrian nature of campus by minimizing the need for private automobiles for cross-campus travel. This shall be done by locating parking areas on the campus perimeter and by maintaining a street system that directs traffic to nearby collectors and arterials, to the maximum extent practicable.
- 4.1.16 If mitigation from projected development is not completed in accordance with said development, then the project will either be delayed until such a time that mitigation can occur in accordance with the most recent CMP annual monitoring report or CMP's
- 4.2.2.c Concentrate on providing instructional and related facilities in Sector C. This includes classrooms, teaching laboratories, faculty and administrative offices, libraries, student union facilities, and recreational and performance facilities with instructional functions.
- 4.2.3.c Locate related instructional facilities such that they can be reached within a 10-minute walk (approximately 2,200 feet).
- 4.2.1.d Site all new development to minimize disturbance to existing open space to the maximum extent practicable.
- 6.1.4 Consider improvements to sidewalks, multi-use paths, on-street bicycle lanes, street alignments, intersections, turn lanes, and road striping as part of the physical development of campus, constructing the improvements as needed or as conditions warrant.
- 7.2.1 Provide parking facilities to meet the needs of the campus community. Where possible, provide adequate parking convenient to the area or site it serves or develop satellite or remote parking facilities with adequate shuttle service.
- 7.2.5 Consider parking improvements as a component of the physical development of campus. Parking improvements may be constructed as part of the on-going operation of the university as well as with new construction or expansions of existing buildings.

- 7.2.6** Develop future parking facilities based on usage of existing parking facilities:
- a) If the usage of existing parking facilities is less than 90 percent as per the most recent parking inventory, vehicular parking improvements may be postponed until occupancy rates are 90 percent or greater; or
 - b) If the usage of existing parking facilities is 90 percent or greater, parking improvements may be constructed independent of new construction projects, or if a new construction project exceeds 5,000 square feet, it shall provide additional parking improvements in accordance with the Corvallis Land Development Code.
- 7.2.7** If the usage of existing parking facilities is 85 percent or greater, planning for parking improvements shall be initiated so that a parking improvement project is ready for construction if parking usage will exceed 90 percent or when a new construction project is proposed.
- 7.2.8** Locate parking improvements in accordance with the general locations identified on the Future Parking Facilities map (Figure 7.3). Parking improvements associated with a particular development project, however, may be provided in the vicinity of that project.
- 7.2.9** Manage parking such so that all parking improvements on campus are used. This will require the use of a shuttle to transport people from more distant parking areas into the core of campus.
- 7.2.10** Continue to work with the surrounding neighborhoods to identify potential changes to residential parking districts to more effectively discourage students, faculty, and staff from parking in the surrounding community.

On November 19, 2012, the City Council authorized OSU's request to initiate a Text Amendment, consistent with LDC Section 1.2.80.02.a, and Comprehensive Plan policy 1.2.9, (Attachment B). To satisfy the criterion to amend the Code, it must be demonstrated that the public necessity, convenience, and general welfare requires such an amendment.

The proposal will transfer allowable building square footage from one sector of campus to another, without increasing the total allowable building square footage on campus. If the amendment is approved it will allow OSU to construct a new residence hall in Sector D. The proposed amendment satisfies policies 9.2.1, 9.3.6, 9.4.1, 9.7.2, and 9.7.3 by providing additional on-campus housing and reducing the need for students to live in nearby neighborhoods. The applicant has prepared a transportation study to determine how the amendment might impact nearby intersections. Mitigation measures are proposed to address intersections that do not meet the level of service standards during the planning horizon, consistent with policies 11.12.1 and 11.13.2. The new administrative building at Jefferson Avenue and 9th Street will provide new on-site parking to replace displaced spaces and to satisfy the parking demands from the new

building. Parking impacts due to displaced parking from the new residence hall have been evaluated and additional parking spaces will be added across campus, consistent with Comp Plan Policies 11.13.2 and 11.13.3. and CMP Policies 7.2.1 and 7.2.9. The new buildings proposed in Sector D are anticipated to be compatible with the surrounding land uses, consistent with policy 13.2.2.

Transferring 71,000 SF of development allocation out of Sector C is not anticipated to impact what can be constructed within this sector through the planning horizon of 2015. Table 2 in the Transportation Facility Analysis, (Attachment N) shows that the transfer would still allow an additional 382,603 SF of building to be constructed within Sector C.

There is currently a public need for additional student housing in Corvallis as a result of low vacancy rates and enrollment increases at the university. Private developers have constructed several multi-family projects during the past year, including 7th Street Station and Wilson Woods. This next year several additional multi-family projects are anticipated, including the Harrison Street Apartments and Landmark Properties student housing project at the Sather property. Each of these projects will provide additional student housing in close proximity to campus, however they also have impacts to the nearby neighborhoods with increased traffic and noise. Providing additional student housing on campus places students closer to their classes and results in fewer undesirable neighborhood impacts including traffic and noise. Allowing OSU to transfer development allocation from Sector C to Sector D is one of the best ways of addressing the public need for additional student housing in Corvallis.

Sector C is the core of campus and is primarily used for instructional uses, consistent with CMP Policy 4.2.2.c. It is important to encourage students to walk or bike between classes, so keeping those classrooms within the core of campus helps to meet that objective, consistent with CMP Policy 4.2.3.c. The new student residence is a result of public feedback from the collaboration efforts and President Ray's mandate to require all full term freshmen to live on campus beginning fall of 2013. Freshmen typically eat at one of the three main dining centers on campus (McNary, Arnold, and Marketplace West). Currently, Arnold and Marketplace West are at full capacity. The only dining center that has additional capacity is McNary. Therefore, the new residence hall needs to be placed close to McNary dining center, which is located in the middle of Sector D. If the new student residence was constructed in Sector C, it would overburden the other dining centers and displace land that might otherwise be used for instruction. OSU has already made a considerable investment to design this project and has already submitted plans to the City for review in hopes of beginning construction this spring. City staff has asked for assurance that this is the location where the residence hall will be constructed. It is highly unlikely that OSU would decide to relocate this building to another area in Sector D at this point in time.

Constructing the new residence hall in Sector D will impact parking availability in this sector. A detailed discussion of parking impacts is addressed in the subsequent "Off-

Site Parking Impacts” section that addresses the Major Modification to the Planned Development.

OSU tracks parking on campus by conducting an annual parking utilization study. This study is conducted the fourth week of fall term over two days and determines how well the parking spaces on campus are being utilized. Parking usage is calculated as the ratio of occupied spaces to the total number of spaces.

Constructing the new residence hall will displace a total of 218 existing permit parking spaces. These spaces are currently available to both faculty and students. Attachment M shows the nearby parking lots and the parking that is available in each. The triangular parking lot #3227 at Washington Avenue and 11th Street is a free lot while all the others are pay lots or pay street parking. OSU is planning on converting this free lot to a pay lot in the fall of this year. Of the pay lots identified on the exhibit, approximately 218 spaces are available on an average day. This number represents the 190.5 available spaces within the 10 paved pay parking areas plus the 27.5 available spaces in the gravel lot #3203.

If the new residence hall is constructed on the gravel parking lot #3203, it will remove at least 164.5 spaces (the average number of spaces that were used in the lot this spring). If we add the 19 additional spaces that will be displaced from the new plaza along Adams Avenue and the three that will be added in the service area, we will displace a total of 180.5 spaces, $(164.5 + 19 - 3 = 180.5)$. The new residence hall will therefore displace approximately 181 parking spaces on an average school day. The 190.5 that are available in the other adjacent lots are anticipated to satisfy the parking spaces that will be displaced from constructing the new residence hall.

Since the new residence hall is anticipated to have 162 bedrooms and between 162 and 324 beds, there will be additional students who will have cars and the need to park them. OSU does not have statistics regarding the percentage of residents in the dorms that bring their cars to campus. Therefore we can only speculate as to what the demands might be. We do know that students residing in the dorms who do have cars on campus, tend to use them in the evenings after classes or on the weekend. During the weekday, they generally walk or ride their bicycle to get around campus.

Parking is managed on a campus-wide basis to ensure that overall utilization remains at 95 percent or less. If campus-wide utilization is found to be 85 percent or greater, planning for parking improvements shall be initiated. Parking improvements are not required unless utilization is greater than 90 percent. Campus wide parking utilization is currently at 68 percent. Sector D has a total of 1,268 parking spaces with a utilization rate of 82 percent. Since campus-wide parking is at 68 percent utilization, it is well below the threshold of 90 percent that requires new parking to be installed. In addition, the proposed amendment is not anticipated to increase the campus-wide parking utilization beyond 90 percent, in compliance with CMP Policies 7.2.6 and 7.2.7.

One potential impact from this project is increased pressure for students and campus employees to park in the nearby neighborhood. The City is currently exploring options to expand parking districts around campus as part of the City/OSU Collaboration efforts. Establishment of parking districts around campus will encourage those who currently park in the neighborhoods to seek alternatives such as parking on campus, taking transit, or riding their bike. The neighborhood parking utilization analysis that was done on April 24th and 25th of 2012 found that the neighborhood along 9th, 10th, and 11th Streets had parking utilization in excess of 50 percent, (Attachment M). Therefore, this neighborhood is already being impacted by students who either live in the neighborhood or choose to park there and walk to campus. OSU finds that allowing the development allocation to be shifted from Sector C to Sector D has a net positive public impact as it places students in close proximity to where they eat and attend classes, it reduces the need for them to use their cars, thereby reducing traffic congestion. The only offsetting negative impact is that some students may try and park their car in the nearby neighborhood. However, establishment of a future parking district in the nearby neighborhood along with tiered parking rates on campus with enhanced shuttle service should address this concern.

Oregon Land Use Goals

Since 1973, Oregon has maintained a statewide land use program based on 19 Statewide Planning Goals. Local jurisdictions are required to develop Comprehensive Plans and Land Development Codes that are consistent with the Statewide Planning Goals. Corvallis' Comprehensive Plan and LDC have been acknowledged by the Department of Land Conservation and Development as conforming to these Goals, however, any time an amendment to the Comprehensive Plan or LDC is made, an analysis of continued conformance with applicable Goals is required. The following section provides this analysis relative to the subject Text Amendment.

Goal 1

To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

Goal 2 - Planning

To establish a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

Goal 10 - Housing

To provide for the housing needs of citizens of the state.

Goal 13 - Energy and Conservation

To conserve energy. Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

OSU recognizes the potential impacts to adjacent neighborhoods resulting from the proposed development, in particular the new residence hall. The university obtained mailing labels from residents within 300 feet of the affected tax lots, which included over 400 property owners and tenants. The neighborhood meeting was held on December 18th at the Depot Suites meeting room at 700 Washington Avenue. In addition, seven recognized neighborhood associations were sent notices of the meeting. Four neighbors participated in the neighborhood meeting. The Planning Commission is holding a duly advertised public hearing on the Text Amendment and will make a recommendation to the City Council regarding this Amendment. The City Council will consider the Planning Commission recommendation during a separate, de novo, public hearing. Consistent with Goal 1, the public will have the opportunity to be meaningfully involved in the process of considering the subject Text Amendment.

The process for evaluating the proposed Amendment is described in the LDC. This process affords the opportunity for public comment, and requires review by the Planning Commission and City Council. Thus, the planning process is consistent with Goal 2 - Planning.

As currently written, the proposed Text Amendment in and of itself doesn't provide needed housing. It simply shifts development within OSU from one sector to another. However, the main driver of this request is the new student residence hall which will house mostly freshman on campus. As such, the Text Amendment would be consistent with Goal 10 - Housing.

All new construction on campus is required to meet the LEED silver equivalent rating for energy conservation. In addition, constructing a new student residence on campus will reduce the need for students to travel to and from campus and will encourage students to either ride their bikes or walk to class. These provisions are consistent with Goal 13 - Energy and Conservation.

B. PROPOSED AMENDMENT

OSU's proposed revisions to the LDC are shown using a double-underline font for new text, and a strike-out font for deleted text. Below is *Table 3.36-2: Building Square Footage by Sector* from Section 3.36 of the LDC. It shows the change that results from removing 71,000 square feet from Sector C and adding the same amount to Sector D.

Table 3.36-2: Building Square Footage by Sector			
Sector	Existing/Approved	Maximum Future Allocation	Total
A	281,551	250,000	531,551
B	831,426	500,000	1,331,426
C	4,685,510	750,000 <u>679,000</u>	5,435,510 <u>5,364,510</u>
D	325,506	35,000 <u>106,000</u>	360,506 <u>431,506</u>
E	253,046	120,000	373,046
F	847,166	750,000	1,597,166
G	742,092	350,000	1,092,092
H	133,535	50,000	183,535
J	41,851	350,000	391,851
Total	8,141,683	3,155,000	11,296,683

C. CONCLUSIONS AND RECOMMENDATIONS

The Text Amendment presented above will include a neighborhood outreach meeting, a meeting before the Planning Commission and a meeting before the City Council, consistent with Goal 1 and citizen involvement. The land use processes and procedures that were followed are consistent with state and local regulations. The proposed change is anticipated to satisfy needed housing for enrollment growth at the university and at the same time reduce consumption of fossil fuels as the majority of the students in the new residence hall will walk or bike to class. Allowing the development allocation to be transferred from Sector C to Sector D provides an opportunity to house more students on campus, thereby reducing the need to house them in the nearby neighborhoods where traffic and noise can be a problem. The only dining center on campus that has capacity for additional students is McNary, therefore construction of a new residence hall adjacent to this dining center in Sector D will be the most convenient. Parking impacts will result from the parking displaced by construction of the new residence hall, however there is available parking in nearby lots and in other areas across campus. If the City implements a parking district in the neighborhood along 11th Street, there will likely be fewer students parking on nearby streets, and more students either parking on campus or taking alternate modes such as transit or bicycles. These outcomes are consistent with the Statewide Planning Goals, and are in the interest of public necessity, convenience and general welfare as required by Section 1.2.80.01.

Part II – Major Modification to a Planned Development

Although this application includes conceptual site plans and perspectives for the new residence hall, they are only submitted for reference. The university is asking for a major adjustment to the Campus Master Plan to allow 71,000 square feet of future development area to be shifted from Sector C to Sector D. The total campus-wide square footage will remain the same. Therefore, the applicable criteria will address the compatibility factors found in Sections 2.5.40.04 and 2.5.50.04 below.

2.5.40.04 - Review Criteria

Requests for the approval of a Conceptual Development Plan shall be reviewed to ensure consistency with the purposes of this Chapter, policies and density requirements of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. The application shall demonstrate compatibility in the areas in "a," below, as applicable, and shall meet the Natural Resource and Natural Hazard criteria in "b," below:

a. Compatibility Factors -

1. Compensating benefits for the variations being requested;
 2. Basic site design (the organization of Uses on a site and the Uses' relationships to neighboring properties);
 3. Visual elements (scale, structural design and form, materials, etc.);
 4. Noise attenuation;
 5. Odors and emissions;
 6. Lighting;
 7. Signage;
 8. Landscaping for buffering and screening;
 9. Transportation facilities;
 10. Traffic and off-site parking impacts;
 11. Utility infrastructure;
 12. Effects on air and water quality (note: a DEQ permit is not sufficient to meet this criterion);
 13. Design equal to or in excess of the types of improvements required by the standards in Chapter 4.10 - Pedestrian Oriented Design Standards¹; and
-

14. Preservation and/or protection of Significant Natural Features, consistent with Chapter 2.11 - Floodplain Development Permit, Chapter 4.2 - Landscaping, Buffering, Screening, and Lighting, Chapter 4.5 - Floodplain Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, and Chapter 4.14 - Landslide Hazard and Hillside Development Provisions. Streets shall also be designed along contours, and structures shall be designed to fit the topography of the site to ensure compliance with these Code standards.

b. Natural Resources and Natural Hazards Factors -

1. Any proposed variation from a standard within Chapter 2.11 - Floodplain Development Permit, Chapter 4.5 - Floodplain Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, or Chapter 4.14 - Landslide Hazard and Hillside Development Provisions shall provide protections equal to or better than the specific standard requested for variation; and
2. Any proposed variation from a standard within Chapter 2.11 - Floodplain Development Permit, Chapter 4.5 - Floodplain Provisions, Chapter 4.11 - Minimum Assured Development Area (MADA), Chapter 4.12 - Significant Vegetation Protection Provisions, Chapter 4.13 - Riparian Corridor and Wetland Provisions, or Chapter 4.14 - Landslide Hazard and Hillside Development Provisions shall involve an alternative located on the same development site where the specific standard applies.
3. Any proposed Floodplain Development Permit variation that exceeds the scope of Section 2.11.60.01.a shall also meet the Floodplain Development Permit Variance review criteria in Section 2.11.60.06 and, to the extent feasible, the base Floodplain Development Permit review criteria in Section 2.11.50.04.

2.5.50.04 - Review Criteria for Determining Compliance with Conceptual Development Plan

Request for approval of a Detailed Development Plan shall be reviewed to determine whether it is in compliance with the Conceptual Development Plan. The Detailed Development Plan shall be deemed to be in conformance with the Conceptual Development Plan and may be approved provided it is consistent with the review criteria in Section 2.5.40.04 above, provides a clear and objective set of development standards for residential Detailed Development Plans (considering the Detailed Development Plan proposal, required adherence to this Code, and Conditions of Approval), and does not involve any of the factors that constitute a major change in the Planned Development. See Section 2.5.60.02 - Thresholds that Separate a Minor Planned Development Modification from a Major Planned Development Modification.

The above criteria are intended to ensure “compatibility”. Section 2.5.40.04 does not state what the proposal must be compatible with. Land Development Code Chapter 1.6 – Definitions, defines the term compatible.

Compatible - Ability of different uses to exist in harmony with each other. "Making uses compatible with each other" implies site development standards that regulate the impact of one use on another.

Based on the above definition, compatibility is achieved when uses exist in harmony with each other, and when development standards are achieved. Comprehensive Plan policy 3.2.2 also provides some clarification of what is meant by the term “compatible”. This policy states,

3.2.2 Within a land use district, primary uses and accessory uses permitted outright shall be considered compatible with each other when conforming to all standards of the district.

Sectors C and D of the Campus Master Plan are zoned OSU in the Land Development Code, (Attachment D). The applicant intends to comply with all development standards within Sector D.

Basic Site Design

Although a conceptual site plan has been submitted for the new residence hall, it is not the subject of this land use application. The applicant is requesting 71,000 square feet from Sector C be shifted to Sector D. This change is anticipated to shift any impacts that were anticipated in Sector C to Sector D. The applicant intends to construct the two new buildings in compliance with the development standards found in the OSU zone.

Visual Elements

Sector D currently has a remaining development allocation of approximately 34,000 square feet. The proposed 15,000 square foot administrative use at the northwest corner of Jefferson Avenue and 9th Street could be constructed under the existing approved Master Plan. Therefore we will focus on the visual impacts associated with constructing a new residence hall on the gravel parking lot.

A gravel parking lot is where the new residence hall is proposed, (Attachments G, H, & I). The visual character of this area will change from a large area of parked cars to a 5 story residence hall. The height of the new residence hall will be 53-feet to the top of the parapet, while the height of McNary, Callahan, and Wilson Halls are 72-feet tall. Therefore, the new residence hall is considered to be compatible with the three existing

dormitories directly to the north. The visual character is not anticipated to be significantly altered for nearby residents to the south and to the east, as the new building will be adjacent to the existing residential dorms. The proposed alteration is therefore considered to be compatible with the visual character of the adjacent buildings.

Noise Attenuation

Currently the only noise associated with the existing sites are from automobiles that use the parking lots. The new administrative building will replace any displaced parking and provide additional on-site parking based on City code requirements. This will increase the number of vehicle trips, but is not anticipated to increase noise levels. The new student residence will reduce the number of vehicle trips or shift those vehicle trips to nearby parking lots. It is not anticipated to change the existing noise levels in this part of campus. Therefore, the overall noise levels are anticipated to remain where they are today.

Odors and Emissions

The two new buildings are not expected to generate offensive odors or emissions. Trash and recycling receptacles will be located on or adjacent to both sites and within standard waste and recycling receptacles that will be screened on all sides. Therefore, the anticipated odors and emissions are anticipated to remain the same as what they are today.

Lighting

All new exterior lighting will be from full-cut-off fixtures and are expected to prevent light trespass on adjacent properties or excessive glare into the night sky. Future exterior lighting will also be evaluated through the building permit process to ensure that applicable standards in LDC Section 4.2.80 will be met. Therefore, lighting impacts are anticipated to be in compliance with LDC standards.

Signage

There are no signs associated with this request. Prior to issuing a sign permit, the Development Services Division will review any non-exempt signage to ensure compliance with applicable standards in *LDC Chapter 4.7 - Sign Regulations*. Therefore, all future signage is anticipated to be in compliance with LDC standards.

Landscaping for Buffering and Screening

There is no landscaping associated with this request. Any landscaping associated with the two new buildings is anticipated to be installed in compliance with LDC standards.

Traffic and Transportation Facilities

OSU manages its transportation improvements by conducting an annual Base Transportation Model analysis and implementing the upgrades identified in Chapter 6 of the Campus Master Plan. Typically these include frontage improvements for new construction and the improvement projects are listed in *Table 6.8 – Transportation Improvements by Sector*.

Page 6-19 of the CMP includes the following statement:

The 15th Street/Washington Way intersection is currently experiencing acceptable levels of service in the AM and PM peak hours. It is in the full build-out scenario that level of service for the approach for the PM peak reaches LOS F. However, this intersection has some operational deficiencies due to its proximity to the railroad, limited right-of-way (a portion of the Washington Way road is within the railroad right of way), limited sight distance for southbound movements, and lack of a designated pedestrian/bike crossing on 15th Street. Mitigation most likely would involve realignment of Washington Way. Improvements provided with re-development of the site south of Kerr Administration or 80% Assignable Future Square Footage trigger for the sector per Table 6.9.

This application increases the assignable future square footage for Sector D beyond 80%, thereby triggering upgrades to the intersection of 15th Street and Washington Way.

For this project, the City engineer asked that OSU prepare a transportation study to address the impacts of shifting 71,000 square feet of developable area from Sector C to Sector D. The transportation study found that the transportation impacts associated with the proposed adjustment to the Campus Master Plan were increased slightly for the administrative use and were actually reduced for the new student residence. This is because the trip generators for the campus transportation model are the parking lots and not the buildings themselves. Construction of the new student residence will result in the displacement of the gravel parking lot #3203, resulting in a reduction to the trips to and from campus. Because of this anomaly, the City asked OSU to provide an alternative transportation analysis, evaluating the new uses within Sector D to determine level of service impacts to nearby intersections. The two alternative analysis

found the new uses in Sector D to maintain acceptable levels of service (< 30 trips) for nearby intersections during the peak hour, (Attachment N).

The transportation study evaluated traffic impacts in two ways. It first evaluated impacts based on the Base Transportation Model. This resulted in the intersection at 15th Street and Washington Way as failing through the CMP plan year (2015). To bring this intersection into compliance with the City's mobility standards, OSU will need to provide a southbound right turn lane and an eastbound left turn lane, along with all way stop control. In addition, OSU will need to remove portions of the existing buildings near this intersection to comply with vision clearance requirements and to align the street properly. A diagram of the recommended improvements are included in the transportation study, (Attachment N). The second evaluation was based on a 1 percent background growth rate and concluded the same levels of improvement would be required, less the stop control measures. The City has informed OSU that all way stop control at this intersection is not an acceptable solution and that a signal will be required. The City has also asked OSU to prepare an additional traffic study to determine the 20 year planning horizon impacts to Washington Way and 15th, 13th, and 11th Streets, knowing there is a desire to move Washington Avenue between 11th and 15th Streets to have it run along the north side of the railroad tracks. This will reduce the need to have two signals in close proximity on 15th Street, one at Washington Way and the other at Washington Avenue. This 20 year traffic study will be submitted under separate cover.

OSU is committed to upgrading the 15th Street intersections at Washington Way and Washington Avenue to comply with the City's mobility standards through the plan year. Prior to occupancy of the new student residence, the applicant will upgrade the 15th Street and Washington Avenue intersection to include a west bound right turn lane and a combined west bound straight and left turn lane. This upgrade shall not be required if the 20 year traffic study finds that mobility standards can be met using the existing lane configuration. Prior to occupancy of the new student residence, the applicant will upgrade the 15th Street and Washington Way intersection consistent with Attachment N, including relocation of Washington Way to the north, outside the railroad property, a full intersection improvement including sidewalks, curbs, gutters, on-street bike lanes, travel lanes, turn lanes, traffic signal, railroad crossing arms, and a curb return stub and barricade for the future extension of Washington Way to the east. In addition these improvement will include sufficient width to accommodate an additional north bound turn lane that the City can install if the 20 year traffic study finds it necessary to meet mobility standards.

In conclusion, the proposed alterations will not increase the gross building square footage allowed on campus through the CMP plan year (2015). The intersection of 15th Street and Washington Way will be upgraded to comply with the City's mobility standards through the plan year. These intersection improvements will be installed prior to occupancy of the new student residence. These proposed improvements are

anticipated to mitigate anticipated impacts related to transportation facilities within Sector D.

Off-Site Parking Impacts

Construction of the new administrative building will occur adjacent to an existing predominantly residential neighborhood. The coops and the neighborhood have a history of having considerable on-street parking challenges. Therefore, any new building constructed on the empty lot at the northwest corner of Jefferson Avenue and 9th Street will replace any displaced parking and provide new parking based on city standards, which is currently 1 parking space for every 400 square feet of office use. If a 15,000 square foot building were constructed in this location, approximately 38 new parking spaces would be required.

The new residence hall will displace 202 existing parking spaces in the gravel lot #3203. This differs from the 192 total spaces shown on Attachment I because there was a construction trailer stored on the lot when the spring parking utilization study was conducted in 2012. The trailer was removed last summer and all 202 spaces are now available for vehicle parking. If sufficient funds are available, a new plaza will be constructed over Adams Avenue, north of the new residence hall, (Attachment H). The plaza would displace 19 additional parking spaces, (14 head in and 5 parallel parking spaces), however three of those spaces would be reconstructed in the service area behind Wilson Hall. Therefore a total of 218 parking spaces will be displaced, ($202 + 19 - 3 = 218$).

When evaluating parking impacts resulting from this project, it's important to understand the utilization rates of the nearby parking lots that might be used by the existing or future residents. Attachment L shows the nearby parking lots and the parking that is available in each. This is the most recent parking data that was evaluated on April 24th and 25th in 2012. The triangular parking lot #3227 at Washington Avenue and 11th Street is a free lot while all the others are pay lots or pay street parking. OSU is planning on converting this free lot to a pay lot in the fall of this year. Of the pay lots identified on the exhibit, approximately 218 spaces are available on an average day. This number represents the 190.5 available spaces within the 10 paved pay parking areas plus the 27.5 available spaces in the gravel lot #3203.

If the new residence hall is constructed on the gravel parking lot #3203, it will remove at least 164.5 spaces (the average number of spaces that were used in the lot this spring). If we add the 19 additional spaces that will be displaced from the new plaza along Adams Avenue and the three that will be added in the service area, we will displace a total of 180.5 spaces, ($164.5 + 19 - 3 = 180.5$). The new residence hall will therefore displace approximately 181 parking spaces on an average school day. The 190.5 that

are available in the other adjacent lots are anticipated to satisfy the parking spaces that will be displaced from constructing the new residence hall.

Since the new residence hall is anticipated to have 162 bedrooms and between 162 and 324 beds, there will be additional students who will have cars and the need to park them. OSU does not have statistics regarding the percentage of residents in the dorms that bring their cars to campus. Therefore we can only speculate as to what the demands might be. We do know that students residing in the dorms who do have cars on campus, tend to use them in the evenings after classes or on the weekend. During the weekday, they generally walk or ride their bicycle to get around campus.

Parking is managed on a campus-wide basis to ensure that overall utilization remains at 95 percent or less. If campus-wide utilization is found to be 85 percent or greater, planning for parking improvements shall be initiated. Parking improvements are not required unless utilization is greater than 90 percent. Campus wide parking utilization is currently at 68 percent.

OSU tracks parking on campus by conducting an annual parking utilization study. This study is conducted the fourth week of fall term over two days and determines how well the parking spaces on campus are being utilized. Parking usage is calculated as the ratio of occupied spaces to the total number of spaces. A large parking lot (one with 100 or more spaces) is considered full when it is 95 percent occupied during peak hours. Smaller lots (those with fewer than 100 spaces) are considered full when peak hour usage is 90 percent or above. Generally, the lots at the north end of campus and the core of campus (Sector C) are full, while lots on the south (Reser), west and east ends of campus have a lower utilization rate, (Attachment J). Since campus-wide parking is at 68 percent utilization, it is well below the threshold of 90 percent that requires new parking to be installed. In addition, the proposed amendment is not anticipated to increase the parking utilization beyond 90 percent.

A number of changes have occurred across campus since the Campus Master Plan was adopted in December of 2004. Most noticeable are the surface parking lots within the core of campus that have been displaced by new buildings. Attachment P is a table that shows how the university's parking capacity has changed since the CMP was adopted. There are roughly 400 more parking spaces on campus than there were at the end of 2004. OSU is currently working on the design of a new lot at the southwest corner of Campus Way and 35th Street. This lot is on the existing shuttle route and will eventually have approximately 250 new spaces. In addition, another lot is being looked at east of LaSells Stewart Center and south of Bloss Hall. The existing campus-wide parking surplus coupled with the additional surface parking noted above and enhanced shuttle service is anticipated to adequately address the parking needs associated with the residents living in the new residence hall.

One potential impact from this project is increased pressure for students and campus employees to park in the nearby neighborhood. The City is currently exploring options to expand parking districts around campus as part of the City/OSU Collaboration efforts. Establishment of parking districts around campus will encourage those who currently park in the neighborhoods to seek alternatives such as parking on campus, taking transit, or riding their bike. The neighborhood parking utilization analysis that was done on April 24th and 25th of 2012 found that the neighborhood along 9th, 10th, and 11th Streets had parking utilization in excess of 50 percent, (Attachment M). Therefore, this neighborhood is already being impacted by students who either live in the neighborhood or choose to park there and walk to campus. OSU finds that allowing the development allocation to be shifted from Sector C to Sector D has a net positive public impact as it places students in close proximity to where they eat and attend classes, it reduces the need for them to use their cars, thereby reducing traffic congestion.

During the neighborhood meeting, one of the residents raised concern about students who choose to park within the neighborhood. In order to assess the existing impacts in the adjacent neighborhood, OSU photographed 9th, 10th, and 11th Streets from Adams Avenue at various times and dates. The images below were taken during winter break when most students are out of town, and at the beginning of winter term, before school started and during the school day.

9th Street North



December 28 – 11:00 am



January 17 – 7:30 am



January 17 – 11:00 am

9th Street South



December 28 – 11:00 am

January 17 – 7:30 am

January 17 – 11:00 am

10th Street North



December 28 – 11:00 am
10th Street South

January 17 – 7:30 am

January 17 – 11:00



December 28 – 11:00 am

January 17 – 7:30 am

January 17 – 11:00

11th Street North



December 28 – 11:00 am

January 17 – 7:30 am

January 17 – 11:00

11th Street South

EXHIBIT I.55



December 28 – 11:00 am



January 17 – 7:30 am



January 17 – 11:00

From the images above, it appears as if the majority of the vehicles that park on these street when school is in session are those of the nearby residents.

The Campus Master Plan contains Figure 6.2 which shows OSU Street Ownership. This exhibit is used by the City to determine which roadways through campus are considered streets and subject to City street standards. Those demarcated with a dashed line are considered streets, while all others are considered alleys or access drives. The new student residence may have a new courtyard developed along Adams Avenue between 13th and 14th Streets, (Attachment H). In order to accommodate the new plaza, the current street designation will need to be removed from Figure 6.2. OSU has submitted a copy of the existing figure, (Attachment J), along with a modified exhibit, (Attachment K), showing the proposed changes. Since Adams Avenue currently terminates before 15th Street there is no need for Adams to function as a street between 13th and 15th Streets. With this change, there is also no need for 14th Street to extend north of Washington Avenue. Therefore, all of these street segments are proposed to be removed from Figure 6.2 in the Campus Master Plan.

Utility Infrastructure

There are no utilities proposed with this request. Utility infrastructure is evaluated through *LDC Chapter 4.0 - Improvements Required with Development*. Any new public utilities associated with the two new buildings are anticipated to be installed in compliance with LDC standards.

Effects on Air and Water Quality

Corvallis is currently in compliance with State and Federal air and water quality regulations. The administrative building is anticipated to increase vehicle trips in the immediate area, resulting in a slight impact on air quality. The new student residence is anticipated to result in a slight improvement to air quality, as a parking lot is being

removed. It's also important to note that housing students on campus reduces their need to drive to campus, thereby further improving air quality. Water quality will be addressed at the time of future development and is anticipated to be in compliance with LDC standards.

Pedestrian Oriented Design Standards

OSU is not subject to Pedestrian Oriented Design Standards in LDC Chapter 4.10, therefore this criteria is not applicable.

Natural Resources and Natural Hazards

There are no identified natural features on either of the two development sites. Therefore, future development is anticipated to be in compliance with the natural resource and natural hazard provisions of the LDC.

Compensating Benefits

There are no variations to the development standards being requested. Therefore, compensating benefits are not required. However, it is important to note that both uses are directly associated with the university, and their proximity to campus is in and of itself a compensating benefit. Students residing in dormitories on campus eat most of their meals on campus and walk or bike to destinations on campus. This results in fewer vehicle trips to and from campus, as the students are already living there.

Summary of Conclusions and Recommendation

As noted, the application complies with all applicable LDC standards and is consistent with applicable Comprehensive Plan policies. The proposal was evaluated against the compatibility criteria in Section 2.5.40.04. Analysis in that section of the application found that the proposal complies with applicable LDC standards and is compatible based on consideration of the compatibility criteria.

ATTACHMENT A

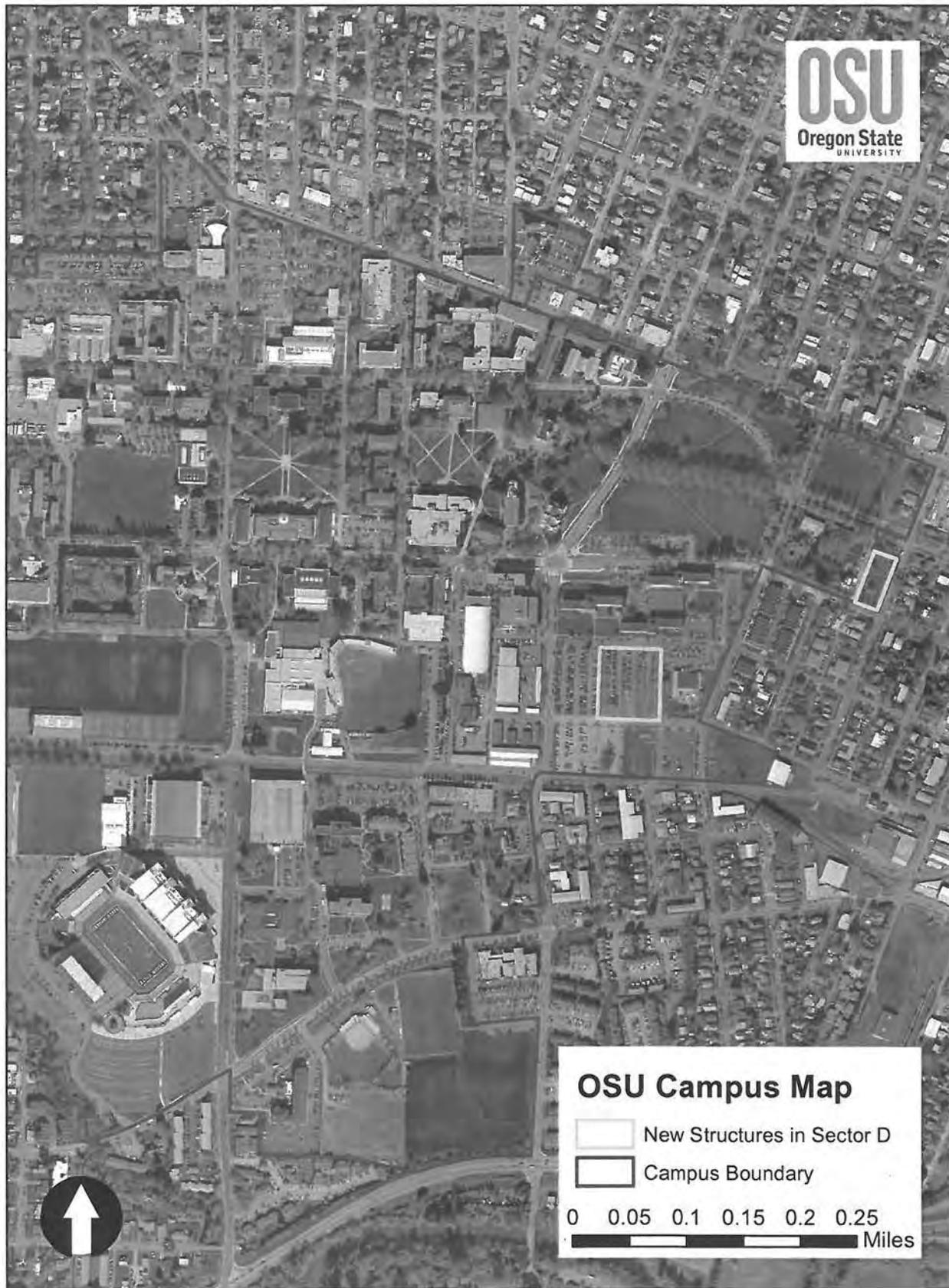


EXHIBIT I.58

ATTACHMENT B



Facilities Services: 130 Oak Creek Building, Corvallis, Oregon 97331-2001
T 541-737-2969 | F 541-737-3013 | <http://faweb1.baf.orst.edu/towow/>

November 9, 2012

Kevin Young
Planning Director
City of Corvallis
PO Box 1083
Corvallis, OR 97339-1083

RE: Oregon State University Housing

Dear Mr. Young:

The City/OSU collaboration effort has resulted in a series of recommendations to address growth impacts from the university. One of the recommendations is for OSU to house more students on campus. As a result of this recommendation, President Ed Ray is requiring all full time true freshmen attending OSU in 2013/2014 to live on campus.

OSU has three dining centers on campus that serve the dormitories. Only one (McNary) has capacity for additional students. As a result, OSU is hoping to construct a new 324 bed dormitory near this dining facility in Sector D. The new dorm would be located on the gravel parking lot between 13th and 14th Streets and Washington and Adams Avenue in Sector D.

The new dormitory exceeds the 35,000 square feet of remaining developable square footage in Sector D, therefore OSU will need to apply for a major modification to its Campus Master Plan. Table 3.36.2 – Building Square Footage by Sector, in the Corvallis Land Development Code will need to be amended to transfer available square footage in Sector C to Sector D. The change will not affect the total maximum building square footage that is allocated for campus.

Text amendments to the Land Development Code (LDC) require Planning Commission or City Council authorization, consistent with LDC Section 1.2.80.02. We respectfully request the City Council allow OSU to proceed with submitting an application to amend the Land Development Code to accommodate the changes noted above. Thank you for your consideration on this matter.

Sincerely,


David Dodson, AICP
Campus Planning Manager

EXHIBIT I.59

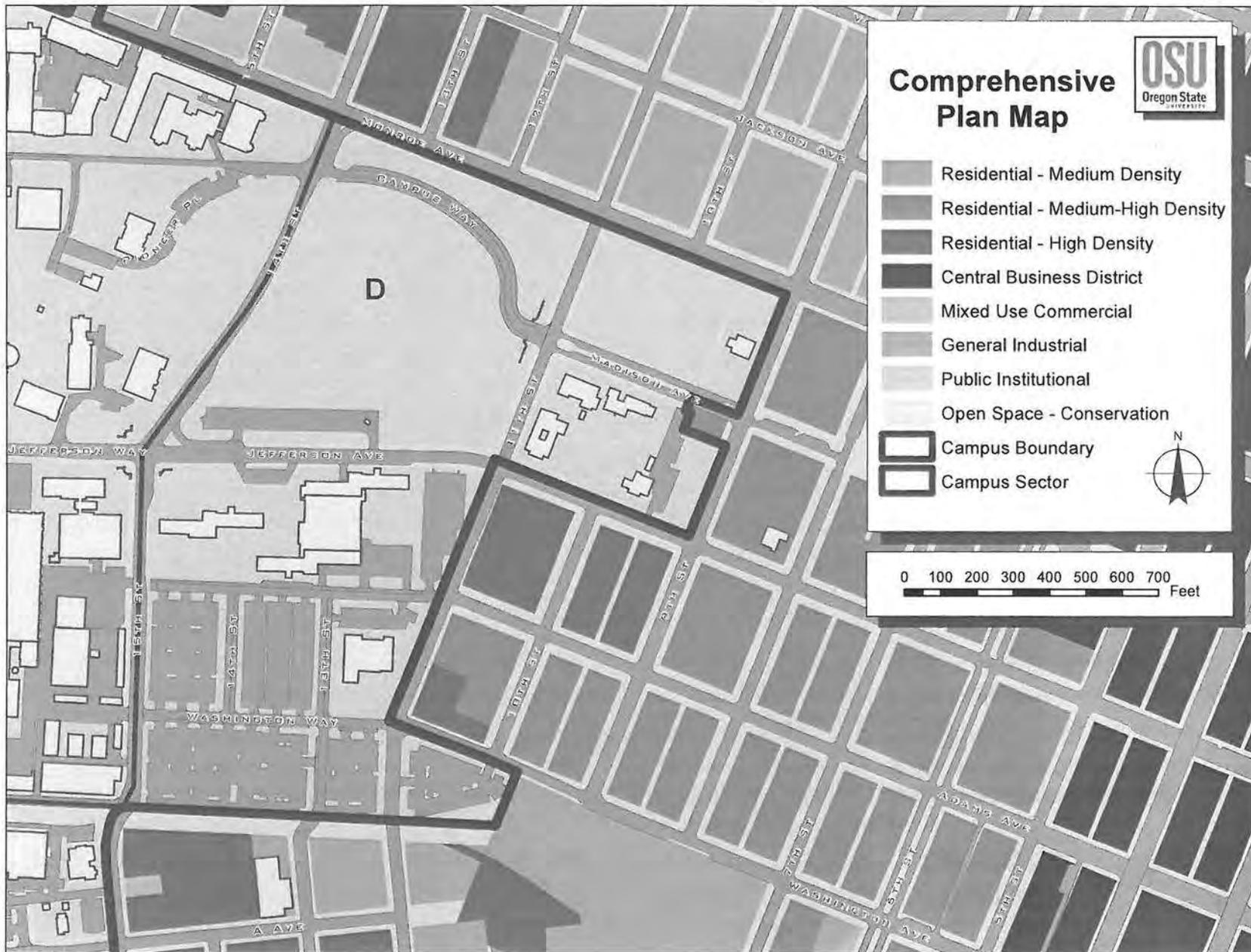


EXHIBIT I.60

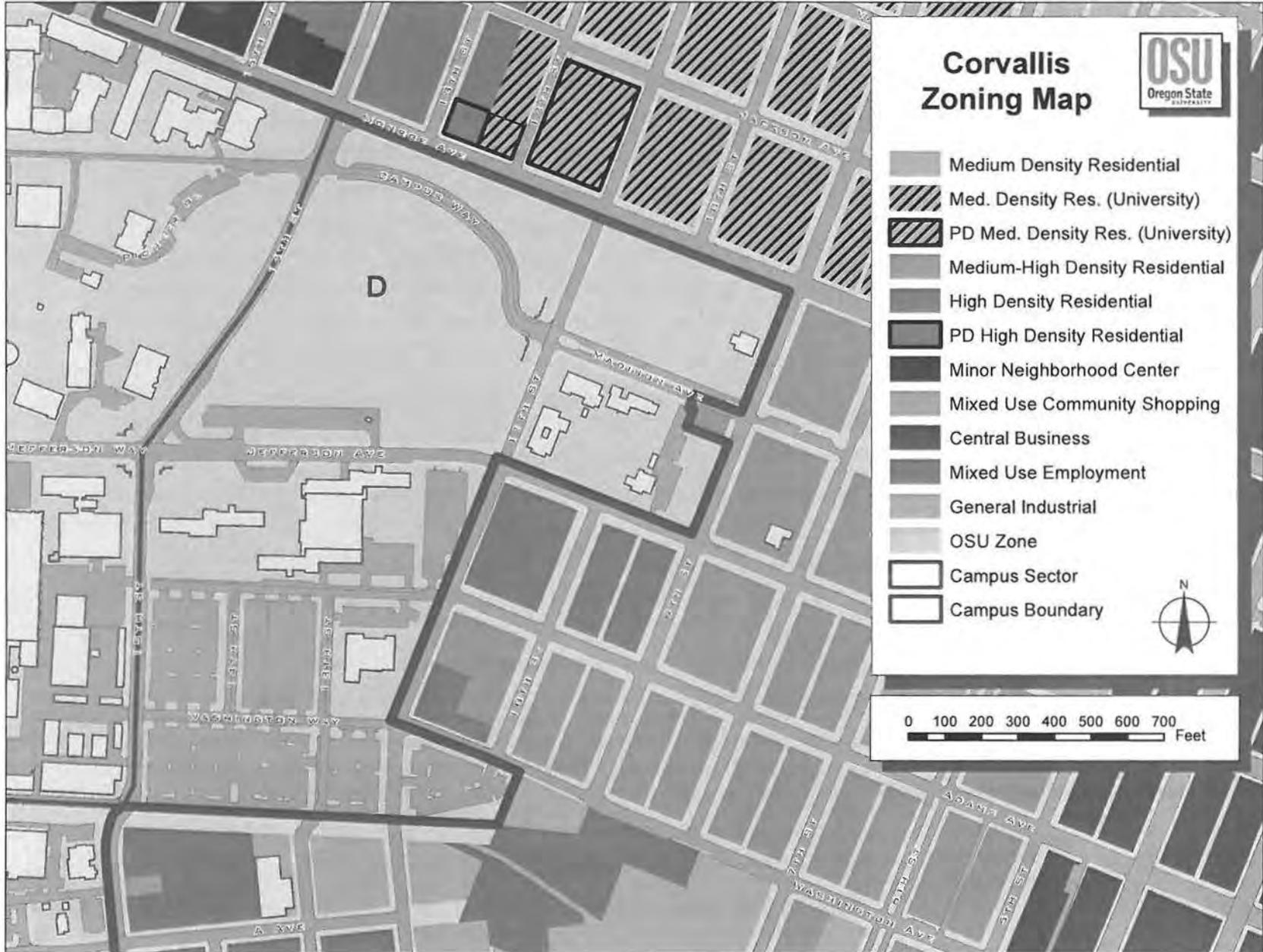


EXHIBIT I.61



Map prepared by OIU Campus Planning. Sara Robinson, S. Facilities, Campus Planning, The Planning Process Unit, and OIU Campus Sector Major Adjustment Graphics. Existing U. Map 13, 2, Amend 1/16/2013

ATTACHMENT F

Campus Master Plan Sector Map

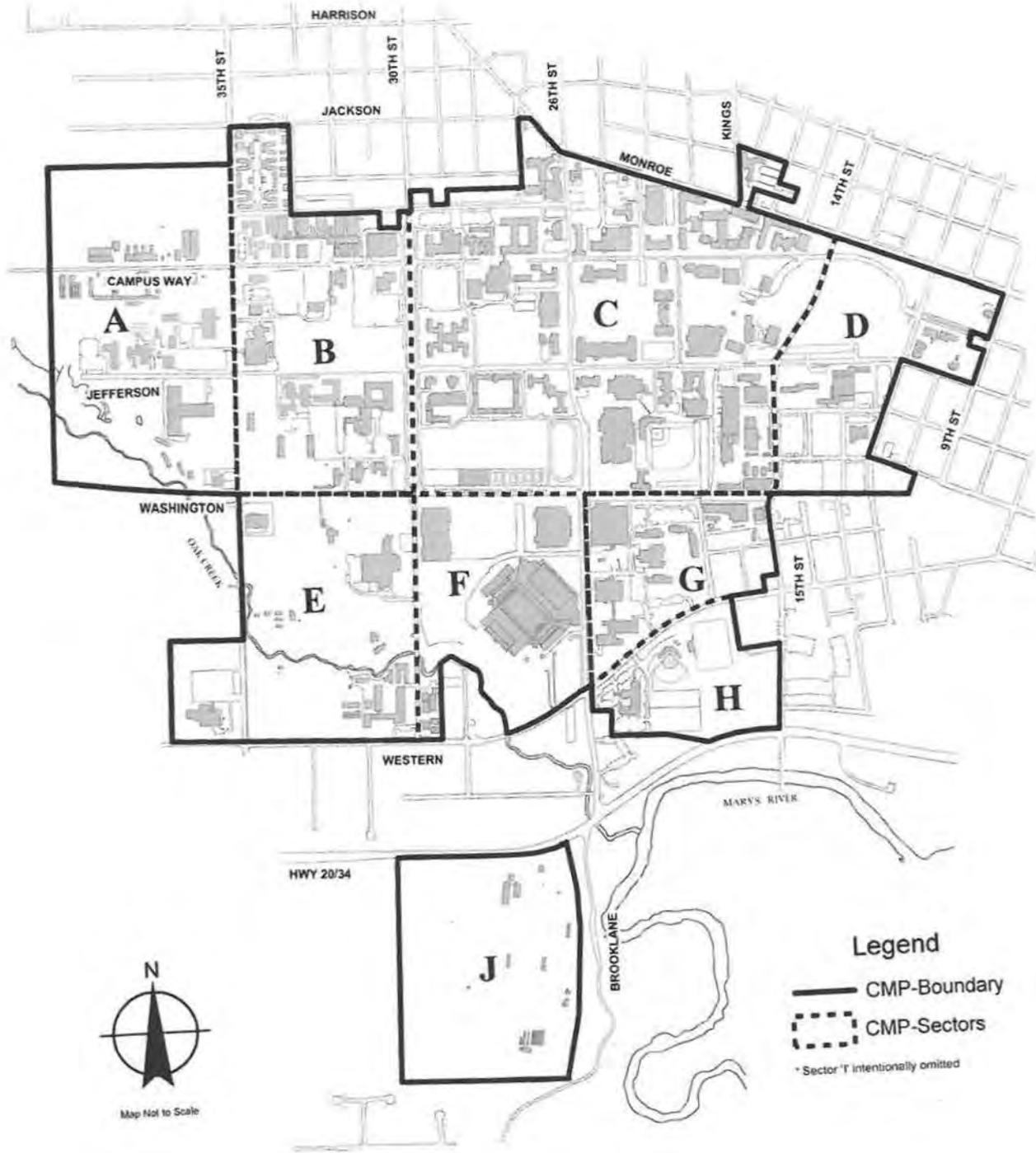


EXHIBIT I.63

Figure I.1: OSU Campus Sector Map

ATTACHMENT I



S A S A K I

Opsis Architecture

North Entrance

OSU New Student Residence

EXHIBIT I.66



S A S A

Opsis Architecture

Northwest Corner

ew Student Residence

EXHIBIT I.67



S A S A K I

Opsis Architecture

Southeast Corner

OSU New Student Residence



S A S A K I

Opis Architecture

Multipurpose Room

OSU New Student Residence

ATTACHMENT J

Existing OSU Street Ownership (Private Streets)

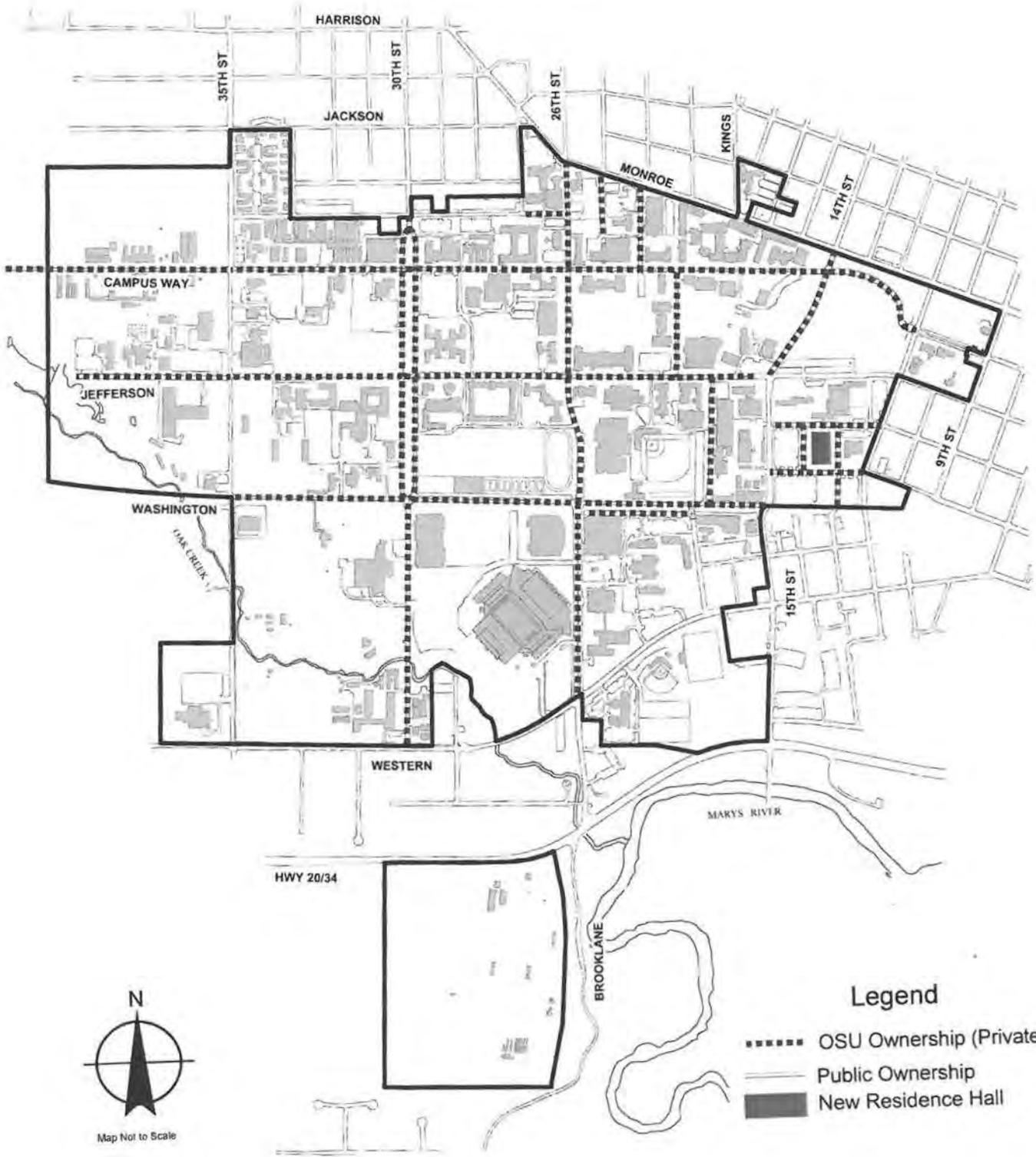


EXHIBIT I.70

ATTACHMENT K

Proposed OSU Street Ownership (Private Streets)

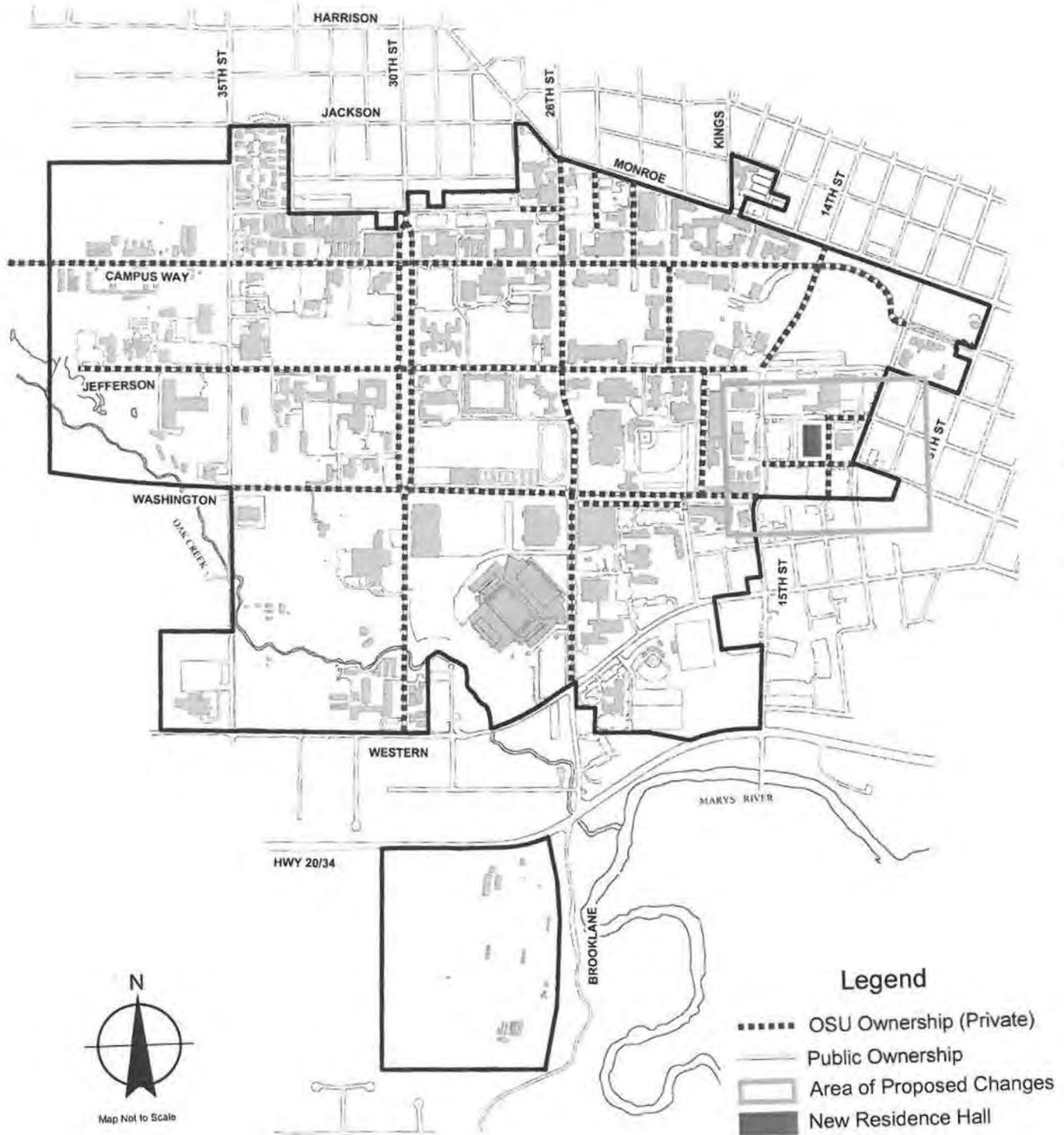
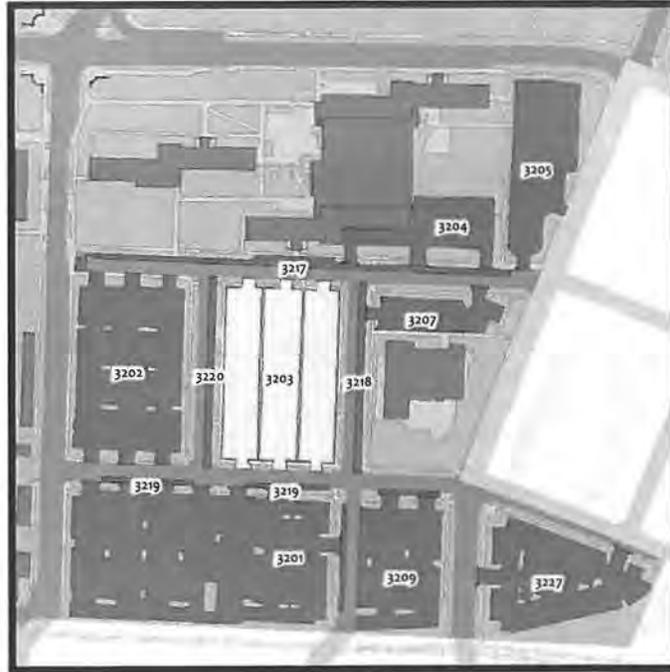


EXHIBIT I.71

ATTACHMENT L

EXISTING NEARBY PARKING LOTS



April 24 - 25, 2012 Parking Utilization Results

ID	Description	Total General Use Spaces			Average Available Spaces
		Occupied Spaces	Total Spaces	Percent Utilization	
3201	WASHINGTON AVE SOUTHWEST LOT	219.5	279.0	79%	59.5
3202	WASHINGTON AVE NORTHWEST LOT	183.5	185.0	99%	1.5
3204	ADAMS AVE NORTH LOT	19.5	22.0	89%	2.5
3205	ADAMS AVE NORTHEAST LOT	77.0	82.0	94%	5.0
3207	ADAMS AVE SOUTH LOT	21.0	26.0	81%	5.0
3209	WASHINGTON AVE SOUTHEAST LOT	7.5	102.0	7%	94.5
3217	Adams Ave	29.0	32.0	91%	3.0
3218	S 13TH ST	15.0	29.0	52%	14.0
3219	WASHINGTON AVE	2.0	7.0	29%	5.0
3220	S 14TH ST	29.5	30.0	98%	0.5
3227	WASHINGTON AVE AND 11TH ST SOUTHEAST LOT	90	90	100%	0.0
					190.5

Lot Proposed to be Displaced

ID	Description	Total General Use Spaces		
		Occupied Spaces	Total Spaces	Percent Utilization
3203	WASHINGTON AVE NORTHEAST LOT	164.5	192.0	86%

EXHIBIT I.72

ATTACHMENT M



EXHIBIT I.73

Data Analysis Legend

	Study Area		25% and Under
	OSU Campus Boundary		26% - 49%
	Residential Parking Districts		50% - 74%
			75% - 94%
			95% and Over

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City of Corvallis/OSU
Neighborhood Parking and Traffic Mitigation Analysis
April 24, 2012

Utilization
Analysis - Daily Use

ATTACHMENT N

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OSU SECTOR D
TRANSPORTATION
FACILITIES ANALYSIS

OREGON STATE
UNIVERSITY CAMPUS

Corvallis, Oregon



RENEWED 31 DEC 2013

Prepared For
Oregon State University

Completed On
November 5, 2012

Project Number
2120355.00

EXHIBIT I.74

TABLE OF CONTENTS	Page #
I. Introduction	1
II. Scope of Report.....	2
III. Plan Scenarios	3
IV. Trip Generation and Distribution	4
V. Vehicle Operation Analysis.....	7
VI. Mitigation	8
VII. Alternative Vehicle Operation Analysis	9
VII. Summary	10

LIST OF TABLES

Table 1 – Square Footage to Transfer	3
Table 2 – Building/Structure Square Footage for Transfer	3
Table 3 – Existing Student Residence Trip Generation.....	4
Table 4 – Proposed Student Residence Trip Generation	4
Table 5 – Existing Administration Trip Generation.....	5
Table 6 – Proposed Administration Trip Generation	5
Table 7 – Intersection Operations (LOS)	7
Table 8 – Mitigated Intersection Operations (LOS)	8
Table 9 – Alternative Analysis Intersection Operations (LOS)	9

I. INTRODUCTION

The following transportation analysis supports the proposed Major Adjustment to the Oregon State University (OSU) Campus Master Plan (CMP). Specifically, this analysis evaluates changes to the Base Transportation Model (BTM) resulting from the proposed Major Adjustment and identifies any necessary infrastructure mitigation to provide acceptable transportation system operation in the 2014-2015 CMP plan year.

As part of the Major Adjustment, Oregon State University (OSU) is proposing to construct a new 90,000 SF student residence having approximately 324 beds in 55 units, health services, and community areas. The residence site is located in Sector D, immediately south of Wilson Hall, and is part of the McNary Dining and Service Center complex. The site is currently an unimproved parking lot, bounded by Adams Avenue, SW 13th and SW 14th Streets, and Washington Avenue. To improve pedestrian connectivity to campus, the project further contemplates changing travel lanes and parking along portions of Adams Avenue and SW 14th Street, and redirecting vehicular traffic onto other roadways. Figure 1 presents the building location and immediate vicinity.

In addition to the new student residence, OSU is also anticipating future construction of 15,000 SF of *Administration* use in Sector D. The specific nature of the use is unknown; however, it is anticipated to be located in the northeast portion of Sector D at the northwest corner of 9th Street and Jefferson Avenue.

Addition of the proposed student residence and administration use will exceed the Sector D permitted-to-be-constructed square footage contemplated in the CMP. Findings contained in the 2011-2012 BTM Update also indicate the nearby SW 15th Street/Washington Way/Washington Avenue intersections exceed the City of Corvallis (City) mobility standard during peak periods. As such, the City land use process requires a CMP Major Adjustment, part of which includes a BTM refinement contemplating transferring additional permitted-to-be-constructed square footage to Sector D, and an analysis of nearby intersection improvements necessary to provide acceptable plan year operations.

II. SCOPE OF REPORT

This analysis addresses intersection operations in the Sector D influence area relative to the additional development anticipated to be constructed. Analysis intersections include:

- SW 11th Street/Jefferson Way
- SW 15th Street/Washington Way
- SW 15th Street/Washington Avenue
- SW 15th Street/Jefferson Way

Operation analyses were performed for the weekday AM and PM peak hours at the study intersections for the following scenarios:

- Current 2014-2015 CMP full build-out
- Proposed 2014-2015CMP full build-out

System operating conditions are documented and mitigation measures are identified to address system deficiencies.

III. PLAN SCENARIOS

CURRENT CAMPUS MASTER PLAN

The current CMP allows for a total of 330,361 SF of buildings to be constructed in Sector D and 5,404,719 SF in Sector C. With the planned/anticipated Sector D buildings, the sector will be over-constructed by approximately 71,000 SF. Therefore, OSU is proposing to amend the CMP by transferring some available building square footage from Sector C to D. Figure 2 presents the Current CMP traffic volumes at the study area intersections.

PROPOSED CAMPUS MASTER PLAN

In addition to the construction of 90,000 SF of student residence, OSU is also anticipating future construction of 15,000 SF of *Administration* use in Sector D. To allow for construction of both of these uses, it is proposed to transfer available square footage from Sector C to D. The following table presents the total square footage proposed to be transferred.

Scenario/Use	Square feet
Existing Sector D Construction	326,233 ¹
Proposed New Student Residence	90,000
Proposed Administration	15,000
Total to be Constructed	431,233
Permitted-to-be-Constructed	360,331 ¹
Need to Transfer	70,902

¹ Data from the Model BTM Update 2011-2012 Technical Letter #2 - Building Assignment and Model Development

As presented in the previous table, it is necessary to transfer approximately 71,000 SF to Sector D to accommodate the proposed uses.

The following table presents the detailed square footage transfer from Sector C to D by use type.

Scenario Use	Existing Permitted-to-be Constructed		To Be Transferred		Proposed Permitted-to-be-Constructed		Proposed CMP Full Build-Out	
	C	D	C	D	C	D	C	D
Instruction	118,760	0			118,760	0	1,415,036	0
Research	33,573	0			33,573	0	400,025	0
Library	23,927	0			23,927	0	285,096	0
Administration	78,804	-2,161	-15,000	15,000	63,804	12,839	923,957	31,256
Occasional Services	0	0			0	0	0	0
Frequent Services	11,843	-700			11,843	-700	141,107	5,267
Events	3,199	0			3,199	0	38,119	0
Recreation	19,936	0			19,936	0	237,541	0
Housing	59,393	-40,516	-56,000	56,000	3,393	15,484	651,678	360,771
Physical Plant	8,746	0			8,746	0	104,204	0
Food	4,240	-3,763			4,240	-3,763	50,517	28,303
Non Assignable	91,182	-762			91,182	-762	1,086,439	5,734
Total	453,603	-47,902	-71,000	71,000	382,603	38,582	5,333,719	431,331

As shown in the previous table, with the proposed transfer, Sector C will have 5,333,719 SF and Sector D will have 431,331 SF constructed at the time of CMP full build-out. All other sector square footages remain the same as presented in the in *the OSU – Base Transportation Model (BTM) Update 2011-2012 Technical Letter #2 – Building Assignment and Model Development*.

To support construction of the new student residence and long-range campus planning needs, it is necessary to eliminate/remove motor vehicle traffic from Adams Avenue between 13th and 15th Streets. This change requires amending CMP Figure 6.2 to remove the street designation along this roadway section and revising the BTM to remove the link and motor vehicle connections to the parking areas. All BTM revisions were assumed for the proposed CMP scenarios.

IV. TRIP GENERATION AND DISTRIBUTION

TRIP GENERATION – HOUSING USE

The proposed *Housing* use, specifically the 90,000 SF New Student Residence Hall is anticipated to house incoming freshman and will have approximately 324 beds in 55 units. Motor vehicle trip generation is anticipated to be very low based on the building proximity to campus. Additionally, trip generation associated with similar sized student residences was evaluated using the OSU BTM model and is presented in the following table.

Building Name	SF	AM Trips			PM Trips		
		Production	Attraction	Trips/KSF	Production	Attraction	Trips/KSF
West Hall	62,870	3	9	0.19	10	4	0.22
McNary Hall	72,500	3	10	0.18	11	5	0.22
Wilson Hall	73,000	3	11	0.19	11	5	0.22
Average Rate per KSF		0.05	0.14	0.19	0.15	0.07	0.22

Based on the trip rates presented in the previous table, trip generation for the proposed student residence is presented in the following table.

Use	SF	AM Trips		PM Trips	
		Production	Attraction	Production	Attraction
Residence	90,000	4	13	14	6

As identified in the previous table, motor vehicle trip generation for the proposed student residence is 17 AM and 20 PM peak hour trips.

No new nearby on-site parking is anticipated to be constructed with the New Student Residence Hall. It is anticipated the vehicles currently using the 192-space parking lot (Lot 3203) which will be replaced by the residence hall will shift to Lots 3201 and 3209. This shift is especially anticipated for Lot 3209 which based on the 2012 OSU Campus Parking Utilization Survey has 8% utilization.

EXHIBIT I.78

TRIP GENERATION – ADMINISTRATION USE

The exact nature of the proposed 15,000 SF *Administration* use has not yet been determined. Rather, it is being transferred to Sector D to accommodate anticipated future development. Trip generation associated with similar buildings was evaluated using the OSU BTM model and is presented in the following table.

Building Name	SF	AM Trips			PM Trips		
		Production	Attraction	Trips/KSF	Production	Attraction	Trips/KSF
Plageman Student Health Center	31,419	7	55	1.97	52	3	1.75
Asian and Pacific Cultural Center	2,395	1	4	2.09	4	0	1.67
Foundation Center	32,050	6	52	1.81	48	3	1.59
Average Rate per KSF		0.21	1.69	1.90	1.58	0.09	1.67

Based on the data in the previous table, trip generation for the proposed administration use is presented in the following table.

Use	SF	AM Trips		PM Trips	
		Production	Attraction	Production	Attraction
Administration	15,000	3	25	24	1

As identified in the previous table, motor vehicle trip generation for the proposed administration use is 28 AM and 25 PM peak hour trips.

TRIP DISTRIBUTION

It is anticipated the new *Administration* use will be located in the northeast section of Sector D and will have additional on-site parking for the intended use. Trip distribution for the proposed student residence and administration use was based on the BTM model and engineering judgment as follows:

- 40 percent to the north via 9th, 11th and 15th Streets
- 35 percent to the east via Washington Way
- 25 percent to the south 11th Street and 15th Street

Figure 3 presents vehicle trip assignment for both uses at the study area intersections. Be advised that some trips travel outside the study area and are therefore not accounted for in the intersection volumes.

TRIP GENERATION AND DISTRIBUTION SUMMARY

In summary, any new Sector D trip generation results from added *Administration* use square footage. It should be noted that not only does the added *Housing* use not significantly increase Sector D trip generation; it displaces an existing surface parking lot which generates trips.

While the *Housing* use will decrease Sector C trip generation, as a conservative analysis this decrease was not considered when evaluating increased Sector D uses.

BACKGROUND TRAFFIC GROWTH

A background traffic growth rate was calculated based on intersection turning movement volume differences between 2005 and 2010. Using this data, the average intersection background traffic growth rate is approximately 0.5% per year.

Historic traffic volumes on 99W near Taylor Avenue were also obtained from the Oregon Department of Transportation (ODOT) Traffic Counting Program for the years 2000, 2005, and 2010. Data indicates traffic volumes decreased approximately 15% from 2000 to 2005 and did not increase from 2005 to 2010.

As such, a conservative 1% annual growth rate was added to the 2010 traffic volumes to establish 2011-2012 volumes which is based on historic count volumes and conversations with ODOT staff.

INTERSECTION ANALYSIS VOLUMES

Current plan year intersection volumes are the sum of existing traffic volumes, background traffic growth, and traffic volume increases predicted by the 2014-2015 BTM model assuming current CMP full build-out.

Proposed plan year intersection volumes include the current CMP full build-out volumes plus the traffic volume increase resulting from the increased Sector D uses. Figure 4 presents the proposed CMP full build-out traffic volumes at the study area intersections.

V. VEHICLE OPERATION ANALYSIS

OPERATION ANALYSIS DESCRIPTION

Intersection operation characteristics are generally defined by two measurements: level-of-service (LOS) and volume-to-capacity (v/c) ratio. The city uses LOS.

LOS is a measure of the average control delay (in seconds) experienced by drivers at an intersection and is described by a letter on the scale from 'A' to 'F.' LOS 'A' represents optimum operating conditions and minimum delay. LOS 'F' indicates over capacity conditions causing unacceptable delay. Based on City standards, LOS D is the minimum acceptable during peak periods.

PEAK HOUR FACTOR

The peak hour factor (PHF) is used to determine the design hour flow rate and is defined as the ratio of total hourly flow to the peak 15-minute flow rate within the hour. For analyses contained in this document, PHFs are calculated for individual study area intersections.

OPERATION ANALYSIS

Highway Capacity Manual 2000 analysis procedures were used to calculate LOS for the study area intersections. For signalized and all-way stop-controlled (AWSC) intersections, overall intersection operations are presented. For unsignalized intersections, operations are presented for the critical lane group.

Operation analyses were performed for the weekday AM and PM peak hours at the study intersections for the following scenarios:

- Current 2014-2015 CMP full build-out
- Proposed 2014-2015 CMP full build-out

LOS operation results are summarized in the following table.

Study Intersection (North-South/ East-West)	Geometry	Control	Current 2014-2015 CMP		Proposed 2014-2015 CMP	
			AM	PM	AM	PM
11 th Street/ Jefferson Avenue	Existing	TWSC	C	C	C	C
15 th Street/ Washington Way	Existing	Stop-Control	C	E	C	E
15 th Street/ Washington Avenue	Existing	Stop-Control	B	D	C	D
15 th Street/ Jefferson Avenue	Existing	Signalized	A	A	A	A

¹ Interim improvements include construction of eastbound left-turn and southbound right-turn lanes.

As depicted in the previous table, all study area intersections in all scenarios meet mobility standards except the 15th Street/Washington Way with existing geometry. This is consistent with the analysis findings contained in the *2011-2012 OSU Base Transportation Model Update – Technical Letter #3 – Operations Analysis*.

VI. MITIGATION

Based on the operation analysis, the 15th Street/Washington Way intersection requires mitigation to operate at the acceptable agency mobility standard.

Consistent with the mitigation identified in the *2011-2012 OSU Base Transportation Model Update – Technical Letter #3 – Operations Analysis*, improvements include:

Existing Washington Way Alignment (15th Street/Washington Way ‘T’ intersection)

1. Construct eastbound left-turn lane.
2. Construct southbound right-turn lane.
3. Consider conversion to all-way stop-control (AWSC) when intersection operations exceed the City mobility standard.

These infrastructure improvements are more specifically identified in the *OSU Washington Way Construction Documents – Intersection Operation Analysis* and a figure depicting the improvements is attached.

MITIGATED ANALYSIS

Analyses results are summarized in the following table assuming intersection mitigation.

Intersection	Infrastructure Improvements	Proposed 2014-2015 CMP	
		AM	PM
15 th Street/ Washington Way	▪ Construct eastbound left-turn lane.	C	E
	▪ Construct southbound right-turn lane.	C	E
	▪ Convert to AWSC when intersection operations exceed the City mobility standard.	C	C

With construction of improvements and installation of AWSC, intersection operations meet the mobility standard. The following additional items are noted regarding converting the 15th Street/Washington Way intersection to AWSC.

- Operations will meet the mobility standard.
- AWSC operations will eliminate the any sight-distance deficiencies.
- Approach volumes are not necessarily well-balanced – i.e. 15th Street volumes are higher and AWSC will introduce delay on these movements.

VII. ALTERNATIVE VEHICLE OPERATION ANALYSIS

The *Vehicle Operation Analysis* presented above assumes full OSU campus build-out by 2014-2015 based on CMP assumptions; however, it is unlikely that 2.8 million SF of buildings will be constructed in the next two years. Therefore, an alternative analysis was conducted assuming a conservative 1% annual background traffic growth rate, as opposed to assuming growth related to building construction.

Figure 5 presents the traffic volumes at the study area intersections assuming a 1% annual background traffic growth rate.

The following table presents this alternative LOS operation analysis.

TABLE 9 – ALTERNATIVE ANALYSIS INTERSECTION OPERATIONS (LOS)		
Intersection	Infrastructure Improvements	Proposed 2014-2015 CMP
		PM
15 th Street/ Washington Way	▪ Construct eastbound left-turn lane. ▪ Construct southbound right-turn lane.	D
	▪ Convert to AWSC when intersection operations exceed the City mobility standard.	C

As presented in the previous table, the 15th Street/Washington Way intersection operations meet the City mobility standard through the plan year assuming 1% yearly background traffic growth with either minor roadway stop-control or AWSC.

VII. SUMMARY

Materials contained in this analysis support the proposed OSU Campus Master Plan Major Adjustment which includes a BTM refinement that contemplates transferring additional permitted-to-be-constructed square footage to Sector D, and an analysis of the SW 15th Street/Washington Avenue/Washington Way intersection improvements necessary to provide acceptable plan year operations.

The following conclusions and recommendations are made based on analysis contained in this document:

1. The proposed *Housing* and *Administration* uses exceed the current Sector D permitted-to-be-constructed square footage contemplated in the Campus Master Plan (CMP).
2. To accommodate the additional Sector D uses, 71,000 SF are proposed to be transferred from Sector C to Sector D.
3. The proposed *Housing* use is not anticipated to increase Sector D trip generation as it displaces an existing surface parking which generates trips. The proposed *Administration* use will minimally increase Sector D trip generation.
4. 15th Street/Washington Way intersection operations do not meet the City mobility standard with existing geometry assuming CMP full build-out. With construction of proposed interim improvements and installation of all-way stop-control, intersection operations meet the mobility standard.
5. 15th Street/Washington Way intersection operations meet the City mobility standard through the CMP plan year assuming 1% annual background traffic growth with proposed interim improvements and either minor roadway stop-control or AWSC



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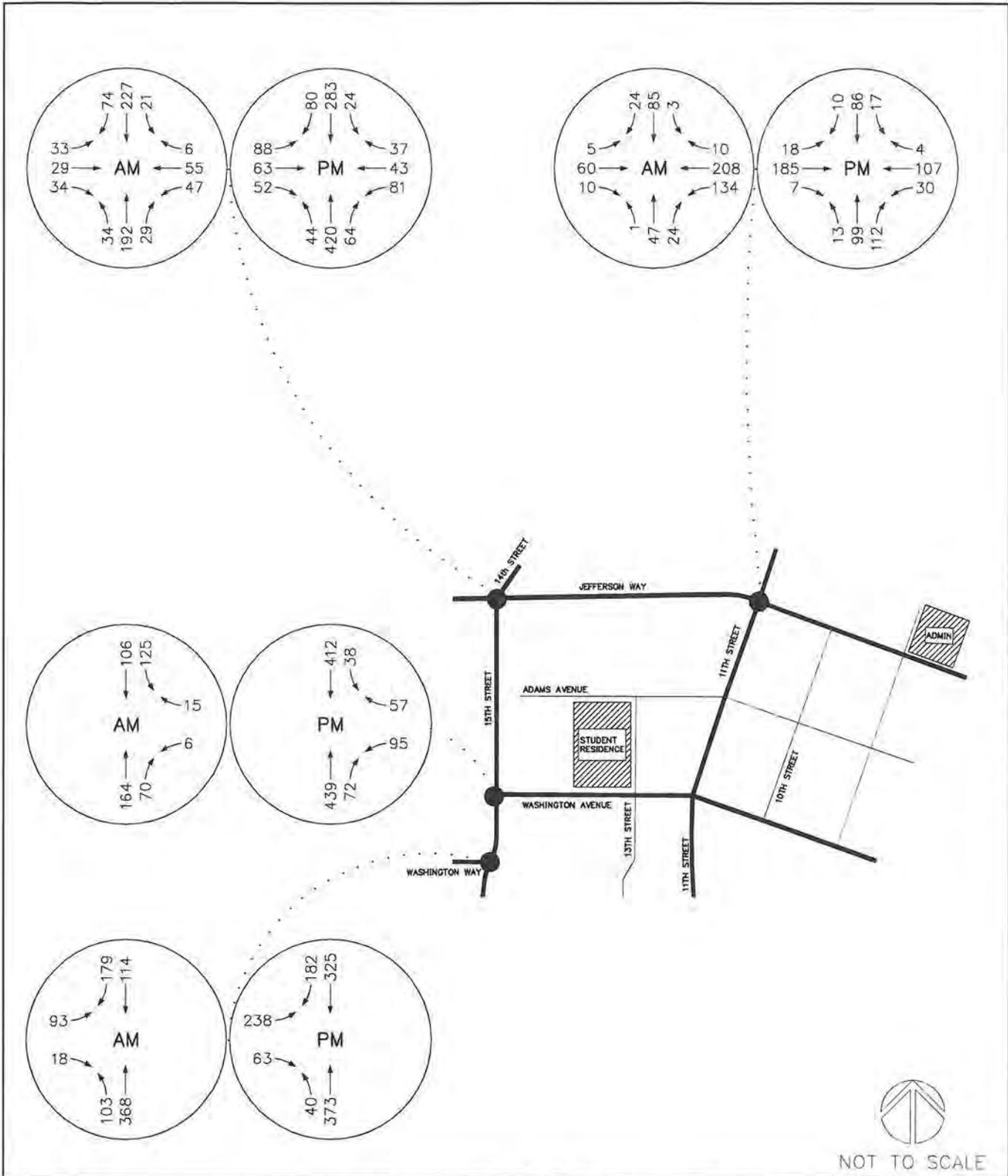
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VICINITY MAP

OSU Sector D Transportation Facilities Analysis
 Corvallis, Oregon

FIGURE

1



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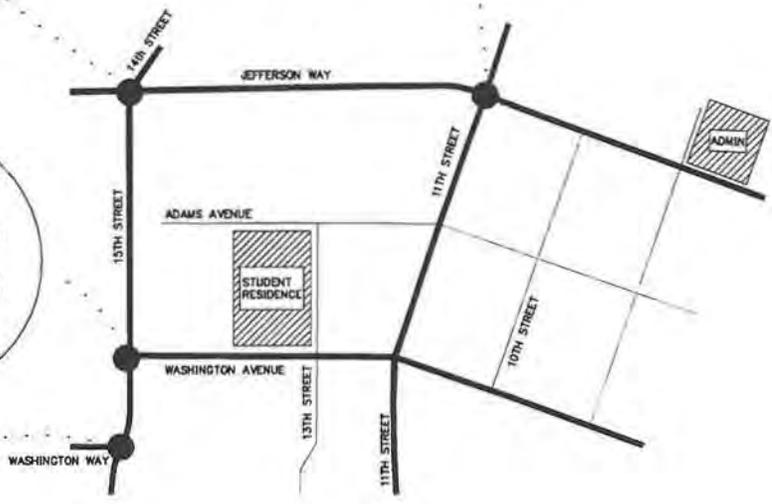
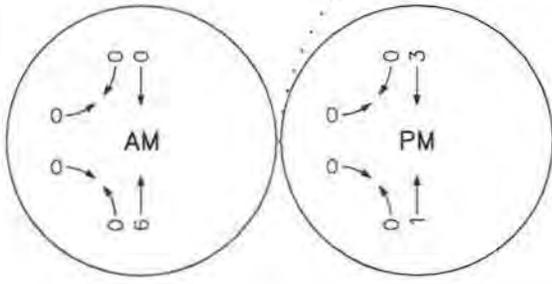
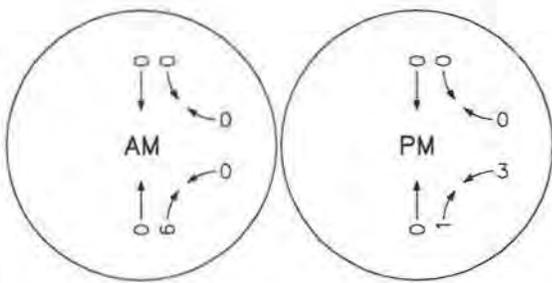
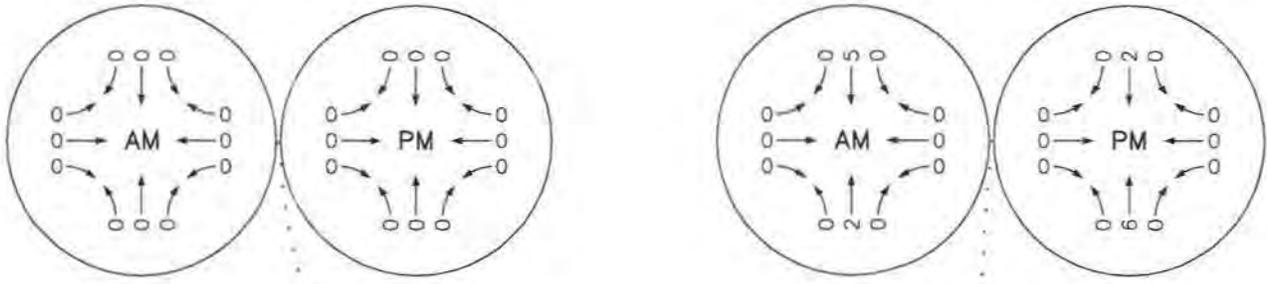
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2014/15 WASHINGTON WAY
 INTERSECTION VOLUMES USING
 USING 1% PER YEAR GROWTH RATE

OSU Sector D Transportation Facilities Analysis
 Corvallis, Oregon

FIGURE

2



WEEKDAY PM PEAK HOUR NEW VEHICLE TRIPS				
LAND USE	PRODUCTION/ATTRACTION			
	AM	PM	AM	PM
STUDENT RESIDENCE	4	14	13	6
ADMINISTRATION	3	24	25	1



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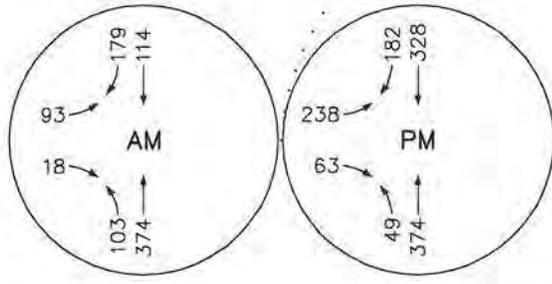
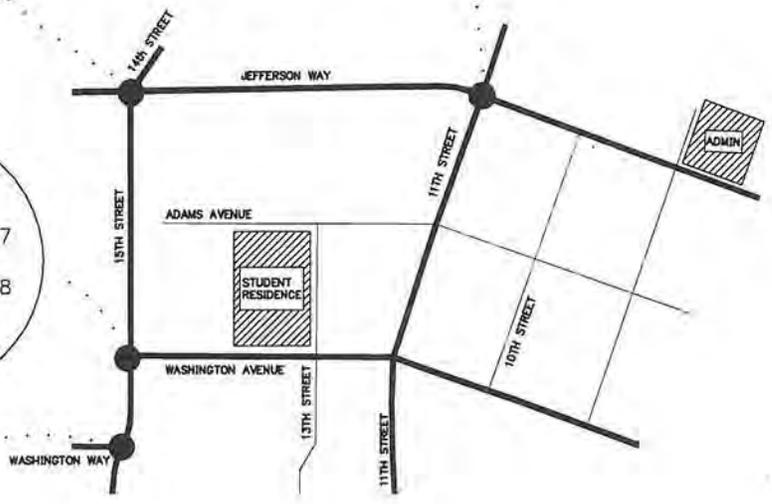
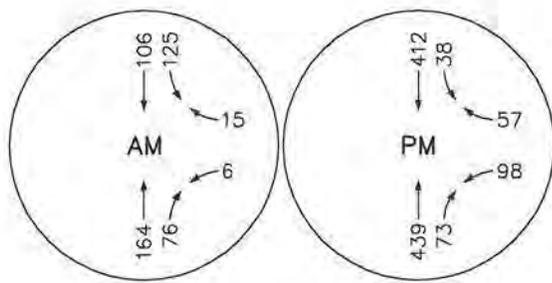
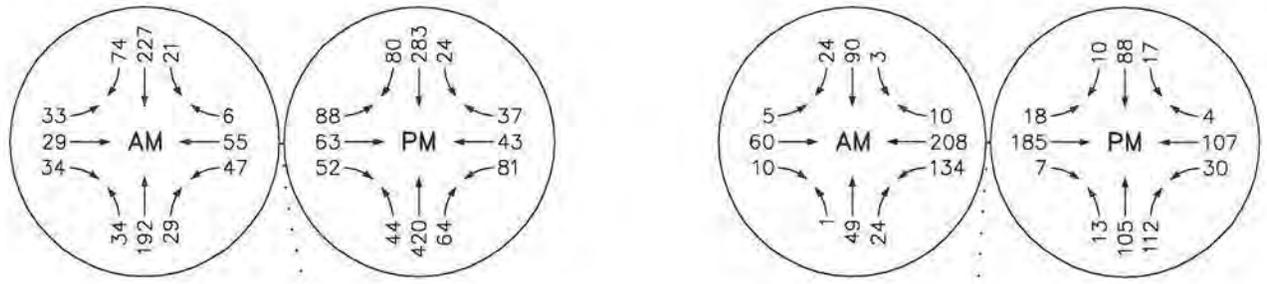
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**SITE TRIP ASSIGNMENT AT
STUDY AREA INTERSECTIONS
WEEKDAY AM/PM PEAK HOUR**

OSU Sector D Transportation Facilities Analysis
Corvallis, Oregon

FIGURE

3



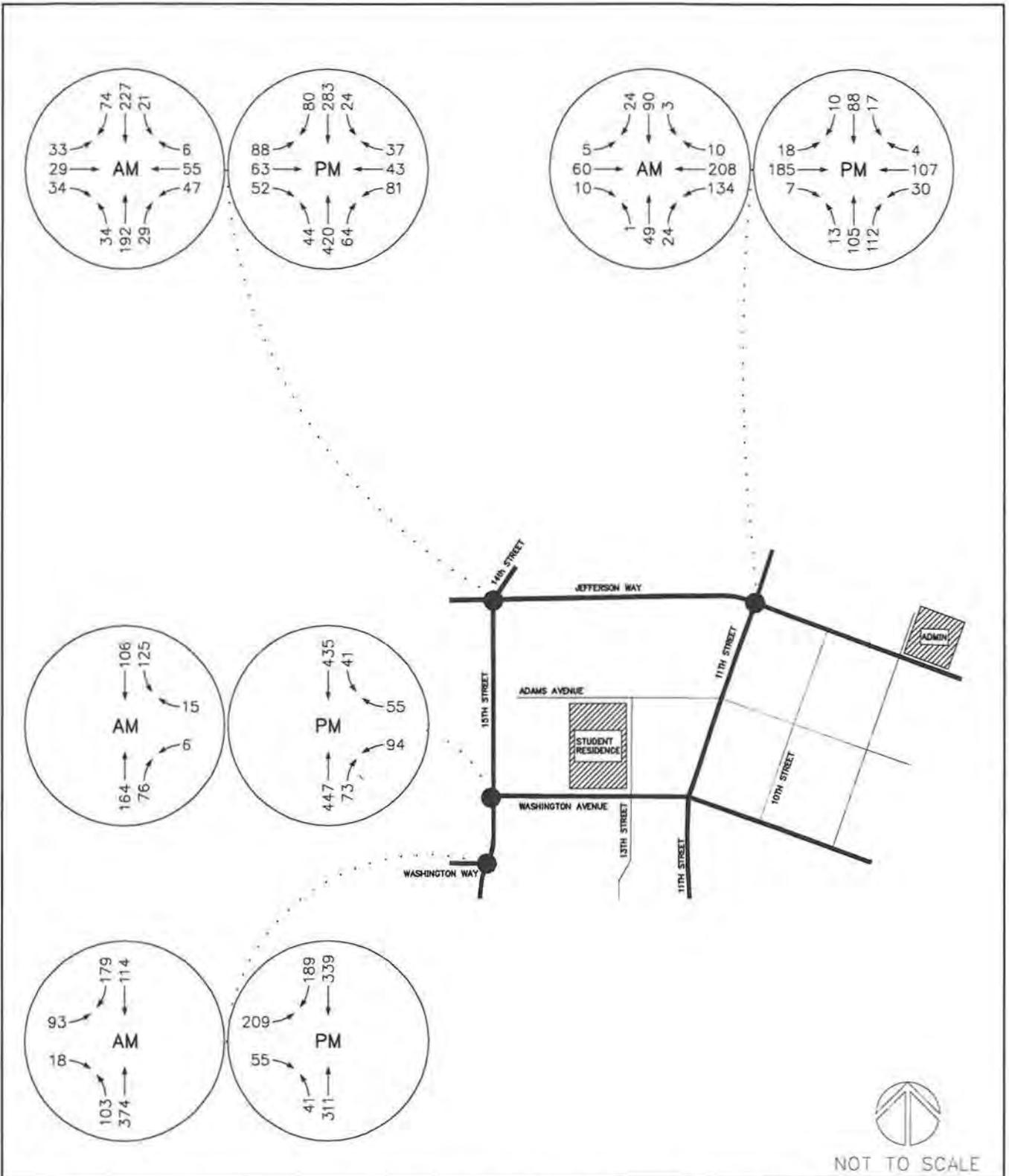
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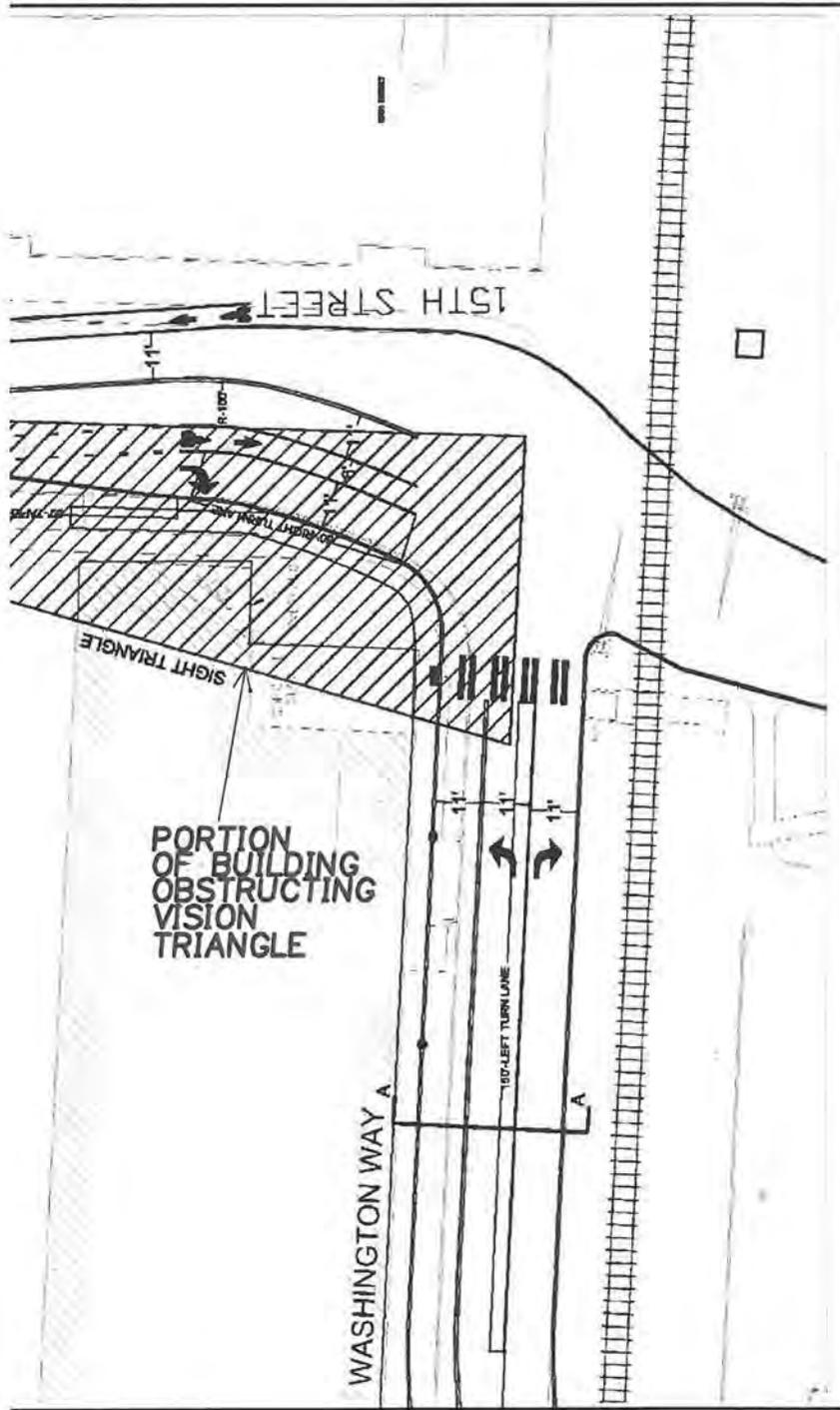
2014/15 PROPOSED CMP FULL
 BUILD-OUT INTERSECTION VOLUMES
 WEEKDAY AM/PM PEAK HOUR
 OSU Sector D Transportation Facilities Analysis
 Corvallis, Oregon

FIGURE
4



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<p>GROUP MACKENZIE</p> <p>Portland OR Vancouver WA Seattle WA 503.224.8580 360.885.7878 208.748.8888</p> <p>© GROUP MACKENZIE 2010 ALL RIGHTS RESERVED. THESE DRAWINGS ARE THE PROPERTY OF GROUP MACKENZIE AND ARE NOT TO BE USED OR REPRODUCED IN ANY MANNER WITHOUT PRIOR WRITTEN PERMISSION.</p>	<p>DATE: 10.23.12 DRAWN BY: MJD CHECKED BY: CMC JOB NO: 2120355.00</p>	<p>2014/15 PROPOSED STRAIGHT GROWTH 1% PER YEAR WEEKDAY AM/PM PEAK HOUR OSU Sector D Transportation Facilities Analysis Corvallis, Oregon</p>	<p>FIGURE 5</p>
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**WASHINGTON WAY
 SIGHT DISTANCE**

**WASHINGTON WAY INTERIM SOLUTION
 CORVALLIS, OREGON**

FIGURE

3

EXHIBIT I.90

Node 3433: 11th @ Jefferson

Control Type TWSC
 Method HCM 2000
 dI, Average Delay 8.35
 Worst Case Delay 24.48
 Worst Case LOS C

Volume and Adjustments

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
Base Volume	3.00	85.00	24.00	134.00	208.00	10.00	1.00	47.00	24.00	5.00	60.00	10.00
PHF, Peak-hour factor	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
V, Adjusted Volume	4.00	113.33	32.00	178.67	277.33	13.33	1.33	62.67	32.00	6.67	80.00	13.33

Pedestrians

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
vx, Flow (Ped/hr)	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
w, Lane Width (ft)	12.00	12.00	12.00	12.00			12.00	12.00	12.00	12.00		
Sp, Walking Speed (ft/s)	4.00	4.00	4.00	4.00			4.00	4.00	4.00	4.00		
fpb, Percent Blockage	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		

Capacity of Movements below Rank 1

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
Rank	4	3	2	2	1	1	4	3	2	2	1	1
vx, Volume	4.00	113.33	32.00	178.67			1.33	62.67	32.00	6.67		
Conflicting Volume (Veh)	788.67	748.00	284.00	93.33			814.00	748.00	86.67	290.67		
Conflicting Volume (Ped)	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
Conflicting Volume	788.67	748.00	284.00	93.33			814.00	748.00	86.67	290.67		
cpx, Potential Capacity	308.50	340.95	754.96	1500.99			296.60	340.95	971.91	1271.10		
Capacity	221.48	290.38	754.96	1500.99			176.76	290.38	971.91	1271.10		

Critical Gap and Follow Up Time

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
tc,base, Base Critical Gap	7.10	6.50	6.20	4.10			7.10	6.50	6.20	4.10		
tc,HV, Heavy Vehicles Adj.	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00		
Phv, % Heavy Vehicles			2		2				2		2	
tc,G, Grade Adjustment Fac	0.20	0.20	0.10	1.00			0.20	0.20	0.10	1.00		
G, % Grade		0.00			0.00			0.00			0.00	
T3,lt, Geometry Adjustment	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
tc, Critical Gap	7.12	6.52	6.22	4.12			7.12	6.52	6.22	4.12		
tf,base, Base Follow-Up Time	3.50	4.00	3.30	2.20			3.50	4.00	3.30	2.20		
tf,hv, Heavy Vehicles Adjus	0.90	0.90	0.90	0.90			0.90	0.90	0.90	0.90		
tf, Follow-Up Time	3.52	4.02	3.32	2.22			3.52	4.02	3.32	2.22		

Delay and Level of Service by Movement

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
vx, Volume	4.00	113.33	32.00	178.67	277.33	13.33	1.33	62.67	32.00	6.67	80.00	13.33
cmx, Capacity	221.48	290.38	754.96	1500.99			176.76	290.38	971.91	1271.10		
V/C	0.02	0.39	0.04	0.12			0.01	0.22	0.03	0.01		
d, Delay	24.48	24.48	24.48	7.72			17.89	17.89	17.89	7.85		
LOS	C	C	C	A			C	C	C	A		
dA, Approach Delay		24.48			2.94			17.89			0.52	
Approach LOS		C			A			C			A	
dRank1, Rank 1 Delay					1.11						0.04	

Delay and Level of Service by Lane

Approach	N	E (Major)	S	W (Major)
	Lane 1	Lane 1	Lane 1	Lane 1
Movements	L1, T, R1	L1, T, R1	L1, T, R1	L1, T, R1
vx, Volume	149.33	469.33	96.00	100.00
cmx, Capacity	331.31	1500.99	374.59	1271.10
V/C	0.45	0.31	0.26	0.08
Q95, 95% Queue Length	2.24	1.35	1.00	0.26
d, Delay	24.48	7.72	17.89	7.85
LOS	C	A	C	A
dA, Approach Delay	24.48	2.94	17.89	0.52
Approach LOS	C	A	C	A

Mon Oct 08 11:33:13 2012

EXHIBIT I.91

Node 3561: 15th @ Washington Ave

Control Type TWSC
 Method HCM 2000
 dl, Average Delay 2.73
 Worst Case Delay 12.57
 Worst Case LOS B

Volume and Adjustments						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
Base Volume	125.00	106.00	6.00	15.00	164.00	70.00
PHF, Peak-hour factor	0.670	0.670	0.670	0.670	0.670	0.670
V, Adjusted Volume	186.57	158.21	8.96	22.39	244.78	104.48

Pedestrians						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
vx, Flow (Ped/hr)	0.00		0.00	0.00		
w, Lane Width (ft)	12.00		12.00	12.00		
Sp, Walking Speed (ft/s)	4.00		4.00	4.00		
fpb, Percent Blockage	0.00		0.00	0.00		

Capacity of Movements below Rank 1						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
Rank	2	1	3	2	1	1
vx, Volume	186.57		8.96	22.39		
Conflicting Volume (Veh)	349.25		828.36	297.01		
Conflicting Volume (Ped)	0.00		0.00	0.00		
Conflicting Volume	349.25		828.36	297.01		
cpx, Potential Capacity	1209.60		340.75	742.41		
Capacity	1209.60		282.80	742.41		

Critical Gap and Follow Up Time						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
tc,base, Base Critical Gap	4.10		7.10	6.20		
tc,HV, Heavy Vehicles Adjusted	1.00		1.00	1.00		
Phv, % Heavy Vehicles		2		2		2
tc,G, Grade Adjustment Factor	1.00		0.20	0.10		
G, % Grade		0.00		0.00		0.00
T3,lt, Geometry Adjustment	0.00		0.70	0.00		
tc, Critical Gap	4.12		6.42	6.22		
tf,base, Base Follow-Up Time	2.20		3.50	3.30		
tf,hv, Heavy Vehicles Adjusted	0.90		0.90	0.90		
tf, Follow-Up Time	2.22		3.52	3.32		

Delay and Level of Service by Movement						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
vx, Volume	186.57	158.21	8.96	22.39	244.78	104.48
cmx, Capacity	1209.60		282.80	742.41		
V / C	0.15		0.03	0.03		
d, Delay	8.52		12.57	12.57		
LOS	A		B	B		
dA, Approach Delay	4.61		12.57		0.00	
Approach LOS	A		B		A	
dRank1, Rank 1 Delay	1.45				0.00	

Delay and Level of Service by Lane			
Approach	N (Major)		S (Major)
Lane	Lane 1	Lane 1	Lane 1
Movements	L1, T	L1, R1	T, R1
vx, Volume	344.78	31.34	349.25
cmx, Capacity	1209.60	506.99	
V / C	0.29	0.06	
Q95, 95% Queue Length	1.18	0.20	
d, Delay	8.52	12.57	
LOS	A	B	
dA, Approach Delay	4.61	12.57	0.00
Approach LOS	A	B	A

EXHIBIT I.92

Tue Oct 23 14:38:48 2012

Node 3037 150 @ Johnson									
Control Type	N		E		S		W		
Method	HCA 2007		HCA 2007		HCA 2007		HCA 2007		
Average Delay	s		s		s		s		
Average LOS	A		A		A		A		
V/C	0.74		0.74		0.74		0.74		
Lost Time	0		0		0		0		

Volume and Adjustments by Movement									
Adjustment	N		E		S		W		
Adjustment	L	R	L	R	L	R	L	R	Adj
Base Volume	51	27	11	11	11	11	11	11	51
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Peak 15 Volume	37	23	9	9	9	9	9	9	37
Adjusted Volume	31	24	8	8	8	8	8	8	31

Volume and Adjustments by Lane Group									
Adjustment	N		E		S		W		
Adjustment	L	R	L	R	L	R	L	R	Adj
Base Volume	14327	14327	14327	14327	14327	14327	14327	14327	14327
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Peak 15 Volume	10178	10178	10178	10178	10178	10178	10178	10178	10178
Adjusted Volume	8551	8551	8551	8551	8551	8551	8551	8551	8551

Saturation Flow Rate									
Approach	N		E		S		W		
Lane Group	Perms	No. Lanes	Perms						
1. Base Saturation Flow Rate	14327	14327	14327	14327	14327	14327	14327	14327	14327
2. Intersecting Lane	1	1	1	1	1	1	1	1	1
3. Lane Width Adjustment									
4. % Heavy Vehicles									
5. % Heavy Vehicles									
6. Green Adjustment									
7. Parking Adjustment									
8. Bus Blocking Adjustment									
9. Area Type Adjustment									
10. Lane Utilization Adj.									
11. Left Turn Adj.									
12. Right Turn Adj.									
13. Left Turn Phd. Adj.									
14. Right Turn Phd. Adj.									
15. Saturation Flow Rate	1007	3800	1007	3800	1007	3800	1007	3800	1007

Capacity, Control Delay, and Level of Service Determination									
Approach	N		E		S		W		
Lane Group	Perms	No. Lanes	Perms						
1. Capacity	14327	14327	14327	14327	14327	14327	14327	14327	14327
2. Control Delay	38.25	376.25	38.25	376.25	38.25	376.25	38.25	376.25	38.25
3. Saturation Flow Rate	1007	3800	1007	3800	1007	3800	1007	3800	1007
4. Capacity	14327	14327	14327	14327	14327	14327	14327	14327	14327
5. Green Cycle	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
6. Volume Capacity	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
7. Uniform Delay	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
8. Sat. Saturation	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
9. Intersection Delay	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
10. Initial Queue Delay	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
11. Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12. Progression Adjustment	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
13. Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14. Delay	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
15. Approach Delay	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
16. Intersection Delay	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
17. Intersection L.O.S.	A	A	A	A	A	A	A	A	A
18. Intersection Delay	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25

Bills of Material									
Approach	N		E		S		W		
Lane Group	Perms	No. Lanes	Perms						
1. Green Cycle	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
2. Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3. Function Control	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
4. Second-Order Control	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
5. Saturated Flow	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6. Early Arrival Adj. Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
7. Average Best of Queue	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
8. % Green	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
9. Best of Queue Percent	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
10. Best of Queue	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85

Signal Timing Information									
Approach	N		E		S		W		
Lane Group	Perms	No. Lanes	Perms						
1. Cycle Length	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
2. Total Lost Time per Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Max Up Loss Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
4. Downstream Loss Time	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Green Time	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
6. Green Time End	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
7. Actual Green Time	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
8. Effective Green Time	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
9. Green Cycle	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
10. Volume / Saturation F	0.01	0.14	0.01	0.04	0.00	0.00	0.00	0.00	0.00
11. Critical Lane Group	1	1	1	1	1	1	1	1	1

Left-Turn Adjustment Factors for Permitted Phasing									
Approach	N		E		S		W		
Lane Group	Perms	No. Lanes	Perms						
1. Subject to Signal(s) or Mark	0	0	0	0	0	0	0	0	0
2. Cycle Length	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00
3. Lane Utilization	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
4. Left Turn Volume	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Opposing Signal	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
6. Number Lanes in Opp.	1	1	1	1	1	1	1	1	1
7. Number Left Lanes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8. Left Adj. LT Flow Rate	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
9. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39. Left Turn Proportion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40. Left Turn Proportion	0.00	0.00	0.00	0.0					

Node 3433, 11th @ Jefferson

Control Type TWSC
 Method HCM 2000
 dI, Average Delay 8.5
 Worst Case Delay 16.58
 Worst Case LOS C

Volume and Adjustments

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
Base Volume	17.00	86.00	10.00	30.00	107.00	4.00	13.00	99.00	112.00	18.00	185.00	7.00
PHF, Peak-hour factor	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
V, Adjusted Volume	20.00	101.18	11.76	35.29	125.88	4.71	15.29	116.47	131.76	21.18	217.65	8.24

Pedestrians

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
vx, Flow (Ped/hr)	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
w, Lane Width (ft)	12.00	12.00	12.00	12.00			12.00	12.00	12.00	12.00		
Sp, Walking Speed (ft/s)	4.00	4.00	4.00	4.00			4.00	4.00	4.00	4.00		
fpb, Percent Blockage	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		

Capacity of Movements below Rank 1

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
Rank	4	3	2	2	1	1	4	3	2	2	1	1
vx, Volume	20.00	101.18	11.76	35.29			15.29	116.47	131.76	21.18		
Conflicting Volume (Veh)	587.06	467.06	128.24	225.88			519.41	465.29	221.76	130.59		
Conflicting Volume (Ped)	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
Conflicting Volume	587.06	467.06	128.24	225.88			519.41	465.29	221.76	130.59		
cpx, Potential Capacity	421.11	493.42	921.75	1342.58			467.12	494.55	817.80	1454.75		
Capacity	276.72	471.32	921.75	1342.58			372.27	472.40	817.80	1454.75		

Critical Gap and Follow Up Time

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
tc,base, Base Critical Gap	7.10	6.50	6.20	4.10			7.10	6.50	6.20	4.10		
tc,HV, Heavy Vehicles Adj	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00		
Phv, % Heavy Vehicles		2			2			2			2	
tc,G, Grade Adjustment Fa	0.20	0.20	0.10	1.00			0.20	0.20	0.10	1.00		
G, % Grade		0.00			0.00			0.00			0.00	
T3,lt, Geometry Adjustmen	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00		
tc, Critical Gap	7.12	6.52	6.22	4.12			7.12	6.52	6.22	4.12		
tf,base, Base Follow-Up Tim	3.50	4.00	3.30	2.20			3.50	4.00	3.30	2.20		
tf,hv, Heavy Vehicles Adjus	0.90	0.90	0.90	0.90			0.90	0.90	0.90	0.90		
tf, Follow-Up Time	3.52	4.02	3.32	2.22			3.52	4.02	3.32	2.22		

Delay and Level of Service by Movement

Approach	N			E (Major)			S			W (Major)		
	L1	T	R1	L1	T	R1	L1	T	R1	L1	T	R1
Movement												
vx, Volume	20.00	101.18	11.76	35.29	125.88	4.71	15.29	116.47	131.76	21.18	217.65	8.24
cmx, Capacity	276.72	471.32	921.75	1342.58			372.27	472.40	817.80	1454.75		
V / C	0.07	0.21	0.01	0.03			0.04	0.25	0.16	0.01		
d, Delay	16.58	16.58	16.58	7.75			16.10	16.10	16.10	7.51		
LOS	C	C	C	A			C	C	C	A		
dA, Approach Delay		16.58			1.65			16.10			0.64	
Approach LOS		C			A			C			A	
dRank1, Rank 1 Delay					0.22						0.13	

Delay and Level of Service by Lane

Approach	N		E (Major)		S		W (Major)	
	Lane 1							
Movements	L1, T, R1							
vx, Volume	132.94	165.88	263.53	247.06				
cmx, Capacity	443.57	1342.58	587.25	1454.75				
V / C	0.30	0.12	0.45	0.17				
Q95, 95% Queue Length	1.27	0.42	2.41	0.61				
d, Delay	16.58	7.75	16.10	7.51				
LOS	C	A	C	A				
dA, Approach Delay	16.58	1.65	16.10	0.64				
Approach LOS	C	A	C	A				

Mon Oct 08 14:03:31 2012

EXHIBIT I.94

Node 3561: 15th @ Washington Ave
Control Type TWSC
Method HCM 2000
dI, Average Delay 4.08
Worst Case Delay 27.72
Worst Case LOS D

Volume and Adjustments						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
Base Volume	38.00	412.00	95.00	57.00	439.00	72.00
PHF, Peak-hour factor	0.950	0.950	0.950	0.950	0.950	0.950
V, Adjusted Volume	40.00	433.68	100.00	60.00	462.11	75.79

Pedestrians						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
vx, Flow (Ped/hr)	0.00		0.00	0.00		
w, Lane Width (ft)	12.00		12.00	12.00		
Sp, Walking Speed (ft/s)	4.00		4.00	4.00		
fpb, Percent Blockage	0.00		0.00	0.00		

Capacity of Movements below Rank 1						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
Rank	2	1	3	2	1	1
vx, Volume	40.00		100.00	60.00		
Conflicting Volume (Veh)	537.89		1013.68	500.00		
Conflicting Volume (Ped)	0.00		0.00	0.00		
Conflicting Volume	537.89		1013.68	500.00		
cpx, Potential Capacity	1030.32		264.49	570.79		
Capacity	1030.32		250.70	570.79		

Critical Gap and Follow Up Time						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
tc,base Base Critical Gap	4.10		7.10	6.20		
tc,HV, Heavy Vehicles Adju	1.00		1.00	1.00		
Phv, % Heavy Vehicles		2		2		2
tc,G, Grade Adjustment Fai	1.00		0.20	0.10		
G, % Grade		0.00		0.00		0.00
T3,lt, Geometry Adjustment	0.00		0.70	0.00		
tc, Critical Gap	4.12		6.42	6.22		
tf,base, Base Follow-Up Tir	2.20		3.50	3.30		
tf,hv, Heavy Vehicles Adjus	0.90		0.90	0.90		
tf, Follow-Up Time	2.22		3.52	3.32		

Delay and Level of Service by Movement						
Approach	N (Major)		E		S (Major)	
Movement	L1	T	L1	R1	T	R1
vx, Volume	40.00	433.68	100.00	60.00	462.11	75.79
cmx, Capacity	1030.32		250.70	570.79		
V / C	0.04		0.40	0.11		
d, Delay	8.64		27.72	27.72		
LOS	A		D	D		
dA, Approach Delay		0.73		27.72		0.00
Approach LOS		A		D		A
dRank1, Rank 1 Delay		0.45				0.00

Delay and Level of Service by Lane			
Approach	N (Major)		S (Major)
Lane	Lane 1	Lane 1	Lane 1
Movements	L1, T	L1, R1	T, R1
vx, Volume	473.68	160.00	537.89
cmx, Capacity	1030.32	317.46	
V / C	0.46	0.50	
Q95, 95% Queue Length	2.53	2.94	
d, Delay	8.64	27.72	
LOS	A	D	
dA, Approach Delay	0.73	27.72	0.00
Approach LOS	A	D	A

EXHIBIT I.95

Thu Oct 11 10:40:32 2012

HCM Unsignalized Intersection Capacity Analysis

1: 11th & Jefferson

10/23/2012

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	60	10	134	208	10	1	49	24	3	90	24
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	80	13	179	277	13	1	65	32	4	120	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)		978										
pX, platoon unblocked												
vC, conflicting volume	291			93			833	748	87	806	748	284
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	291			93			833	748	87	806	748	284
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			88			99	78	97	98	60	96
cM capacity (veh/h)	1271			1501			173	299	972	219	299	755
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	100	469	99	156								
Volume Left	7	179	1	4								
Volume Right	13	13	32	32								
cSH	1271	1501	381	337								
Volume to Capacity	0.01	0.12	0.26	0.46								
Queue Length 95th (ft)	0	10	26	58								
Control Delay (s)	0.6	3.6	17.7	24.5								
Lane LOS	A	A	C	C								
Approach Delay (s)	0.6	3.6	17.7	24.5								
Approach LOS			C	C								
Intersection Summary												
Average Delay			8.9									
Intersection Capacity Utilization			42.6%		ICU Level of Service				A			
Analysis Period (min)			15									

EXHIBIT I.97

HCM Unsignalized Intersection Capacity Analysis
 2: 15th St & Washington Way

10/23/2012

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	93	18	103	374	114	179
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	104	20	116	420	128	201
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)					980	
pX, platoon unblocked						
vC, conflicting volume	780	128	329			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	780	128	329			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	68	98	91			
cM capacity (veh/h)	330	922	1230			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2	
Volume Total	104	20	536	128	201	
Volume Left	104	0	116	0	0	
Volume Right	0	20	0	0	201	
cSH	330	922	1230	1700	1700	
Volume to Capacity	0.32	0.02	0.09	0.08	0.12	
Queue Length 95th (ft)	33	2	8	0	0	
Control Delay (s)	20.9	9.0	2.6	0.0	0.0	
Lane LOS	C	A	A			
Approach Delay (s)	19.0		2.6	0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			3.8			
Intersection Capacity Utilization			46.5%	ICU Level of Service		A
Analysis Period (min)			15			

EXHIBIT I.98

HCM Unsignalized Intersection Capacity Analysis
 3: 15th St & Washington Ave

10/23/2012

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	15	164	76	125	106
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	8	19	205	95	156	132
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	708					
pX, platoon unblocked						
vC, conflicting volume	698	252	300			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	698	252	300			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	98	88			
cM capacity (veh/h)	356	786	1261			
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	26	300	289			
Volume Left	8	0	156			
Volume Right	19	95	0			
cSH	585	1700	1261			
Volume to Capacity	0.04	0.18	0.12			
Queue Length 95th (ft)	4	0	11			
Control Delay (s)	11.4	0.0	5.0			
Lane LOS	B		A			
Approach Delay (s)	11.4	0.0	5.0			
Approach LOS	B					
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			41.3%	ICU Level of Service	A	
Analysis Period (min)			15			

EXHIBIT I.99

HCM Signalized Intersection Capacity Analysis
4: 15th St & Jefferson

10/23/2012

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	33	29	34	47	55	6	34	192	29	21	227	74	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	0.92		1.00	1.00	0.85	1.00	0.98		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)	1630	1577		1630	1716	1458	1630	1682		1630	1653		
Flt Permitted	1.00	1.00		1.00	1.00	1.00	0.54	1.00		0.59	1.00		
Satd. Flow (perm)	1716	1577		1716	1716	1458	923	1682		1012	1653		
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	
Adj. Flow (vph)	41	36	42	59	69	8	42	240	36	26	284	92	
RTOR Reduction (vph)	0	35	0	0	0	7	0	11	0	0	22	0	
Lane Group Flow (vph)	41	43	0	59	69	1	42	265	0	26	354	0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8		8	2			6			
Actuated Green, G (s)	3.6	3.6		3.6	3.6	3.6	9.2	9.2		9.2	9.2		
Effective Green, g (s)	3.6	3.6		3.6	3.6	3.6	9.2	9.2		9.2	9.2		
Actuated g/C Ratio	0.17	0.17		0.17	0.17	0.17	0.44	0.44		0.44	0.44		
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	297	272		297	297	252	408	743		447	731		
v/s Ratio Prot		0.03			c0.04			0.16			c0.21		
v/s Ratio Perm	0.02			0.03		0.00	0.05			0.03			
v/c Ratio	0.14	0.16		0.20	0.23	0.01	0.10	0.36		0.06	0.48		
Uniform Delay, d1	7.3	7.3		7.4	7.4	7.1	3.4	3.8		3.3	4.1		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.2	0.3		0.3	0.4	0.0	0.1	0.3		0.1	0.5		
Delay (s)	7.5	7.6		7.7	7.8	7.1	3.5	4.1		3.4	4.6		
Level of Service	A	A		A	A	A	A	A		A	A		
Approach Delay (s)		7.6			7.7			4.1			4.5		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM 2000 Control Delay			5.2									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.41										
Actuated Cycle Length (s)			20.8									Sum of lost time (s)	8.0
Intersection Capacity Utilization			40.7%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

EXHIBIT I.100

HCM Unsignalized Intersection Capacity Analysis

1: 11th & Jefferson

10/23/2012

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	18	185	7	30	107	4	13	105	112	17	88	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	21	218	8	35	126	5	15	124	132	20	104	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		982										
pX, platoon unblocked												
vC, conflicting volume	131			226			526	465	222	656	467	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	131			226			526	465	222	656	467	128
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			96	74	84	92	78	99
cM capacity (veh/h)	1455			1343			368	475	818	246	473	922
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	247	166	271	135								
Volume Left	21	35	15	20								
Volume Right	8	5	132	12								
cSH	1455	1343	584	433								
Volume to Capacity	0.01	0.03	0.46	0.31								
Queue Length 95th (ft)	1	2	61	33								
Control Delay (s)	0.8	1.8	16.4	17.1								
Lane LOS	A	A	C	C								
Approach Delay (s)	0.8	1.8	16.4	17.1								
Approach LOS			C	C								
Intersection Summary												
Average Delay			8.8									
Intersection Capacity Utilization			38.0%		ICU Level of Service				A			
Analysis Period (min)			15									

EXHIBIT I.101

HCM Unsignalized Intersection Capacity Analysis
2: 15th St & Washington Way

10/23/2012



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	238	63	49	374	328	182
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	248	66	51	390	342	190
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	833	342	531			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	833	342	531			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %						
cM capacity (veh/h)	322	701	1036			
Direction, Lane #						
	EB 1	EB 2	NB 1	SB 1	SB 2	
Volume Total	248	66	441	342	190	
Volume Left	248	0	51	0	0	
Volume Right	0	66	0	0	190	
cSH	322	701	1036	1700	1700	
Volume to Capacity	0.77	0.09	0.05	0.20	0.11	
Queue Length 95th (ft)	152	8	4	0	0	
Control Delay (s)	45.4	10.7	1.5	0.0	0.0	
Lane LOS	E	B	A			
Approach Delay (s)	38.2		1.5	0.0		
Approach LOS	E					
Intersection Summary						
Average Delay			9.8			
Intersection Capacity Utilization			67.4%	ICU Level of Service		C
Analysis Period (min)			15			

EXHIBIT I.102

HCM Unsignalized Intersection Capacity Analysis
3: 15th St & Washington Ave

10/23/2012

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	98	57	439	73	38	412
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	103	60	462	77	40	434
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						715
pX, platoon unblocked						
vC, conflicting volume	1014	501			539	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1014	501			539	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	59	89			96	
cM capacity (veh/h)	254	570			1029	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	163	539	474			
Volume Left	103	0	40			
Volume Right	60	77	0			
cSH	319	1700	1029			
Volume to Capacity	0.51	0.32	0.04			
Queue Length 95th (ft)	69	0	3			
Control Delay (s)	27.5	0.0	1.1			
Lane LOS	D		A			
Approach Delay (s)	27.5	0.0	1.1			
Approach LOS	D					
Intersection Summary						
Average Delay			4.3			
Intersection Capacity Utilization			74.1%		ICU Level of Service	D
Analysis Period (min)			15			

EXHIBIT I.103

HCM Signalized Intersection Capacity Analysis
4: 15th St & Jefferson

10/23/2012

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	88	63	52	81	43	37	44	420	64	24	283	80	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		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)	1630	1599		1630	1716	1458	1630	1682		1630	1659		
Flt Permitted	0.73	1.00		0.68	1.00	1.00	0.52	1.00		0.39	1.00		
Satd. Flow (perm)	1246	1599		1160	1716	1458	895	1682		665	1659		
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)	97	69	57	89	47	41	48	462	70	26	311	88	
RTOR Reduction (vph)	0	43	0	0	0	31	0	10	0	0	19	0	
Lane Group Flow (vph)	97	83	0	89	47	10	48	522	0	26	380	0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8		8	2			6			
Actuated Green, G (s)	6.5	6.5		6.5	6.5	6.5	12.4	12.4		12.4	12.4		
Effective Green, g (s)	6.5	6.5		6.5	6.5	6.5	12.4	12.4		12.4	12.4		
Actuated g/C Ratio	0.24	0.24		0.24	0.24	0.24	0.46	0.46		0.46	0.46		
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	301	386		280	414	352	412	775		306	764		
v/s Ratio Prot		0.05			0.03			c0.31			0.23		
v/s Ratio Perm	c0.08			0.08		0.01	0.05			0.04			
v/c Ratio	0.32	0.21		0.32	0.11	0.03	0.12	0.67		0.08	0.50		
Uniform Delay, d1	8.4	8.2		8.4	8.0	7.8	4.1	5.7		4.1	5.1		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.6	0.3		0.7	0.1	0.0	0.1	2.3		0.1	0.5		
Delay (s)	9.0	8.4		9.0	8.1	7.8	4.3	8.0		4.2	5.6		
Level of Service	A	A		A	A	A	A	A		A	A		
Approach Delay (s)		8.7			8.5			7.7			5.5		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM 2000 Control Delay			7.3									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.55										
Actuated Cycle Length (s)			26.9									Sum of lost time (s)	8.0
Intersection Capacity Utilization			53.5%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

EXHIBIT I.104

**GROUP
MACKENZIE**

November 5, 2012 *(Revised November 8, 2012)*

Oregon State University
Attention: David Dodson, AICP
130 Oak Creek Building
Corvallis, OR 97331

Re: **OSU Sector D Transportation Facilities Analysis**
Alternate Transportation Analysis – New Student Residence
Project Number 2120355.00

Dear Mr. Dodson:

This letter supplements the Oregon State University (OSU) Sector D Transportation Facilities Analysis by presenting an alternate transportation analysis specifically for the proposed New Student Residence (residence). It is important to note, this analysis is not part of the proposed Major Adjustment to the OSU Campus Master Plan. Rather, this is an additional analysis prepared at the request of City of Corvallis staff to specifically evaluate development impacts.

BACKGROUND

The proposed residence will be located in Sector D, immediately south of Wilson Hall, and is part of McNary Dining and Service Center complex. The site is currently an unimproved parking lot bounded by Adams Avenue, SW 13th and SW 14th Streets, and Washington Avenue. The residence will have 54 suites and one resident director apartment, or a total of 55 units.

ALTERNATE ANALYSIS REQUIREMENTS

City of Corvallis Development Code requires residential developments to analyze traffic impacts at year of build-out and 20 years in the future. Based on conversations with city staff, the study area is defined by intersections having an increase of at least 30 trips during the AM or PM peak hours.

TRIP GENERATION

Trip generation for the proposed residence was calculated using the Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 9th Edition, Land Use Code 220 – Apartment. The following table presents trip generation.

TABLE 1 – TRIP GENERATION							
Land Use (Code)	Dwelling Units	AM			PM		
		Enter	Exit	Total	Enter	Exit	Total
Apartment (220)	55	6	22	28	22	12	34

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Seattle, Washington
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EXHIBIT I.105

**GROUP
MACKENZIE**

November 5, 2012

Oregon State University
Attention: David Dodson, AICP
130 Oak Creek Building
Corvallis, OR 97331

Re: **OSU Sector D Transportation Facilities Analysis**
Alternate Transportation Analysis – Administration Use
Project Number 2120355.00

Dear Mr. Dodson:

This letter supplements the Oregon State University (OSU) Sector D Transportation Facilities Analysis by presenting an alternate transportation analysis specifically for the 15,000 SF *Administration* use. It is important to note, this analysis is not part of the proposed Major Adjustment to the OSU Campus Master Plan. Rather, this is an additional analysis prepared at the request of the City of Corvallis staff to specifically evaluate development impacts.

BACKGROUND

The specific nature of the 15,000 SF *Administration* use is unknown; however, for analysis purposes the administration building is assumed to be located in Sector D at the northwest corner of 9th Street and Jefferson Avenue.

ALTERNATE ANALYSIS REQUIREMENTS

City of Corvallis Development Code 4.0.609(a)(1) requires, “Any proposal generating 30 or more trips per hour shall include Level of Service (LOS) analyses for the affected intersections.”

TRIP GENERATION

Trip generation for the proposed administration building was calculated using the Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 9th Edition, Land Use Code 710 – General Office, as this land use best represents the anticipated building use. The following table presents trip generation.

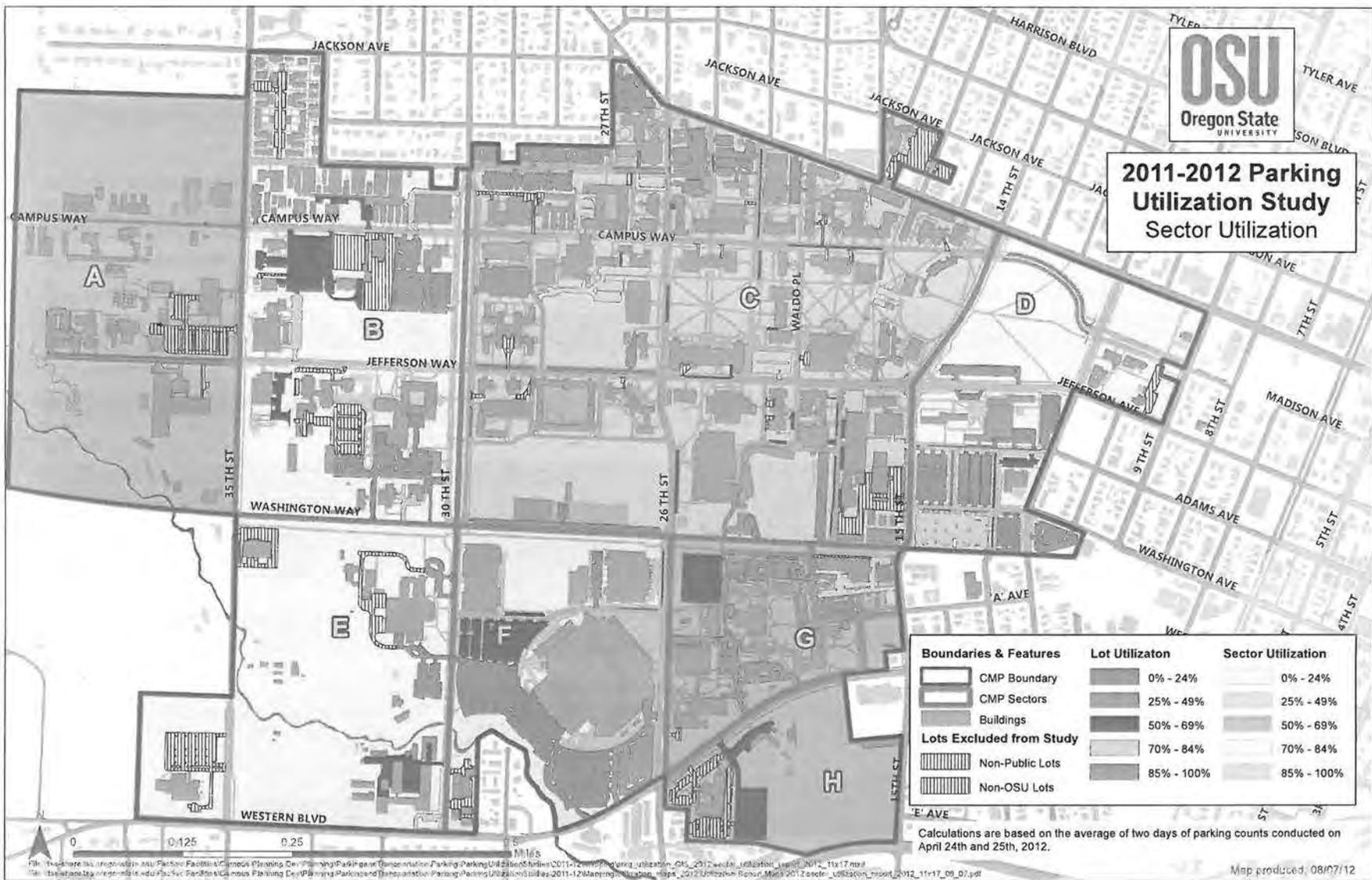
TABLE 1 – TRIP GENERATION							
Land Use (Code)	Square feet	AM			PM		
		Enter	Exit	Total	Enter	Exit	Total
General Office (710)	15,000	21	3	24	4	19	23

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OSU Parking Capacity

Year	Project Name	Location	Lot Number	Sector	Spaces Displaced	Spaces Replaced	OSU Parking Capacity	Net Change from 2004	Notes
2004							7,475		Parking Utilization Report Capacity*
2005	Parking Structure	26th/Washington Way	J	G	(290)		7,185	(290)	
2005	Parking Structure	26th/Washington Way	0205	G		992	8,177	702	
2005	Parking Structure	Bloss Hall West Lot, north of CH2M Hill Alumni Center	3273	G		48	8,225	750	
2005	Magruder Hall Expansion	Magruder Northeast Lot	3360	E		15	8,240	765	
2007	Kelley Engineering Building	Campus Way/Park Terrace		C	(118)		8,122	647	
2008	Magruder Hall Expansion	Magruder South Lot	3363	E		13	8,135	660	
2009	Linus Pauling Science Center	Scakett Hall North Lot, Campus Way/30th Street	3303	C	(166)		7,969	494	283 original spaces - 117 remaining spaces = 166 displaced spaces
2009	Linus Pauling Science Center	Washington Ave Southwest Lot (expansion)	3201	D		63	8,032	557	
2009	Linus Pauling Science Center	Washington Ave and 11th ST Southeast Lot	3227	D		90	8,122	647	
2009	Hallie Ford Center	Campus Way/26th	3314	C	(42)		8,080	605	
2009	McAlexander Field House	Benton Place	3268	C	(6)		8,074	599	
2010	Energy Center	Energy Center East Lot	3340	B		21	8,095	620	
2010	Student Legacy Park	Student Legacy Park South Lot	3293	C	(58)		8,037	562	
2011	Weatherford Place Lot Decommission	Weatherford Place Lot	3291	C	(5)		8,032	557	Displaced due to fire lane
2011	Cauthorn and Poling Halls ADA Parking	Intramural Lane Lot	3294	C		4	8,036	561	Expanded with decommission of Weatherford Place Lot
2011	Whyte Track and Field Center	Sports Complex West Lot	3286	H	(265)		7,770	295	
2011	International Living Learning Center	Bloss South Lot (expansion)	3270	G		72	7,842	367	
2011	International Living Learning Center	S 17th ST and A Ave Lot	3289	G		23	7,865	390	Capacity does not include the twenty-six (26) free spaces OSU was required to provide due to closure of portion of 17th Street; total lot capacity is forty-nine (49) spaces.
2011	International Living Learning Center	International Living Learning Center East Lot	3288	G		4	7,869	394	
2011	Forest Science Laboratory	Forest Science Lab Lot	3902	B		2	7,871	396	

*The 2004 parking capacity (7,528) was adjusted to reflect the removal of Lot 3214: Madison Ave (33 spaces) and Lot 3215: 11th Street (20 spaces) in 2012 from OSU's utilization study as these two areas are city streets.

11/9/2012

GROUP
MACKENZIE

February 26, 2013

Oregon State University, Campus Operations
Attention: David Dodson, AICP
130 Oak Creek Building
Corvallis, OR 97331

Re: OSU Sector D Transportation Facilities Analysis
*Additional Transportation Analysis (15th Street/Washington Way, 15th
Street/Washington Avenue)*
Project Number 2120355.00

Dear Mr. Dodson:

Based on our conversations and meetings with Oregon State University (OSU) and City of Corvallis (City) staff, Group Mackenzie has prepared additional transportation analysis as requested by the City. While the Sector D analysis contemplated Base Transportation Model (BTM) impacts resulting from transferring permitted-to-be-constructed square footage from Sector C to D, the City requested additional analysis to determine impacts resulting from construction of the 324 bed/55 dwelling unit New Student Residence (NSR).

As part of the Washington Way roadway improvement project, infrastructure improvements constructed at the 15th Street/Washington Way intersection in 2014 include a traffic signal and separate turn lanes. The analysis purpose is to determine impacts at the 15th Street/Washington Way and 15th Street/Washington Avenue intersections and identify necessary transportation infrastructure to accommodate design year traffic volumes. Analysis at the 15th Street/Washington Avenue intersection will assume that any future improvements made to improve intersection operations are limited to signing and striping revisions that can be made within the existing paved roadway. It is assumed both intersections will remain in a 'T' configuration.

This additional transportation analysis addresses AM and PM peak hour design year intersection operations. For analysis purposes, the design year (2034) is defined as 20 years from construction of the 2014 intersection improvements. This analysis does not contemplate the construction of any Washington Way improvements after 2014 – e.g., the realignment of Washington Way east of 15th Street as these are further contemplated as part of the separate Washington Way design process.

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EXHIBIT I.110

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EXISTING CONDITIONS

Intersection turning movement counts were conducted at the 15th Street/Washington Way and 15th Street/Washington Avenue intersections on Tuesday February 12, 2013 during the AM (7AM-9 AM) and PM (4PM – 6 PM) peak hours. All roadways are two-lane roadways with no separate turn lanes at either intersection.

PLANNED IMPROVEMENTS

Planned improvements at the 15th Street/Washington Way include a traffic signal and the addition of an eastbound left-turn lane and a southbound right-turn lane. There are no planned improvements at the 15th Street/Washington Avenue intersection.

GROWTH RATE

In order to project existing 2013 intersection volumes to 2034 volumes, growth rates were calculated using the Corvallis Area Metropolitan Planning Organization (CAMPO) 2000-2030 travel demand model. Growth rate for the AM peak hour was determined to be 2.5% per year and the PM peak hour was 1.5% per year. These growth rates are higher than what was determined using the historical ground counts. However, the CAMPO growth rates were used in order to present a conservative analysis.

TRIP GENERATION

The City of Corvallis uses data contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* to determine the anticipated trip generation for a proposed use. Unfortunately, ITE has no data pertaining to student housing. Therefore, based on conversations with City staff, trip generation has been determined to be approximately equivalent to the ITE Land Use Code – 220 (Apartment) average rate with three beds equal to one apartment. The resulting number of apartments was calculated to be 108 (324/3). The anticipated trip generation for the proposed NSR is presented in the following table.

TABLE 1 – TRIP GENERATION									
Land Use (Code)	Units	AM				PM			
		Trips/Unit	Enter	Exit	Total	Trips/Unit	Enter	Exit	Total
Proposed Apartment (220) – Per Unit	108	0.40	11	44	55	0.62	44	23	67

As presented in the previous table the NSR is anticipated to generate 55 AM peak hour trips and 67 PM peak hour trips.

Trip distribution for the proposed residence was based on the OSU Base Transportation Model (BTM) model and engineering judgment as follows:

- 40% to the north via 11th Street and 15th Street
- 35% to the east via Washington Avenue
- 25% to the south and west via 11th Street and 15th Street

OPERATIONS ANALYSIS

Operation Analysis Description

Intersection operation characteristics are generally defined by two measurements: level-of-service (LOS) and volume-to-capacity (v/c) ratio. The City of Corvallis (City) uses LOS based on delay.

Level-of-service is a measure of the average control delay (in seconds) experienced by drivers at an intersection and is described by a letter on the scale from 'A' to 'F.' LOS 'A' represents optimum operating conditions and minimum delay. LOS F indicates over capacity conditions causing unacceptable delay. Based on City standards, LOS D is the minimum acceptable during peak periods.

Peak Hour Factor

The peak hour factor (PHF) is used to determine the design hour flow rate and is defined as the ratio of total hourly flow to the peak 15-minute flow rate within the hour. For this analysis, PHFs are set at 0.95 for both study area intersections.

Operation Analysis

The software package SYNCHRO was used to calculate LOS for the study area intersections. This analysis is based on Highway Capacity Manual 2000 procedures.

TABLE 2 - OPERATIONS ANALYSIS				
Study Intersection (North-South/East-West)	Control Type	Mobility Standard	AM Peak Hour	PM Peak Hour
15th Street/Washington Way	Signal	LOS	A	B
15th Street/Washington Avenue	2-Way Stop		E	F

As presented in the previous table the 15th Street/Washington Avenue will not meet the City minimum mobility standard in the AM or PM peak hour in 2034. The NSR only adds 1.6% to the 2034 intersection volumes and the intersection will exceed minimum mobility standards with or without the NSR.

SENSITIVITY ANALYSIS

Because the 15th Street/Washington Avenue intersection will not meet City minimum mobility standard in 2034 a sensitivity analysis was conducted to determine when the intersection would exceed the minimum standard. Intersection volumes were approximated by proportionally reducing 2034 intersection volumes by the calculated growth rate of 1.5% per year. It was determined that the intersection would exceed the minimum mobility standard in 2021.

Alternative Methodology

Highway Capacity Manual methodologies used to calculate LOS assume that the intersection is by itself and does not take into account the influence of nearby intersections. The 15th Street/Washington Way signal is 250 feet to the south and the Adams Avenue pedestrian crossing is 250 feet to the north of the 15th Street/Washington Avenue intersection. Both create gaps in the traffic stream that westbound vehicles at the 15th Street/Washington Avenue intersection can use. Therefore, the intersections are better evaluated as a system.

A simulation of the intersections was conducted using the SIMTraffic. The results of the simulation show the 15th Street/Washington Avenue intersection would exceed the minimum mobility standard in 2029.

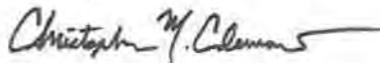
FINDINGS AND RECOMMENDATIONS

15th Street/Washington Way Intersection – Based on the above analysis, the improvements proposed at the intersection 15th Street/Washington Way will meet the City's mobility standards through 2034 analysis year.

15th Street/Washington Avenue Intersection – Based on the above analysis, the 15th Street/Washington Avenue intersection is anticipated to exceed the minimum mobility standard in 2021 or 2029 using the alternative analysis.

The recommended mitigation is to close Washington Avenue to through traffic at 15th and 11th Streets and extend Washington Way east according to the Washington Way improvement project.

Sincerely,



Christopher M. Clemow, PE, PTOE
Transportation Engineer



Matthew J. Dorado, EIT
Transportation Analyst

HCM Signalized Intersection Capacity Analysis
 1: 15th St & Washington Way

2/25/2013



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	129	20	131	564	189	227
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	0.86		1.00	1.00	0.87
Flpb, ped/bikes	1.00	1.00		0.98	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.99	1.00	1.00
Satd. Flow (prot)	1630	1255		1654	1683	1240
Flt Permitted	0.95	1.00		0.90	1.00	1.00
Satd. Flow (perm)	1630	1255		1506	1683	1240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	21	138	594	199	239
RTOR Reduction (vph)	0	18	0	0	0	74
Lane Group Flow (vph)	136	3	0	732	199	165
Confl. Peds. (#/hr)	72	76	76			72
Heavy Vehicles (%)	2%	2%	3%	3%	4%	4%
Turn Type	NA	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	8.0	8.0		35.4	35.4	35.4
Effective Green, g (s)	8.0	8.0		35.4	35.4	35.4
Actuated g/C Ratio	0.16	0.16		0.69	0.69	0.69
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	253	195		1037	1159	854
v/s Ratio Prot	c0.08				0.12	
v/s Ratio Perm		0.00		c0.49		0.13
v/c Ratio	0.54	0.02		0.71	0.17	0.19
Uniform Delay, d1	20.0	18.4		4.8	2.8	2.9
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	0.0		2.2	0.1	0.1
Delay (s)	22.2	18.4		7.1	2.9	3.0
Level of Service	C	B		A	A	A
Approach Delay (s)	21.7			7.1	2.9	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

EXHIBIT I.114

HCM Unsignalized Intersection Capacity Analysis
 2: 15th St & Washington Ave

2/25/2013

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	66	33	447	246	93	349
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	69	35	471	259	98	367
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			265			
pX, platoon unblocked	0.80	0.80			0.80	
vC, conflicting volume	1163	600			729	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1077	369			531	
tC, single (s)	6.5	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	58	93			88	
cM capacity (veh/h)	167	531			816	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	104	729	465			
Volume Left	69	0	98			
Volume Right	35	259	0			
cSH	216	1700	816			
Volume to Capacity	0.48	0.43	0.12			
Queue Length 95th (ft)	60	0	10			
Control Delay (s)	36.2	0.0	3.3			
Lane LOS	E		A			
Approach Delay (s)	36.2	0.0	3.3			
Approach LOS	E					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization		83.5%		ICU Level of Service		E
Analysis Period (min)			15			

EXHIBIT I.115

HCM Signalized Intersection Capacity Analysis
 1: 15th St & Washington Way

2/25/2013



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	195	51	60	450	431	261
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	0.79		1.00	1.00	0.71
Flpb, ped/bikes	0.50	1.00		0.99	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.99	1.00	1.00
Satd. Flow (prot)	824	1177		1705	1733	1043
Flt Permitted	0.95	1.00		0.91	1.00	1.00
Satd. Flow (perm)	824	1177		1564	1733	1043
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	54	63	474	454	275
RTOR Reduction (vph)	0	28	0	0	0	0
Lane Group Flow (vph)	205	26	0	537	454	275
Confl. Peds. (#/hr)	350	129	129			350
Heavy Vehicles (%)	0%	0%	1%	1%	1%	1%
Turn Type	NA	custom	Perm	NA	NA	custom
Protected Phases				2	6	4
Permitted Phases	4	4	2			6
Actuated Green, G (s)	17.2	17.2		22.6	22.6	39.8
Effective Green, g (s)	17.2	17.2		22.6	22.6	39.8
Actuated g/C Ratio	0.36	0.36		0.47	0.47	0.83
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	296	423		739	819	1043
v/s Ratio Prot					0.26	0.09
v/s Ratio Perm	c0.25	0.02		c0.34		0.17
v/c Ratio	0.69	0.06		0.73	0.55	0.26
Uniform Delay, d1	13.0	10.0		10.1	9.0	0.9
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.8	0.1		3.6	0.8	0.1
Delay (s)	19.9	10.1		13.7	9.8	1.0
Level of Service	B	B		B	A	A
Approach Delay (s)	17.8			13.7	6.5	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

EXHIBIT I.116

HCM Unsignalized Intersection Capacity Analysis
 2: 15th St & Washington Ave

2/26/2013

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	140	61	558	76	38	544
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	118	51	470	64	32	458
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	265					
pX, platoon unblocked	0.84	0.84			0.84	
vC, conflicting volume	1024	502			534	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	933	311			349	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	51	92			97	
cM capacity (veh/h)	242	616			1025	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	169	534	490			
Volume Left	118	0	32			
Volume Right	51	64	0			
cSH	297	1700	1025			
Volume to Capacity	0.57	0.31	0.03			
Queue Length 95th (ft)	82	0	2			
Control Delay (s)	32.0	0.0	0.9			
Lane LOS	D		A			
Approach Delay (s)	32.0	0.0	0.9			
Approach LOS	D					
Intersection Summary						
Average Delay			4.9			
Intersection Capacity Utilization			68.6%	ICU Level of Service	C	
Analysis Period (min)			15			

EXHIBIT I.117

HCM Unsignalized Intersection Capacity Analysis
 2: 15th St & Washington Ave

2/25/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↕		↘	↕
Volume (veh/h)	140	61	558	76	38	544
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	147	64	587	80	40	573
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			265			
pX, platoon unblocked	0.73	0.73			0.73	
vC, conflicting volume	1280	627			667	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1199	304			359	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	88			95	
cM capacity (veh/h)	144	540			884	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	212	667	613
Volume Left	147	0	40
Volume Right	64	80	0
cSH	185	1700	884
Volume to Capacity	1.14	0.39	0.05
Queue Length 95th (ft)	267	0	4
Control Delay (s)	161.1	0.0	1.2
Lane LOS	F		A
Approach Delay (s)	161.1	0.0	1.2
Approach LOS	F		

Intersection Summary			
Average Delay		23.3	
Intersection Capacity Utilization		84.1%	ICU Level of Service E
Analysis Period (min)		15	

EXHIBIT I.118

HCM Unsignalized Intersection Capacity Analysis
 2: 15th St & Washington Ave

2/26/2013

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	140	61	558	76	38	544
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	121	53	482	66	33	470
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			265			
pX, platoon unblocked	0.83	0.83			0.83	
vC, conflicting volume	1050	514			547	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	958	313			353	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	48	91			97	
cM capacity (veh/h)	231	608			1011	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	173	547	502			
Volume Left	121	0	33			
Volume Right	53	66	0			
cSH	285	1700	1011			
Volume to Capacity	0.61	0.32	0.03			
Queue Length 95th (ft)	92	0	3			
Control Delay (s)	35.5	0.0	0.9			
Lane LOS	E		A			
Approach Delay (s)	35.5	0.0	0.9			
Approach LOS	E					
Intersection Summary						
Average Delay			5.4			
Intersection Capacity Utilization		70.2%		ICU Level of Service		C
Analysis Period (min)			15			

EXHIBIT I.119

1: 15th St & Washington Way Performance by movement

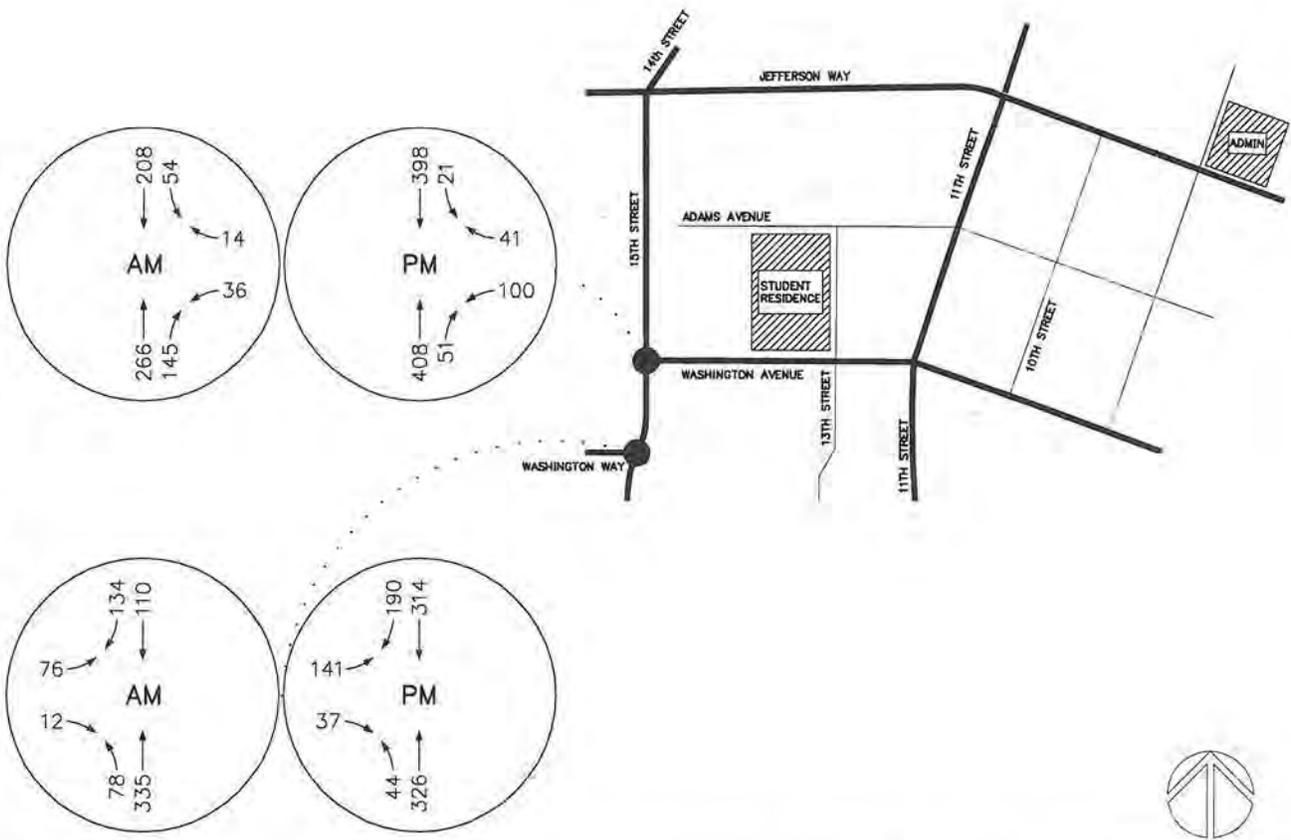
Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.9	0.3	2.4	0.5	0.0	0.1	0.4
Total Del/Veh (s)	14.0	6.6	13.4	8.7	9.8	3.5	8.9

2: 15th St & Washington Ave Performance by movement

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.0	0.5	0.0	0.0	0.6	0.5	0.2
Total Del/Veh (s)	35.1	0.6	23.8	2.1	1.3	6.8	2.3	6.3

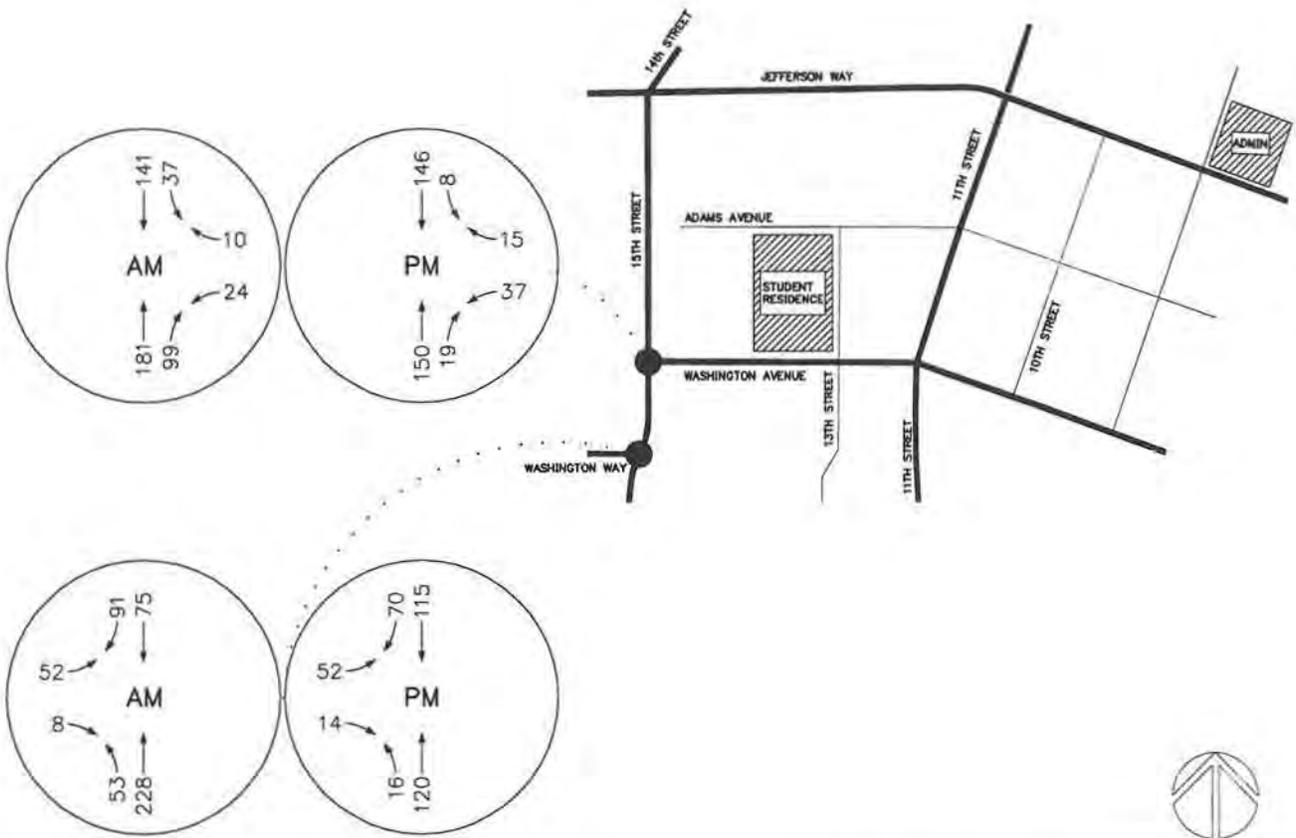
Total Zone Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	560.2



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DATE: 02.26.13
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JOB NO:
2120355.00

**21-YR BACKGROUND GROWTH
INTERSECTION VOLUMES WEEKDAY
AM/PM PEAK HOUR**
OSU Sector D Transportation Facilities Analysis
Corvallis, Oregon

**FIGURE
2**

WEEKDAY PM PEAK HOUR				
NEW VEHICLE TRIPS				
LAND USE	AM		PM	
	ENTER	EXIT	ENTER	EXIT
STUDENT RESIDENCE	11	44	44	23

NON-STUDY AREA INTERSECTION TRIPS AM(PM)

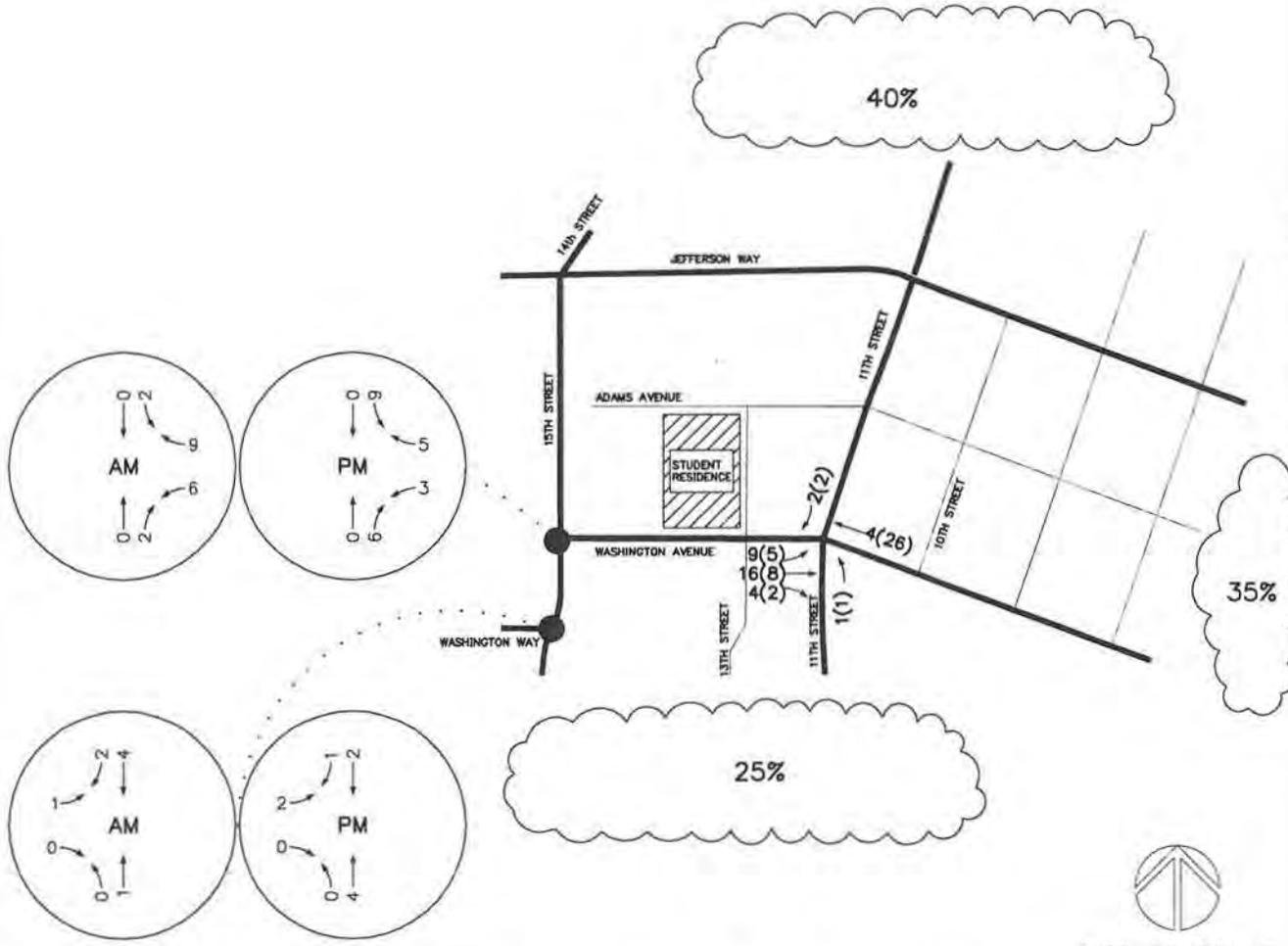


EXHIBIT I.123

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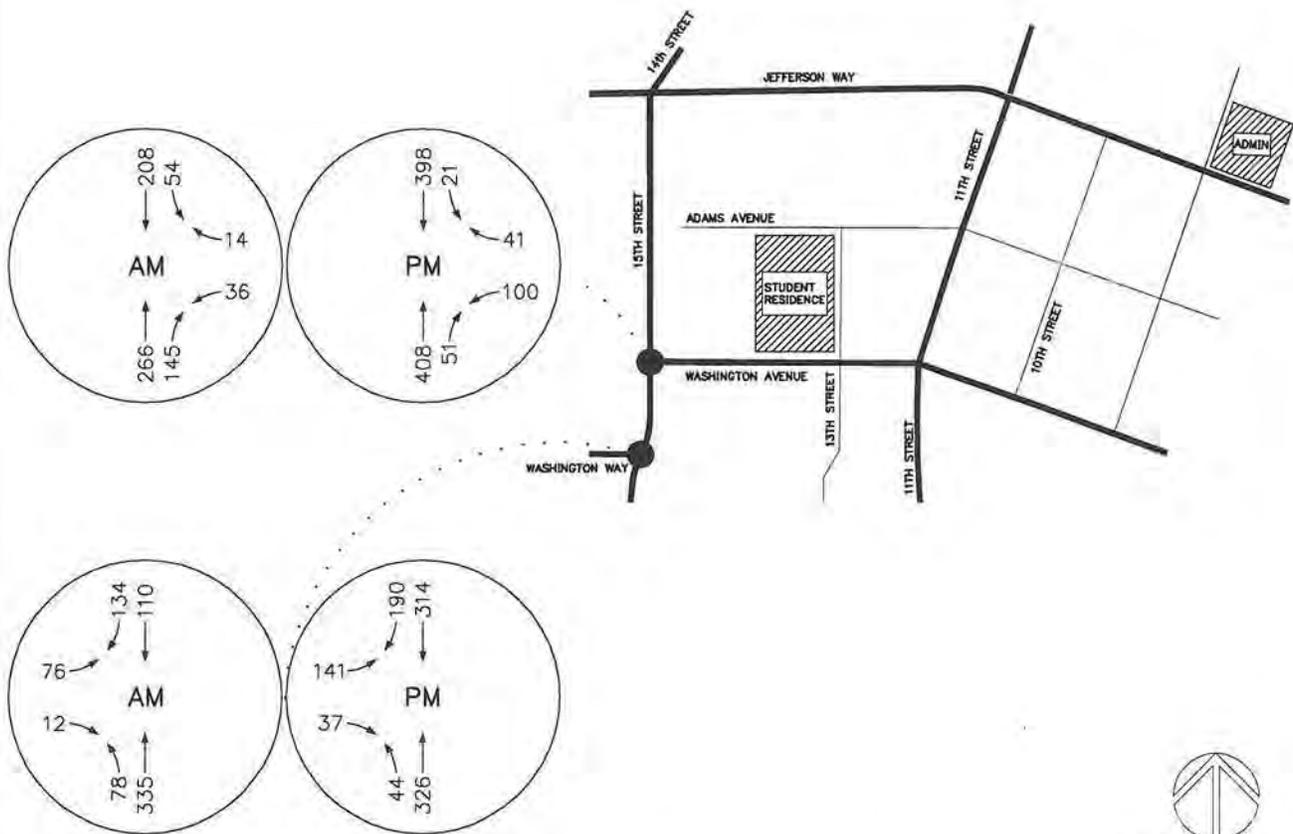
JOB NO:
2120355.00

**SITE TRIP ASSIGNMENT AT
STUDY AREA INTERSECTIONS
WEEKDAY AM/PM PEAK HOUR**

OSU Sector D Transportation Facilities Analysis
Corvallis, Oregon

FIGURE

3



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DATE: 02.26.13

DRAWN BY: MJD

CHECKED BY: CMC

JOB NO:
2120355.00

2034 TOTAL INTERSECTION
TRAFFIC VOLUMES WEEKDAY
AM/PM PEAK HOUR

OSU Sector D Transportation Facilities Analysis
Corvallis, Oregon

FIGURE

4

GROUP MACKENZIE

February 27, 2013

Oregon State University, Campus Operations
Attention: Mike Blair
130 Oak Creek Building
Corvallis, OR 97331

Re: **OSU Washington Way Improvement Transportation Analysis**
Additional Transportation Analysis
Project Number 2120355.00

Dear Mr. Blair:

Based on conversations, and meetings with Oregon State University (OSU) and City of Corvallis (City) staffs, Group Mackenzie has prepared additional transportation analysis as requested by the City for the proposed Washington Way realignment.

As part of the Washington Way roadway improvement project, it is anticipated Washington Way will be extended in 2020 eastward from its current terminus at 15th Street and connect with Washington Way east of 11th Street. The analysis purpose is to evaluate operations at the resulting Washington Way intersections at 11th, 13th and 15th Streets.

EXISTING CONDITIONS

Study area intersections include:

- 15th Street/Washington Way
- 15th Street/Washington Avenue
- 13th Street/Washington Way
- 11th Street/Washington Way

Intersection turning movement counts were conducted on Tuesday February 12, 2013 during the AM (7AM-9 AM) and PM (4PM – 6 PM) peak hours. All roadways are two-lane roadways with no separate turn lanes. Existing volumes are shown in Figure 1.

PLANNED IMPROVEMENTS

The Washington Way improvement project includes new signals at the 15th Street/Washington Way and 11th Street/Washington Way intersections. Left-turn lanes will be provided on all approaches at the 15th Street/Washington Way intersection and a southbound right-turn lane. No turn lanes are planned at the other two intersections.

RiverEast Center | 1515 SE Water Avenue, Suite 100 | Portland, OR 97214

P.O. Box 14510 | Portland, OR 97295

Tel: 503 224 9560 Web: www.grpmack.com Fax: 503 228 1285

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Engineering
Civil Engineering
Land Use Planning
Transportation
Planning
Landscape
Architecture

Locations:

Portland, Oregon
Seattle, Washington
Vancouver, Washington

H:\Projects\212035500\WP\LTR\130227-Additional Transportation Analysis.doc

EXHIBIT I.125

GROWTH RATE

In order to project existing 2013 intersection volumes to 2040, volumes growth rates were calculated using the Corvallis Area Metropolitan Planning Organization (CAMPO) 2000-2030 travel demand model. Growth rate for the AM peak hour was determined to be 2.5% per year and the PM peak hour was 1.5% per year. These growth rates are higher than what was determined using the historical ground counts. However, the CAMPO growth rates were used in order to present a conservative analysis.

In addition to general background growth the proposed New Student Residence (NSR) located at 13th Avenue and Washington Avenue volumes were included in the analysis.

REROUTE

As part of the Washington Way improvement project, Washington Avenue will be closed to through traffic at 11th and 15th Streets. As such, the vehicles at these intersections needed to be rerouted. Vehicles were rerouted based on CAMPO model data and engineering judgment based on roadway volumes, parking lot locations, and access points. Total rerouted volumes are presented in Figure 2.

OPERATIONS ANALYSIS

Operation Analysis Description

Intersection operation characteristics are generally defined by two measurements: level-of-service (LOS) and volume-to-capacity (v/c) ratio. The City of Corvallis (City) uses LOS based on delay.

Level-of-service is a measure of the average control delay (in seconds) experienced by drivers at an intersection and is described by a letter on the scale from 'A' to 'F.' LOS 'A' represents optimum operating conditions and minimum delay. LOS F indicates over capacity conditions causing unacceptable delay. Based on City standards, LOS D is the minimum acceptable during peak periods.

Peak Hour Factor

The peak hour factor (PHF) is used to determine the design hour flow rate and is defined as the ratio of total hourly flow to the peak 15-minute flow rate within the hour. For this analysis, PHFs are set at 0.95 for all study area intersections.

Operation Analysis

The software package SYNCHRO was used to calculate LOS for the study area intersections. This analysis is based on Highway Capacity Manual 2000 procedures. The study area intersections were analyzed with 13th Street as a 4-leg intersection and as a 3-leg intersection.

Study Intersection (North-South/East-West)	Control Type	Mobility Standard	AM Peak Hour		PM Peak Hour	
			4-leg	3-leg	4-leg	3-leg
15th Street/Washington Way	Signal	LOS	B	B	B	B
13th Street/Washington Way	2-Way Stop/4-leg		B	A	B	B
11th Street/Washington Way	Signal		A	A	A	A

As presented in the previous table all intersections meet the City minimum mobility standard in the AM or PM peak hour in 2040 for all scenarios and no additional turn lanes are recommended at the 11th Street/Washington Way intersection.

Queuing

In order to determine the appropriate lane configuration and storage bay lengths a simulation of the roadway network was conducted to determine the 95th percentile queue lengths that will need to be accommodated. The 95th percentile queue lengths from the simulation are presented in the following table for the 2040 AM and PM scenarios with 13th Street as a 4-leg and 3-leg intersection.

Intersection	Movement	AM		PM	
		4-leg	3-leg	4-leg	3-leg
15th Street/Washington Way	EBL	75	75	125	125
	WBL	50	50	75	100
	NBL	125	125	125	150
	SBL	75	75	75	75
	SBR	75	75	150	150
13th Street/Washington Way	NBLTR	50		50	
	SBLTR	50	50	75	75
11th Street/Washington Way	EBLTR	50	75	75	100
	WBLTR	75	75	100	75
	NBLTR	100	125	75	75
	SBLTR	75	75	100	100

As presented in the previous table none of the turn lanes have excessive queues and can be accommodated based on the proposed lane configurations.

Additionally, the 11th Street/Washington Way intersection was evaluated for a “gates down” situation due to the proximity to the rail line and the possibility of queue buildup. However, it was determined that the “gates down” time was short (3 minutes) and infrequent (4 times a day) and did not warrant additional turn lanes.

THE SENSITIVITY ANALYSIS

While the signal at 15th Street/Washington Way intersection is scheduled to be installed in 2014 the east leg of the intersection is not programmed to be built until later. In order to determine when the east leg will need to be built, a sensitivity analysis was conducted at the 15th Street/Washington Way and 15th Street/Washington Avenue intersections in the existing lane configuration as part of the OSU Sector D analysis.

The 15th Street/Washington Avenue intersection will not meet City minimum mobility standard in 2040 in the existing lane configuration. A sensitivity analysis was conducted to determine when the intersection would exceed the minimum standard. Intersection volumes were approximated by proportionally reducing 2040 intersection volumes by the calculated growth rate of 1.5% per year. It was determined that the intersection would exceed the minimum mobility standard in 2021.

Alternative Methodology

Highway Capacity Manual methodologies used to calculate LOS assume that the intersection is by itself and does not take into account the influence of nearby intersections. The 15th Street/Washington Way signal is 250 feet to the south and the Adams Avenue pedestrian crossing is 250 feet to the north of the 15th Street/Washington Avenue intersection. Both create gaps in the traffic stream that westbound vehicles at the 15th Street/Washington Avenue intersection can use. Therefore, the intersections are better evaluated as a system. It is further assumed the east/west pedestrian traffic at the 15th Street/Washington Way intersection is no longer allowed.

A simulation of the intersections was conducted using the SIMTraffic. The results of the simulation show the 15th Street/Washington Avenue intersection would exceed the minimum mobility standard in 2029.

Interim Queuing

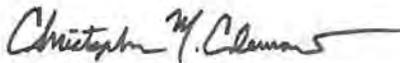
Because the east leg of the 15th Street/Washington Way will be built sometime in the future, an interim year was analyzed to determine the appropriate storage bay lengths that could be built and accommodate 95th percentile queues using the existing roadway configuration (two T-intersections). A queuing analysis was initially conducted for the 2023 (10-year) horizon year. However, it was found that 2025 (12-year) intersection volumes could be accommodated with the same storage bay lengths. The following table presents the proposed storage lengths to accommodate 2025 intersection volumes.

Intersection	Movement	AM	PM
15th Street/Washington Way	EBL	75	100
	NBL	75	50
	SBR	75	100

CONCLUSIONS AND RECOMMENDATIONS

- Study area intersections will not exceed the minimum mobility standards in the 2040 design year.
- The proposed lane configurations can accommodate the projected 95th percentile queue lengths.
- Separate left-turn lanes are not recommended at the 11th Street/Washington Way intersection.
- The east leg of the 15th Street/Washington Way intersection should be completed before 2029.
- Close the east/west pedestrian crossing at the 15th Street/Washington Avenue intersection when the 15th Street/Washington Way signal is installed.
- Construct the interim storage bay lengths at the 15th Street/Washington Way intersection to accommodate near term traffic volumes prior to building the 15th Street/Washington Way east leg.

Sincerely,



Christopher M. Clemow, PE, PTOE
Transportation Engineer



Matthew J. Dorado, EIT
Transportation Analyst

EXHIBIT I.129



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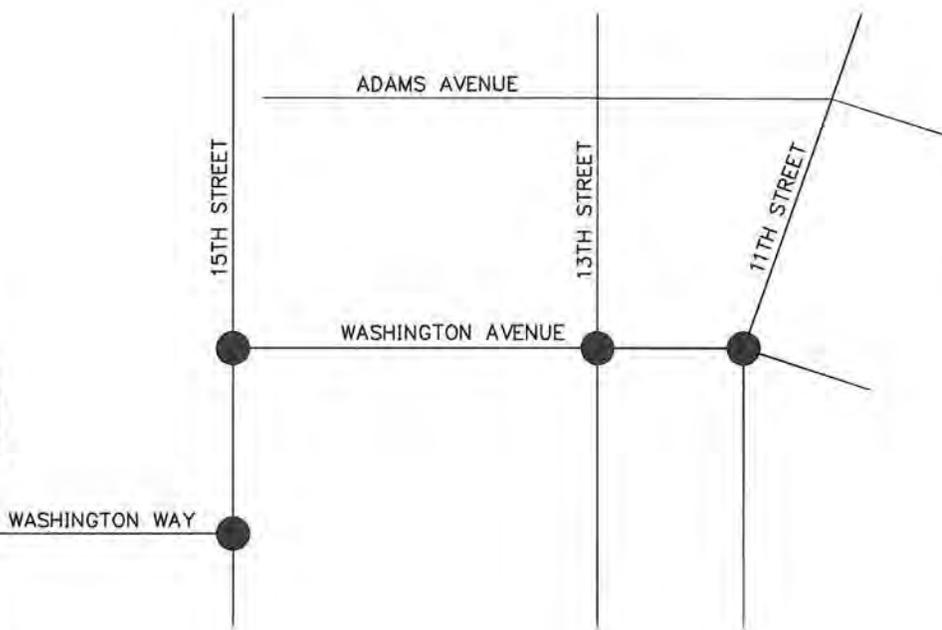
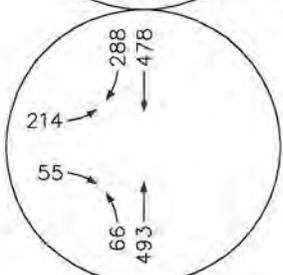
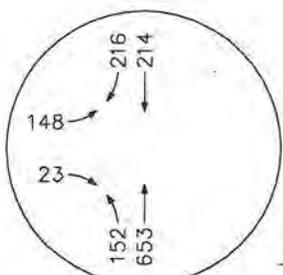
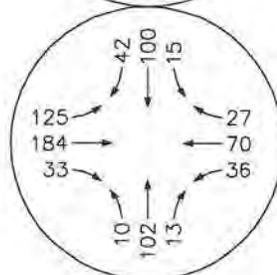
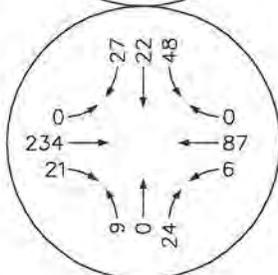
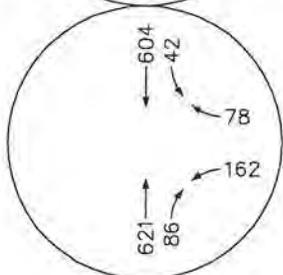
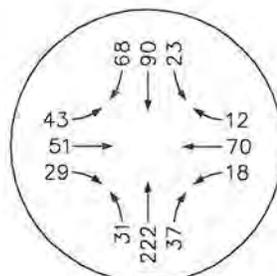
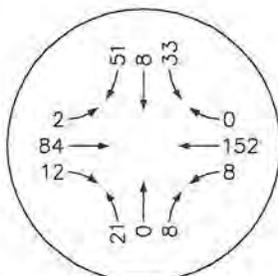
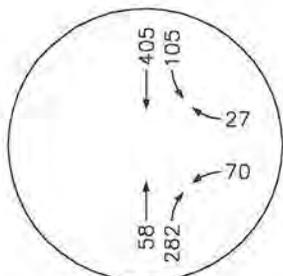


EXHIBIT I.130

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CHECKED BY: CMC

JOB NO:
2120187.02

2040 INTERSECTION VOLUMES
EXISTING ROADWAY CONFIGURATION
AM AND PM PEAK HOUR

OSU WASHINGTON WAY REALIGNMENT
CORVALLIS, OREGON

FIGURE

1



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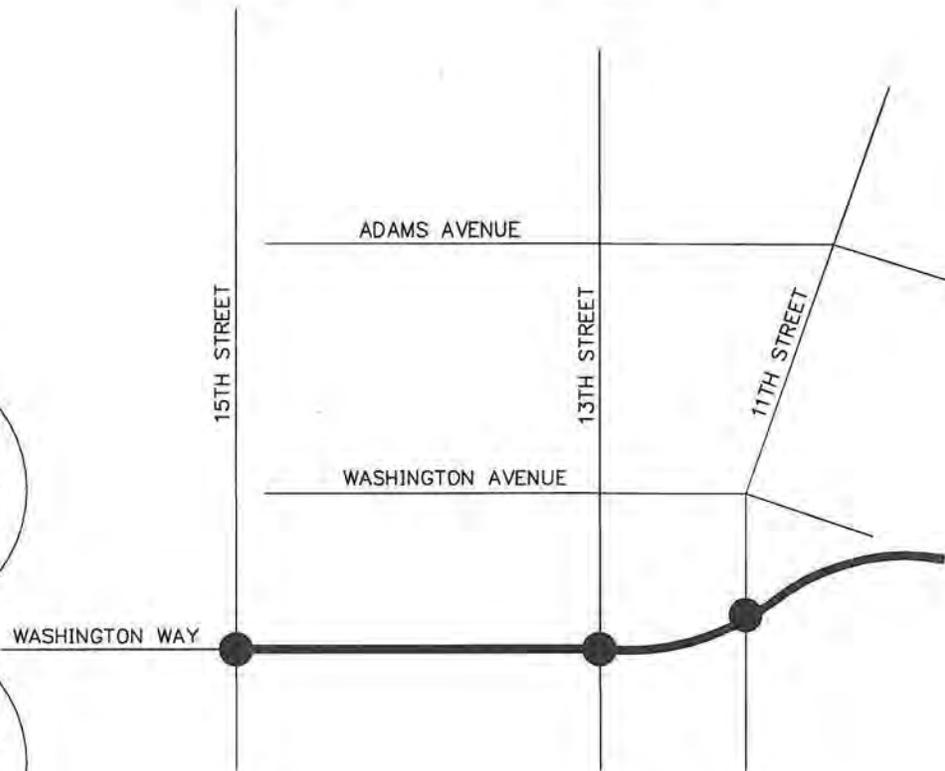
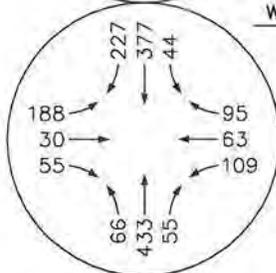
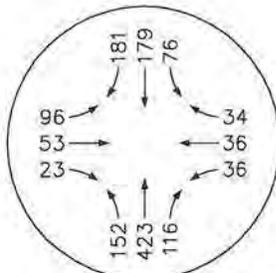
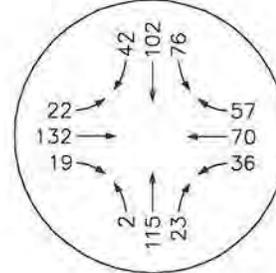
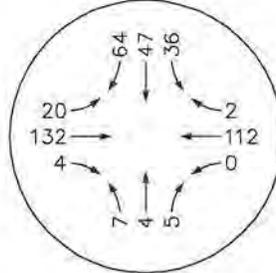
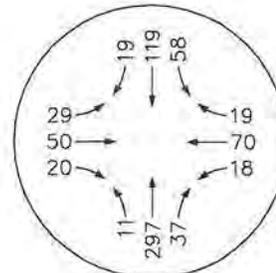
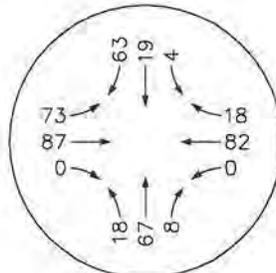


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 2120187.02

2040 REROUTED VOLUMES
 PROPOSED ROADWAY CONFIGURATION
 AM AND PM PEAK HOUR

OSU WASHINGTON WAY REALIGNMENT
 CORVALLIS, OREGON

FIGURE

2

HCM Signalized Intersection Capacity Analysis
1: 15th & Washington Way

2/27/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	53	23	36	36	34	152	423	116	76	179	181
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Fr _t	1.00	0.95		1.00	0.93		1.00	0.97		1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	1638		1630	1590		1630	1660		1630	1716	1458
Fl _t Permitted	0.69	1.00		0.78	1.00		0.57	1.00		0.36	1.00	1.00
Satd. Flow (perm)	1183	1638		1346	1590		985	1660		614	1716	1458
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	56	24	38	38	36	160	445	122	80	188	191
RTOR Reduction (vph)	0	21	0	0	32	0	0	12	0	0	0	103
Lane Group Flow (vph)	101	59	0	38	42	0	160	555	0	80	188	88
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	7.9	5.8		6.5	5.1		31.4	26.6		26.0	23.9	23.9
Effective Green, g (s)	7.9	5.8		6.5	5.1		31.4	26.6		26.0	23.9	23.9
Actuated g/C Ratio	0.15	0.11		0.13	0.10		0.61	0.51		0.50	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	198	183		176	156		655	850		348	790	671
v/s Ratio Prot	c0.02	0.04		0.01	0.03		c0.02	c0.33		0.01	0.11	
v/s Ratio Perm	c0.06			0.02			0.13			0.11		0.06
v/c Ratio	0.51	0.32		0.22	0.27		0.24	0.65		0.23	0.24	0.13
Uniform Delay, d ₁	20.1	21.2		20.3	21.7		4.6	9.3		7.1	8.5	8.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d ₂	2.2	1.0		0.6	0.9		0.2	3.9		0.3	0.7	0.4
Delay (s)	22.3	22.3		20.9	22.6		4.8	13.2		7.4	9.2	8.4
Level of Service	C	C		C	C		A	B		A	A	A
Approach Delay (s)		22.3			22.0			11.3			8.6	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.6				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			51.9				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			58.8%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

EXHIBIT I.132

HCM Unsignalized Intersection Capacity Analysis
2: 13th & Washington Way

2/27/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	73	87	0	0	82	18	18	67	8	4	19	63
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	77	92	0	0	86	19	19	71	8	4	20	66
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		528			209							
pX, platoon unblocked												
vC, conflicting volume	105			92			417	351	92	385	341	96
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	105			92			417	351	92	385	341	96
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			96	87	99	99	96	93
cM capacity (veh/h)	1486			1503			475	544	966	492	551	961
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	168	105	98	91								
Volume Left	77	0	19	4								
Volume Right	0	19	8	66								
cSH	1486	1503	549	795								
Volume to Capacity	0.05	0.00	0.18	0.11								
Queue Length 95th (ft)	4	0	16	10								
Control Delay (s)	3.7	0.0	13.0	10.1								
Lane LOS	A		B	B								
Approach Delay (s)	3.7	0.0	13.0	10.1								
Approach LOS			B	B								
Intersection Summary												
Average Delay			6.1									
Intersection Capacity Utilization			34.8%		ICU Level of Service				A			
Analysis Period (min)			15									

EXHIBIT I.133

HCM Signalized Intersection Capacity Analysis
3: 11th & Washington Way

2/27/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	29	50	20	18	70	19	11	297	37	58	119	19
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.99	
Flt Protected		0.99			0.99			1.00			0.99	
Satd. Flow (prot)		1645			1661			1688			1668	
Flt Permitted		0.86			0.92			0.99			0.85	
Satd. Flow (perm)		1436			1536			1675			1435	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	53	21	19	74	20	12	313	39	61	125	20
RTOR Reduction (vph)	0	18	0	0	16	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	87	0	0	97	0	0	358	0	0	200	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		4.7			4.7			17.0			17.0	
Effective Green, g (s)		4.7			4.7			17.0			17.0	
Actuated g/C Ratio		0.16			0.16			0.57			0.57	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		227			243			958			821	
v/s Ratio Prot												
v/s Ratio Perm		0.06			0.06			0.21			0.14	
v/c Ratio		0.38			0.40			0.37			0.24	
Uniform Delay, d1		11.2			11.2			3.5			3.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.1			1.1			0.2			0.2	
Delay (s)		12.3			12.3			3.7			3.3	
Level of Service		B			B			A			A	
Approach Delay (s)		12.3			12.3			3.7			3.3	
Approach LOS		B			B			A			A	

Intersection Summary

HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	29.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

EXHIBIT I.134

HCM Signalized Intersection Capacity Analysis
1: 15th & Washington Way

2/27/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	188	30	55	109	63	95	66	433	55	44	377	227	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Frt	1.00	0.90		1.00	0.91		1.00	0.98		1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1630	1550		1630	1561		1630	1687		1630	1716	1458	
Flt Permitted	0.62	1.00		0.70	1.00		0.39	1.00		0.25	1.00	1.00	
Satd. Flow (perm)	1069	1550		1199	1561		662	1687		433	1716	1458	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	198	32	58	115	66	100	69	456	58	46	397	239	
RTOR Reduction (vph)	0	49	0	0	84	0	0	7	0	0	0	150	
Lane Group Flow (vph)	198	41	0	115	82	0	69	507	0	46	397	89	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4			8			2			6		6	
Actuated Green, G (s)	12.1	8.1		12.1	8.1		22.9	18.9		22.9	18.9	18.9	
Effective Green, g (s)	12.1	8.1		12.1	8.1		22.9	18.9		22.9	18.9	18.9	
Actuated g/C Ratio	0.24	0.16		0.24	0.16		0.45	0.37		0.45	0.37	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0	
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)	297	246		318	247		373	625		288	635	540	
v/s Ratio Prot	c0.05	0.03		0.03	0.05		c0.01	c0.30		0.01	0.23		
v/s Ratio Perm	c0.11			0.06			0.07			0.06		0.06	
v/c Ratio	0.67	0.17		0.36	0.33		0.18	0.81		0.16	0.63	0.16	
Uniform Delay, d1	17.0	18.5		16.0	19.0		8.4	14.4		8.8	13.1	10.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	5.6	0.3		0.7	0.8		0.2	7.9		0.3	1.9	0.1	
Delay (s)	22.6	18.9		16.7	19.8		8.6	22.3		9.0	15.1	10.9	
Level of Service	C	B		B	B		A	C		A	B	B	
Approach Delay (s)		21.4			18.5			20.7			13.2		
Approach LOS		C			B			C			B		
Intersection Summary													
HCM 2000 Control Delay			17.7		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			51.0		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			66.3%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

EXHIBIT I.135

HCM Unsignalized Intersection Capacity Analysis
2: 13th & Washington Way

2/27/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	132	4	0	112	2	7	4	5	36	47	64
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	139	4	0	118	2	7	4	5	38	49	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)		528			209							
pX, platoon unblocked												
vC, conflicting volume	120			143			394	303	141	309	304	119
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	120			143			394	303	141	309	304	119
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			98	99	99	94	92	93
cM capacity (veh/h)	1468			1439			486	601	907	629	600	933
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	164	120	17	155								
Volume Left	21	0	7	38								
Volume Right	4	2	5	67								
cSH	1468	1439	602	720								
Volume to Capacity	0.01	0.00	0.03	0.21								
Queue Length 95th (ft)	1	0	2	20								
Control Delay (s)	1.1	0.0	11.1	11.4								
Lane LOS	A		B	B								
Approach Delay (s)	1.1	0.0	11.1	11.4								
Approach LOS			B	B								
Intersection Summary												
Average Delay			4.7									
Intersection Capacity Utilization			32.4%		ICU Level of Service				A			
Analysis Period (min)			15									

EXHIBIT I.136

HCM Signalized Intersection Capacity Analysis
3: 11th & Washington Way

2/27/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕			↕		
Volume (vph)	22	132	19	36	70	57	2	115	23	76	102	42	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		1.00			1.00			1.00			1.00		
Frt		0.99			0.95			0.98			0.97		
Flt Protected		0.99			0.99			1.00			0.98		
Satd. Flow (prot)		1680			1617			1677			1643		
Flt Permitted		0.95			0.92			1.00			0.87		
Satd. Flow (perm)		1602			1504			1672			1453		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	23	139	20	38	74	60	2	121	24	80	107	44	
RTOR Reduction (vph)	0	10	0	0	42	0	0	11	0	0	13	0	
Lane Group Flow (vph)	0	172	0	0	130	0	0	136	0	0	218	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		5.1			5.1			13.8			13.8		
Effective Green, g (s)		5.1			5.1			13.8			13.8		
Actuated g/C Ratio		0.19			0.19			0.51			0.51		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Vehicle Extension (s)		3.0			3.0			3.0			3.0		
Lane Grp Cap (vph)		303			285			857			745		
v/s Ratio Prot													
v/s Ratio Perm		c0.11			0.09			0.08			c0.15		
v/c Ratio		0.57			0.46			0.16			0.29		
Uniform Delay, d1		9.9			9.7			3.5			3.8		
Progression Factor		1.00			1.00			1.00			1.00		
Incremental Delay, d2		2.4			1.2			0.1			0.2		
Delay (s)		12.3			10.8			3.6			4.0		
Level of Service		B			B			A			A		
Approach Delay (s)		12.3			10.8			3.6			4.0		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			7.6									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.37										
Actuated Cycle Length (s)			26.9									Sum of lost time (s)	8.0
Intersection Capacity Utilization			47.8%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

EXHIBIT I.137

HCM Signalized Intersection Capacity Analysis
 1: 15th & Washington Way

2/27/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Volume (vph)	96	53	23	47	36	34	152	423	143	76	179	181
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Fr _t	1.00	0.95		1.00	0.93		1.00	0.96		1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	1638		1630	1590		1630	1650		1630	1716	1458
Fl _t Permitted	0.69	1.00		0.78	1.00		0.57	1.00		0.33	1.00	1.00
Satd. Flow (perm)	1183	1638		1346	1590		985	1650		570	1716	1458
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	101	56	24	49	38	36	160	445	151	80	188	191
RTOR Reduction (vph)	0	21	0	0	32	0	0	15	0	0	0	103
Lane Group Flow (vph)	101	59	0	49	42	0	160	581	0	80	188	88
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	7.9	5.8		6.5	5.1		31.4	26.6		26.0	23.9	23.9
Effective Green, g (s)	7.9	5.8		6.5	5.1		31.4	26.6		26.0	23.9	23.9
Actuated g/C Ratio	0.15	0.11		0.13	0.10		0.61	0.51		0.50	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	198	183		176	156		655	845		328	790	671
v/s Ratio Prot	c0.02	0.04		0.01	0.03		c0.02	c0.35		0.01	0.11	
v/s Ratio Perm	c0.06			0.03			0.13			0.11		0.06
v/c Ratio	0.51	0.32		0.28	0.27		0.24	0.69		0.24	0.24	0.13
Uniform Delay, d ₁	20.1	21.2		20.5	21.7		4.6	9.5		7.2	8.5	8.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d ₂	2.2	1.0		0.9	0.9		0.2	4.5		0.4	0.7	0.4
Delay (s)	22.3	22.3		21.3	22.6		4.8	14.1		7.6	9.2	8.4
Level of Service	C	C		C	C		A	B		A	A	A
Approach Delay (s)		22.3			22.1			12.1			8.6	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	51.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

EXHIBIT I.138

HCM Unsignalized Intersection Capacity Analysis
 2: Washington Way & 13th

2/27/2013



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Volume (veh/h)	73	87	82	18	12	74
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	77	92	86	19	13	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		528	209			
pX, platoon unblocked						
vC, conflicting volume	105				341	96
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	105				341	96
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				98	92
cM capacity (veh/h)	1486				621	961

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	168	105	91
Volume Left	77	0	13
Volume Right	0	19	78
cSH	1486	1700	893
Volume to Capacity	0.05	0.06	0.10
Queue Length 95th (ft)	4	0	8
Control Delay (s)	3.7	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	3.7	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay		4.1	
Intersection Capacity Utilization		28.4%	ICU Level of Service A
Analysis Period (min)		15	

EXHIBIT I.139

HCM Signalized Intersection Capacity Analysis
3: 11th & Washington Way

2/27/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Volume (vph)	29	50	20	18	70	19	69	297	45	58	119	19	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		1.00			1.00			1.00			1.00		
Flt		0.97			0.98			0.99			0.99		
Flt Protected		0.99			0.99			0.99			0.99		
Satd. Flow (prot)		1645			1661			1676			1668		
Flt Permitted		0.89			0.92			0.93			0.84		
Satd. Flow (perm)		1478			1537			1567			1414		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	31	53	21	19	74	20	73	313	47	61	125	20	
RTOR Reduction (vph)	0	18	0	0	16	0	0	6	0	0	5	0	
Lane Group Flow (vph)	0	87	0	0	97	0	0	427	0	0	201	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		4.8			4.8			19.8			19.8		
Effective Green, g (s)		4.8			4.8			19.8			19.8		
Actuated g/C Ratio		0.15			0.15			0.61			0.61		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Vehicle Extension (s)		3.0			3.0			3.0			3.0		
Lane Grp Cap (vph)		217			226			951			858		
v/s Ratio Prot													
v/s Ratio Perm		0.06			0.06			0.27			0.14		
v/c Ratio		0.40			0.43			0.45			0.23		
Uniform Delay, d1		12.6			12.7			3.5			2.9		
Progression Factor		1.00			1.00			1.00			1.00		
Incremental Delay, d2		1.2			1.3			0.3			0.1		
Delay (s)		13.8			14.0			3.8			3.1		
Level of Service		B			B			A			A		
Approach Delay (s)		13.8			14.0			3.8			3.1		
Approach LOS		B			B			A			A		
Intersection Summary													
HCM 2000 Control Delay			6.2									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.44										
Actuated Cycle Length (s)			32.6									Sum of lost time (s)	8.0
Intersection Capacity Utilization			44.3%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

EXHIBIT I.140

HCM Signalized Intersection Capacity Analysis
 1: 15th & Washington Way

2/27/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	188	30	55	109	63	95	66	433	55	44	377	227
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flt	1.00	0.90		1.00	0.91		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	1550		1630	1561		1630	1687		1630	1716	1458
Flt Permitted	0.62	1.00		0.70	1.00		0.39	1.00		0.25	1.00	1.00
Satd. Flow (perm)	1069	1550		1199	1561		662	1687		433	1716	1458
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	198	32	58	115	66	100	69	456	58	46	397	239
RTOR Reduction (vph)	0	49	0	0	84	0	0	7	0	0	0	150
Lane Group Flow (vph)	198	41	0	115	82	0	69	507	0	46	397	89
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	12.1	8.1		12.1	8.1		22.9	18.9		22.9	18.9	18.9
Effective Green, g (s)	12.1	8.1		12.1	8.1		22.9	18.9		22.9	18.9	18.9
Actuated g/C Ratio	0.24	0.16		0.24	0.16		0.45	0.37		0.45	0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
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)	297	246		318	247		373	625		288	635	540
v/s Ratio Prot	c0.05	0.03		0.03	0.05		c0.01	c0.30		0.01	0.23	
v/s Ratio Perm	c0.11			0.06			0.07			0.06		0.06
v/c Ratio	0.67	0.17		0.36	0.33		0.18	0.81		0.16	0.63	0.16
Uniform Delay, d1	17.0	18.5		16.0	19.0		8.4	14.4		8.8	13.1	10.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.3		0.7	0.8		0.2	7.9		0.3	1.9	0.1
Delay (s)	22.6	18.9		16.7	19.8		8.6	22.3		9.0	15.1	10.9
Level of Service	C	B		B	B		A	C		A	B	B
Approach Delay (s)		21.4			18.5			20.7			13.2	
Approach LOS		C			B			C			B	
Intersection Summary												
HCM 2000 Control Delay			17.7				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			51.0				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			66.3%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

EXHIBIT I.141

HCM Unsignalized Intersection Capacity Analysis
 2: Washington Way & 13th

2/27/2013



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↘	↙
Volume (veh/h)	20	132	112	2	55	92
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	139	118	2	58	97
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		528	209			
pX, platoon unblocked						
vC, conflicting volume	120				300	119
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	120				300	119
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				92	90
cM capacity (veh/h)	1468				682	933
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	160	120	155			
Volume Left	21	0	58			
Volume Right	0	2	97			
cSH	1468	1700	820			
Volume to Capacity	0.01	0.07	0.19			
Queue Length 95th (ft)	1	0	17			
Control Delay (s)	1.1	0.0	10.4			
Lane LOS	A		B			
Approach Delay (s)	1.1	0.0	10.4			
Approach LOS			B			
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			31.5%	ICU Level of Service		A
Analysis Period (min)			15			

EXHIBIT I.142

HCM Signalized Intersection Capacity Analysis
 3: 11th & Washington Way

2/27/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	22	132	38	36	70	57	13	115	28	76	102	42	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		1.00			1.00			1.00			1.00		
Flt		0.97			0.95			0.98			0.97		
Flt Protected		0.99			0.99			1.00			0.98		
Satd. Flow (prot)		1660			1617			1668			1643		
Flt Permitted		0.94			0.89			0.97			0.86		
Satd. Flow (perm)		1577			1459			1623			1434		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	23	139	40	38	74	60	14	121	29	80	107	44	
RTOR Reduction (vph)	0	18	0	0	39	0	0	14	0	0	15	0	
Lane Group Flow (vph)	0	184	0	0	133	0	0	150	0	0	216	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		7.2			7.2			12.6			12.6		
Effective Green, g (s)		7.2			7.2			12.6			12.6		
Actuated g/C Ratio		0.26			0.26			0.45			0.45		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Vehicle Extension (s)		3.0			3.0			3.0			3.0		
Lane Grp Cap (vph)		408			377			735			649		
v/s Ratio Prot													
v/s Ratio Perm		c0.12			0.09			0.09			c0.15		
v/c Ratio		0.45			0.35			0.20			0.33		
Uniform Delay, d1		8.6			8.4			4.6			4.9		
Progression Factor		1.00			1.00			1.00			1.00		
Incremental Delay, d2		0.8			0.6			0.1			0.3		
Delay (s)		9.4			9.0			4.7			5.2		
Level of Service		A			A			A			A		
Approach Delay (s)		9.4			9.0			4.7			5.2		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM 2000 Control Delay			7.1									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.38										
Actuated Cycle Length (s)			27.8									Sum of lost time (s)	8.0
Intersection Capacity Utilization			49.5%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

EXHIBIT I.143

Intersection: 1: 15th & Washington Way

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	100	75	52	84	155	306	69	103	87
Average Queue (ft)	44	29	23	38	56	114	31	49	39
95th Queue (ft)	78	61	51	69	119	215	59	90	68
Link Distance (ft)		827		465		922		874	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150		100		150		100		150
Storage Blk Time (%)				0	0	3		0	
Queuing Penalty (veh)				0	0	5		1	

Intersection: 2: 13th & Washington Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	40	4	70	58
Average Queue (ft)	8	0	36	33
95th Queue (ft)	33	3	59	51
Link Distance (ft)	465	152	242	383
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 11th & Washington Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	67	80	120	104
Average Queue (ft)	32	36	55	41
95th Queue (ft)	57	66	99	80
Link Distance (ft)	152	752	940	173
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Zone Summary

Zone wide Queuing Penalty: 6

Queuing and Blocking Report
13TH 4-WAY STOP

2/27/2013

Intersection: 1: 15th & Washington Way

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	145	80	111	145	174	316	103	245	175
Average Queue (ft)	75	32	43	61	44	158	29	122	61
95th Queue (ft)	127	67	80	108	123	262	74	206	133
Link Distance (ft)		1201		466		1199		874	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150		100		150		100		150
Storage Blk Time (%)	0		0	2		9	0	11	0
Queuing Penalty (veh)	0		0	2		6	2	30	0

Intersection: 2: 13th & Washington Way

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	29	39	77
Average Queue (ft)	2	13	40
95th Queue (ft)	17	38	63
Link Distance (ft)	466	242	312
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: 11th & Washington Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	85	110	88	104
Average Queue (ft)	40	45	35	50
95th Queue (ft)	70	81	72	87
Link Distance (ft)	152	782	700	174
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Zone Summary

Zone wide Queuing Penalty: 40

EXHIBIT I.145

Queuing and Blocking Report
2040 AM

2/27/2013

Intersection: 1: 15th & Washington Way

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	98	88	67	77	159	286	82	136	70
Average Queue (ft)	42	32	29	37	54	120	34	42	34
95th Queue (ft)	78	67	57	67	119	232	64	93	60
Link Distance (ft)		827		471		922		874	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150		100		150		100		150
Storage Blk Time (%)	0			0	0	3	0	1	
Queuing Penalty (veh)	0			0	0	5	0	1	

Intersection: 2: Washington Way & 13th

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	45	58
Average Queue (ft)	7	31
95th Queue (ft)	30	48
Link Distance (ft)	471	382
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: 11th & Washington Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	89	82	143	90
Average Queue (ft)	35	37	68	40
95th Queue (ft)	67	66	118	75
Link Distance (ft)	146	752	940	173
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Zone Summary

Zone wide Queuing Penalty: 7

EXHIBIT I.146

HCM Signalized Intersection Capacity Analysis
 1: 15th & Washington Way

2/27/2013

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	188	30	55	109	63	95	66	433	55	44	377	227	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Flt	1.00	0.90		1.00	0.91		1.00	0.98		1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1630	1550		1630	1561		1630	1687		1630	1716	1458	
Flt Permitted	0.62	1.00		0.70	1.00		0.39	1.00		0.25	1.00	1.00	
Satd. Flow (perm)	1069	1550		1199	1561		662	1687		433	1716	1458	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	198	32	58	115	66	100	69	456	58	46	397	239	
RTOR Reduction (vph)	0	49	0	0	84	0	0	7	0	0	0	150	
Lane Group Flow (vph)	198	41	0	115	82	0	69	507	0	46	397	89	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4			8			2			6		6	
Actuated Green, G (s)	12.1	8.1		12.1	8.1		22.9	18.9		22.9	18.9	18.9	
Effective Green, g (s)	12.1	8.1		12.1	8.1		22.9	18.9		22.9	18.9	18.9	
Actuated g/C Ratio	0.24	0.16		0.24	0.16		0.45	0.37		0.45	0.37	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0	
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)	297	246		318	247		373	625		288	635	540	
v/s Ratio Prot	c0.05	0.03		0.03	0.05		c0.01	c0.30		0.01	0.23		
v/s Ratio Perm	c0.11			0.06			0.07			0.06		0.06	
v/c Ratio	0.67	0.17		0.36	0.33		0.18	0.81		0.16	0.63	0.16	
Uniform Delay, d1	17.0	18.5		16.0	19.0		8.4	14.4		8.8	13.1	10.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	5.6	0.3		0.7	0.8		0.2	7.9		0.3	1.9	0.1	
Delay (s)	22.6	18.9		16.7	19.8		8.6	22.3		9.0	15.1	10.9	
Level of Service	C	B		B	B		A	C		A	B	B	
Approach Delay (s)		21.4			18.5			20.7			13.2		
Approach LOS		C			B			C			B		
Intersection Summary													
HCM 2000 Control Delay			17.7		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.69										
Actuated Cycle Length (s)			51.0		Sum of lost time (s)						16.0		
Intersection Capacity Utilization			66.3%		ICU Level of Service						C		
Analysis Period (min)			15										
c Critical Lane Group													

EXHIBIT I.147

HCM Unsignalized Intersection Capacity Analysis
 2: Washington Way & 13th

2/27/2013



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Volume (veh/h)	20	132	112	2	55	92
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	139	118	2	58	97
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		528	209			
pX, platoon unblocked						
vC, conflicting volume	120				300	119
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	120				300	119
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				92	90
cM capacity (veh/h)	1468				682	933
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	160	120	155			
Volume Left	21	0	58			
Volume Right	0	2	97			
cSH	1468	1700	820			
Volume to Capacity	0.01	0.07	0.19			
Queue Length 95th (ft)	1	0	17			
Control Delay (s)	1.1	0.0	10.4			
Lane LOS	A		B			
Approach Delay (s)	1.1	0.0	10.4			
Approach LOS			B			
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization			31.5%		ICU Level of Service	A
Analysis Period (min)			15			

EXHIBIT I.148

HCM Signalized Intersection Capacity Analysis
3: 11th & Washington Way

2/27/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	132	38	36	70	57	13	115	28	76	102	42
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.97			0.95			0.98			0.97	
Flt Protected		0.99			0.99			1.00			0.98	
Satd. Flow (prot)		1660			1617			1668			1643	
Flt Permitted		0.94			0.89			0.97			0.86	
Satd. Flow (perm)		1577			1459			1623			1434	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	139	40	38	74	60	14	121	29	80	107	44
RTOR Reduction (vph)	0	18	0	0	39	0	0	14	0	0	15	0
Lane Group Flow (vph)	0	184	0	0	133	0	0	150	0	0	216	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.2			7.2			12.6			12.6	
Effective Green, g (s)		7.2			7.2			12.6			12.6	
Actuated g/C Ratio		0.26			0.26			0.45			0.45	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		408			377			735			649	
v/s Ratio Prot												
v/s Ratio Perm		c0.12			0.09			0.09			c0.15	
v/c Ratio		0.45			0.35			0.20			0.33	
Uniform Delay, d1		8.6			8.4			4.6			4.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			0.6			0.1			0.3	
Delay (s)		9.4			9.0			4.7			5.2	
Level of Service		A			A			A			A	
Approach Delay (s)		9.4			9.0			4.7			5.2	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.1					HCM 2000 Level of Service			A	
HCM 2000 Volume to Capacity ratio			0.38									
Actuated Cycle Length (s)			27.8					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			49.5%					ICU Level of Service		A		
Analysis Period (min)			15									
c Critical Lane Group												

EXHIBIT I.149

Queuing and Blocking Report
Existing Lane Configuration

2/27/2013

Intersection: 1: 15th St & Washington Way

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	94	29	99	173	131	99
Average Queue (ft)	38	9	39	83	43	47
95th Queue (ft)	76	27	78	147	91	82
Link Distance (ft)		2202		410	203	203
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	200		100			
Storage Blk Time (%)			0	4		
Queuing Penalty (veh)			1	4		

Intersection: 2: 15th St & Washington Ave

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	132	41	99
Average Queue (ft)	48	2	40
95th Queue (ft)	93	16	93
Link Distance (ft)	434	203	332
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 5

EXHIBIT I.150

Queuing and Blocking Report
Existing Lane Configuration

2/27/2013

Intersection: 1: 15th St & Washington Way

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	137	46	68	170	191	158
Average Queue (ft)	59	17	28	87	95	42
95th Queue (ft)	108	39	58	146	153	94
Link Distance (ft)	2202		1470		203	
Upstream Blk Time (%)					0	0
Queuing Penalty (veh)					0	0
Storage Bay Dist (ft)	200		100		100	
Storage Blk Time (%)			0	4	5	0
Queuing Penalty (veh)			0	2	11	0

Intersection: 2: 15th St & Washington Ave

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	181	107
Average Queue (ft)	80	24
95th Queue (ft)	146	78
Link Distance (ft)	434	1147
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 13

EXHIBIT I.151

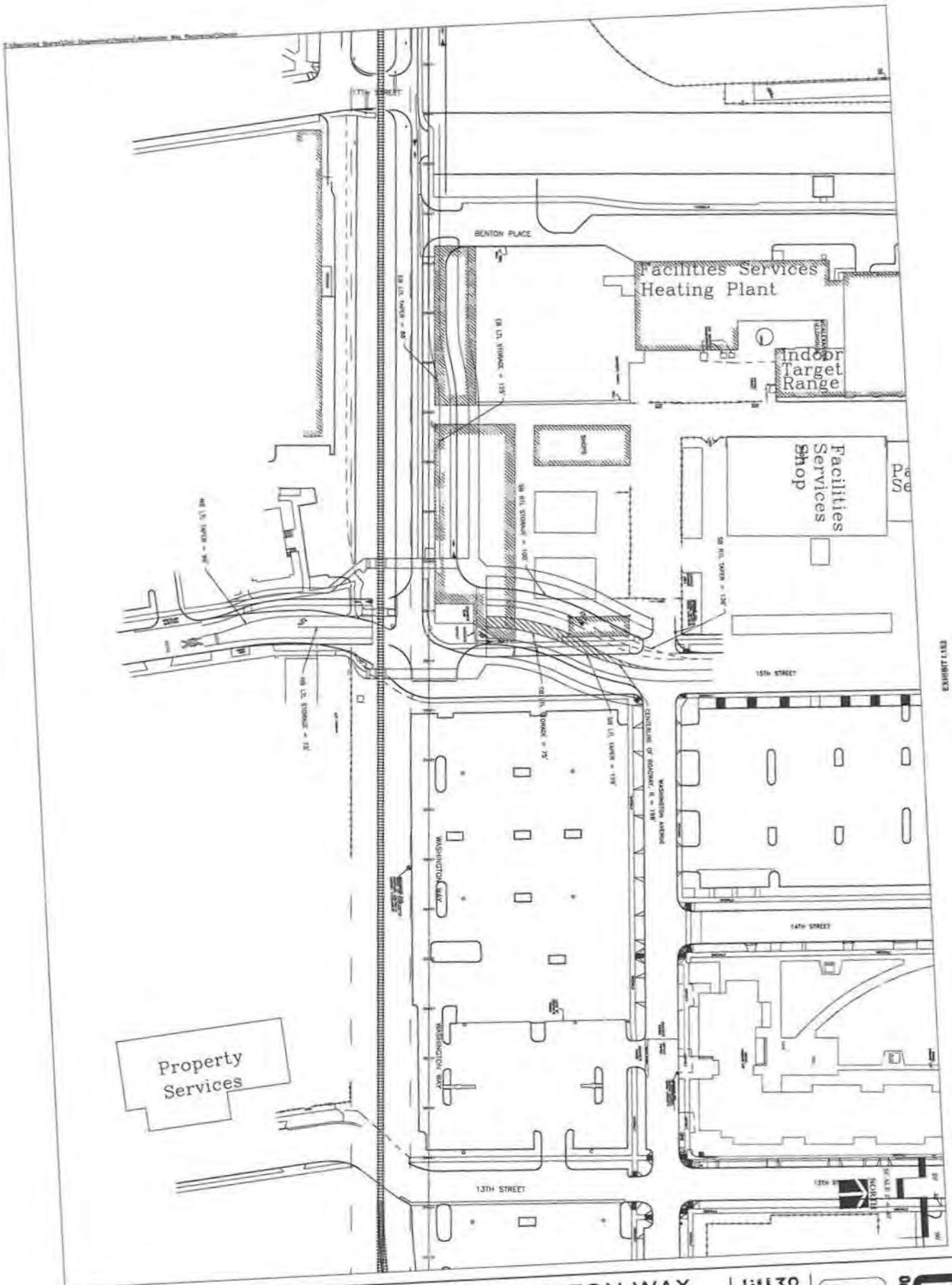


EXHIBIT 103

Project:	15TH AND WASHINGTON WAY DESIGN FOR 2025
Client:	OSU
Contract:	1358-12
Scale:	AS SHOWN
Date:	Feb. 07, 2013
Drawn by:	[Signature]
Checked by:	[Signature]
Approved by:	[Signature]

CXX

WASHINGTON WAY REALIGNMENT

OREGON STATE UNIVERSITY
OSU PROJECT NUMBER: 1358-12

PHIC 000004

Attachment A-118

CAMERON MCCARTHY
Principal
1358-12

OSU
Oregon State University
Civil Engineering
Leading in Service
100 NE Oregon Street
Corvallis, OR 97331
(503) 754-2000

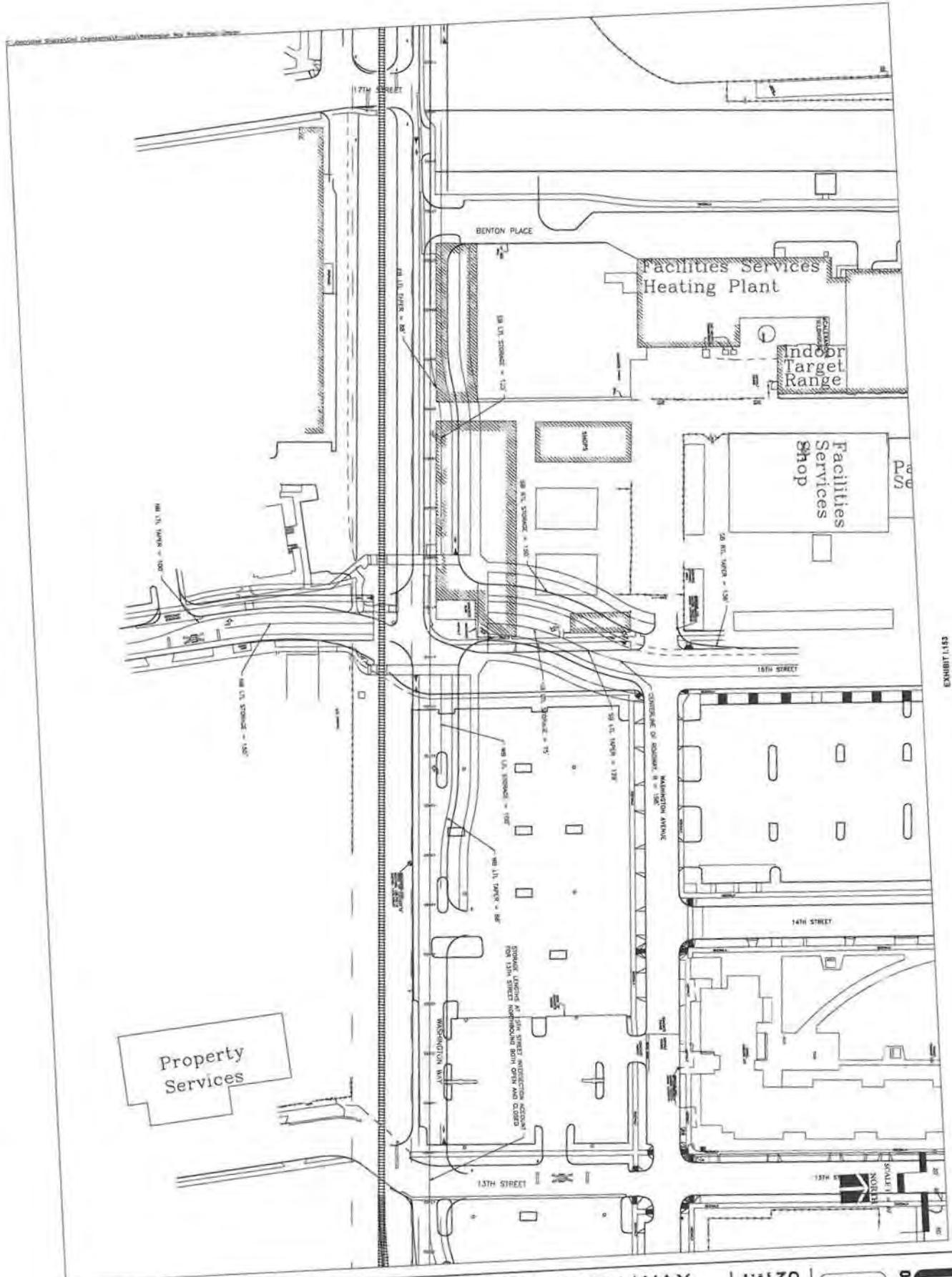


EXHIBIT L153

Sheet Title	15TH AND WASHINGTON WAY DESIGN FOR 2010
Drawn By	ELC
Checked By	PHS
Date	MAY 27, 2013
Scale	AS SHOWN
Project No.	1358-12
Client	OSU

CXX

WASHINGTON WAY REALIGNMENT

OREGON STATE UNIVERSITY
OSU PROJECT NUMBER: 1358-12

PIC-KKXXXX

OSU
Oregon State University

CAMERON MCCARTHY
Principal
1000 NE Oregon Street
Corvallis, OR 97331
503.754.2000
www.osu.edu

ARCADIS SERVICES
Chief Engineer
Lead Designer
1000 NE Oregon Street
Corvallis, OR 97331
503.754.2000

Motorcycle Areas were not included in previous parking utilization studies given multiple bikes can park in one area. Since the delineated areas provide parking for students and staff, OSU will assess and report on them separately. Refer to Table 13: OSU Motorcycle Areas for the current number of areas in OSU General Use lots.

Table 13: OSU Motorcycle Areas

Academic Year	Motorcycle Areas
2007 - 2008	~
2008 - 2009	~
2009 - 2010	~
2010 - 2011	~
2011 - 2012	49

~Motorcycle areas previously not surveyed

Parking Utilization

Campus Utilization

Parking utilization is calculated as the ratio of occupied spaces to the total parking spaces.ⁱⁱⁱ OSU's parking utilization rate for Spring Term 2012 is 68 percent during peak hours 10 am and 2 pm. While Table 14a and 14b: OSU Parking Utilization show a slight decrease in the total campus parking utilization over the past five years, this is partially the result of changes in data collection methodology and differences in the utilization of parking lots constructed to replace displaced parking due to their location on campus. Parking facilities in Sector C historically have the highest utilization rates, while parking lots in other sectors have had lower utilization rates due to the greater distance of these lots from the campus core. Replacement of parking facilities in Sector C with new facilities in other sectors has contributed to the decline in utilization from 75 percent in 2007 – 2008 to 65 percent in 2011 – 2012.

Parking utilization also has not been adjusted as the capacity number were; thus, it is not surprising that the percent utilization for Sectors C, D, and E is lower in academic year 2011 – 2012 than the previous four years, as the residential non-public lots were included in previous years (e.g., Madison Ave Co-op Lot (3213), N 16th West Lot (3223), N 16th St East Lot (3224), and Orchard Court Lot (3322)). Refer to Attachment B: Parking Utilization for a map of utilization by parking facility.

Table 14a: OSU Parking Utilization

Sector	2007 - 2008			2008 - 2009			2009 - 2010		
	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization
A	130	122	94%	130	84	64%	130	126	97%
B	924	787	83%	948	761	80%	948	709	75%
C	2,653	2,460	93%	2,606	2,285	88%	2,319	2,066	89%
D	1,268	1,169	92%	1,265	1,058	84%	1,263	1,064	84%
E	295	192	76%	253	195	77%	252	191	76%
F	1,514	448	32%	1,394	447	32%	1,395	433	31%
G	1,365	883	65%	1,362	906	66%	1,364	902	66%
H	43	5	11%	46	1	20%	46	6	13%
Total	8,192	6,066	75%	8,004	5,737	72%	7,717	5,497	72%

Table 14b: OSU Parking Utilization

Sector	2010 - 2011			2011 - 2012		
	Total Spaces	Occupied Spaces	Percent Utilization	Total Spaces	Occupied Spaces	Percent Utilization
A	130	116	89%	195	124	63%
B	950	801	84%	884	697	79%
C	2,293	2,090	91%	1,839	1,647	90%
D	1,217	1,075	88%	1,268	1,034	82%
E	226	165	70%	173	145	84%
F	1,397	500	36%	1,353	317	23%
G	1,366	912	67%	1,337	873	65%
H	46	10	22%	185	97	52%
Total	7,625	5,669	71%	7,234	4,931	68%

EXHIBIT I.154



Community Development
Planning Division
501 SW Madison Avenue
Corvallis, OR 97333

**CORVALLIS CITY COUNCIL
NOTICE OF DISPOSITION**

ORDER 2004 - 156

**CASE: Oregon State University Campus Master Plan (CPA03-00005; LDT03-00005;
ZDC03-00020; PLD03-00018).**

REQUEST: Approval of a major modification to the OSU Physical Development Plan, which, by LDC provisions, is processed under the Major Planned Development Modification process (PLD03-00018). Approval of a Comprehensive Plan Map Amendment to change the Comprehensive Plan Map designation of the property at the corner of Kings Boulevard and Monroe Avenue (commonly known as the "College Inn," and including associated parking) from High Density Residential to Public Institutional. Approval of a request to change the Development District designation of the College Inn property from RS-20 to OSU and to change the property commonly known a "South Farm" from Agricultural-Open Space to OSU. The South Farm property is located south of Philomath Boulevard near SW Brooklane Drive. Finally, a Land Development Code Text Amendment to establish new standards for development in the OSU (Oregon State University) District.

APPLICANT: Oregon State University
Facilities Services
100 Adams Hall
Corvallis, OR 97331-2001

OWNERS:

Oregon State University
Facilities Services
100 Adams Hall
Corvallis, OR 97331-2001

Leong Family LLC
879 Independence Hwy NW
Albany, OR 97321-9313

Stehr Christian P
3560 NW Tyler Ave
Corvallis, OR 97330-4959

Lachelle Norma G, tr
2845 NW Orchard Ave
Corvallis, OR 97330-5328

Hayden Fred Elmer &
Dorothy M
1563 SW A Ave
Corvallis, OR 97333-4118

Anderson Carl P & Debbie
561 NW Jackson St
Corvallis, OR 97330

Bushnell Harold H & Verla J
1730 SW 53rd St
Corvallis, OR 97333-1011

Gary Wallace
P.O. Box 145
Gleneden Beach, OR 97388

Rudisill Ernest H & D Lee
2605 SW 49th St
Corvallis, OR 97333-1326

Benard Richard P
1500 W Rudasill Rd
Tucson, AZ 85704

City of Corvallis
P.O. Box 1083
Corvallis, OR 97339-1083

EXHIBIT I.155

LOCATION: The entire area under consideration is approximately 577 acres in size and is roughly bounded by Monroe Avenue on the north, Western Boulevard on the south, 9th Street on the east, and 35th Street on the west. Additionally, the South Farm property, south of Philomath Boulevard and not contiguous to the area is included in the request.

DECISION: The Corvallis City Council conducted a review of the above case on September 20, 2004, and deliberated on the proposal on October 4, 2004. On November 1, 2004, the City Council took the following actions on the Oregon State University Campus Master Plan:

CPA03-00005 (Change Comprehensive Plan Map Designation of College Inn site)-

Action: Adopted Ordinance 2004-20 approving the Comprehensive Plan Map Amendment for the "College Inn" site (Benton County Assessor's Map 11-5-34-DA; Tax Lots 9800, 9900, and 11400). Approval is based on, and the ordinance incorporates as Attachment A, the formal findings taken from the staff report dated September 9, 2004, public comment, the minutes of the of the September 20, 2004, public hearing, and the October 4, 2004, deliberations (**Exhibit A**).

ZDC03-00020 (Change College Inn District to OSU and change South Farm [Sector J] to OSU)

Action 1: Upheld the Planning Commission's decision to approve the Land Development Code District Map Change for the "College Inn" site (Benton County Assessor's Map 11-5-34-DA; Tax Lots 9800, 9900, and 11400). Approval is based on the formal findings taken from the staff report dated September 9, 2004, public comment, the minutes of the of the September 20, 2004, public hearing, and the October 4, 2004, deliberations (**Exhibit B**).

Action 2: Upheld the Planning Commission's decision to approve the Land Development Code District Map Change for the "South Farm" site (Benton County Assessor's Map 12-5-3-C; Tax Lot 100). Approval is based on the formal findings taken from the staff report dated September 9, 2004, public comment, the minutes of the of the September 20, 2004, public hearing, and the October 4, 2004, deliberations (**Exhibit B**).

Action 3: Approve the Land Development Code District Map Change removing from the OSU District privately held properties owned by Leong, Stehr, and Lachelle, and identified on Benton County Assessor's Map 11-5-34 CA, as Taxlots 8500, 8600, 9200, and 9300 and located at 2845 NW Orchard Avenue, 2909-2911 NW Orchard Avenue, 3020 NW Orchard Avenue, and 3010 NW Orchard Avenue, respectively. Approval is based on the formal findings taken from the staff report dated September 9, 2004, public comment, the minutes of the of the September 20, 2004, public hearing, and the October 4, 2004, deliberations (**Exhibit B**).

LDT03-00005 (Adopt a replacement Land Development Code Chapter 3.36 OSU District)-

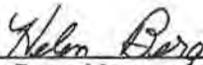
Action: Adopted Ordinance 2004-21 approving a Land Development Code Text Amendment replacing the OSU District (replacement Chapter 3.36 is included as Attachment B to the ordinance). Approval is based on, and the ordinance incorporates as Attachment A, the formal findings taken from the staff report dated September 9, 2004, public comment, the minutes of the of the September 20, 2004, public hearing and of the October 4, 2004, deliberations (**Exhibit C**).

PLD03-00018 (Major Modification to OSU PDP through adoption of the OSU CMP)-

Action: Approved the Major Modification to the Oregon State University Physical Development Plan Amendment of the Oregon State University Campus Master Plan (**Attachments G and J of Exhibit D of the September 9, 2004, City Council Staff Report, with the additional modifications approved during the October 4, 2004, deliberations**). Approval is based on the formal findings taken from the staff report dated September 9, 2004, public comment, the minutes of the of the September 20, 2004, public hearing and of the October 4, 2004, deliberations.

The proposal, staff report, hearing minutes, and findings and conclusions may be reviewed at the Community Development Department, Planning Division, City Hall, 501 SW Madison Avenue.

If you wish to appeal this decision, an appeal must be filed with the State Land Use Board of Appeals within 21 days from the date of the decision.



Helen Berg, Mayor of Corvallis

Signed this 2nd day of December 2004.
Attachments: Exhibit A : Ordinance 2004-20
Exhibit B: District Map Changes
Exhibit 3: Ordinance 2004-21

EXHIBIT I.157

ORDINANCE 2004-20

AN ORDINANCE relating to a Comprehensive Plan Amendment, modifying the Comprehensive Plan Map associated with Ordinance 98-53, as amended.

Whereas, the Planning Commission, after holding a duly advertised public hearing, has forwarded its recommendation to the City Council concerning a request for a Comprehensive Plan Map Amendment;

Whereas, the Planning Commission recommended that the City Council approve the request to change the Comprehensive Plan Map designation of the properties commonly known as the "College Inn," from High Density Residential to Public Institutional. The properties are indicated on Attachment B and are identified on Benton County Assessor's Map 11-5-34-DA as Tax Lots 9800, 9900, and 11400.

Whereas, after proper legal notice, a public hearing before the City Council concerning the proposed Comprehensive Plan Map Amendment was held on September 20, 2004, and interested persons and the general public were given an opportunity to be heard;

Whereas, the record was held open until 5:00 pm on September 27, 2004, and the applicant submitted a written argument on September 27, 2004, in response to written and oral comments received during the September 20, 2004, hearing.

Whereas, the applicant made final written arguments on October 4, 2004, and the Council has reviewed the public testimony and the recommendations of the Planning Commission and of staff.

Whereas, findings of fact have been prepared by the applicant and staff, which findings consist of the complete staff report to the City Council, dated September 9, 2004, including attachments; the minutes of the September 20, 2004, public hearing, and the October 4, 2004, deliberations; and the formal findings attached hereto as Attachment A.

Whereas, said findings are by reference incorporated herein and are hereby adopted by the City Council.

Whereas, the City Council finds that the proponents have borne their burden of proof.

Whereas, the City Council finds that there is a public need for the proposed Comprehensive Plan Map Amendment from High Density Residential to Public Institutional, that the advantages of the proposal outweigh the disadvantages, and that the proposal results in a net benefit to the community.

Whereas, the City Council finds that the proposal conforms with the Corvallis Comprehensive Plan and any other applicable policies.

NOW THEREFORE, THE CITY OF CORVALLIS ORDAINS AS FOLLOWS:

Section 1. The Comprehensive Plan Map is amended such that the properties commonly known as the "College Inn," are re-designated from High Density Residential to Public Institutional, as indicated

-1- Ordinance
Comprehensive Plan Amendment (CPA03-00005)
Oregon State University Campus Master Plan

Exhibit A

EXHIBIT I.158

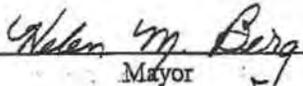
on Attachment B. The properties are identified on Benton County Assessor's Map 11-5-34-DA as Tax Lots 9800, 9900, and 11400.

Section 2. Emergency clause. The earliest imposition of the provisions of this ordinance is necessary to preserve the peace, health, safety and general welfare of the public. Accordingly, an emergency is declared, and this ordinance will take effect immediately upon its passage by the Council and approval by the Mayor.

PASSED by the Council this 1st Day of November, 2004.

APPROVED by the Mayor this 1st Day of November, 2004.

Effective this 1st Day of November, 2004.



Mayor

ATTEST:

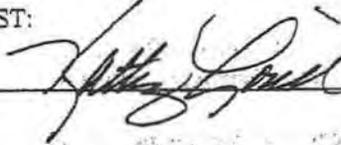


EXHIBIT I.159

A Summary of Oregon's Statewide Planning Goals

1. **CITIZEN INVOLVEMENT** Goal 1 calls for "the opportunity for citizens to be involved in all phases of the planning process." It requires each city and county to have a citizen involvement program containing six components specified in the goal. It also requires local governments to have a committee for citizen involvement (CCI) to monitor and encourage public participation in planning.
2. **LAND USE PLANNING** Goal 2 outlines the basic procedures of Oregon's statewide planning program. It says that land use decisions are to be made in accordance with a comprehensive plan, and that suitable "implementation ordinances" to put the plan's policies into effect must be adopted. It requires that plans be based on "factual information"; that local plans and ordinances be coordinated with those of other jurisdictions and agencies; and that plans be reviewed periodically and amended as needed. Goal 2 also contains standards for taking exceptions to statewide goals. An exception may be taken when a statewide goal cannot or should not be applied to a particular area or situation.
3. **AGRICULTURAL LANDS** Goal 3 defines "agricultural lands." It then requires counties to inventory such lands and to "preserve and maintain" them through farm zoning. Details on the uses allowed in farm zones are found in ORS Chapter 215 and in Oregon Administrative Rules, Chapter 660, Division 33.
4. **FOREST LANDS** This goal defines forest lands and requires counties to inventory them and adopt policies and ordinances that will "conserve forest lands for forest uses."
5. **OPEN SPACES, SCENIC AND HISTORIC AREAS AND NATURAL RESOURCES** Goal 5 covers more than a dozen natural and cultural resources such as wildlife habitats and wetlands. It establishes a process for each resource to be inventoried and evaluated. If a resource or site is found to be significant, a local government has three policy choices: preserve the resource, allow proposed uses that conflict with it, or strike some sort of a balance between the resource and the uses that would conflict with it.
6. **AIR, WATER AND LAND RESOURCES QUALITY** This goal requires local comprehensive plans and implementing measures to be consistent with state and federal regulations on matters such as groundwater pollution.
7. **AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS** Goal 7 deals with development in places subject to natural hazards such as floods or landslides. It requires that jurisdictions apply "appropriate safeguards" (floodplain zoning, for example) when planning for development there.
8. **RECREATION NEEDS** This goal calls for each community to evaluate its areas and facilities for recreation and develop plans to deal with the projected demand for them. It also sets forth detailed

standards for expedited siting of destination resorts.

9. **ECONOMY OF THE STATE** Goal 9 calls for diversification and improvement of the economy. It asks communities to inventory commercial and industrial lands, project future needs for such lands, and plan and zone enough land to meet those needs.
10. **HOUSING** This goal specifies that each city must plan for and accommodate needed housing types, such as multifamily and manufactured housing. It requires each city to inventory its buildable residential lands, project future needs for such lands, and plan and zone enough buildable land to meet those needs. It also prohibits local plans from discriminating against needed housing types.
11. **PUBLIC FACILITIES AND SERVICES** Goal 11 calls for efficient planning of public services such as sewers, water, law enforcement, and fire protection. The goal's central concept is that public services should be planned in accordance with a community's needs and capacities rather than be forced to respond to development as it occurs.
12. **TRANSPORTATION** The goal aims to provide "a safe, convenient and economic transportation system." It asks for communities to address the needs of the "transportation disadvantaged."
13. **ENERGY** Goal 13 declares that "land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles."
14. **URBANIZATION** This goal requires cities to estimate future growth and needs for land and then plan and zone enough land to meet those needs. It calls for each city to establish an "urban growth boundary" (UGB) to "identify and separate urbanizable land from rural land." It specifies seven factors that must be considered in drawing up a UGB. It also lists four criteria to be applied when undeveloped land within a UGB is to be converted to urban uses.
15. **WILLAMETTE GREENWAY** Goal 15 sets forth procedures for administering the 300 miles of greenway that protects the Willamette River.
16. **ESTUARINE RESOURCES** This goal requires local governments to classify Oregon's 22 major estuaries in four categories: natural, conservation, shallow-draft development, and deep-draft development. It then describes types of land uses and activities that are permissible in those "management units."
17. **COASTAL SHORELANDS** The goal defines a planning area bounded by the ocean beaches on the west and the coast highway (State Route 101) on the east. It specifies how certain types of land and resources there are to be managed: major marshes, for example, are to be protected. Sites best suited for unique coastal land uses (port facilities, for example) are reserved for "water-dependent" or "water related" uses.
18. **BEACHES AND DUNES** Goal 18 sets planning standards for development on various types of dunes. It prohibits residential development on beaches and active foredunes, but allows some other

types of development if they meet key criteria. The goal also deals with dune grading, groundwater drawdown in dunal aquifers, and the breaching of foredunes.

19. *OCEAN RESOURCES* Goal 19 aims "to conserve the long-term values, benefits, and natural resources of the

nearshore ocean and the continental shelf." It deals with matters such as dumping of dredge spoils and discharging of waste products into the open sea. Goal 19's main requirements are for state agencies rather than cities and counties.

Richardson, Robert

From: GRIGG DEVIS Valerie [Valerie.GRIGGDEVIS@odot.state.or.us]
Sent: Tuesday, February 26, 2013 1:04 PM
To: Richardson, Robert
Cc: 'Dodson, David'; AYASH Sam H
Subject: Model Run for OSU Major Adjustment (LDT12-00002)

Hello Bob -

I have received the results of the CAMPO modeling analysis of the proposed OSU "Land Development Code Text Amendment" referenced above. Two methods were used in analysis of the dorm housing and the administrative offices. Both resulted in minimal impacts to the highway intersections at US20/OR 34 at SW 15th and SW 26th streets. ODOT is satisfied that this analysis has addressed the requirements of the Transportation Planning Rule with regard to the proposed "Land Development Code Text Amendment" referenced above.

If there are additional questions regarding the analysis, you are welcome to contact Sam Ayash, our Senior Transportation Modeler, at 503-986-4101. Thank you for your consideration in this matter.

With Best Regards,

Valerie Grigg Devis

Senior Region Planner

Oregon Department of Transportation

3700 SW Philomath Boulevard, Corvallis, OR 97333

Office: 541-757-4197 Fax: 541-757-4290

Valerie's Regular Office Hours:

Monday to Thursday: 7:30 a.m. to 5 p.m. & Friday: 7:30 a.m. to 11:30 a.m.

From: AYASH Sam H
Sent: Tuesday, February 26, 2013 9:16 AM
To: GRIGG DEVIS Valerie; UPTON Dorothy J
Cc: DUNN Brian G
Subject: RE: Model Run for OSU

Hi Valerie,

Analysis of the results of the CAMPO PM PK model runs for OSU campus with land use change for zones 215 and 389, indicated no **noticeable impacts** on the intersections of US20/OR34 and SW 15th and SW 26th streets. Two different approaches were undertaken to model the resident dorm. The first approach converted the group quarters 162 dorm rooms to an equivalent households. The process followed took the number of PM PK trip ends (20, as provided by consultant) turned them into daily vehicular trips and then converted them into an equivalent households.

The second approach added the dorm pm pk trips to the existing model pm pk demand and assigned it to assess the transportation impacts to the intersections in interest.

The combined number of pm pk trips (dorm plus admin building) as provided to us added to about 45 pm pk vehicular trips. Analysis of the results from the output of both scenarios when compared to the CAMPO's reference year 2030 scenario indicated **minimal impacts**. Difference in pm pk volumes we're in the single digits. Review of the difference plots indicated only path choice impacts on facilities north and east of the project areas.

The plot below reflects PM PK output with added land use (Dorm and Admin Building):

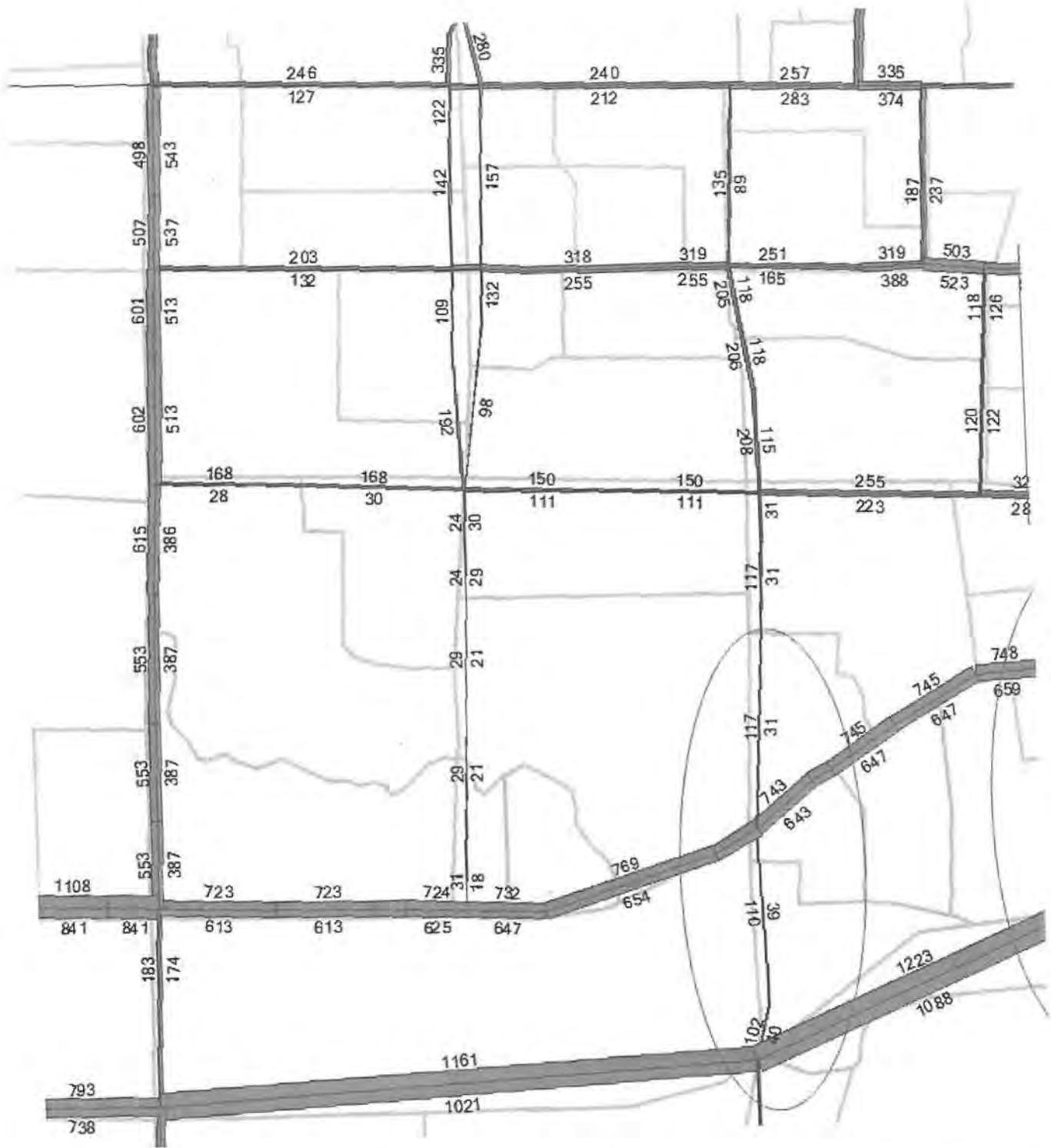


EXHIBIT I.166

The Plot below represents a difference plot between the two scenarios. Red color represent drop in assigned volume, while blue reflects increase in assigned volume.

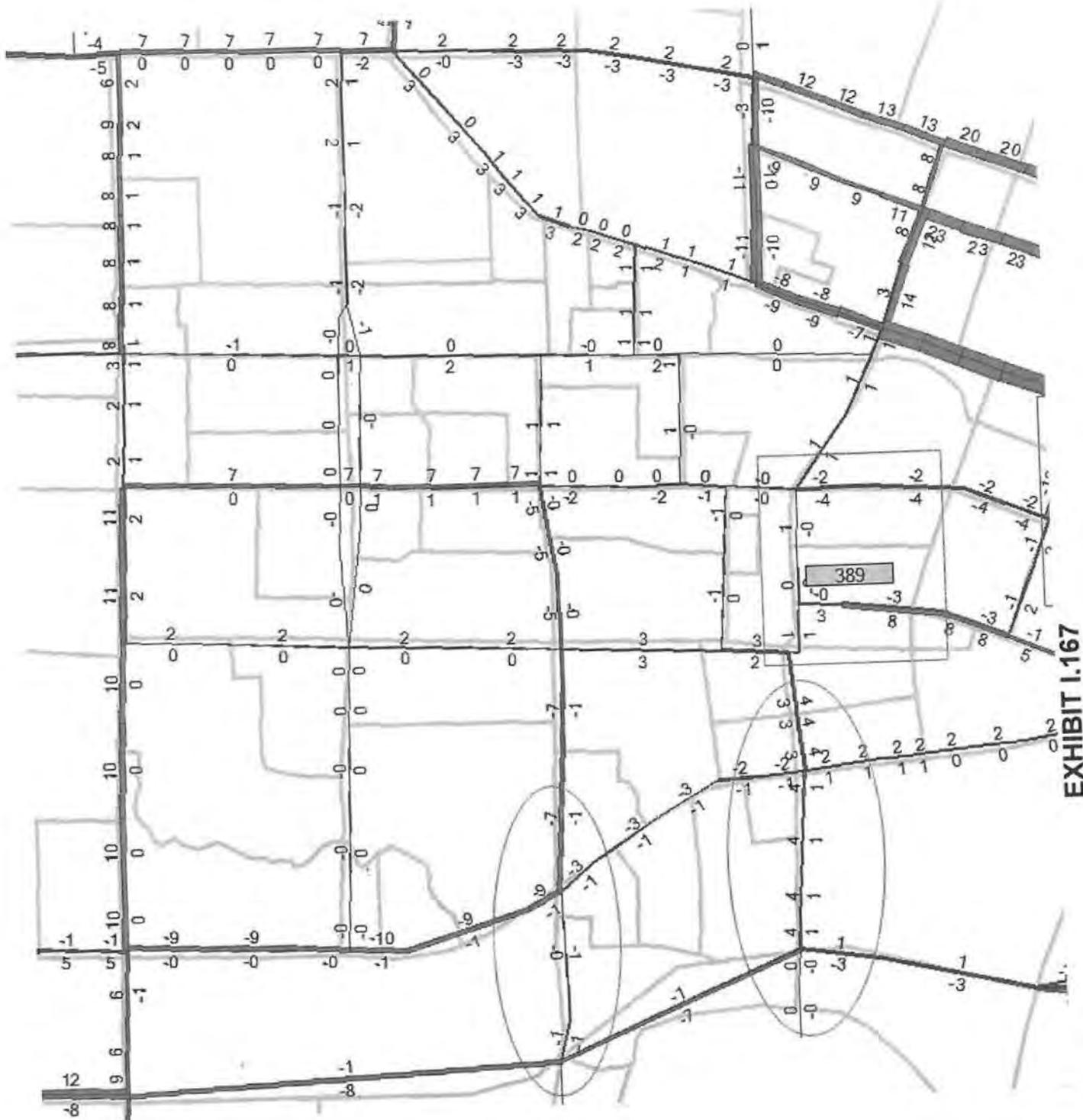


EXHIBIT I.167

Please let me know if you need additional information.

Thanks

Sam H. Ayash
 Senior Transportation Analyst
 Oregon Department of Transportation
 Transportation Planning Analysis Unit

Phone: 503 - 986 - 4101
<mailto:sam.h.ayash@odot.state.or.us>
<http://www.oregon.gov/ODOT/>

EXHIBIT I.168

