CITY OF CENTRAL POINT
PLANNING COMMISSION AGENDA
February 2, 2016 - 6:00 p.m.

I. MEETING CALLED TO ORDER

II. ROLL CALL

III. CORRESPONDENCE

IV. MINUTES

Review and approval of January 5, 2016 Minutes.

V. PUBLIC APPEARANCES

VI. BUSINESS

A. Consideration of a Conditional Use Permit application for the construction of a 161,992 square foot membership warehouse and fuel facility on an 18.28 acre site at the southwest corner of Hamrick and Table Rock Road. The project site is within the Federal Way Business Park Subdivision in the Industrial (M-1) zoning district, and is identified on the Jackson County Assessor's map as 37S 2W 12B, Tax Lots 213, 214, 215, and 216. File No. 15022. **Approval Criteria**: CPMC 17.76, Conditional Use Permits. **Applicant**: Costco Wholesale; **Agent**: Steve Bullock, MG2.

VII. DISCUSSION

A.

VIII. ADMINISTRATIVE REVIEWS

IX. MISCELLANEOUS

X. ADJOURNMENT

City of Central Point
Planning Commission Minutes
January 5, 2016

I. MEETING CALLED TO ORDER AT 6:00 P.M.

II. ROLL CALL

Commissioners Chuck Piland, Susan Szczesniak, Tom Van Voorhees, Mike Oliver, Craig Nelson and Kay Harrison were present. Also in attendance were: Tom Humphrey, Community Development Director, Don Burt, Planning Manager; Stephanie Holtey, Community Planner, Chris Clayton, City Manager, Matt Samitore, Public Works Director, Kim Parducci, Traffic Analyst, Dan O'Connor, City Attorney and Karin Skelton, Planning Secretary.

III. CORRESPONDENCE

e-mail from Michael Cavallero regarding traffic impact resulting from Costco relocation

e-mail from Gary Shaff regarding provisions for bicycle traffic in regard to Costco relocation

e-mail from Peter Mackprang regarding collision data in support of the City of Medford's comments regarding the Costco relocation

IV. MINUTES

Kay Harrison made a motion to approve the minutes of the November 3, 2015 meeting as presented. Craig Nelson seconded the motion. ROLL CALL: Kay Harrison, yes; Craig Nelson, yes; Susan Szczesniak, yes; Tom Van Voorhees, yes; Mike Oliver, yes. Motion Passed.

V. PUBLIC APPEARANCES

None

VI. BUSINESS

A. Consideration of a Conditional Use Permit application for the construction of a 161,992 square foot membership warehouse and fuel facility on an 18.28 acre site at the southwest corner of Hamrick and Table Rock Road. The project site is within the Federal Way Business park Subdivision in the Industrial (M-1) zoning district, and is identified on the Jackson County Assessor's map as 37S 2W 12B, Tax Lots 213, 214, 215 and 216.

Commission Chair Piland read the rules governing public hearings.

Stephanie Holtey drew attention to the fact that there was a revised staff report and attachments.

She said the revised staff report noted that we had inadvertently omitted a condition requiring applicant to comply with RVSS conditions of approval. That item has been inserted and also some incorrect references to attachments and had been corrected.

Additionally, two new conditions had been added for two transportation projects to be discussed later in the presentation.

Ms. Holtey explained that the proposed Costco was a membership warehouse with a 4 island fuel facility and tentatively planned to open in the fall of 2016. This was a relocation of their existing Costco store on Crater Lake Highway. She presented a map of the proposed building and fuel facility showing the orientation and the planned ingress and egress for the project. She outlined the parking for vehicles and bicycles.

She informed the Commission that the location consists of four separate lots which will be consolidated prior to building permit issuance.

She stated that the City has evaluated the proposed use and identified four issues.

1. <u>Traffic</u>

Costco will generate an additional 10,670 new trips daily. A Traffic Impact Analysis has identified four impacted intersections. Northbound I-5 Off Ramp; Table Rock Road & Hamrick Road; Table Rock Road & Airport Road and Biddle Road & Airport Road.

Ms. Holtey said that one year after the scheduled date of opening for Costco, the County will begin construction of the planned Table Rock Road project. The project will widen Table Rock Road between Biddle and Airport Road to include

four travel lanes, a center turn lane, bike lanes and sidewalks, and intersection signalization at Table Rock and Airport Road.

Additionally the applicant will comply with the Oregon Department of Transportation (ODOT) requirement to contribute a percentage of the total cost toward the construction of dual right turn lanes from the I-5 off-ramp to East Pine Street. ODOT has agreed to fund the remaining improvement cost and expedite construction, which is necessary to prevent failure of the northbound off-ramp.

Tom Humphrey stated that the applicant would share the cost of the I-5 off- ramp project with ODOT, and that of the applicant's expected share of $500,000, $377,000 would be provided by the applicant and the balance would be provided by SDC fees from the City

The Traffic Impact Analysis identified impacts and mitigation measures for the following intersections.

Table Rock Road and Hamrick Road. The applicant will be required to construct median islands in front of the access drives on Table Rock Road to limit movements to right-in/right-out; and construct a center left turn lane and refuge within the existing Table Rock Road right-of-way at Hamrick Road to ease left turn delays.

Table Rock Road & Airport Road. No mitigation measures are recommended since operational deficiencies will be resolved upon completion of Jackson County's Table Rock Road widening project. This project is scheduled to begin six months after the projected opening of the Costco.

Biddle Road and Airport Road. There was new information received today from the City of Medford. Originally, there were no recommendations from the City of Medford or from the TIA in how to address it. Although installing a median would address any traffic issues, the airport said that would conflict with the airport master plan as freight travel needed to cross at that intersection. Per the City of Medford, a contribution toward signalization of this intersection would be sufficient to mitigate the traffic impact. The total cost of this improvement is estimated to be $450,000. The applicant's share would be 10% per the City of Medford for a total of $45,000. Payment would be required prior to building permit issuance.

In addition to the impacts identified by the TIA, Ms. Holtey gave information regarding the following two intersections.

Hamrick at East Pine Street and Biddle Road. This is not impacted by Costco on the day of opening. There will be a future impact whether or not Costco goes in. However the proposed impact is sped up by Costco's relocation.

The improvement here is installing a dedicated right turn lane and a dedicated left turn lane as well as a through lane on both the northbound and southbound approaches for Hamrick Road. The city has tentatively scheduled this project to be completed in 2018. There is no requirement of Costco.

Table Rock Road at Morningside St. This was not identified in the TIA. The TIA evaluated 12 intersections from the Crater Lake Hwy and Vilas intersection through the Table Rock and Hwy. 99 intersections. Morningside connects Merriman and Table Rock roads. Ms. Holtey said that the city of Medford provided crash information for this intersection today indicating there is an existing problem that is aggravated by additional traffic on Table Rock Road. The city of Medford has requested the applicant contribute to construction of a left turn lane and center refuge lane at this intersection. The estimated cost is $300,000 with 20% cost share, which would be a total cost to the applicant of $60,000.

Ms. Holtey stated that these conditions have been addressed in the revised staff report. The City's condition prior to issuance of building permit would be that the applicant's contribution not exceed the estimated cost of each of the project.

2. **Parking.** The applicant's parking plan proposes 783 parking spaces for warehouse members. Costco's parking plan provides slightly more parking than the minimum recommendation to accommodate typical peak periods as well as provide additional spaces for seasonal peaks. Our Code section 17.64.040 (B)2 allows them to request an adjustment provided they supply a parking demand analysis which they have done.

3. **Signage.** The applicant's signage plan includes wall signs that are proportional to scale and size of the building and they exceed the maximum sign area allowed in the M-1 zone. A Class "C" Variance will be presented to the Planning Commission for consideration.

4. **Lot Consolidation**. The project site includes four (4) lots. The proposed warehouse occupies three (3) of the existing lots. The applicant has indicated it is their intent to consolidate the lots.

Kim Parducci, a traffic analyst and civil engineer for the City of Central Point was introduced. Mike Oliver asked if the I-5 improvements were to be expedited as there was a problem currently at the traffic signal at the intersection with Penninger lane and he feared that additional traffic would make this more of a

problem. Ms. Holtey responded that ODOT had agreed to expedite the construction.

Ms. Parducci added that the traffic impact study indicated that the 2 off- ramp lanes would allow enough relief to mitigate any impact at that intersection. There would be an additional 350 feet on the off ramp to allow for vehicle stacking there.

Matt Samitore stated that the city would be working with ODOT on the timing of signals at that intersection.

Ms. Holtey said that in order for the Planning Commission to approve the application there were some criteria to be considered: If the site is adequate in size; That there is adequate access to streets and highways to accommodate the traffic; That there will be no adverse effect on abutting properties, and that the proposed use will comply with all the state and federal regulations pertaining to health and safety.

Ms. Holtey said that as conditioned the Costco site plan meets all the criteria for approval and that all the traffic impacts had been identified and can be mitigated.

Kay Harrison stated her concern that the traffic impact would be awkward at best for local residents during construction.

Ms. Holtey informed the Planning Commission that the TIA indicated that abutting properties would not be significantly impacted and added that any health and safety issues would be addressed during the building permit approval process . Also the lot consolidation and a variance regarding signage would be addressed prior to the issuing of a building permit.

Peter Kahn from Costco requested that the record be kept open for seven days in order to consider recent concerns raised by the City of Medford.

He informed the Planning Commission that the current location of Costco had become too small, the building was deteriorating and there was not enough parking. He said that Costco wanted a newer, more energy efficient building with adequate parking facilities. He reviewed the traffic issues and proposed mitigations. He said that Costco had reviewed the traffic impact studies and had agreed to pay a proportional share of the I-5 off ramp cost.

Wayne Kitteleson, Traffic engineer for Costco informed the Planning Commission that Costco had agreed to share in the costs of the proposed traffic mitigations. As an example he described the Pine Street off ramp improvement and stated that Costco had agreed to pay a higher percentage rate of the total cost of the improvement (29%) than that of the traffic impact generated by Costco customers (23%). Additionally, he stated that they had not had time for an in-depth review of the Airport and Biddle concerns.

He said that the Morningside intersection information had only been recently received from the City of Medford, but he stated that Costco traffic should not impact the safety issues of the Morningside and Table Rock intersection significantly. He had reviewed the rear end crash history at that location and stated that accidents had been decreasing every year at that intersection with only one accident happening last year.

Mr. Kahn presented a plan addressing the storm water and landscaping at the Costco site. He stated that the plan provided an attractive setting for the store. He provided information regarding energy efficiency of the building and architectural drawings of the proposed building.

He stated that Costco would generate 40 to 60 new local jobs and would add to the City's revenue by way of taxes and permit and construction fees. He said it was Costco's desire to begin construction as soon as possible.

John Vial, of Jackson County stated there would be traffic issues and admitted it would be a difficult time. He referenced previous projects on Table Rock Road and said that although each had been difficult, they had gotten through them, and that the current Table Rock Road project would be difficult whether Costco was there or not. He said they would wait until the project was done to see if any adjustment to speed limits would be necessary.

Don Moorehouse of ODOT stated that he would be willing to answer any questions anyone had. There were no questions.

The public portion of the hearing was opened.

Calvin Martin
Mr. Martin said he did not think the project would work. He used the example of the South Gateway Walmart in Medford as a similar project which was difficult during construction. Additionally, he mentioned the site nearby in Central Point where Walmart at one time proposed to build. He stated that it had been very much objected to by local residents. He stated that he was concerned that the traffic level of service at the affected intersections would be bad, and he was also concerned that large truck traffic from other entities in the area would push the limits of the traffic capacity. He stated he did not agree with the Traffic Impact Analysis and he believed it would be a detriment to the neighborhoods around Table Rock Road. He also mentioned that some traffic would have to come through downtown Central Point increasing problems there. He said he was representing several clients who have properties in the area and were also against the proposed Costco at that location. He did not think that this was a good site for Costco.

Commissioner Piland asked Mr. Martin to clarify in what capacity he represented others. Mr. Martin replied it was regarding development.

David Smith
Mr. Smith stated he owns a business and some apartments in Central Point. He is also a lawyer and has a history in real estate. He stated that there was a lot of large truck traffic at the I-5 interchange. Additionally he also believed that Gordon Trucking had plans to build in the area. That, in conjunction with the existing truck traffic and the trucks that would be supplying Costco would negatively impact the area. He did not think it could be done. He said he would like to see Costco locate somewhere else.

Kim Shelton
Ms. Shelton stated the new location would not be as convenient for shopping as the current location. Additionally the construction on Biddle and Airport Road would impact driving to and from the airport.

Laura Vaughn
Ms. Vaughn stated she was excited about having Costco in Central Point.

Vic Agnifili
Mr. Agnifili stated that he thought Costco could use local businesses as suppliers for a portion of their merchandise.

Wayne Kitteleson, engineer for Costco said that the traffic would indeed be impacted but not as badly as people were anticipating. He said that Costco traffic would account for less than 20% of all traffic at the I-5 interchange.

The Public Hearing was closed.

Attorney Dan O'Connor stated that Costco had requested the record be left open for 7 days in order to assess information already received and any new information presented. That time period would end on January 12, 2016 at 4:30 p.m. He stated that e-mail was not acceptable and any information submitted must be either hand delivered or mailed.

The applicant would then have a statutory 7 day rebuttal period which would end on January 19, 2016 at 4:30 p.m.

All information would be presented to the Planning Commission for the next scheduled meeting on February 2, 2016. At that meeting the Planning Commission would make a ruling on the Conditional Use Permit application based upon a complete record.

Attorney Dan O'Connor stated he wanted to summarize for the record that the written record was being left open at the request of the applicant for 7 days. He stressed that the applicant then had a statutory 7 day rebuttal period and the Planning Commission would deliberate and make a decision based on the complete record at their next regularly scheduled meeting on February 2, 1016.

Mike Oliver made a motion that the record be left open until 4:30 p.m. on January 12, 2016 and that a rebuttal period for the applicant would close on January 19, 2016 at 4:30 p.m. Kay Harrison seconded the motion. ROLL CALL: Kay Harrison, yes; Craig Nelson, yes; Susan Szczesniak, yes; Tom Van Voorhees, yes; Mike Oliver, yes. Motion Passed.

Commission Chair Piland stated there would be a 5 minute break.

B. **Consideration of a Site Plan and Architectural Review application for the construction of a 161,992 square foot membership warehouse and fuel facility. The 18.28 acre project site is located within the Federal Way Business park Subdivision in the Industrial (M-1) zoning district, and is identified on the Jackson County Assessor's map as 37S 2W 12B, Tax Lots 213, 214, 215 and 216.**

Commission Chair Piland read the rules governing public hearings

Ms. Holtey stated that most of the details had been previously discussed during the Conditional Use Permit application. She informed the Commissioners that approval of the Site Plan and Architectural Review application would be contingent upon approval of the Conditional Use Permit. She stated the proposal meets the zoning requirements and that the lots required consolidation prior to construction. This would be a condition of approval. She also stated that there were no traffic issues on this application, as those were addressed in the Conditional Use Permit application.

She described the proposed Costco as an enhanced metal warehouse building. The 4 island fuel facility would be covered by a metal canopy with small signs compliant with the code. The vehicle parking was increased from the allowed maximum 698 spaces to 783 spaces based on a parking demand analysis specific to Costco operations in Oregon. She said that the bicycle parking was reduced from a required 54 spaces to a warehouse standard of 16 spaces which were deemed adequate as the code allows for a reduction if the business does not generate a need for more bicycle parking.

The commissioners had questions as to whether bicycle parking would be better served by starting out with a higher number of parking spaces and then removing excess if deemed unneeded.

Tom Humphrey answered that at this time the spaces were deemed adequate but that Costco would periodically evaluate the situation and add more if needed.

Ms. Holtey added that currently the bicycle parking was not shown on the site plan and that a condition of approval was that Costco would submit a revised site plan showing the bicycle parking prior to building permit issuance.

The public portion of the hearing was opened.

Peter Kahn of Costco asked the Planning Commission to approve the Site Plan and Architectural Review as conditioned. He stated that currently Costco stores in large cities had significantly less bicycle parking than was being suggested here. He said that the Portland store had 10 bike spaces and Seattle had 5 spaces and that those stores did not see much bicycle traffic.

Becca Croft
Ms. Croft stated that people would not use their bicycles if there was not adequate parking and that there might be a correlation between bicycle traffic and the available bicycle parking. People just wouldn't ride there if there were no provisions for bicycles.

Jeannie Savage
Ms. Savage said she does not remember seeing a bicycle rack at the current Costco location in Medford.

The public portion of the hearing was closed.

Tom Van Voorhees asked about the storm water drainage and whether the water would be going into the public system or back into the ground.

Alex Palm Civil Engineer for Costco answered that the storm water drainage would be going into 2 large dry detention storage basins to provide storm water quality treatment and storm water detention. They are tied into a storm drain in Hamrick Road.

Kay Harrison made a motion to approve Resolution 828, the Site Plan and Architectural Review application as conditioned upon approval of the Conditional Use Permit. ROLL CALL: Kay Harrison, yes; Craig Nelson, yes; Susan Szczesniak, yes; Tom Van Voorhees, yes; Mike Oliver, yes. Motion Passed.

C. Consideration of a Class "C" Variance request to the M-1 sign area standard per CPMC 17.48.080 (A)(1) for a membership warehouse in the Industrial (M-1) zone. The project site is within the Federal Way Business park Subdivision in the Industrial (M-1) zoning district, and is identified on the Jackson County Assessor's map as 37S 2W 12B, Tax Lots 213, 214, 215 and 216.

Commission Chair Piland read the rules governing public hearings.

Don Burt stated that the purpose of a variance is to provide relief from provisions that impose hardship. He said this is a unique situation because of the size of the building. He stated that Costco would have a total of 9 signs and showed slides depicting the proposed signage. Mr. Burt stated that the proposed signs were not detrimental to the purpose of the code. He stated that in this situation Costco required a large sign in order to be balanced with the size of the building. He informed them that the actual area ratio of the sign to building size was within the requirements for the TOD district. He said that Costco met all the sign requirements other than the area.

Peter Kahn of Costco stated that the proposed signs were mounted on the building and were externally lit. He said they were proportionate to the building and could be seen from the public right of way. He also said that Costco used only building mounted signs and there would be no other types of signage used.

The public portion of the hearing was opened.

There were no questions or comments.

The public portion of the hearing was closed.

Mike Oliver made a motion to approve Resolution 829, the Application for a Class "C" Variance to the Maximum Signage Are Requirements for the M-1 District as conditioned upon approval of the Conditional Use Permit. Tom Van Voorhees seconded the motion. ROLL CALL: Kay Harrison, yes; Craig Nelson, yes; Susan Szczesniak, yes; Tom Van Voorhees, yes; Mike Oliver, yes. Motion Passed.

The foregoing minutes of the January 5, 2016 Planning Commission meeting were approved by the Planning Commission at its meeting on the _____ day of _____, 2016.

_____
Planning Commission Chair

Consideration of a Conditional Use Permit application for the construction of a 161,992 square foot membership warehouse and fuel facility on an 18.28 acre site at the southwest corner of Hamrick and Table Rock Road. The project site is within the Federal Way Business Park Subdivision in the Industrial (M-1) zoning district, and is identified on the Jackson County Assessor's map as 37S 2W 12B, Tax Lots 213, 214, 215, and 216. File No. 15022.

STAFF REPORT
February 2, 2016

ITEM

Consideration of a Conditional Use Permit application for the construction of a 161,992 square foot Costco membership warehouse and fuel facility on an 18.28 acre site at the southwest corner of Hamrick and Table Rock Road. The project site is within the Federal Way Business Park subdivision in the Industrial (M-1) zoning district, and is identified on the Jackson County Assessor's map as 37S 2W 12B, Tax Lots 213, 214, 215, and 216. Applicant: Costco Wholesale; Agent: Steve Bullock, MG2

STAFF SOURCE

Stephanie Holtey, Community Planner II

BACKGROUND

Costco Wholesale ("Applicant") is requesting a Conditional Use Permit to develop a 161,992 square foot membership warehouse on 18.28 acres in the M-1, Industrial zone.

The Conditional Use Permit application was considered at the January 5, 2016 Planning Commission meeting. At that time staff presented an evaluation of the proposal relative to its compliance with the conditional use approval criteria set forth in CPMC 17.76.040. Based on the evidence submitted, the proposal was found to comply with the applicable review criteria as conditioned.

The Planning Commission heard testimony from the applicant, and proponents and opponents of the application. Due to the timing of revised comments and conditions from the City of Medford on January 5, 2016, the applicant requested that the record remain open for seven (7) days following closure of the public hearing; including a seven (7) day rebuttal period. The public hearing was closed and, per a duly seconded motion, the request to leave the record open was granted with written comments to be submitted as follows:

- Open record period – January 12, 2016 at 4:30 p.m.;
- Applicant's rebuttal period – January 19, 2016 at 4:30 p.m.

On January 19, 2016 the applicant submitted their written rebuttal (Exhibit "14") to the City of Medford's January 5, 2016 revised conditions and comments. Staff has reviewed the applicant's rebuttal and finds that the previously written conditions 3 and 4 in the Revised Staff Report dated January 5, 2016 adequately address the situation and do not need to be modified.

ISSUES

During the open record period, thirteen (13) letters were received with six (6) in favor, five (5) in opposition, and

two (2) neutral. The applicant responded to opposing testimony with timely rebuttal. It should be noted that some of the issues were anecdotal and beyond the scope of the conditional use approval criteria in CPMC 17.76.040 (i.e. Costco's business policies, impacts to local businesses and associated internship and scholarship opportunities). A summary of the written comments received during the open record are:

1. **Opposition.** Testimony received in opposition to the proposed use primarily focused on traffic issues and includes three broad categories: 1) concerns about the TIA assumptions; 2) operations/safety; and 3) mitigation sufficiency/cost allocation. Due to the volume of the traffic generated by Costco, there is a perception that additional mitigation actions are necessary to ease operational and safety concerns. Emphasis was given to Table Rock Road widening, impacts of heavy truck traffic, and the need for the applicant to bear the cost of improvements (See Exhibits "1" through "5").

   The Applicant's Rebuttal (Exhibit "14") and the TIA (Exhibit "15") address the testimony opposing the proposed use on the following basis:

   a. The TIA was prepared and reviewed by affected agencies and Southern Oregon Transportation Engineers, LLC. The analysis relied on assumptions including Costco's market demographics, area-wide population, employment, land use, and transportation system information including heavy trucks/ vehicles (See TIA, Exhibit "15");

   b. Per the conditions of approval, mitigation measure address safety and operational impacts necessary to provide adequate transportation services.

   c. Costco's cost share for the improvements are proportional to the impact generated by the proposed use and therefore sufficient to mitigate the financial cost of off-site impacts.

2. **Support.** Testimony in support of the proposed use counters concerns about adverse impacts to local business and further asserted support for the proposed location due to community benefits associated with economic growth stimulus and improved property values. It is further emphasized that traffic impacts have been adequately addressed and that the concerns about heavy truck traffic conflicts and congestion on Biddle/Pine Street have been adequately addressed and mitigated (See Exhibits "6" through "11").

Based on evidence in the record and the applicant's rebuttal, the testimony received during the open record period has been adequately addressed (See Exhibits "14" and "15").

EXHIBITS

Exhibit "1" – Letter from L. Calvin Martin, received January 12, 2016
Exhibit "2" – Letter from David Smith, received January 12, 2016.
Exhibit "3" – Letter from Tanya Wilkerson, received January 12, 2016
Exhibit "4" – Letter from Kathy and Ray Wilkerson
Exhibit "5" – Letter from Dennis Burt, received January 12, 2016
Exhibit "6" – Letter from Wayne and Hattie King, received January 12, 2016
Exhibit "7" – Letter from Kimberly Little, received January 11, 2016
Exhibit "8" – Letter from John Batzer, received January 11, 2016
Exhibit "9" – Letter from Glen Finley, received January 11, 2016

Exhibit "10" – Letter from Laura Vaughn, received January 8, 2016
Exhibit "11" – Letter from Pulver & Leever, received January 8, 2016
Exhibit "12" – Letter from Vic Agnifili, received January 12, 2016
Exhibit "13" – Letter from Vic Agnifili, received January 12, 2016
Exhibit "14" – Applicant's Rebuttal, received January 19, 2016
Exhibit "15" – Revised Staff Report dated January 5, 2016

ACTION

Consider the Conditional Use Permit application and either 1) approve; 2) approve with conditions; or 3) deny the application.

RECOMMENDATION

Approve the Conditional Use Permit per the Revised Staff Report dated January 5, 2016 and all conditions therein.

EXHIBIT "1"

L Calvin Martin, Developer's Agent
P. O. Box 442, Jacksonville, Oregon, 97530
(541) 778-6638 Office, (541) 227-4262 Cell
calmartin1@msn.com

Design, Construction Management, Construction Cost Estimates, Contract Negotiations
Feasibility Studies, Quantity Surveys, Contract Management, Contract Dispute Resolutions
City and Regional Planning, Land Development, Lobbying, Wastewater Technologies

1 / 11 / 2016

Response to the Conditional Use-Permit Application of Costco to the City of Central Point, Oregon

City of Central Point Oregon
Planning Department and Planning Commission
155 South 2nd Street
Central Point, Oregon
97502

Via Hand Delivery

Having listened to the applicant's presentation and their consultants, it became clear that no matter the difficulty with the site and its related traffic applicants would force a fit. Certainly the most significant problem relates to the traffic it generates and the assumptions made by the applicant's traffic consultants.

The traffic consultants were hired to make it work in whatever way can produce an approval. The consultants (Kittleson and Associates) are essentially a hired gun that represents the applicant and land owners, putting together a plan that they believe will convince the City to approve the plan. It is obvious that the City and Planning Commission look favorably on the locating of Costco in Central Point. Costco is an amazing retailer/wholesaler that is loved by its customers and admired by its competitors. The problem is that this site and this business are not an appropriate fit.

Costco is a "warehouse" sales/membership store. This is true but Costco generates more traffic to its "warehouse" of 130,000 square foot store in Medford than the nearly 700,000 square foot Rogue Valley Mall. Costco parking is almost always near full and traffic is very difficult and congested, hence the reason for their desire to build a new store. A leaking roof is not the reason for their move. The reason is that they are losing potential business due to older persons and busy people not being willing to fight the traffic and congestion. They are smart retailers and they need a larger store to service the market and loyal customers that they have.

RECEIVED
JAN 12 2016

Kittleson Consultants have made many assumptions that can and should be examined, at the very least, by a neutral consultant. Clearly without questioning deeply their assumptions the T.I.A. reveals many problems that require expensive and time consuming mitigation. The cost numbers are very liberal and favor the applicant. They desperately need to be reviewed in detail by another neutral consultant.

The use of Table Rock Road is necessary and that arterial is scheduled for major improvements but the acquisition of land for widening and funding of the cost has not even started. Land must be acquired, engineering completed, bids advertised for and then, depending on weather, construction begun. Based on other projects the construction could easily take a year and the other issues could take that much time or even more.

The widening of Table Rock Road will only be done to just south of its intersection with Airport Road, The road to be effective needs to be widened all the way to its intersection with Merriman Road. The bridge crossing the I-5 is old and very narrow. The increased traffic and stress on this "elderly" bridge will require that it be replaced with a stronger and wider (at least four lanes) bridge. The cost of this bridge is far more substantial than any of the other proposed mitigation measures and likely more than all of them combined.

Table Rock Road continues south into a fairly dense housing area with homes fronting directly onto the road and serves two large multifamily projects exiting only onto Table Rock Road.

The proposed location of Costco will create a very dangerous mix of large heavy trucks (including triples) from adjacent and nearby businesses (Knife River Concrete and Aggregates, FedEx Ground and others). Table Rock Road to the north of East Pine Street and Biddle Roads serves many trucking companies and they will mix with the Costco traffic. This will create a very high likelihood of accidents and driver stress for all of East Pine Street, Hamrick Road and Table Rock Road. There is no plan, apparent or in consideration, that will eliminate or diminish this condition.

If you consider the age make-up of Costco customers it becomes apparent that large portions are seniors. The mix of senior drivers with congestion and heavy trucks is not appropriate or desirable and could have disastrous results.

The land around the proposed Costco has not been developed to its potential, particularly to the North and West. When that land develops the intersections will be even more stressed. The mitigation measures proposed create difficult driving and congestion all through Central Point's downtown area as well.

Traffic to Costco from western Medford, western Central Point, Jacksonville and the Applegate Valley as well as Grants Pass, Rogue River and Gold Hill will pass through Central Point. The Jacksonville and Applegate Valley traffic will come all the way through the downtown area of Central Point. If that traffic, through Central Point, becomes a problem and it is somewhat congested even now, then the traffic will reroute to the Table Rock Road option as the route of choice. The problems with that option have been previously addressed.

The expenses, of this first set of mitigations, are likely to be much more than what has been projected by the applicant's consultant and others. There are no actual hard numbers for the projected work based on design drawings and completed land acquisition. The time frames for completing these improvements are very liberal and delays will add extra costs.

In summary, this proposed conditional use-permit application, though it can legally accommodate this facility, it is a very poor and troublesome location that will affect Central Point, Medford and Jackson County in a negative way both due to traffic and expense.

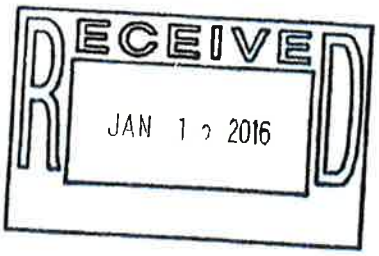
My clients would urge you to not approve this application or require, at the very least, another independent traffic study.

Sincerely,

L.Calvin Martin, Agent

C.c. Garvey, Shubert, Barer Attorneys. Portland, Oregon

EXHIBIT "2"



January 12, 2016

Summary of January 6,2016 comments on application of .Costco Wholesale

David Smith 241 Saginaw Drive, Medford, OR 97504

1. Co-owner of business on S. Front Street in Central Point and several apartments.

2. Long time member of Costco and shop at present store at least twice a week.

3. Research of official records of ODOT and Central Point reveal that the proposed site for Costco is located on an official freight route system within the city and in the midst of freight terminals.(Reddaway, Conway, Fed Ex.) One, Reddaway Trucking already account for 600 truck trips per day. According to ODOT materials Gordon Trucking owns a large parcel directly across from the proposed entrance to Costco, and intends to build a freight terminal, adding a significant increase in trucks using the area.

4 Costco's traffic study indicates its store will add 10,670 new trips per day, the majority of which will come from Medford on Biddle and Table Rock.

5. Costco traffic will add several thousand more cars per day using Biddle and adding congestion at the entrance to the airport.

6...ODOT's Freight Profile identifies Table Rock Road as one of the local roads that "experience high volumes of freight traffic."

7. Costco's traffic study is flawed in that it does not identify the routes its members use to access the existing Medford store; information which is necessary to accurately predict how those members will re-route to the proposed location.

8. Costco tries to identify its operation as a warehouse, but indicates in its November 3, 20125 memo to the city staff (at page 14) that its Parking Demand Study requires 783 parking stalls which is more than the city requires for a retail store the size of the proposed Costco.

CONCLUSION: While the "member Warehouse" description of the Costco proposal may distinguish it from other retail stores as far as the variety of merchandise and profit margins, its impact on traffic will be greater than other retails stores of the same size. One need only note how fast the Costco parking lot fills up and remains full during store hours; much more so than other retail stores which are open longer hours which results in less traffic in any given hour. Even the entire Medford Mall appears to have less parked cars. Costco and the city staff both indicate the intention to have the store open in 2016, before the widening project on Table Rock even begins. It makes no sense to add 10,670 more vehicles traveling through a construction zone, for an undetermined period, which will create an additional problem which has not been addressed.

EXHIBIT "3"

January 12, 2016

City of Central Point
Attn: Commissioners and Planning Department
140 S. Front Street
Central Point, OR 97502

To Whom This May Concern:

I am writing this letter to share my strong desire to keep Central Point a small, family-friendly town. I understand that bringing a large business, such as Costco would at first appear to increase revenue flow in the town of Central Point; however, I think upon further examination, it would be detrimental to the efforts that Mayor, Hank Williams, has recently put into our town's downtown and local business appeal.

My thoughts go immediately to the small businesses that make up the backbone of this community – businesses that would inevitably be losing some of their customer base. In turn, some local businesses – ones that faithfully give back to our schools and community, would possibly be faced with the layoff of staff, or in extreme cases, closure of facilities. This could change the dynamics in Central Point – affecting revenue, Crater Foundation Scholarships, local internships for high school students, and housing. People pay a prime price to live in Central Point, yet one has to wonder, if the traffic appeal is similar to that of Medford, if prices will eventually drop.

I am confident that when reviewing this proposal, you will realize the detriment effect of this decision. My hope is that Central Point will continue to be a little oasis in the valley, with local businesses that are booming, strong schools educating our children, safe parks to play in, and a strong housing demand.

Thank you for your time.

Best Regards,

Tanya Wilkerson

RECEIVED
JAN 12 2016

EXHIBIT "4"

Kathy Lang Wilkerson

Dear Central Point Planning commission,

This is regarding the plans for the New Costco on Table Rock Rd. and Biddle.
I live at 2524 Beebe Rd. in Central Point and I am very concerned of the traffic around my home.
It's already bad to try to get out of my Central Point East subdivision.
This seems to be a pretty big building they are planning and with the Pilot close by with all the trucks already from that this will be a complete nightmare.
I assume that the roads around it will be widened somehow and traffic lights will be added. Who will be paying for this?
I hope not us property tax players as it's already $3800 a year which is higher than any city near Central Point.
I am also concerned that my house value will go down in price with no one wanting to live next to this nightmare of traffic.
This will make it a low desirable area to live in we believe.

Thanks for your time
Kathy and Ray Wilkerson
541 664 0533
Central Point East

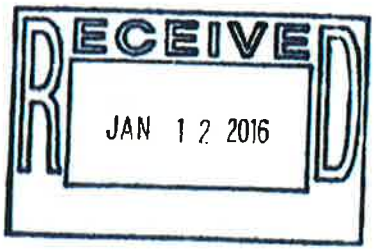


EXHIBIT "5"

1/11/16

To whom it may concern:

This letter is in regards to the consideration of allowing Costco to build at the corner of Hamrick and Table Rock roads. My only request is that you read this letter and consider the negative impact that this would cause to the current families of Villas and Table Rock roads.

Three years ago my family moved to a home located on Table Rock Rd. near Ore Rd. At the time the traffic was heavy but bearable. Since then, a sizeable increase in traffic has made us regret our decision. This increase, in my opinion, was caused from the increase in business activity and growth on the Crater Lake Hwy such as the new Lithia Auto Mall. People, trying to avoid the traffic congestion on Crater Lake Hwy have begun to use alternate routes to get to the Freeway, Rogue Valley Mall, Central Point, and others via Table Rock Rd. as well as Villas Rd.

Several years ago, the Jackson County Roads Dept. did a traffic count study to determine the amount of traffic using Table Rock Rd. I don't have, nor remember, the exact numbers but it was somewhere in the realm of 13,000 cars a day, on average, were passing by the intersection of Wilson and Table Rock Rd. Based on several factors, one can assume that the number has significantly increased. Getting out of my driveway and on to Table Rock Rd. has become a nightmare. Crossing to get the mail, which lies on the opposite side of Table Rock Rd. is no longer a safe option. I've approached USPS, with the numbers and hazards, asking about having the mail boxes moved and was told to that it would not be a financially feasible decision. Thus not taking the safety of the residents in to account. Two people have died, within several hundred yards of my home, within the last 3 years while walking or crossing Table Rock Rd. and countless accidents have happened, making it, in my opinion, one of the most dangerous roads in the county.

If you allow the placement of Costco, at the proposed site, Table Rock Rd. and Villas Rd. will become, more than ever, a safety and logistics nightmare for the people who live there. Not to mention the possible devaluing of our property. People traveling from North of the current location will be forced to use Table Rock Rd. and Villas Rd to get to the new location. These two roads will be, undoubtedly, overwhelmed with traffic. Please give careful consideration to this when making your decision on the placement of the new Costco. Please don't be another USPS and discount the safety of the residents.

Sincerely,

Dennis Burt
5969 Table Rock Rd.
Central Point, OR 97502
541-226-6715

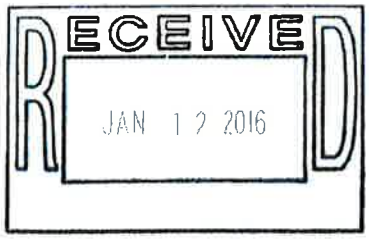
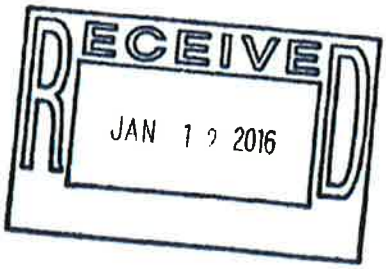


EXHIBIT "6"



January 12, 2016

Central Point City Council

140 3rd Street

Central Point, OR 97502

Dear Members of the City Council,

With respect and appreciation for you as the council of Central Point, my wife and I submit to you for an approval of the proposed Costco Store.

We've been members of the Costco Stores since 1985. Their products are of high quality and within reason. Their attitude and help has always been above reproach. If you have a problem with their products, they are very quick to refund or replace the product with few exceptions (some electronic items).

As property owners in Jackson County and Curry County, Costco has always been an asset in helping us with our needs. Also, their assistance in helping small and large businesses in the Rogue Valley in so many ways. The number of jobs have increased in the surrounding area along with other businesses.

As retired teachers, we do encourage the approval of the Costco Store in Central Point.

Thank you for your time.

Wayne and Hattie King

Wayne and Hattie King

1909 Regal Ave.

Medford, OR 97501a

P. S. Please don't forget the business coming in from California, Washington and other neighboring states from I-5. This produces growth with jobs.

EXHIBIT "7"

Kimberly Little
2467 Sunnyview Lane
Medford, OR 97501

Planning Commission
City of Central Point
140 S. 3rd St.
Central Point, OR 97502

January 7, 2016

To whom it may concern:

I am writing to express my support of the proposed location of a new Costco Wholesale store at the corner of Table Rock Rd. and Hamrick Rd. Although I live in Medford, my daily place of employment is very near this location.

I believe this proposed location has been well-chosen and would benefit the community of Central Point. It is just far enough away from the main part of town as to not affect traffic in the busiest areas, while at the same time, bringing people into the community who might not otherwise conduct their business in the area. I do not foresee any negative impact on traffic in the immediate area, when handled with proper planning for traffic control lights on the intersections around the facility.

Thank you for your consideration of this proposal, and I hope that you will be able to approve their request to build this new store.

Thank you,

Kimberly Little

RECEIVED
JAN 11 2016

EXHIBIT "8"

JOHN E. BATZER
P.O. BOX 970
MEDFORD OR 97501

January 7, 2016

City of Central Point
Planning Commission
140 S. Third Street
Central Point, OR 97502

RE: COSTCO Conditional Use Permit

Dear Planning Commission,

I, along with various partners, own property in the area that Costco proposes to re-locate. We are all in favor of the Costco development.

This Costco development will help stimulate properties that have been stagnate since the recession and will give a needed boost to the surrounding properties. It will help to get the necessary infrastructure needed to develop these properties. In addition, it will help the tax base.

The neighboring area was zoned so that it could be a focal point for commerce. We think Costco will be great for the neighborhood.

We hope the City will approve the Costco conditional use permit.

Sincerely,

John E. Batzer

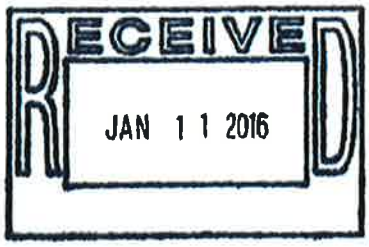


EXHIBIT "9"

January 8, 2016

Costco comments
Central Point Planning Commission
140 S. 3rd St
Central Point, OR 97502

To Whom It May Concern:

I am definitely in favor of approving the Costco store in Central Point near Table Rock Road and Hamrick.

I reside in the Central Point East neighborhood, about 4 blocks north of the proposed Costco site. I am semi-retired and make numerous trips in the area that would be affected by traffic generated by the proposed Costco store. From my frequent observations, the comments I have heard about the truck traffic and other alleged problems on Biddle/Pine must be from persons who have no direct knowledge of the situation or must have some other agenda. Traffic on Biddle/Pine between Table Rock and Hamrick is some of the lightest in the area.

Central Point needs more opportunities for shopping and employment. I think the opponents of development in Central Point, particularly in the area east of I-5, are not thinking of the best interests of the community as a whole.

I would be glad to give you any more information you may need in this matter.

Sincerely,

Glen Finley
358 Meadowbrook Dr.
Central Point, OR 97502
541-840-9484

RECEIVED
JAN 11 2016

EXHIBIT "10"

January 8, 2016

City of Central Point
Planning Commission
140 South 3rd Street
Central Point, OR 97502

Re: Planned Costco in Central Point

My name is Laura Vaughn; I live at 5085 Dobrot Way, Central Point, Oregon. I attended and spoke quickly to the meeting last week on January 5, 2016.

I am following up my nervous statements with the following:

- I have been a member of Costco, Executive Member, since 1993. I am a loyal and avid fan of the quality/price of items they offer to members.
- I have lived in the Rogue Valley since 1996 – I have been at my present location in Central Point since 2001. I do not plan on moving anytime in the foreseeable future. I love Central Point.
- I have been at just about all the Costco locations up and down I-5 from Fresno, California all the way to Abbottsford, British Columbia, Canada....including the original location in Kirkland, Washington.
- All Costco locations generate a buzz and demand – As a traveler, you search Costco out for the best gas prices! I can truthfully say the only Costco that is a bear to get in and out of is the one in Eugene on Cobourg road – did it stop me from visiting it – NO! I am aware that to shop at Costco means you need to have patience. And with the Eugene location – it is very similar to the proposed area – you go a half mile north and it's country roads.....

- I am in favor of relocating the Medford Costco warehouse and fuel facility to the proposed location on Hamirck and Table Rock Roads in Central Point.

- I will look forward to being able to avoid the tangle and mess of highway 62 and Delta Waters Roads in Medford. As stated, the new locations will be within bicycling distance for us, but we will bring the car for the days when we stock up.....Ray's and Albertson's will still be our local grocery stores for the quick in and out purchases!

As I finished my nervous statement I mentioned – IT IS ONLY THROUGH CHANGE THAT YOU GROW....Any change is well worth the hassle and delays that the construction will cause....Loyal Costco members will appreciate a new facility, larger parking lot, larger warehouse and of course, more lines for the fueling station. The yearly property taxes received from Costco will be a boost to Central Point's operating budget, as well as the prospect of the additional jobs that Central Point residents could apply for.....

Thank you for letting me put in writing what I was too excited to say in person at your meeting. **PLEASE APPROVE THIS CONSTRUCTION AND LET COSTCO BEGIN TO HELP CENTRAL POINT GROW!! COSTCO WILL RELOCATE, PLEASE LET IT BE HERE AT HAMIRCK AND TABLE ROCK ROAD!**

Regards,

Laura Vaughn

Laura Vaughn

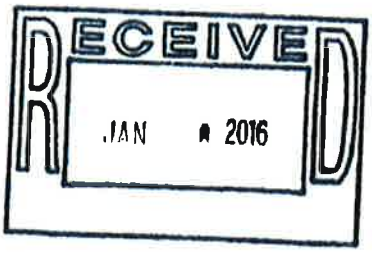


EXHIBIT "11"

City of Central Point
Planning Commission
140 S. Third Street
Central Point, Oregon 97502

January 6, 2015

Re: COSTCO Conditional Use Permit

Dear Sirs:

A number of us own properties in the vicinity of the proposed development and are in favor of your approval of this development.

This area of Central Point has been stagnate for almost 10 years since the beginning of the recession and needs a shot in the arm to get it going again. We think the Costco development will provide that stimulus and will be beneficial to surrounding commercial and industrial properties. It will also enable some of the infrastructure improvements to get completed which would be necessary for other development.

This area of the valley was once characterized as the logistical center of commerce. This is probably why it was chosen by COSTCO. We think a good choice.

We hope the City will work hard to make the proposed development a reality.

Sincerely,

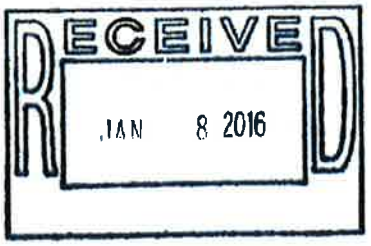


EXHIBIT "12"

1/12/16

RECEIVED
JAN 12 2016

DEAR PLANNING COMMISSION,

AS A CONDITION FOR APPROVAL, COSTCO SHOULD SHOWCASE NO LESS THAN 12 LOCAL SKU'S (OUT OF 3,500 ROUGHLY). ADDITIONALLY, ANY LOCAL/REGIONAL BUSINESS SHOULD BE GRANTED A PRESENTATION SESSION WITH THIS CENTRAL POINT COSTCO.

THIS SHOULD BE DONE ON THE BASIS THAT COSTCO SIGNIFICANTLY DISRUPTS LOCAL SUPPLY/DEMAND, AND THUS SHOULD MAKE REASONABLE ACCOMMADATIONS TO COMPENSATE/OFFSET THIS PHENOMENON. (COSTCO'S OWN STUDIES WITH CONSULTANTS VERIFIES THIS DISRUPTION TO LOCAL MARKETS.

Respectfully,

Vic Agnifili

BLACK OPS

Vic Agnifili
Proprietor, MBE

EXHIBIT "13"

1/12/16

RECEIVED
JAN 12 2016

DEAR PLANNING COMMISSION,

COSTCO HAS ITS SHORTEST DAY OF OPERATION ON SUNDAY, YET ITS HIGHEST PER HOUR SALE OF ANY DAY. COSTCO INHERENTLY RECOGNIZES THROUGH ITS POLICY THE IMPORTANCE OF SUNDAYS.

YET, COSTCO HAS NO PLAN FOR PROMOTING THE VAST MAJORITY OF COMMUNITY MEMBERS THAT FOCUS ON SUNDAY OPERATIONS.

AS A CONDITION FOR APPROVAL, AND TO BE FAIR TO ALL CENTRAL POINT COMMUNITY MEMBERS, I RESPECTFULLY SUGGEST THAT COSTCO HAVE INSTALLED A MESSAGE BOARD AT THE EXIT NO LESS THAN 5'X5' FOR MAINLY SUNDAY OPERATING BUSINESSES TO PROMOTE THEIR WAR WHICH ARE ALMOST ALWAYS FREE OF CHARGE.

Respectfully,
Pastor Vic

Fig Tree Chappals
"The Church for People Who Don't go to Church...Church."
CARE of P. Vic WESLEYAN PRESBYTERIAN
~~(559) 338-4817~~
~~112 Main Street~~
~~Ward, California 96699~~
MB PROP. OF
PASTOR VIC
Senior Pastor
figtreechappals.org
pastorvic@figtreechappals.org

EXHIBIT "14"

January 19, 2016

Planning Commission
City of Central Point
155 S. 2nd Street
Central Point, OR 97502

RE: Conditional Use Permit – Costco Rebuttal

Dear Chairman Piland and members of the Planning Commission:

Costco would like to thank you for your thoughtful consideration of our Conditional Use Permit application.

As you are aware, holding the public record open for an additional week to allow Costco to review comments submitted by the City of Medford on the day of our hearing has allowed some additional comments to be submitted into the record. Aside from the letters of support from the community for our proposed move, the overwhelming majority of testimony received at the hearing and subsequently submitted in written comments are related to traffic. Costco's traffic consultants, Kittelson & Associates, Inc., were directed to collaborate with all the agencies. Additional traffic counts and intersections were collected and analyzed to ensure the project could operate at acceptable levels of service and any safety issues could be mitigated. We are pleased to report that ODOT, Jackson Co. Roads and the City of Medford have reviewed and are in agreement with Costco's Conditional Use Permit as conditioned in the staff report.

The attached letter from Kittelson & Associates is our response to each of the traffic related comments. It is our belief that the analysis provided adequately addresses the issues raised in the hearing and in written comments. Thank you for your consideration.

Respectfully,

Jack S. Frank
Costco Vice-President of Real Estate

January 19, 2016 Project #: 19046.0

Planning Commission
City of Central Point
155 S. 2nd Street
Central Point, OR 97502

RE: Conditional Use Permit Application

Dear Chairman Piland and members of the Planning Commission:

This letter responds to transportation-related issues raised in written comments submitted to the City of Central Point on or before January 12, 2016 and referencing the Conditional Use Permit Application by Costco Wholesale for a warehouse and fuel facility near the Hamrick Road/Table Rock Road intersection in Central Point, Oregon.

1. ***Comment: "Costco's traffic study is flawed in that it does not identify the routes its members use to access the existing Medford store; information which is necessary to accurately predict how those members will re-route to the proposed location."*** *January 12, 2016 letter from David Smith.*
   Response: To assure that the traffic analysis was based on reasonably worst-case conditions, none of the traffic associated with the existing Costco warehouse on Crater Lake Highway was subtracted from the estimated existing and future background traffic volumes, nor was any of it re-routed to the proposed new warehouse location. Instead, current market demographics were used along with area-wide population, employment, land use, and transportation system information to estimate the likely trip distribution and routing characteristics of the entirely new vehicle traffic that was assumed to be generated by the proposed new Costco warehouse. This additional traffic was then superimposed on existing and anticipated future background traffic volumes, resulting in a conservatively high estimate of the total amount of traffic the transportation system will need to be able to accommodate at all key intersections.

2. ***Comment: "It makes no sense to add 10,670 more vehicles traveling through a construction zone, for an undetermined period, which will create an additional problem which has not been addressed."*** *January 12, 2016 letter from David Smith.*
   Response: As is normal practice in almost all road construction projects, a traffic management plan will be established and implemented for the duration of the road construction period for the benefit of both vehicles and workers.

3. ***Comment: "Costco generates more traffic to its 'warehouse' of 130,000 square foot store in Medford than the nearly 700,000 square foot Rogue Valley Mall."*** *January 11, 2016 letter from L. Calvin Martin.*

Response: We are not aware of recent traffic counts at the Rogue Valley Mall. However, a traffic analysis of a shopping center containing 700,000 square feet would be based on an assumption of near-full occupancy and would result in an estimate of about 25,000 average weekday trip ends.

4. ***Comment: "[sic] Kittleson Consultants have made many assumptions that can and should be examined, at the very least, by a neutral consultant."*** *January 11, 2016 letter from L. Calvin Martin.*
   Response: The traffic analysis and associated report that was initially prepared by Kittelson & Associates has been critically reviewed by transportation planning and engineering staff at the City of Central Point; Jackson County; City of Medford; and Oregon Department of Transportation. Additionally, the City of Central Point hired Southern Oregon Transportation Engineers, LLC to conduct a thorough review and provide comments of the transportation impact analysis. Staff from the public review agencies also participated from the outset in defining the scope and scale of the traffic analysis that was ultimately performed. The results of the critical reviews conducted by these agencies have been incorporated into the final report and the follow-up letters and technical memoranda that are part of the record.

5. ***Comment: "Table Rock Road...needs to be widened all the way to its intersection with Merriman Road."*** January 11, 2016 letter from L. Calvin Martin.
   Response: Jackson County has jurisdiction over Table Rock Road in this area and has made the decision on the begin and end points of this particular widening project based on a multitude of factors that fall beyond the scope of this Conditional Use Permit Application. With respect to the adequacy of the transportation system to accommodate the proposed new Costco warehouse, the traffic analysis demonstrates that adequate transportation services can be provided without extending the Table Rock Road improvement project beyond its current boundary limits.

6. ***Comment: "The bridge crossing the I-5 [on Table Rock Road] is old and very narrow. The increased traffic...will require that it be replaced with a stronger and wider (at least four lanes) bridge."*** *January 11, 2016 letter from L. Calvin Martin.*
   Response: The proposed new Costco warehouse does not cause the need for this bridge to be replaced or widened in order to maintain adequate transportation services.

7. ***Comment: "The proposed location of Costco will create a very dangerous mix of large heavy trucks (including triples) from adjacent and nearby businesses (Knife River Concrete and Aggregates, FedEx Ground and others)."*** *January 11, 2016 letter from L. Calvin Martin.*
   Response: The traffic analysis conducted by Kittelson & Associates was reviewed by appropriate City, County, and State agencies and explicitly considered the safety as well as the operational effects of the proposed new Costco warehouse. The mitigation measures incorporated into the conditions of approval have been found sufficient to maintain adequate transportation services with respect to both operations and safety.

8. ***Comment: "The mix of senior drivers with congestion and heavy trucks is not appropriate or desirable and could have disastrous results."*** *January 11, 2016 letter from L. Calvin Martin.*
Response: The traffic analysis conducted by Kittelson & Associates was reviewed by appropriate City, County, and State agencies and explicitly considered the safety as well as the operational effects of the proposed new Costco warehouse. The mitigation measures incorporated into the conditions of approval have been found sufficient to maintain adequate transportation services with respect to both operations and safety.

9. ***Comment: "The land around the proposed Costco has not been developed to its potential, particularly to the North and West. When that land develops the intersections will be even more stressed."*** *January 11, 2016 letter from L. Calvin Martin.*
Response: The projected future background traffic volumes used in the traffic analysis are based on estimates of future population and employment for Central Point and the surrounding urban areas, and therefore anticipate that growth will continue to occur throughout the urban area. Additionally, separate traffic analyses will be required of all nearby specific development applications that are expected to generate significant volumes of additional vehicular traffic. All such development applications will need to provide, as part of their own approval process, whatever mitigation is identified as being necessary to assure continued adequate transportation services in the area.

10. ***Comment: "The mitigation measures proposed create difficult driving and congestion all through Central Point's downtown area."*** *January 11, 2016 letter from L. Calvin Martin.*
Response: The mitigation measures set forth as conditions of approval were developed in collaboration with City, County, and State engineers and planners. They have been found to adequately mitigate the off-site transportation impacts associated with the proposed new Costco warehouse without creating unacceptable side-effects elsewhere.

11. ***Comment: "The expenses, of this first set of mitigations, are likely to be much more than what has been projected by the applicant's consultant and others."*** *January 11, 2016 letter from L. Calvin Martin.*
Response: The construction cost estimates associated with each condition of approval were developed and reviewed by registered professional engineers and are based on the most recent available unit prices from similar and/or nearby construction projects.

12. ***Comment: "I assume that the roads around it will be widened somehow and traffic lights will be added. Who will be paying for this?"*** *January 12, 2016 printed email letter from Kathy and Ray Wilkerson.*
Response: Costco has agreed to pay its proportionate share of each mitigation measure identified in the conditions of approval, which means it will fully mitigate the financial costs of the off-site impacts associated with the proposed new Costco warehouse. See also the response to Comment #1 above: the fact that Costco's traffic analysis has conservatively overestimated the

facility's off-site traffic impacts gives further assurance that Costco is fully contributing its proportionate financial share of each mitigation measure identified in the conditions of approval.

13. ***Comment: "I don't have, nor remember, the exact numbers but it was somewhere in the realm of 13,000 cars a day, on average, were passing by the intersection of Wilson and Table Rock Road".*** *January 11, 2016 letter from Dennis Burt.*
    Response: Traffic data available from Jackson County indicates that in 2008 the average daily traffic volume on Table Rock Road in the vicinity of Wilson Road was about 17,000 vehicles per day. The traffic analysis estimates the proposed new Costco warehouse will generate about 90 additional vehicle trips (45 in each direction) on Table Rock Road in the vicinity of Wilson Road during a typical weekday evening peak hour.

14. ***Comment: "Table Rock Rd. and Villas Rd. will become, more than ever, a safety and logistics nightmare for the people who live there."*** *January 11, 2016 letter from Dennis Burt.*
    Response: The traffic analysis conducted by Kittelson & Associates was reviewed by appropriate City, County, and State agencies and explicitly considered the safety as well as the operational effects of the proposed new Costco warehouse. The mitigation measures incorporated into the conditions of approval have been found sufficient to maintain adequate transportation services with respect to both operations and safety.

Thank you for the opportunity to provide these responses.

Sincerely,

Wayne Kittelson, P.E.
Principal

Brett Korporaal
Associate

MEMORANDUM

Date: January 19, 2016 Project #: 19046.0

To: Stephanie Holtey
City of Central Point
140 South Third Street
Central Point, Oregon 97502

From: Brett Korporaal and Wayne Kittelson, PE

Project: Central Point Costco TIA

Subject: Response to City of Medford Comments dated January 5, 2015

This memorandum responds to comments submitted by staff from the City of Medford related to the Central Point Costco Transportation Impact Analysis (TIA). Each comment from the letter dated January 5, 2016 is summarized below and then followed by Kittelson & Associates, Inc.'s (KAI) response.

COMMENT 1 FROM CITY OF MEDFORD

We understand the Rogue Valley International Airport is opposed to a median at the intersection of Biddle Rd and Airport Rd, as described in Condition No. 3. We recommend a condition that requires the developer to pay a proportional share towards a future traffic signal at this intersection. The City of Medford estimates the total cost for a traffic sign at this location to be $450,000 including design, construction, and inspection. We estimate the development's contribution at 10% from the additional traffic at this intersection shown in the Traffic Impact Analysis, dated October 2015, prepared by Kittelson and Associates, Inc. This results in a $45,000 contribution from the developer to this future project.

RESPONSE 1 FROM KAI

Costco Wholesale and the traffic engineers it has retained respectfully disagree that signalization is the most appropriate mitigation at the Airport Road/Biddle Road intersection. We believe there are good reasons to route trucks to the airport and Airport Road via Biddle Road. Biddle Road is currently a five lane road with a jug handle connection from Interstate 5, SR 62, SR 99, and SR 238 to the south of the airport. Biddle Road also provides a direct connection to E Pine Street, which provides access to Table Rock Road and I-5 for trucks access north of the airport. KAI would need truck origin and

destination data to determine optimum truck routing into and out of the airport. However, it is clear from information already available that a raised median can be constructed that will still allow trucks to make left- and right-turns onto Airport Road via Biddle Road. With a median at the Airport Road/Biddle Road intersection trucks would be able to make right-outs onto Biddle Road or a left-turn out of the airport can be accommodated at the O'Hare Parkway/Biddle Road intersection, which is roughly a quarter-mile south of the Airport Road/Biddle Road intersection and therefore does not require out-of-direction travel.

Based on the low volumes on Airport Road, Costco's traffic engineers also question whether a traffic signal would be able to meet official installation warrants. A traffic signal will disrupt and add delay to all vehicles approaching the intersection whereas a raised median will re-route only a small number of vehicles – and it will re-route them in a way that does not add travel distance or create additional safety or operational problems. For these reasons, we believe that a raised median is the most effective and most appropriate measure to mitigate the effects of the proposed new Costco warehouse at this location. A planning level cost estimate has been prepared for a raised median at this intersection, resulting in an estimated total construction cost of $35,000. *Attachment A contains KAI's planning level cost estimation spreadsheet for a raised median at the Airport Road/Biddle Road intersection.*

COMMENT 2 FROM CITY OF MEDFORD

At the intersection of Table Rock Rd and Morningside St we recommend a condition that requires the developer to pay a proportional share towards a future left turn lane at this intersection. See attached accident history showing an existing pattern of northbound rear-end collisions at this intersection. Per our December 24, 2015 letter, this development will increase PM peak hour trips through the intersection by 20%. The City of Medford estimates the total cost for a left-turn lane at this location to be $300,000 including design, construction, and inspection. A 20% contribution would result in a $60,000 contribution from the developer to this future project.

RESPONSE 2 FROM KAI

The City of Medford provided KAI with crash data at the Table Rock Road/Morningside Street intersection dated 2010 through 2014. In the City of Medford's letter to the City of Central Point dated December 24, 2015, the noted concerns were focused specifically on northbound rear-end crashes. However, a review of the crash data provided by the City reveals that the total number of reported crashes has declined each year since 2010, and only one rear-end northbound crash has been reported in the past three years at this location. These observations cause KAI to question whether there is an ongoing significant northbound rear-end crash problem that warrants mitigation.

Even if the City of Medford believes an intersection improvement is needed at this location, neither KAI nor Costco sees a nexus between the relatively small amount of net new site-generated traffic expected to travel through the intersection and the concern about northbound rear-end crashes:

- To the extent a problem requiring correction exists, it was created by a combination of traffic volume, roadway design, and environmental factors that Costco did not affect.
- To the extent a problem requiring correction exists at this intersection, it is created by northbound vehicles on Table Rock Road turning left onto Morningside Street, and this is a movement to which Costco is expected to add no additional traffic.
- The City of Medford has thus far provided insufficient information to confirm the northbound rear-end crash problem, to the extent such crashes are an ongoing significant problem, can be attributed primarily to the volume of through traffic on Table Rock Road. More specifically, it is impossible at this time to rule out the possibilities that approach speed and/or intersection visibility are the primary contributing factors to a northbound rear-end crash problem.
- Given that the vehicle fleet is rapidly evolving into vehicles with forward-looking radar and automated braking capabilities, it is likely that the rear-end crash problem at this intersection (to the extent it exists) will naturally decline in significance and incidence over time, simply because of the new vehicle technology that is already being deployed.

The City of Medford states that Costco's proportional share for constructing a separate left turn lane should be 20%, based on the volume of additional traffic that is expected to pass through the intersection because of the presence of the Costco warehouse during a typical weekday evening peak hour. However, the City's computations do not recognize that when analyzing crash data transportation engineers use average daily traffic (ADT) data on the approaches at the intersection rather than peak hour volumes. The City of Medford provided 2014 ADT data at this location, which totals 15,416 vehicles per day. Daily site-generated trips accessing the proposed site via Table Rock Road from the south is estimated to equal 20% of total site-generated traffic. This would add an additional 2,134 daily trips to Table Rock Road south of the site for a total of 17,550 ADT when the site opens in 2016. When performed on the basis of average daily traffic, therefore, the City's computations would result in a proportionate share estimate of 12% and not 20%.

In summary, neither Costco nor the traffic engineers it has retained sees a nexus between the site's generated trips and the possible need for a northbound left-turn lane on Table Rock Road at its intersection with Morningside Street. As well, Costco and its traffic engineers believe the need for and appropriateness of a northbound left-turn lane at this intersection has not yet been established, and that further investigation could reasonably conclude that traffic volume on Table Rock Road, while a contributing factor, is not the *primary* or the *only* factor contributing to northbound rear-end crashes at this intersection. *Attachment B includes the crash data summary and ADT at the Table Rock Road/Morningside Road intersection.*

SUMMARY

Costco Wholesale believes that a contribution of $35,000 will allow construction and implementation of roadway improvements in Medford appropriate to mitigate the off-site transportation impacts anticipated within the City of Medford and attributable to the proposed new Central Point Costco warehouse. Even so, Costco Wholesale is prepared to contribute up to $70,000 to the City of Medford in order to assure that sufficient funds are provided to fully mitigate the proposed Costco warehouse's off-site transportation impacts within the Medford's jurisdictional boundaries.

Attachment A Raised Median Cost Estimate
at Airport Rd/Biddle Rd

Central Point Costco Public Improvements

Airport Rd. & Biddle Rd. Intersection

Costco Wholesale

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Engineer's Estimate - Conceptual

Prepared By: Fred Wismer, PE & Charles Radosta, PE			*Date: January 11, 2016*		
		This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
	ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**
	MOBILIZATION AND TRAFFIC CONTROL (00200)				
1	Mobilization (00210)	LS	ALL	$4,000.00	$4,000.00
2	Temporary Protection & Direction of Traffic (00225)	LS	ALL	$2,000.00	$2,000.00
3	Erosion Control (00280)	LS	ALL	$2,000.00	$2,000.00
	MOBILIZATION AND TRAFFIC CONTROL SUBTOTAL				**$ 8,000**
	ROADWORK (00300)				
4	Removal of Structures and Obstructions (00310)	LS	ALL	$3,000.00	$3,000.00
5	Clearing and Grubbing (00320)	LS	ALL	$2,000.00	$2,000.00
6	General Earthworks (00330)	CY	200	$25.00	$5,000.00
7	Subgrade Geotextile (00350)	SY	80	$1.00	$80.00
	ROADWORK SUBTOTAL				**$ 10,080**
	BASES (00600)				
8	Aggregate Base (00641)	CY	48	$40.00	$1,920.00
	BASES SUBTOTAL				**$ 1,920**
	WEARING SURFACES (00700)				
9	Level 3, 1/2 inch Dense HMAC (00744)	TONS	36	$70.00	$2,520.00
10	Concrete Curbs, Standard Curb and Gutter (00759)	LF	150	$15.00	$2,250.00
11	Concrete Curbs, Traffic Separator (00759)	LF	250	$15.00	$3,750.00
12	Concrete Islands (00759)	SF	170	$10.00	$1,700.00
13	Concrete Walks (00759)	SF	900	$5.00	$4,500.00
14	Truncated Domes (00759)	EA	3	$450.00	$1,350.00
	WEARING SURFACES SUBTOTAL				**$ 16,070**
	PERMANENT TRAFFIC CONTROL AND GUIDANCE DEVICES (00800)				
15	Pavement Markings, Complete	LS	ALL	$ 1,000.00	$1,000.00
	PERMANENT TRAFFIC CONTROL AND GUIDANCE DEVICES SUBTOTAL				**$ 1,000**
	RIGHT-OF-WAY DEVELOPMENT (01000)				
16	Permanent Landscaping (01030)	SF	900	$2.50	$2,250.00
	RIGHT-OF-WAY DEVELOPMENT SUBTOTAL				**$ 2,250**
				TOTAL CONSTRUCTION COST	**$ 21,285**
	ENGINEERING SUPPORT				
17	Engineering & Construction Management	LS	15%	$ 21,285	$3,200.00
18	City Construction Management	LS	10%	$ 24,485	$2,500.00
	ENGINEERING SUPPORT SUBTOTAL				**$ 5,700**
				TOTAL PROJECT SUBTOTAL	**$ 26,985**
				30% Contingency	**$ 8,100**
				TOTAL ESTIMATED PROJECT COST	**$ 35,085**

Central Point Costco Public Improvements

Airport Rd. & Biddle Rd. Intersection

Costco Wholesale

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Engineer's Estimate - Conceptual

Prepared By: Fred Wismer, PE & Charles Radosta, PE			*Date: January 11, 2016*	
	This Estimate has a Rating of:	**3C**	*(See rating scale guide below.)*	
ITEM	**UNIT**	**TOTAL QUANTITY**	**UNIT PRICE**	**TOTAL COST**

Scope Accuracy:

Level 1: Project scope well understood and well defined.

Level 2: Project scope conceptual. Scope lacks detail due to potential permit requirements; Unknown project conditions; limited knowledge of external impacts.

Level 3: Project scope is a "vision" with limited detail.

Engineering Effort:

Level A: Preliminary engineering performed. Technical information is available, engineering calculations have been performed; clear understanding of the materials size and quantities needed to execute job. Schedule understood; staff and permitting is fairly clear, (however this element may still need refining). Project Development & Construction Contingencies ranges between 10%-20%.

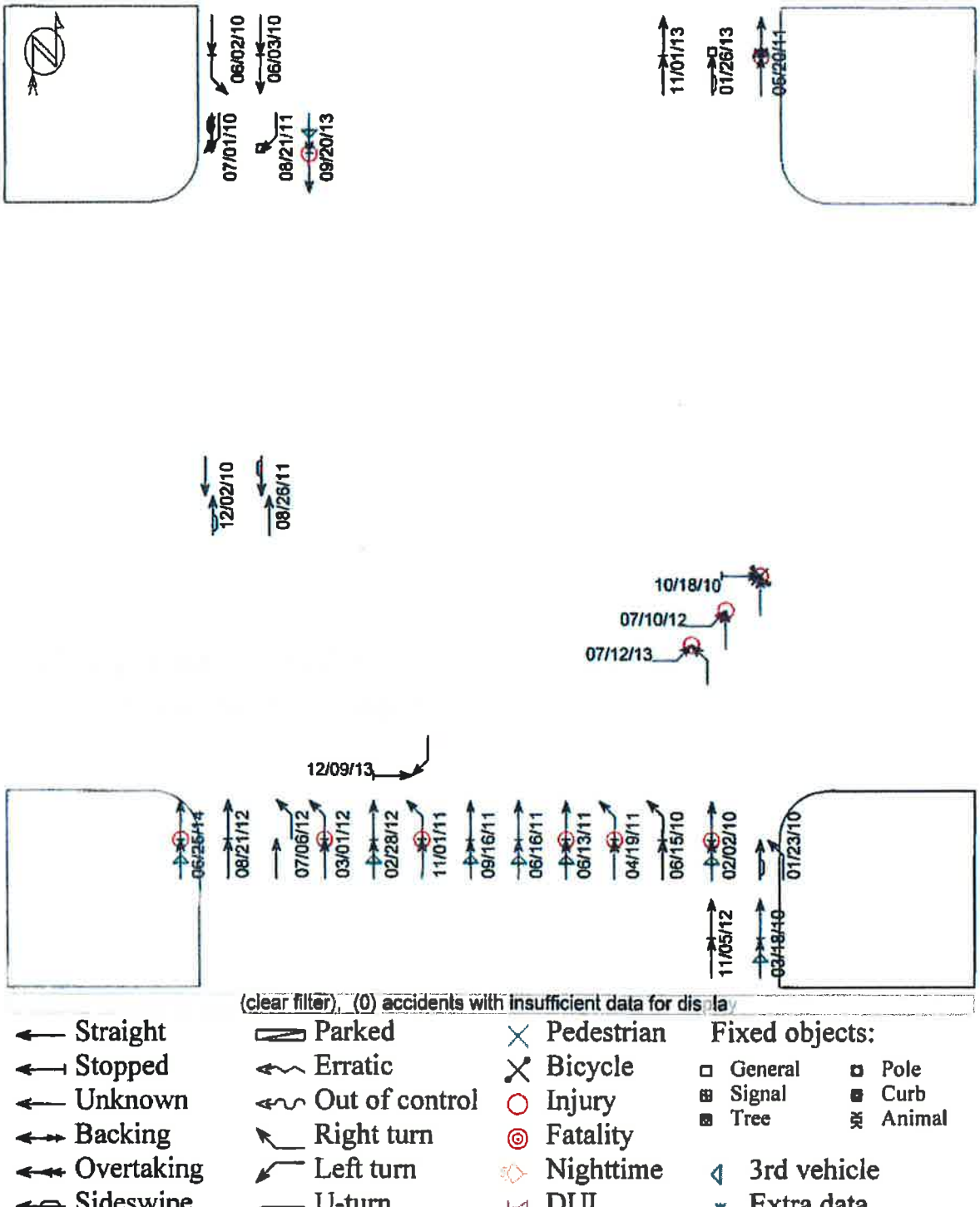
Level B: Conceptual engineering performed. Technical information is available, rough engineering calculations may have been performed, or similar information from previous similar work is compared and used. Project Development Contingencies ranges between 15% to 25% and Construction Contingencies ranges between 20% to 30%.

Level C: No engineering performed. Educated guesstimating. Limited technical information available and/or analysis performed. Project Development and Construction Contingencies should be selected appropriately by Project Manager. Contingency may range up to 50%.

Attachment B Crash Data Summary & ADT at Table Rock Rd/Morningside St

Morningside St & Table Rock Rd

29 Accidents (rate:1.32) 01/01/10 - 12/04/14



Intersection Magic VER 6.725
City of Medford, OR 01/05/2016

Accident listing
01/01/2010 - 12/04/2014
Morningside St & Table Rock Rd
Sorted by <DATE;TIME;ACC#>

CASE ID	DATE	TIME	DISTA	DIR F	STREET 1	STREET 2	TYPE OF COLL	VEH 1 DIR	VEH 2 DIR	VEH 1 MOVE	VEH 2 MOVE	VEH 1 TYPE	VEH 2 TYPE	LANE POS	INJURY	SEVERITY	FATAL	ENFORCEMENT	AT FAULT	SEC CAUSE
1001341	1/23/2010	15:26	0	East	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	North	North	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1001958	2/2/2010	16:21	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Straight	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	
1004406	3/18/2010	17:21	75	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1008465	6/2/2010	15:23	200	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	South	South	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Careless Driving	Veh 1	Did not comp
1008541	6/3/2010	20:02	500	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	South	South	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	DUII Alcohol	Veh 1	
1009155	6/15/2010	12:54	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1010062	7/1/2010	9:37	0		TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	South	South	Overtaking	Turning Right	Moving Aut	Moving Aut	Right Shou	0	0	0	Improp Passing	Veh 1	
1016502	10/18/2010	16:26	0		MORNINGSIDE ST	TABLE ROCK RD	Angle	North	East	Straight	Stopped in Traf	Bicycle	Moving Aut		1	2	0	Careless Driving	Veh 1	
1018998	12/2/2010	0:44	1000	North	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	North	South	Straight	Straight	Moving Aut	Moving Aut	Off Road R	0	0	0	DUII Alcohol	Veh 1	Hit and Run
1107065	4/19/2011	16:36	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		1	1	0	Danger Move of Stp/Prk Ve	Veh 1	
1108914	5/20/2011	11:59	75	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	Animal
1110451	6/13/2011	16:11	50	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	
1110660	6/16/2011	19:37	50	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf				0	0	0	Following too close	Veh 1	Violated Tra
1114896	8/21/2011	10:31	0		TABLE ROCK RD	MORNINGSIDE ST	Head on	South		Turning Right	Stationary	Moving Aut	Object	Off Road R	0	0	0	Careless Driving	Veh 1	
1115263	8/26/2011	16:40	528	North	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	South	North	Leav Traf Ln Lef	Straight	Moving Aut	Moving Aut		0	0	0	Careless Driving	Veh 1	Did not comp
1116541	9/16/2011	17:12	30	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf				0	0	0	Following too close	Veh 1	
1119563	11/1/2011	14:00	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		1	1	0	None	Veh 1	Hit and Run
1203776	2/28/2012	15:57	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf				0	0	0	Following too close	Veh 1	
1209878	3/1/2012	14:47	40	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		1	1	0	Following too close	Veh 1	
1212435	7/6/2012	16:14	0		TABLE ROCK RD	MORNINGSIDE ST	Angle	North	North	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	Did not comp
1212696	7/10/2012	13:29	0		TABLE ROCK RD	MORNINGSIDE ST	Angle	East	North	Turning Left	Straight	Moving Aut	Moving Aut		1	1	0	Fail to obey STOP SIGN	Veh 1	Did not comp
1215893	8/21/2012	16:10	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1221590	11/5/2012	15:43	75	South	TABLE ROCK RD	MORNINGSIDE ST	Non collisio	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1301660	1/26/2013	7:54	500	North	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	North		Leav Traf Ln Lef	Stationary	Moving Aut	Object	Off Road L	0	0	0	None	Veh 1	Hit and Run
1313715	7/12/2013	11:11	0		MORNINGSIDE ST	TABLE ROCK RD	Angle	East	North	Turning Left	Turning Left	Moving Aut	Moving Aut		1	1	0	Fail to obey STOP SIGN	Veh 1	
1319092	9/20/2013	11:11	30	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	South	South	Straight	Stopped in Traf	Moving Aut	Moving Aut		1	1	0	Following too close	Veh 1	Violated Tra
1322177	11/1/2013	14:44	1000	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut	Off Road R	0	0	0	Following too close	Veh 1	
1324605	12/9/2013	14:18	0		MORNINGSIDE ST	TABLE ROCK RD	Angle	South	East	Turning Right	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Other	Veh 1	Weather
1413090	6/25/2014	16:21	30	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	

CITY OF MEDFORD, OREGON

TRAFFIC ENGINEERING DIVISION

24 Hr Average Weekday

TRAFFIC VOLUME

Site Code: 338
Station ID:

Latitude: 0' 0.0000 South

Start	28-Jul-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Direction 1	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction
12:00 AM	*	*	33	52	31	69	*	*	*	*	*	*	*	*	32	60
01:00	*	*	30	50	26	37	*	*	*	*	*	*	*	*	28	44
02:00	*	*	16	19	13	39	*	*	*	*	*	*	*	*	14	29
03:00	*	*	53	34	40	32	*	*	*	*	*	*	*	*	46	33
04:00	*	*	136	33	127	54	*	*	*	*	*	*	*	*	132	44
05:00	*	*	258	118	208	177	*	*	*	*	*	*	*	*	233	148
06:00	*	*	287	197	199	280	*	*	*	*	*	*	*	*	243	238
07:00	*	*	**414**	244	**253**	**407**	*	*	*	*	*	*	*	*	**334**	326
08:00	*	*	323	280	194	400	*	*	*	*	*	*	*	*	258	340
09:00	252	277	284	273	188	337	*	*	*	*	*	*	*	*	241	296
10:00	**318**	271	259	310	194	399	*	*	*	*	*	*	*	*	257	327
11:00	275	**332**	314	**357**	186	363	*	*	*	*	*	*	*	*	258	**351**
12:00 PM	293	368	367	402	*	*	*	*	*	*	*	*	*	*	330	385
01:00	364	387	**456**	439	*	*	*	*	*	*	*	*	*	*	**410**	413
02:00	311	417	345	476	*	*	*	*	*	*	*	*	*	*	328	446
03:00	**376**	519	295	569	*	*	*	*	*	*	*	*	*	*	336	544
04:00	372	**542**	259	**625**	*	*	*	*	*	*	*	*	*	*	316	**584**
05:00	370	520	298	587	*	*	*	*	*	*	*	*	*	*	334	554
06:00	295	304	205	341	*	*	*	*	*	*	*	*	*	*	250	322
07:00	197	249	159	260	*	*	*	*	*	*	*	*	*	*	178	254
08:00	176	180	115	232	*	*	*	*	*	*	*	*	*	*	146	206
09:00	142	175	111	205	*	*	*	*	*	*	*	*	*	*	126	190
10:00	100	135	84	134	*	*	*	*	*	*	*	*	*	*	92	134
11:00	46	71	58	101	*	*	*	*	*	*	*	*	*	*	52	86
Lane	3887	4747	5159	6338	1659	2594	0	0	0	0	0	0	0	0	4974	6354
Day	8634		11497		4253		0		0		0		0		11328	
AM Peak	10:00	11:00	07:00	11:00	07:00	07:00	-	-	-	-	-	-	-	-	07:00	11:00
Vol.	318	332	414	357	253	407	-	-	-	-	-	-	-	-	334	351
PM Peak	15:00	16:00	13:00	16:00	-	-	-	-	-	-	-	-	-	-	13:00	16:00
Vol.	376	542	456	625	-	-	-	-	-	-	-	-	-	-	410	584

Comb. Total	8634	11497	4253	0	0	0	0	11328
ADT	ADT 11,327	AADT 11,327						

CITY OF MEDFORD, OREGON

TRAFFIC ENGINEERING DIVISION

24 Hr Average Weekday

TRAFFIC VOLUME

Site Code: 000000009742
Station ID:

Latitude: 0' 0.0000 South

Start	28-Jul-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Direction 1	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction
12:00 AM	*	*	10	17	9	15	*	*	*	*	*	*	*	*	10	16
01:00	*	*	9	23	12	23	*	*	*	*	*	*	*	*	10	23
02:00	*	*	3	9	3	6	*	*	*	*	*	*	*	*	3	8
03:00	*	*	18	12	13	9	*	*	*	*	*	*	*	*	16	10
04:00	*	*	44	11	48	11	*	*	*	*	*	*	*	*	46	11
05:00	*	*	97	29	100	30	*	*	*	*	*	*	*	*	98	30
06:00	*	*	124	39	133	33	*	*	*	*	*	*	*	*	128	36
07:00	*	*	**191**	59	**175**	60	*	*	*	*	*	*	*	*	**183**	60
08:00	*	*	146	53	128	65	*	*	*	*	*	*	*	*	137	59
09:00	*	*	112	77	98	95	*	*	*	*	*	*	*	*	105	86
10:00	*	*	95	88	121	92	*	*	*	*	*	*	*	*	108	90
11:00	*	*	105	**117**	106	**120**	*	*	*	*	*	*	*	*	106	**118**
12:00 PM	*	*	114	140	102	140	*	*	*	*	*	*	*	*	108	140
01:00	*	*	98	141	126	138	*	*	*	*	*	*	*	*	112	140
02:00	*	*	111	138	108	158	*	*	*	*	*	*	*	*	110	148
03:00	*	*	114	198	109	222	*	*	*	*	*	*	*	*	112	210
04:00	111	217	111	236	116	248	*	*	*	*	*	*	*	*	113	234
05:00	**127**	**260**	**124**	**243**	**133**	**253**	*	*	*	*	*	*	*	*	**128**	**252**
06:00	102	171	91	158	2	5	*	*	*	*	*	*	*	*	65	111
07:00	78	139	89	139	0	0	*	*	*	*	*	*	*	*	56	93
08:00	67	100	54	103	*	*	*	*	*	*	*	*	*	*	60	102
09:00	52	95	49	102	*	*	*	*	*	*	*	*	*	*	50	98
10:00	33	77	28	55	*	*	*	*	*	*	*	*	*	*	30	66
11:00	19	30	17	44	*	*	*	*	*	*	*	*	*	*	18	37
Lane	589	1089	1954	2231	1642	1723	0	0	0	0	0	0	0	0	1912	2178
Day	1678		4185		3365		0		0		0		0		4090	
AM Peak	-	-	07:00	11:00	07:00	11:00	-	-	-	-	-	-	-	-	07:00	11:00
Vol.	-	-	191	117	175	120	-	-	-	-	-	-	-	-	183	118
PM Peak	17:00	17:00	17:00	17:00	17:00	17:00	-	-	-	-	-	-	-	-	17:00	17:00
Vol.	127	260	124	243	133	253	-	-	-	-	-	-	-	-	128	252

Comb. Total	1678	4185	3365	0	0	0	0	4090

ADT ADT 4,089 AADT 4,089

STAFF REPORT

CENTRAL POINT Oregon

Community Development
Tom Humphrey, AICP
Community Development Director

REVISED STAFF REPORT
January 5, 2016

ITEM (File No. 15022)

Consideration of a Conditional Use Permit application for the construction of a 161,992 square foot Costco membership warehouse and fuel facility on an 18.28 acre site at the southwest corner of Hamrick and Table Rock Road. The project site is within the Federal Way Business Park in the Industrial (M-1) zoning district, and is identified on the Jackson County Assessor's map as 37S 2W 12B, Tax Lots 213, 214, 215, and 216. Applicant: Costco Wholesale; Agent: Steve Bullock, MG2.

SOURCE:

Stephanie Holtey, Community Planner II

BACKGROUND

At this time Costco Wholesale ("Applicant") is requesting a Conditional Use Permit to construct a new membership warehouse and fuel facility. The 18.28 acre project site is located on four (4) lots within the Federal Way Business Park Subdivision with frontage on Table Rock Road (Jackson County), Hamrick Road (City of Central Point) and Federal Way (City of Central Point). Land east of the site is located in the City of Medford. It's the Applicant's intent to relocate its existing operation on Crater Lake Highway to Central Point with a scheduled opening date of Fall 2016. Achievement of this objective requires approval of the CUP, as well as a Site Plan and Architectural Review (File No. 15028) and Class "C" Variance to the M-1 sign area standard (File No. 15032) (Agenda Items VI, B and C).

General Project Description:

Costco proposes to construct a 161,992 square foot membership warehouse located on the southwest site boundary north of the existing Fed Ex Distribution Facility (Attachment "A-3"). A total of 783 parking spaces are proposed along with perimeter and interior landscape improvements.

Architecturally the proposed Costco will be a large metal building similar to industrial warehouses like the Fed Ex Distribution building adjacent to the project site. In this case the building design provides for variation in building materials and roof lines, as well as articulation and detailing around the main entrance canopy. The color palette is a blend of earth tones (brown, grey) with Costco red and blue on the proposed signage.

According to the applicant's findings (Attachment "B") the warehouse will be open to members from 10 a.m. to 9 p.m. on weekdays and until 5 p.m. or 6 p.m. on weekends. Deliveries for the warehouse typically occur between 3 a.m. and noon to minimize conflicts between large delivery trucks and Costco's members.

A four (4) island fuel facility is proposed on the southeast site boundary to the west of the existing Fed Ex Distribution Facility (Attachment "A-3"). Each island provides six (6) fuel dispensers and provides stacking for 10 cars. In total the fuel facility includes 24 fuel dispensers and provides stacking for 70 cars. A canopy will cover the fuel dispensers (Attachment "A-13"). The fuel facility will be open to members from 6am to 10pm daily. Depending on demand, fuel deliveries may occur multiple times per day.

ISSUES

The City has evaluated the proposed use and identified four (4) issues:

1. **Traffic**. On opening day it is estimated that Costco will generate an additional 10,670 new daily trips. Due to the large volume of estimated traffic for the proposed use, the applicant prepared a Traffic Impact Analysis (TIA) based on input from affected agencies including the City of Central Point, Jackson County Roads and the Oregon Department of Transportation (ODOT). It should be noted that the City of Medford was invited to participate in developing the TIA scope of work on June 2, 2015 and August 13, 2015, but no comments were received.

   The TIA identified impacts to four (4) intersections at opening day (Table 1, Items 1-4) and one (1) intersection in 2020 (Table 1, Item 5). Additionally, impacts to the intersection of Table Rock Road and Morningside Street were identified and mitigation recommended in a revised letter from the City of Medford dated January 5, 2016 (Attachment "I-1").

No.	Intersection	Governing Agency	Peak Period	Current Conditions (2015) LOS	Current Conditions (2015) V/C Ratio	Build Year Conditions (2016) LOS	Build Year Conditions (2016) V/C Ratio	Future Year Conditions (2030) LOS	Future Year Conditions (2030) V/C Ratio
1	NB I-5 Off Ramp	ODOT	PM Peak	C	0.61		***0.77***		0.84
			Midday Peak	B	0.41		0.61		0.63
2	Table Rock Road & Hamrick Road	Jackson County	PM Peak	C	-	E	-	C	-
			Midday Peak	B	-	***F***	-	B	-
3	Table Rock Road & Airport Road	Jackson County	PM Peak	F	-	***F***	-	C	-
			Midday Peak	C	-	E	-	B	-
4	Biddle Road & Airport Road	City of Medford	PM Peak	C	-	***E***	-	F	-
			Midday Peak	B	-	C	-	F	-
5	Hamrick Road & East Pine Street	City of Central Point, Jackson County	PM Peak	C	-	C		***D***	
			Midday Peak	B	-	B		B	

It should be noted that one year after the scheduled date of opening for Costco, the County will begin construction of the Table Rock Road project. The project will widen Table Rock Road between Biddle and Airport Road to include four travel lanes, a center turn lane, bike lanes and sidewalks and intersection signalization at Table Rock and Airport Road. Completion of the Table Rock Road project resolves traffic impacts of the proposed use on infrastructure along Table Rock Road (i.e. Projects 2 and 3). A detailed summary of the traffic impacts and mitigation are set forth in the Revised Public Works Department Staff Report (Attachment "D").

Resolution: To assure timely completion of traffic mitigation measures relative to the day of opening for the proposed use, staff is recommending:

a. NB I-5 Off Ramp. Prior to building permit issuance, the applicant shall comply with the Oregon Department of Transportation (ODOT) requirement to contribute toward the construction of dual

right turn lanes from the off-ramp to East Pine Street (IAMP Project No. 9). The estimated project cost is $1.3M. Project cost sharing shall be as follows:

ODOT:	$800,000
Costco:	$377,000 (Not to exceed)
City:	$123,000 (Not to exceed)

Per ODOT, construction will commence at the earliest possible date, which is necessary to prevent failure of the northbound off-ramp.

b. Table Rock Road and Hamrick Road. Prior to certificate of occupancy, the applicant will be required to provide the following temporary improvements on Table Rock Road per Jackson County Roads:

   i. Construct median islands in front of the access drives on Table Rock Road to limit movements to right-in/right-out; and,

   ii. Construct a center left turn lane and refuge within the existing Table Rock Road right-of-way at Hamrick Road to ease left turn delays.

c. Table Rock Road at Airport Road. Per Jackson County Roads, no mitigation measures are recommended since operational deficiencies will be resolved upon completion of the Table Rock Road widening project.

d. Biddle Road and Airport Road. Currently this intersection operates at a LOS C. According to the applicant's TIA, the intersection will operate at LOS E on the day of opening. Per the Revised City of Medford letter dated January 5, 2016 (Attachment "I-1"), the applicant will be required to contribute toward construction of a signal at the intersection (See Condition No. 3).

e. Table Rock Road at Morningside Street. Per the Revised City of Medford staff report dated January 5, 2016 (Attachment "I-1"), the applicant shall be required to contribute toward construction of a left turn lane at the intersection of Table Rock Road and Morningside Street (Condition No. 4).

2. **Parking**. The applicant's parking plan proposes 783 parking spaces for warehouse members. The maximum parking spaces allowed based on the allocation of uses is 698 spaces. In accordance with CPMC 17.64.040(B)(2), the applicant is requesting an adjustment to allow for the proposed increase in parking based on a parking demand analysis specific to Costco Wholesale operations in Oregon (Attachment "C").

Resolution: The applicant's parking demand analysis recommends a minimum parking ratio of 4.83 parking spaces per 1,000 s.f. of Gross Floor Area (GFA) to maintain a 90% utilization rate. According the Institute of Traffic Engineers (ITE) Parking Generation, 4th Edition, when more than 90% of the parking spaces in a parking lot are occupied, there is an increase in illegal parking and repeating circulation. Costco's parking plan provides slightly more parking than the minimum recommendation to accommodate typical peak periods as well as provide additional spaces for seasonal peaks. Staff

recommends that the requested increase in parking is warranted.

3. **Signage**. The applicant's signage plan includes wall signs that are proportional to scale and size of the building. Although none of the proposed signs exceed 3.8% of the wall area on any elevation, they exceed the maximum sign area allowed in the M-1 zone.

   Resolution: Approval of the requested signage for the proposed use is subject to approval of a Class "C" Variance, which will be presented to the Planning Commission for consideration (File No. 15032, Agenda Item VI-C). Based on the applicant's proportionality rationale for the proposal, the variance request is deemed reasonable. However, if the variance is not approved, the applicant will be required to demonstrate compliance with the M-1 sign area standards prior to building permit issuance.

4. **Lot Consolidation**. The project site includes four (4) lots within the Federal Way Business Park Subdivision. Based on staff's evaluation of the lot dimensions and site plan, the proposed warehouse occupies three (3) of the existing lots. The applicant has indicated it is their intent to consolidate the lots.

   Resolution: As a condition of approval, the lot consolidation must be completed prior to building permit issuance.

FINDINGS

The Costco Wholesale Conditional Use Permit has been evaluated for compliance with the applicable Conditional Use Criteria set forth in CPMC 17.76 and found to comply as evidenced in the Planning Department Supplemental Findings (Attachment "J").

CONDITIONS OF APPROVAL

1. Prior to building permit issuance for the four consolidated lots, a Subdivision Re-plat shall be prepared and recorded and a copy of the recorded Subdivision Re-plat and Deed provided to the City.

2. The applicant shall satisfy conditions as listed in the Revised Public Works Department Staff Report dated December 15, 2015 (Attachment "D").

3. Per Attachment "I-1", prior to issuance of a building permit, the applicant shall provide evidence that it has contributed toward the construction of signalization improvements at the intersection of Airport and Biddle Road. The applicant's share of the signalization improvement shall not exceed $45,000, which shall be payable to the City of Medford.

4. Per Attachment "I-1", prior to issuance of a building permit, the applicant shall provide evidence that it has contributed toward the construction of left turn lane improvements at the intersection of Table Rock Road and Morningside Street. The applicant's share of the left turn lane improvement shall not exceed $60,000, which shall be payable to the City of Medford.

5. The applicant shall satisfy conditions as listed in the Rogue Valley Sewer Services Staff Report dated November 16, 2015 (Attachment "H").

6. Prior to issuance of building permits for the proposed signage, the applicant shall either demonstrate compliance with the signage standards set forth in CPMC 17.48.080(A)(1) or receive a variance to the signage area standard.

ATTACHMENTS

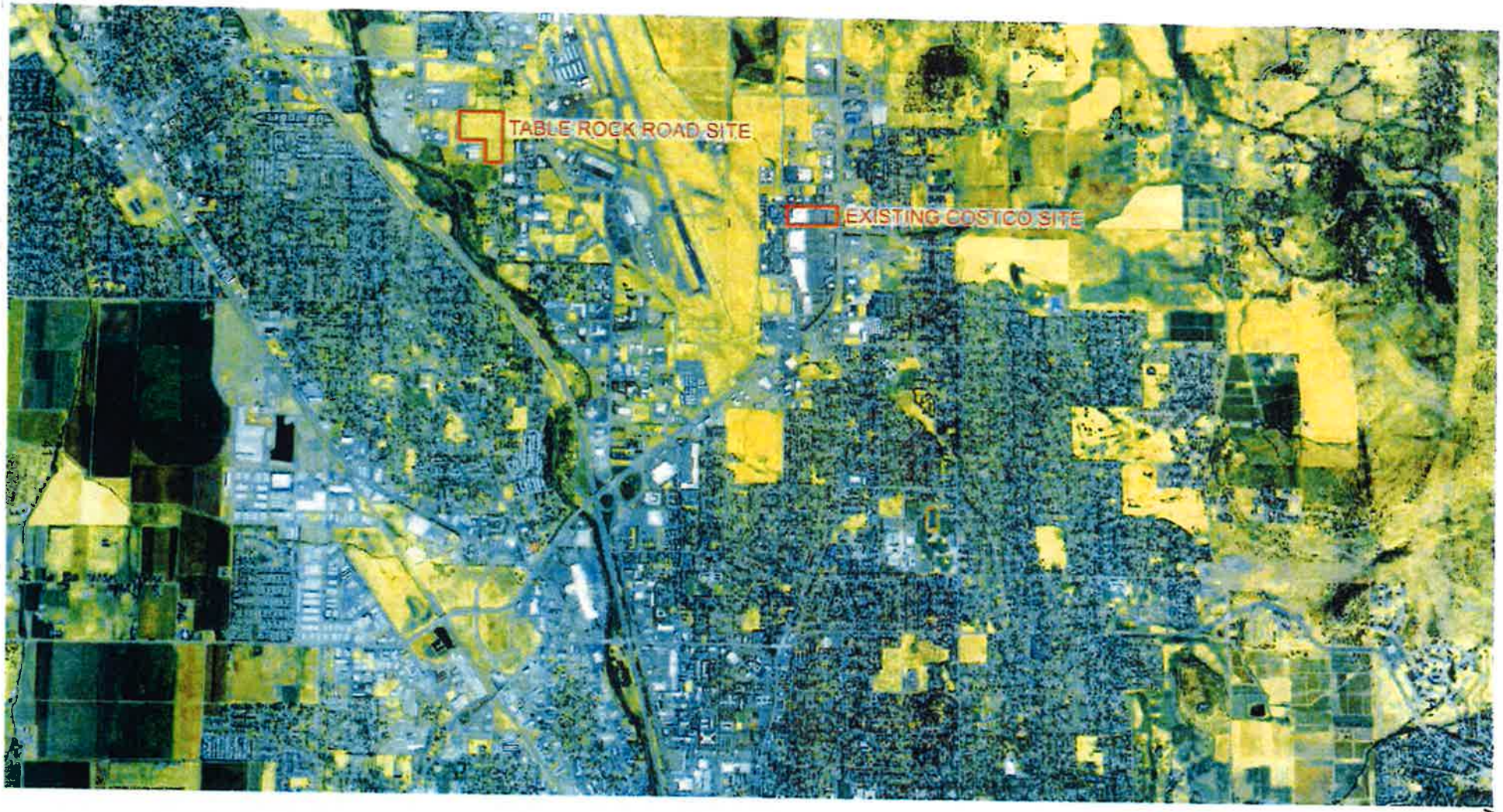
Attachment "A-1" – Site Comparison
Attachment "A-2" – Site Circulation
Attachment "A-3" – Concept Site Plan
Attachment "A-4" – Central Point Costco Grading & Drainage
Attachment "A-5" – Central Point Costco Utilities
Attachment "A-6" – Preliminary Landscape Plan
Attachment "A-7" – Concept Floor Plan
Attachment "A-8" – Concept Exterior Elevations
Attachment "A-9" – Concept Elevations
Attachment "A-10" – Entry View
Attachment "A-11" – NW Corner View
Attachment "A-12" – East View
Attachment "A-13" – Concept Fuel Facility Plan
Attachment "A-14" – Concept Lighting Plan
Attachment "B" – Applicant's Findings
Attachment "C" – Traffic Impact Analysis
Attachment "D" – Revised Public Works Staff Report dated January 5, 2016
Attachment "E" – Jackson County Roads Staff Report dated December 10, 2015
Attachment "F" – Oregon Department of Transportation Staff Report dated December 14, 2015
Attachment "G" – City of Medford Planning Department Comments dated December 3, 2015
Attachment "H" – Rogue Valley Sewer Services Staff Report dated November 16, 2015
Attachment "I-1" – Revised City of Medford Staff Report dated January 5, 2016
Attachment "I-2" – City of Medford Staff Report dated December 24, 2015
Attachment "J" – Planning Department Supplemental Findings
Attachment "K" – Resolution No. 827

ACTION

Consider the Conditional Use Application and either: 1) approve; 2) approve with modifications; or 3) deny the application.

RECOMMENDATION

Approve the Conditional Use Permit for Costco Wholesale subject to the conditions of approval per the Revised Staff Report dated January 5, 2016.



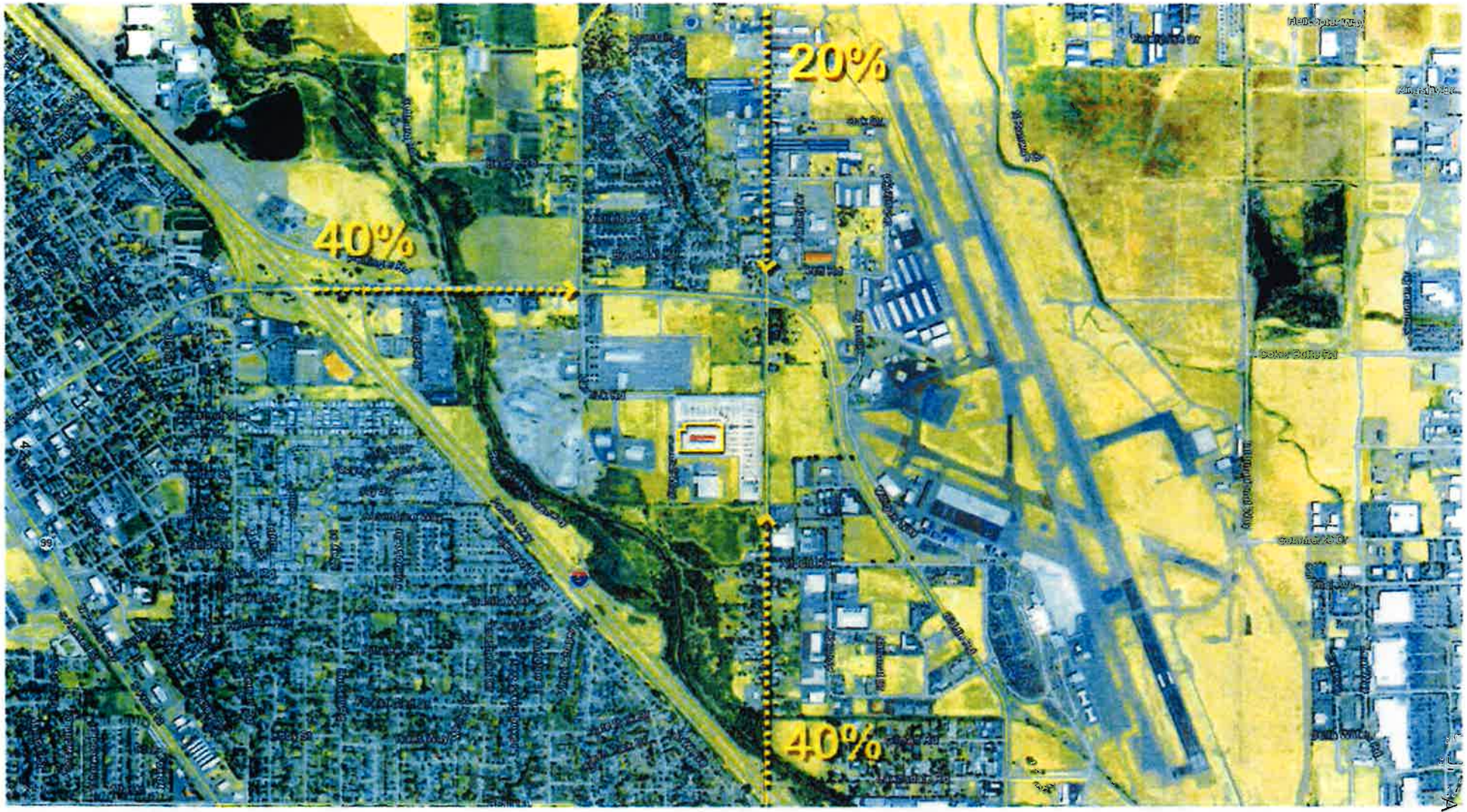
MG2

AUGUST 25, 2015
14-0390-01
CENTRAL POINT, OR

SITE COMPARISON

COSTCO WHOLESALE

ATTACHMENT "A-1"



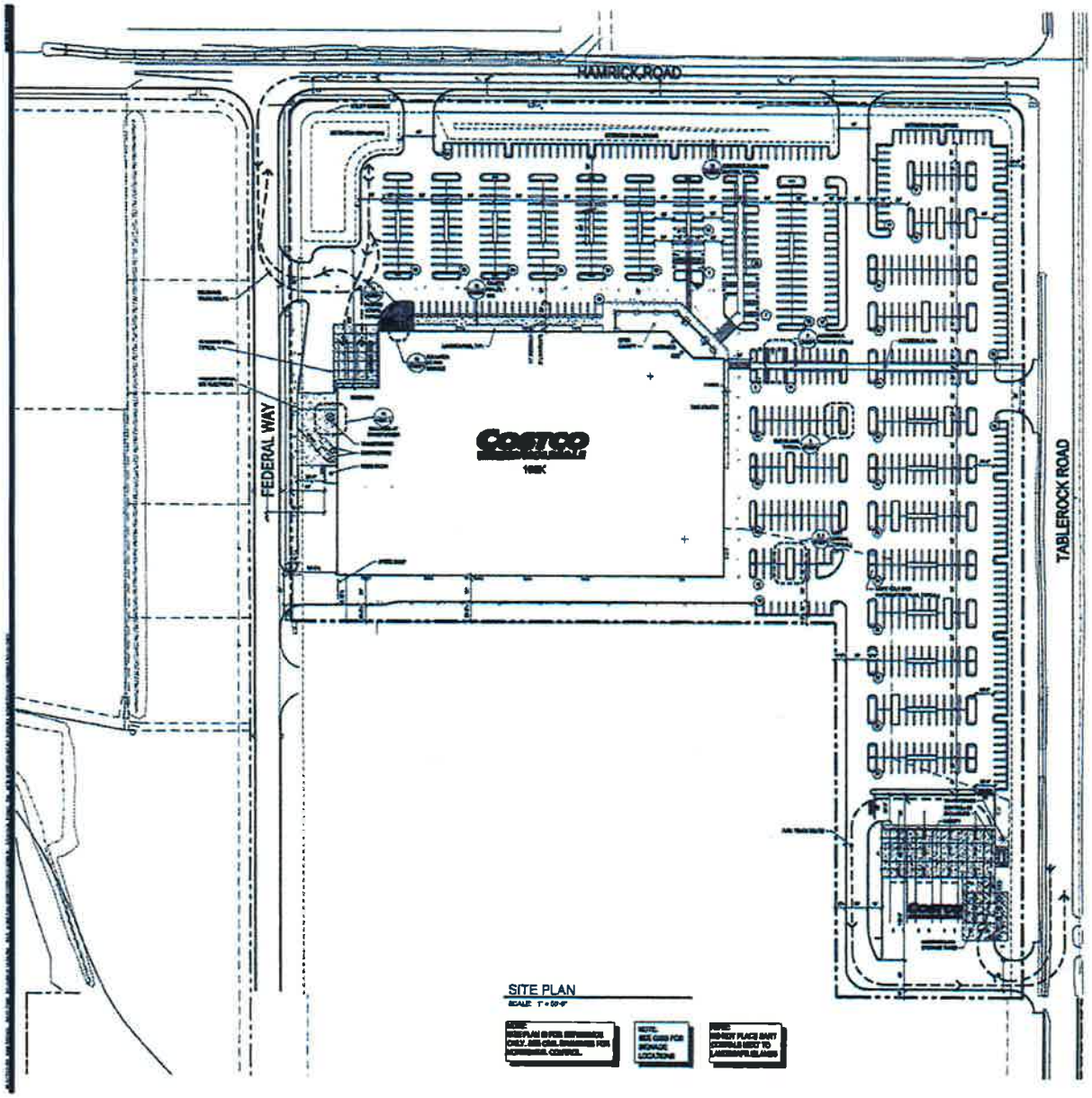
MG2

AUGUST 25, 2015
14-0390-01
CENTRAL POINT, OR

SITE CIRCULATION

COSTCO WHOLESALE

ATTACHMENT "A-2"



PROJECT DATA

CLIENT	COSTCO WHOLESALE [illegible] LAKE DRIVE [illegible]
PROJECT ADDRESS:	TABLEROCK RD & HAMRICK RD CENTRAL POINT, OREGON

SITE DATA:

TOTAL SITE AREA	16.29 ACRES (786,256 S.F.)
JURISDICTION	CENTRAL POINT, OR
ZONING	[illegible]
SETBACKS	FRONT - [illegible] SIDE - 15'-0" BACK - 15'-0"
BOUNDARIES INFORMATION	THIS PLAN HAS BEEN PREPARED BY MG2 USING A SITE LAYOUT BACKGROUND PREPARED BY I.E. ENGINEERING DATED 11-13-2015

BUILDING DATA:

TOTAL BUILDING FOOTPRINT AREA	[illegible]
INCLUDES	
WAREHOUSE MAIN LEVEL	[illegible]
[illegible] ROOM	[illegible]

PARKING DATA:

TOTAL PARKING	[illegible]
INCLUDES	
MAIN LEVEL PARKING PROVIDED:	
⊘ 10' WIDE STALLS	[illegible] STALLS
⊘ ACCESSIBLE STALLS (2 PER 100) INCLUDES 4 VANS (14x18)	17 STALLS
NUMBER OF STALLS PER 1000 SF OF BUILDING AREA	[illegible] STALLS
JURISDICTIONAL PARKING REQUIRED:	1 STALL / 200 SQFT OF SALES SPACE (SALES SPACE = 134,034 SQFT) = 671 STALLS

NOTES
EXISTING CONDITIONS TO BE FIELD VERIFIED

VICINITY MAP

REGIONAL MAP

COSTCO WHOLESALE
CENTRAL POINT, OR

TABLE ROCK RD & HAMRICK RD
CENTRAL POINT, OREGON 97502

COSTCO WHOLESALE CORPORATION
[illegible] LAKE DRIVE
ISSAQUAH, WA [illegible]
T: 425.313.[illegible]
www.costco.com

MG2

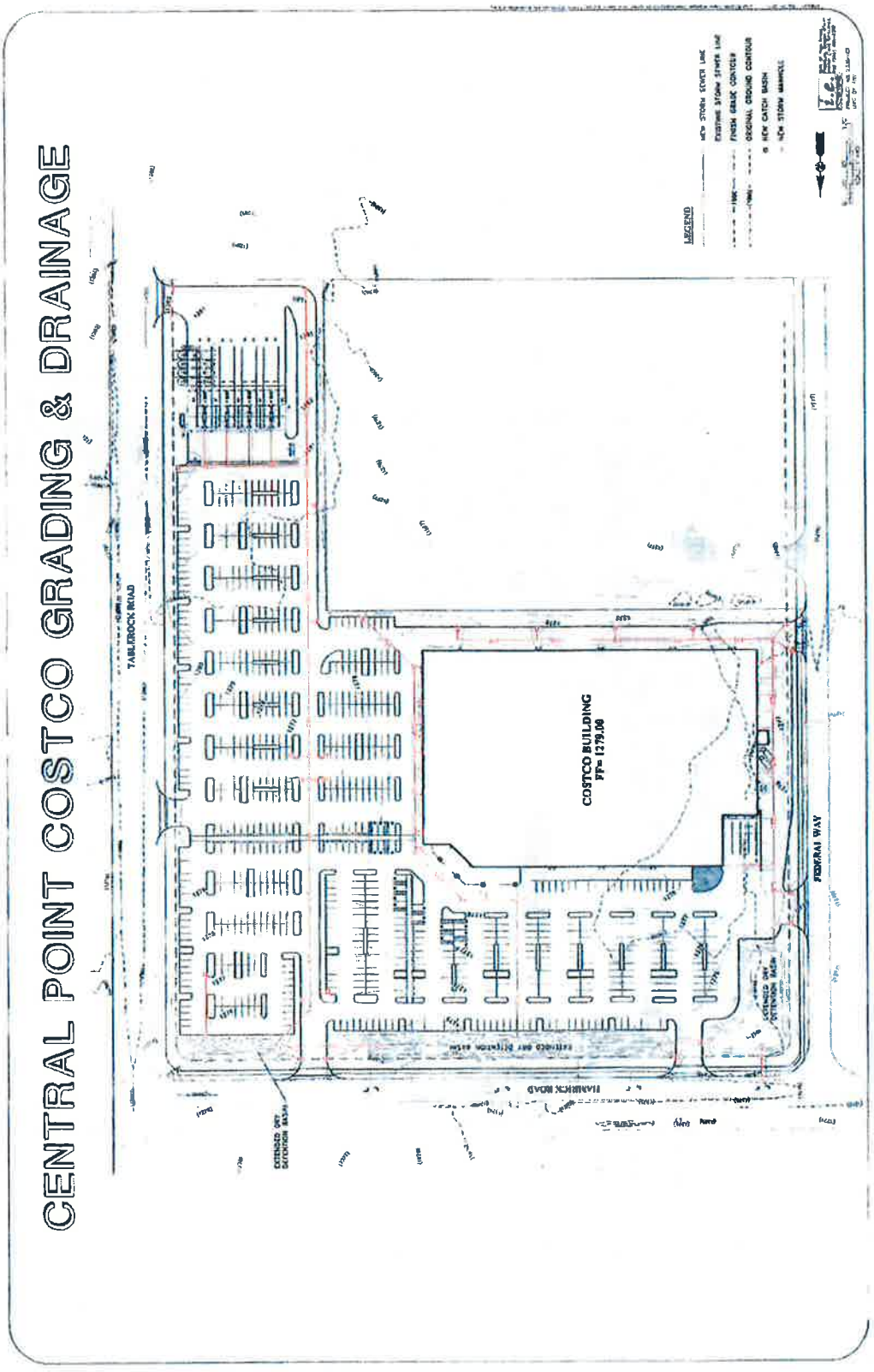
PERMIT SET

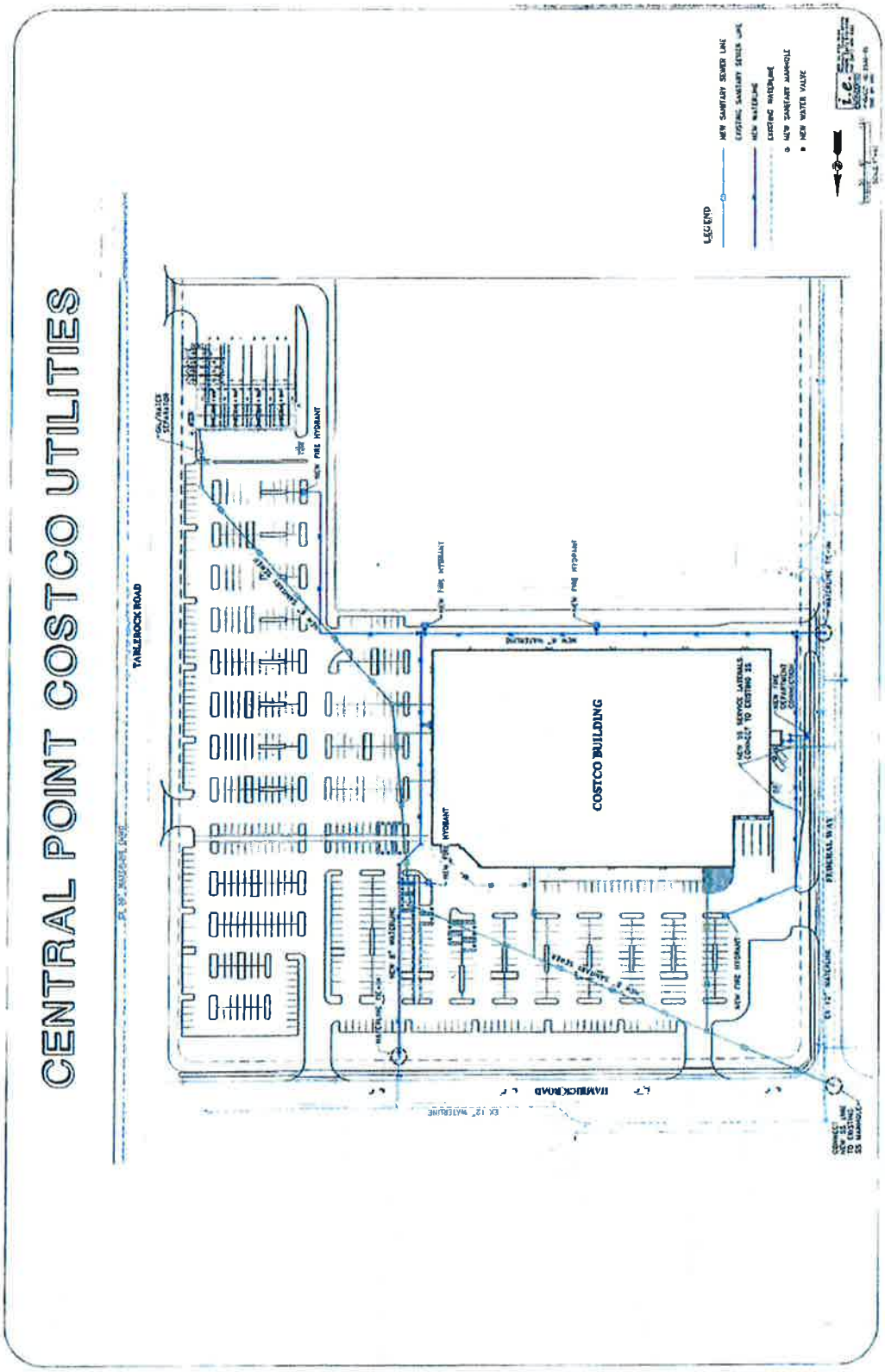
SITE PLAN

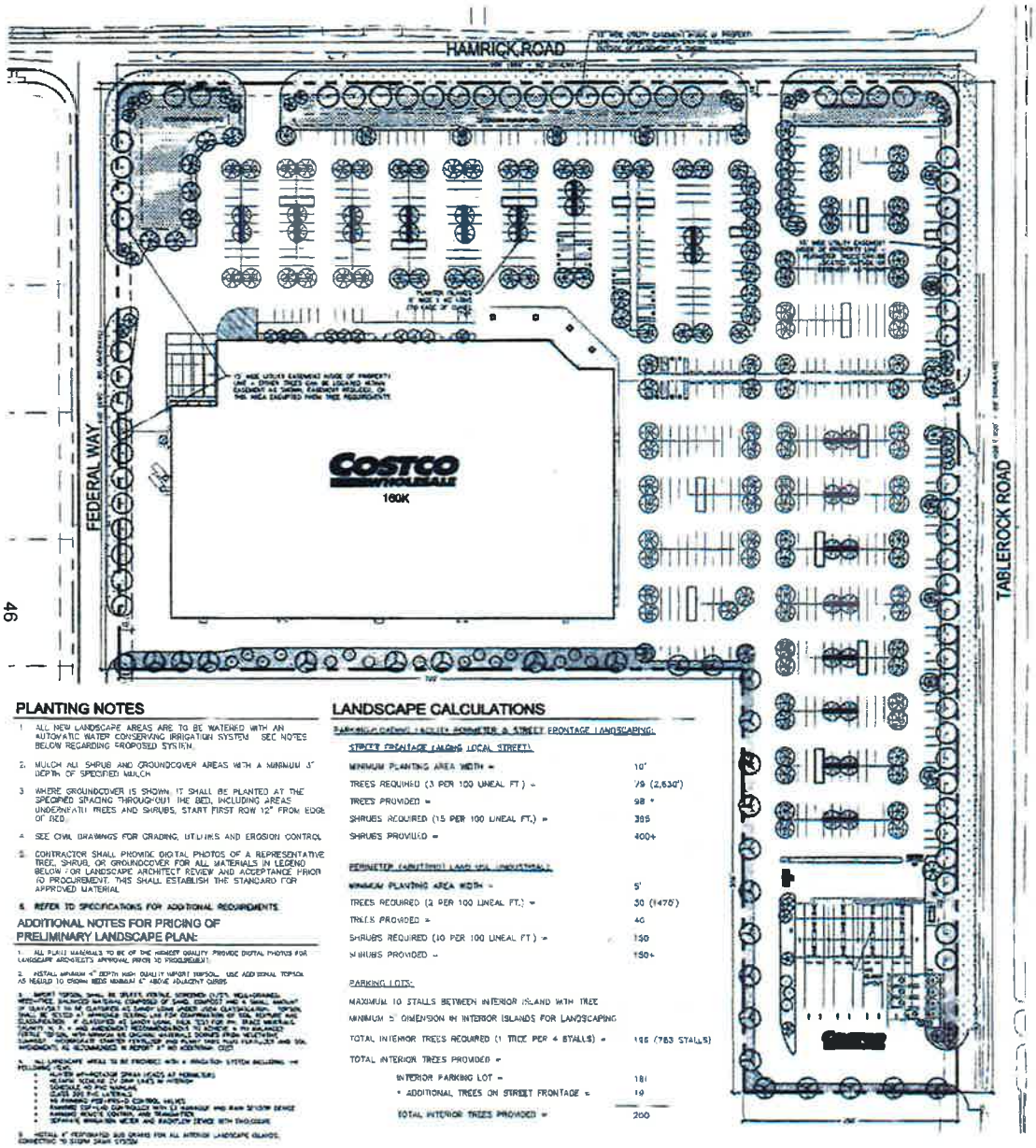
SD101

ATTACHMENT "A-3"

ATTACHMENT "A-4"




CENTRAL POINT COSTCO UTILITIES
TABLEROCK ROAD
COSTCO BUILDING
LEGEND



PLANTING NOTES

1. ALL NEW LANDSCAPE AREAS ARE TO BE WATERED WITH AN AUTOMATIC WATER CONSERVING IRRIGATION SYSTEM. SEE NOTES BELOW REGARDING PROPOSED SYSTEM.
2. MULCH ALL SHRUB AND GROUNDCOVER AREAS WITH A MINIMUM 3" DEPTH OF SPECIFIED MULCH.
3. WHERE GROUNDCOVER IS SHOWN, IT SHALL BE PLANTED AT THE SPECIFIED SPACING THROUGHOUT THE BED, INCLUDING AREAS UNDERNEATH TREES AND SHRUBS. START FIRST ROW 12" FROM EDGE OF BED.
4. SEE CIVIL DRAWINGS FOR GRADING, UTILITIES AND EROSION CONTROL.
5. CONTRACTOR SHALL PROVIDE DIGITAL PHOTOS OF A REPRESENTATIVE TREE, SHRUB, OR GROUNDCOVER FOR ALL MATERIALS IN LEGEND BELOW FOR LANDSCAPE ARCHITECT REVIEW AND ACCEPTANCE PRIOR TO PROCUREMENT. THIS SHALL ESTABLISH THE STANDARD FOR APPROVED MATERIAL.
6. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

ADDITIONAL NOTES FOR PRICING OF PRELIMINARY LANDSCAPE PLAN:

1. ALL PLANT MATERIALS TO BE OF THE HIGHEST QUALITY. PROVIDE DIGITAL PHOTOS FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO PROCUREMENT.
2. INSTALL MINIMUM 4" DEPTH HIGH QUALITY IMPORT TOPSOIL. USE ADDITIONAL TOPSOIL AS NEEDED TO ENSURE SEED MINIMUM 6" ABOVE ADJACENT CURBS.
3. IMPORT TOPSOIL SHALL BE SANDY LOAM, SCREENED CLEAN, WELL-DRAINED, WEED-FREE, ENRICHED NATURAL COMPOSED OF SAND, GRAVEL AND A SMALL AMOUNT OF SILT OR CLAY AND FREE OF SUBSOIL, CLODS, STIFF CLAY, STONES, ROOTS, OR OTHER OBJECTIONABLE MATERIAL. TOPSOIL SHALL BE FREE OF NOXIOUS WEEDS AND FREE OF CONTAMINATION OF SOIL STERILANTS, HERBICIDES, PESTICIDES OR OTHER CHEMICALS IN CONCENTRATIONS HARMFUL TO PLANT GROWTH. TOPSOIL SHALL HAVE A PH OF 6.5 TO 7.5 AND A MINIMUM ORGANIC CONTENT OF 2% BY DRY WEIGHT. TOPSOIL SHALL BE FREE OF PLANTS AND PLANT PARTS, EXCEPT THOSE DESIRED FOR PLANTING, AND FREE OF NOXIOUS WEEDS. AMEND TOPSOIL AS RECOMMENDED BY SOILS REPORT AT NO ADDITIONAL COST.
4. LANDSCAPE AREAS TO BE PROVIDED WITH A IRRIGATION SYSTEM INCLUDING THE FOLLOWING ITEMS:
   - 6" PVC MAINLINE (PRESSURE) AS NEEDED
   - 1" PVC SCHEDULE 40 SLEEVES UNDER PAVING
   - 1" PVC SCHEDULE 40 LATERALS
   - QUICK VALVES
   - 1" PVC SCHEDULE 40 CONTROL WIRES
   - RAINBIRD SERIES CONTROLLER WITH 12 STATIONS AND RAIN SENSOR DEVICE
   - RAINBIRD REMOTE CONTROL WAND TRANSMITTER
   - RAINBIRD EMISSION HEADS AND ROTOR HEADS
   - DRIPWISE IRRIGATION DEVICE WITH TIMECLOCK
5. INSTALL 6" PERFORATED SUB DRAINS FOR ALL INTERIOR LANDSCAPE ISLANDS. CONNECTED TO STORM DRAIN SYSTEM.

LANDSCAPE CALCULATIONS

PARKING LOT/ALL FACILITY PERIMETER & STREET FRONTAGE LANDSCAPING:

STREET FRONTAGE LANDING LOCAL STREET:

MINIMUM PLANTING AREA WIDTH =	10'
TREES REQUIRED (3 PER 100 LINEAL FT.) =	79 (2,630')
TREES PROVIDED =	98 +
SHRUBS REQUIRED (15 PER 100 LINEAL FT.) =	395
SHRUBS PROVIDED =	400+

PERIMETER (ADJUTING) LAND USE (INDUSTRIAL):

MINIMUM PLANTING AREA WIDTH =	5'
TREES REQUIRED (2 PER 100 LINEAL FT.) =	30 (1475')
TREES PROVIDED =	40
SHRUBS REQUIRED (10 PER 100 LINEAL FT.) =	150
SHRUBS PROVIDED =	150+

PARKING LOTS:

MAXIMUM 10 STALLS BETWEEN INTERIOR ISLAND WITH TREE

MINIMUM 5' DIMENSION IN INTERIOR ISLANDS FOR LANDSCAPING

TOTAL INTERIOR TREES REQUIRED (1 TREE PER 4 STALLS) =	195 (783 STALLS)
TOTAL INTERIOR TREES PROVIDED =	
INTERIOR PARKING LOT =	181
+ ADDITIONAL TREES ON STREET FRONTAGE =	19
TOTAL INTERIOR TREES PROVIDED =	200

PRELIMINARY LANDSCAPE LEGEND (SYMBOLS SHOWN AT 1"=20')

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE / CONDITION
	DECIDUOUS SHADE TREES		
	ACER X FREEMANII 'AUTUMN BLAZE'	AUTUMN BLAZE MAPLE	MIN. 2" CAL., MIN. 10-12' HT., MATCHED WELL-BRANCHED ABOVE 6' HT., B&B
	ACER PLATANOIDES 'PARKWAY'	PARKWAY MAPLE	
	CELTIS OCCIDENTALIS	COMMON HACKBERRY	
	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO (MALE ONLY)	
	GLEDITSIA T. INERMIS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	
	QUERCUS RUBRA	RED OAK	
	DECIDUOUS ACCENT TREES		
	LAGERSTROEMIA I. 'NATCHEZ'	NATCHEZ CRAPE MYRTLE	MIN. (3) 1" CAL., 8-10' HT., MULTI-TRUNKED, WELL-BRANCHED, B&B
	CERCIS OCCIDENTALIS	WESTERN REDBUD	1-1/2" CAL., 8-10' HT., WELL-BRANCHED, B&
	PRUNUS SERRULATA 'KWANZAN'	KWANZAN FLOWERING CHERRY	2" CAL., 10-12' HT., FULL, WELL-BRANCHED
	CONIFEROUS EVERGREEN TREES		
	CALOCEDRUS DECURRENS	INCENSE CEDAR	6-7 HT., FULL AND BUSHY TO BASE, B&B
	THUJA P. 'FASTIGIATA'	MORGAN CEDAR	
	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	
	LARGE SHRUBS		
	JUNIPERUS S. 'SKYROCKET'	SKYROCKET JUNIPER	4-5' HT., FULL & BUSHY, B&B OR CONT., SPACING AS SHOWN
	ARBUTUS UNEDO 'COMPACTA'	DWARF STRAWBERRY TREE	24-30" HT., FULL & BUSHY, B&B OR CONT., SPACING AS SHOWN
	OSTEO PURPUREUS	PURPLE ROCKROSE	
	COTONEASTER PARNEYI	PARNEY COTONEASTER	
	MAHONIA AQUIFOLIUM	OREGON GRAPE	
	VIBURNUM T. 'SPRING BOUQUET'	SPRING BOUQUET VIBURNUM	
	MEDIUM SHRUBS		
	EUONYMUS A. 'COMPACTA'	COMPACT BURNING BUSH	21-24" HEIGHT AND SPREAD, FULL AND BUSHY, CONTAINER OR B&B
	ILEX CRENATA 'CONVEXA'	COMPACT JAPANESE HOLLY	
	ROSA RUGOSA	RUGOSA ROSE	MIN. 18-21" HT. & SPREAD, FULL & BUSHY, B&B OR CONT., SPACING AS SHOWN
	MAHONIA A. 'COMPACTA'	COMPACT MAHONIA	
	SPIRAEA B. 'GOLDFLAME'	GOLDFLAME SPIRAEA	
	SMALL SHRUBS		
	NANDINA D. 'CRIMSON PYGMY'	JAPANESE BARBERRY	MIN. 12"-15" HT. & SPREAD, FULL & BUSHY, B&B OR CONT., SPACING AS SHOWN
	PINUS M. MUGO	MUGHO PINE	
	PRUNUS L. 'OTTO LUYKEN'	OTTO LUYKENS LAUREL	
	VIBURNUM DAVIDII	DAVID VIBURNUM	
	ORNAMENTAL GRASSES / ACCENTS		
	CALAMAGROSTIS A. 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL. CONT., SPACING AS SHOWN
	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	
	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	
	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	
	POLYSTICHUM MUNITUM	SWORD FERN	
	GROUNDCOVERS		
	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	1 GAL. CONT. AT 18" O.C. TRIANG. SPACING START FIRST ROW 12" FROM EDGE
	FRAGARIA CHILOENSIS	WILD STRAWBERRY	
	MAHONIA REPENS	CREEPING MAHONIA	
	PERENNIAL ACCENT		
	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY	1 GAL. CONT. AT 18" ON CENTER TRIANG. SPACING
	SOD LAWN		SEE SPECIFICATIONS
	SEED LAWN		SEE SPECIFICATIONS
	DETENTION SWALE PLANTING MIX		50% 5 GAL. CONT. SHRUBS AT 5' O.C. 50% 1 GAL. CONT. GRASSES AT 18" O.C.

0 20 50 100'
1" = 50'-0"

COSTCO WHOLESALE
CENTRAL POINT, OR

WEISMANDESIGNGROUP

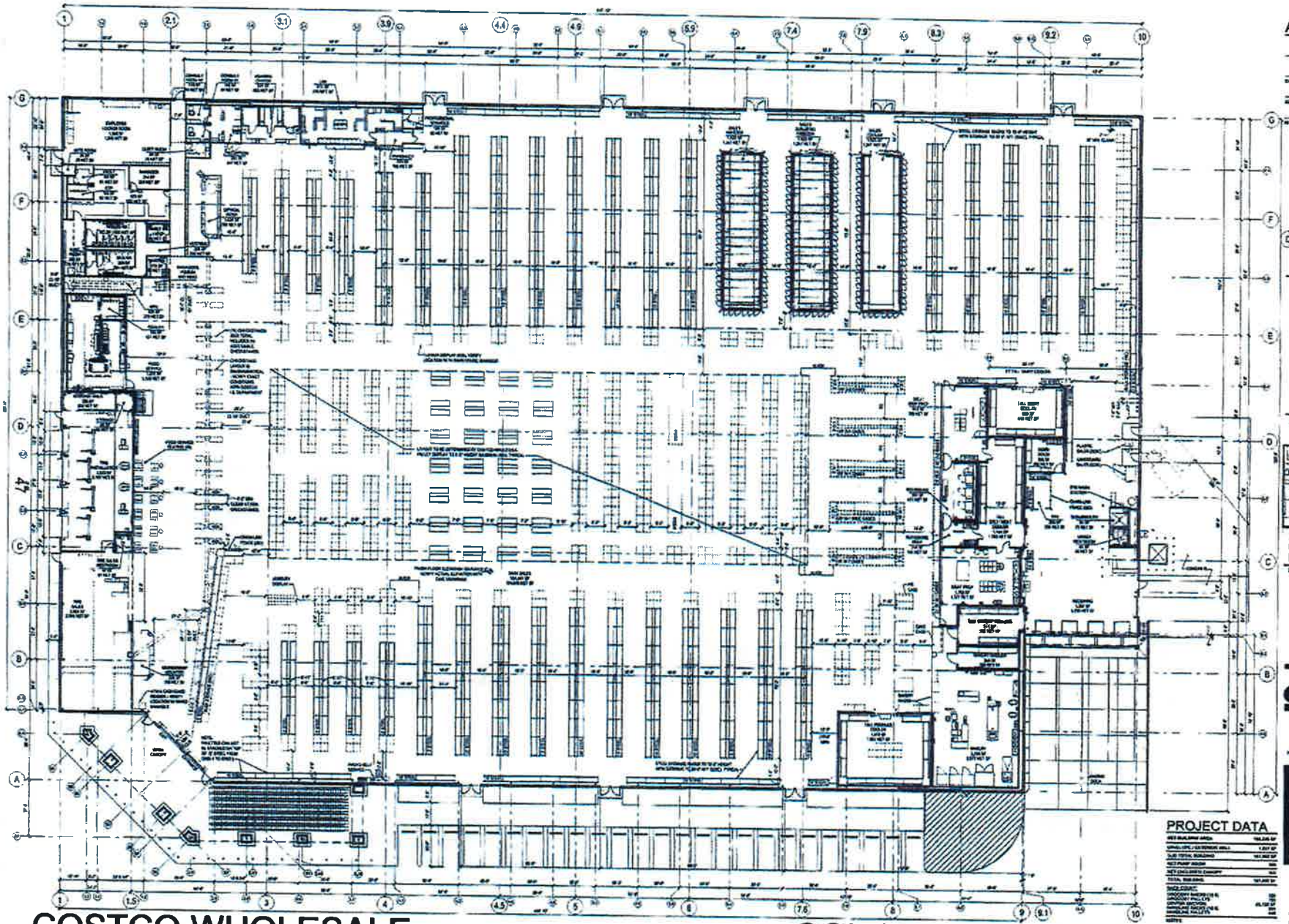
14-0393-01
SEPTEMBER 25, 2015
PRELIMINARY LANDSCAPE PLAN

L1.1

ATTACHMENT "A-6"

COSTCO WHOLESALE
CENTRAL POINT, OREGON

PRELIMINARY LANDSCAPE PLAN
SEPTEMBER 25, 2015



APPROVED BY:

MECHANICAL PLATFORM

ELECTRICAL PLATFORM

EQUIPMENT PLATFORM

PROJECT DATA

COSTCO WHOLESALE
CENTRAL POINT, OR

HAMRICK RD. & TABLE ROCK RD
CENTRAL POINT, OR 97502

MG2

14-0393-01
SEPTEMBER 02, 2015

CONCEPT FLOOR PLAN

DD21-01

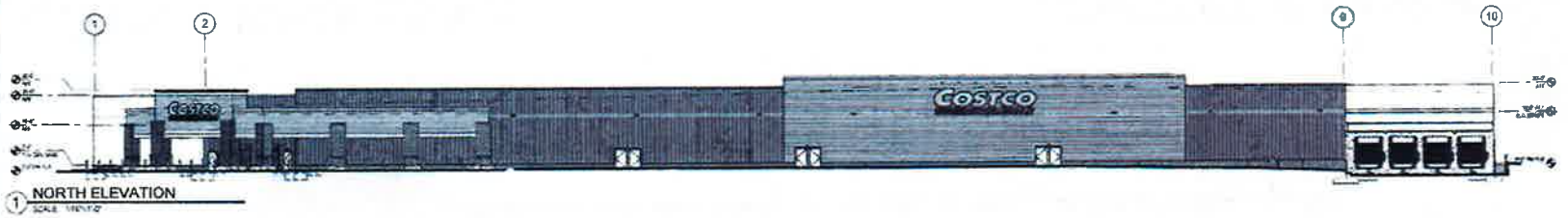
COSTCO WHOLESALE

CENTRAL POINT, OREGON

CONCEPT FLOOR PLAN

SEPTEMBER 02, 2015

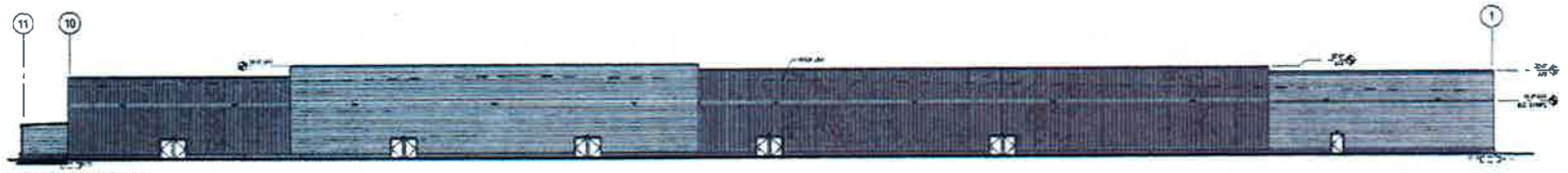
ATTACHMENT "A-7"



1 NORTH ELEVATION

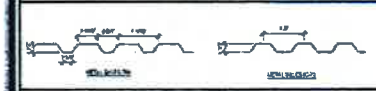
2 EAST ELEVATION

3 ENTRY ELEVATION



4 SOUTH ELEVATION

SIDING PROFILE



SIGNAGE AREA TABULATION (WALL SIGNS)

QTY	SIGN	SIZE	AREA (SF) EA	TOTAL SF

5 WEST ELEVATION

8 BUILDING SIGNAGE

10 LOCATION SIGNAGE

9 BUILDING SIGNAGE

11 BUILDING SIGNAGE

COSTCO WHOLESALE
CENTRAL POINT, OR

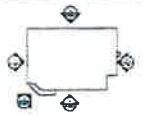
TABLEROCK RD & HAMBROK RD
CENTRAL POINT, OREGON

COSTCO WHOLESALE CORPORATION
999 LAKE DRIVE
ISSAQUAH, WA 98027
T 425.313.8100
www.costco.com

MG2

START UP SET

KEY PLAN



EXTERIOR ELEVATIONS

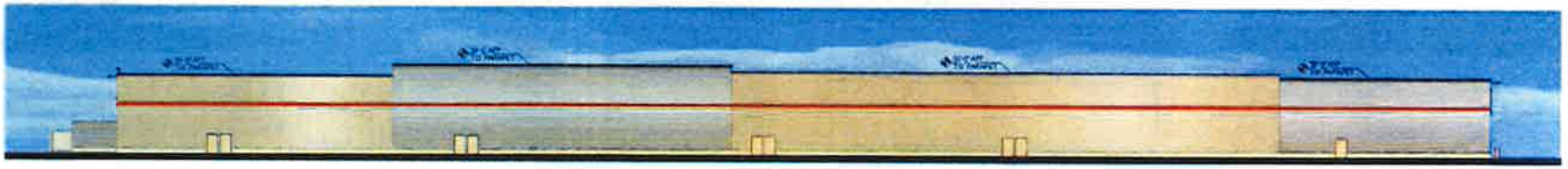
Attachment 3

ATTACHMENT "A-8"

NORTH ELEVATION
SCALE: 1/16" = 1'-0"

ENTRY ELEVATION
SCALE: 1/16" = 1'-0"

EAST ELEVATION
SCALE: 1/16" = 1'-0"



SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

WEST ELEVATION
SCALE: 1/16" = 1'-0"

COSTCO WHOLESALE
09.02.2015
#14-0393
CENTRAL POINT, OR

CONCEPT ELEVATIONS

Attachment 2
MG2

ATTACHMENT "A-9"

50

MG2

AUGUST 24, 2015
14-0393-01 v 1.4
CENTRAL POINT, OREGON

ENTRY VIEW

COSTCO WHOLESALE

ATTACHMENT "A-10"

MG2

AUGUST 24, 2015
14-0393-01 v1.4
CENTRAL POINT, OREGON

NW. CORNER VIEW

COSTCO WHOLESALE

ATTACHMENT "A-11"

52

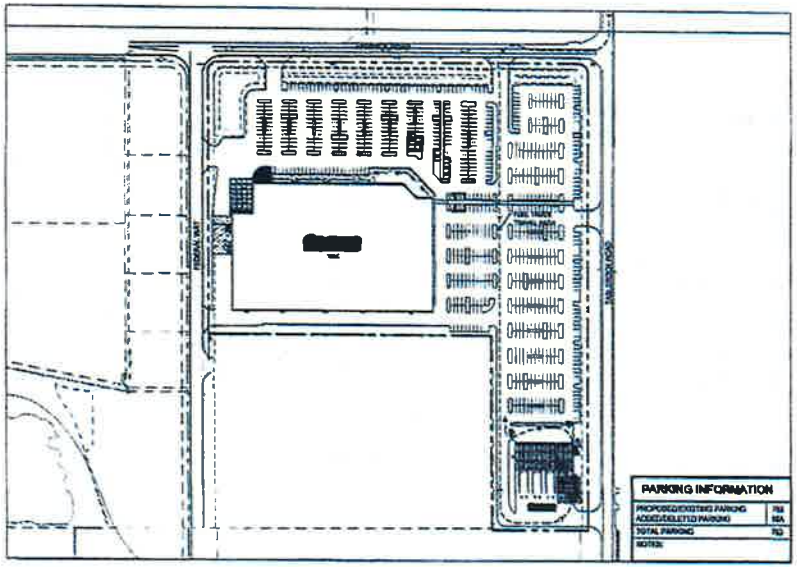
MG2

AUGUST 24, 2015
14-0393-01 v14
CENTRAL POINT, OREGON

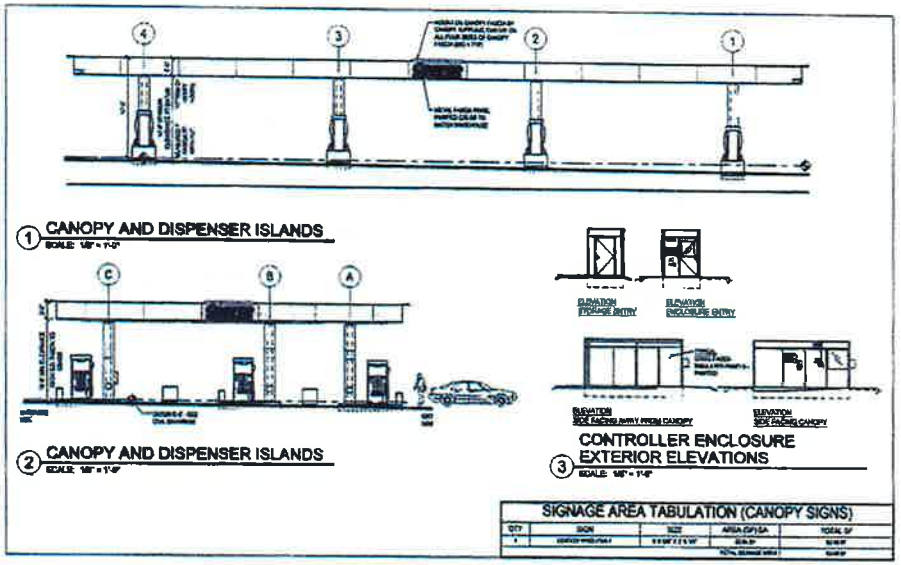
EAST VIEW

COSTCO WHOLESALE

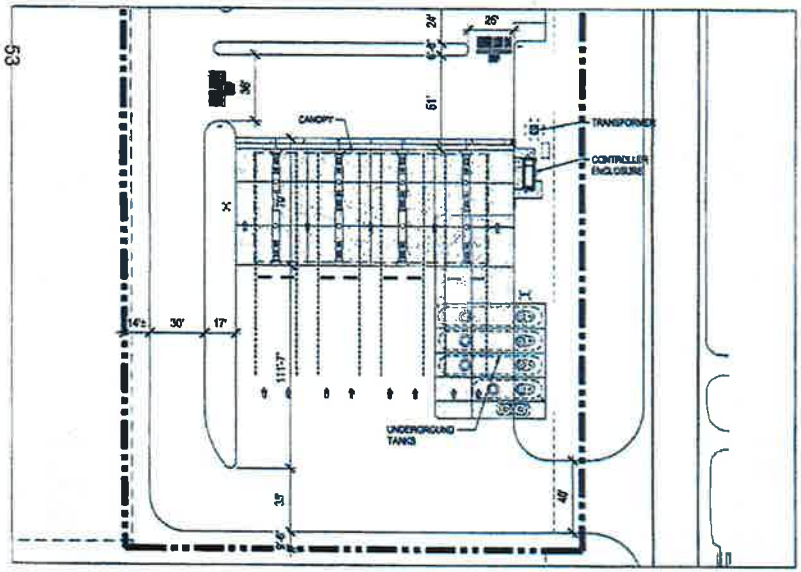
ATTACHMENT "A-12"



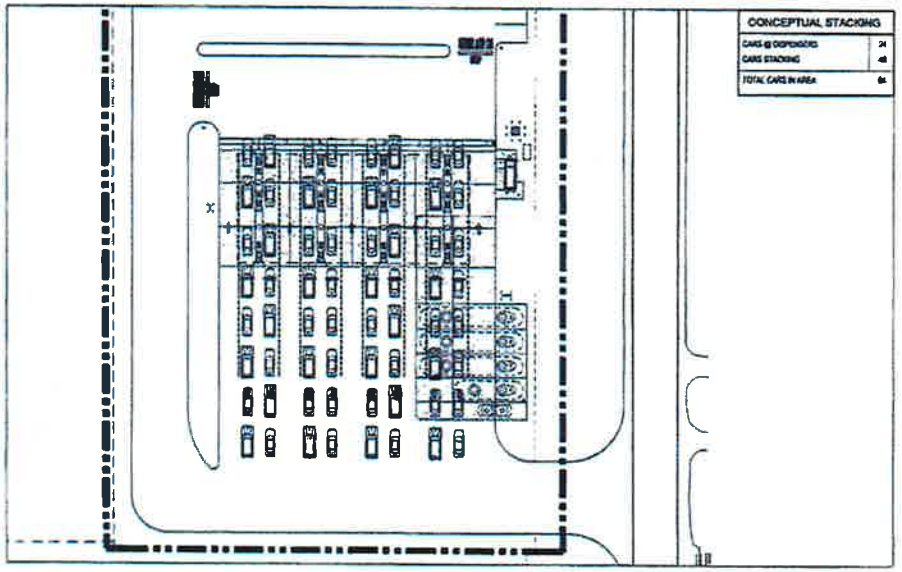
CONCEPT FUEL TRUCK ROUTE



CONCEPT ELEVATIONS



DETAIL SITE PLAN



STACKING PLAN

COSTCO WHOLESALE

CENTRAL POINT, OREGON

CONCEPT FUEL FACILITY PLAN

SEPTEMBER 16, 2015

COSTCO WHOLESALE
CENTRAL POINT, OR

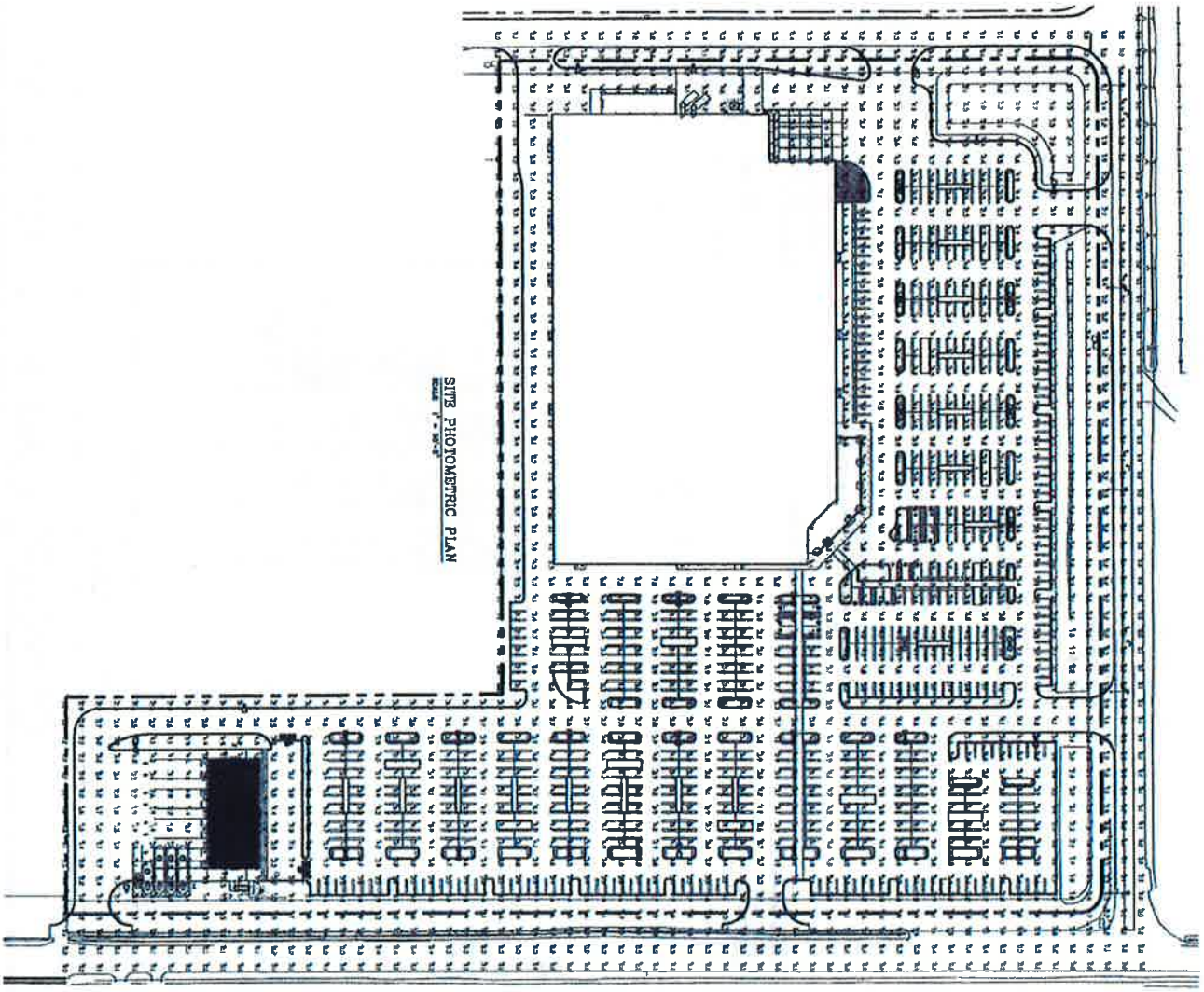
MG2

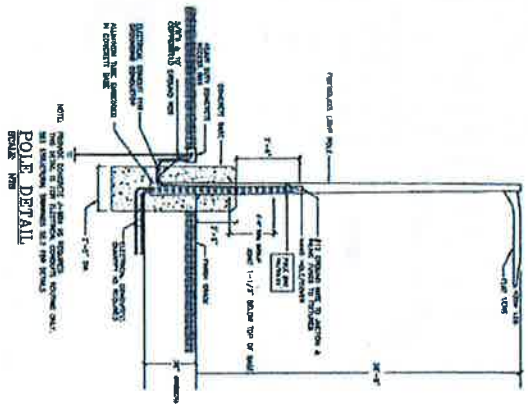
14-0393-01
SEPTEMBER 16, 2015

CONCEPT FUEL FACILITY PLAN

DD41-01

ATTACHMENT A-13"





SE-1

COSTCO WHOLESALE

NEW WAREHOUSE

TABLEROCK ROAD
& HAMRICK ROAD
CENTRAL POINT, OR

T.E., Inc.

MULVANNY G2 ARCHITECTURE

DESIGN AT WORK

MEMO

TO Central Point Land Use Permits Review Staff
FROM Steve Bullock, MG2 and Costco
CC

DATE 11.3.15
PROJECT New Costco Warehouse Central Point Table Rock & Hamrick
PROJECT NUMBER 14-0393-01

RE | **Land Use Applications for a new Costco Warehouse in Central Point OR**

Project Description

Proposal: Costco is considering buying some property on the southwest corner of the Table Rock Rd and Hamrick Rd intersection that is 18.28 acres in size. Their desire and intent would be to build a new Costco Warehouse (with a footprint of approximately 161,992 sq. ft.) and a Fuel Facility (4 islands) together with all required parking and landscaping. In this case, the parking area will accommodate 783 parking stalls. Currently the subject property is undeveloped industrial land. Surrounding the property is a mix of developed and undeveloped industrial land with distribution and manufacturing facilities. T

Costco Building & Site Design: With over 30 years of building membership warehouses Costco has 686 warehouses worldwide. This experience has allowed Costco to develop a carefully thought out program for constructing new facilities. This program includes: the layout of the warehouse floor plan that most effectively allows for the stocking and merchandising of products; the use of materials that are sustainable, long-lasting and energy efficient; the layout of the site in a manner that provides for their parking and circulation needs; the improvements to adjacent public infrastructure to minimize and mitigate for any impacts they may create; the development of an attractive, functional facility that the entire community views as an asset. The final design solution for each of Costco's 600+ sites follows this program resulting in a unique solution that is tailored to the individual site, its environment and the community it is located in.

Costco Operations: Generally Costco's warehouses are open to the public from 10am-9pm. On the weekends they close a little earlier (5 or 6 pm). To avoid conflicts between their members and stocking the warehouse, deliveries are typically received between 3am and Noon. This minimizes potential conflicts between the large delivery trucks and Costco's members.

The gas station is typically open from 6am – 10pm. Fuel deliveries can happen multiple time per day depending upon the demand.

425.463.2000
425.463.2002

1110 112TH AVENUE NE | SUITE 500 | BELLEVUE, WA | 98004
MulvannyG2.com

DEVELOPMENT CODE COMPLIANCE

The following sections of this narrative identify the applicable sections of the Central Point code and provide a response and drawing reference that describes how our proposed site and building design complies with the City's Development Codes.

Chapter 17.48, M1, INDUSTRIAL DISTRICT

17.48.020 Permitted uses.

The following uses and their accessory uses are permitted in an M1 district, subject to the limitations imposed in Section 17.48.030:

A. Warehousing;

B. Storage and wholesaling of prepared or packaged merchandise;

W. Other uses not listed in this or any other district, if the planning commission finds them to be similar to those listed above and compatible with other permitted uses and with the intent of the M1 district.

Response: Costco is a Wholesale Membership Club which has as their primary focus the sales of prepared or packaged merchandise to their members. City staff has further made us aware of a decision made by the City Council related to Wholesale Membership Clubs in the M-1 zone which allows them subject to a conditional use permit. This decision was appealed and confirmed in the Oregon Courts.

17.48.030 Standards for permitted uses.

All uses within the M1 district shall be subject to the following conditions and standards:

A. All raw materials, finished products, machinery and equipment, with the exception of automobiles and trucks normally used in the business, shall be stored within an entirely enclosed building or sight obscuring, non-pierced fence not less than six feet in height;

Response: With the exception of the Fuel Facility, Costco's normal operation happens entirely within their warehouse.

B. The facility shall be in compliance with all applicable state and federal environmental, health and safety regulations;

Response: Costco will obtain all required state and federal permits as well as comply with all health and safety regulations.

C. In any M1 district directly across a street from any residential (R) district, all outdoor parking, loading or display areas shall be set back at least ten feet from the public right-of-way and this setback area shall be planted with trees appropriate for the neighborhood, ground cover or other landscaping materials that are consistent with the general existing character of the area, or that will establish a landscape theme for other developments to follow. This setback and landscaping requirement shall also apply to M1 lots fronting on any street designated in the comprehensive plan as a major arterial.

Response: This section does not apply in that there are no residentially zoned properties adjacent to or across the street from the Costco property.

17.48.040 Conditional Uses.

The following uses and their accessory uses may be permitted in an M1 district when authorized in accordance with Chapter 17.76:

A. Business offices and commercial uses that are compatible with and closely related in their nature of business to permitted uses in the M1 district, or that would be established to serve primarily the uses, employees, or customers of the M1 district;

Response: As mentioned above, the City has determined that a Wholesale Membership Club requires a Conditional Use Permit to operate in an M-1 zone. The last section of this narrative will go over in detail how Costco's proposed project complies with the Conditional Use Permit approval criteria.

17.48.050 Height Regulations.

Maximum height of any building or structure in an M1 district shall be sixty feet.

Response: Costco's warehouse is roughly 38' from finished grade to the highest point on the building, this includes the parapet walls extending above the roof around the perimeter of the building. Light poles in the parking lot are roughly the same height, 35' tall pole on a 2.5' concrete base. See the included elevations and site lighting plan included in the drawing package.

17.48.060 Site Area Requirements.

There are no minimum site area requirements in the M1 district, except as necessary to provide for required parking, loading and yard spaces.

Response: Costco is proposing to build a warehouse having roughly 163,000 sq. ft. For a warehouse of this size Costco has discovered through their experience from building over 600 warehouses that 800 parking stalls (+/-) are needed to effectively handle the volume of members that use their facilities. The size of the property under consideration, about 18.28 acres, is large enough to accommodate these improvements.

17.48.070 Yard Requirements.

The following measurements indicate minimum yard requirements in an M1 district:

A. Front Yard. The front yard shall be a minimum of twenty feet. (Also see Section 17.48.030(C)).

B. Side Yard. The side yard shall be a minimum of ten feet except when the side lot line is abutting a lot in any residential (R) district and then the side yard shall be a minimum of twenty feet and shall be increased by one-half foot for each foot by which the building height exceeds twenty feet.

C. Rear Yard. The rear yard shall be a minimum of ten feet except when the rear lot line is abutting a lot in any residential (R) district and then the rear yard shall be a minimum of twenty feet and shall be increased by one-half foot for each foot by which the building height exceeds twenty feet.

D. Lot Coverage. No requirements.

Response: Costco's proposed site plan (see the drawing package) shows that the site fronts on three roads (Federal Way to the west, Hamrick Rd to the north and Table Rock Rd to the east). Of the three, only Table Rock Rd is a Major Arterial. Our assumption is that all three frontages will require 20' Front Yard Setback. Our internal lot lines, to the south of the warehouse and west of the fuel facility will be side or rear setbacks that are required to be 10'. The warehouse is at least 60' from all property lines and the fuel facility and its ancillary structure are at least 25' from all property lines. The proposed site plan complies with the City's required yards.

17.48.080 Signs.

Signs within the M1 district shall be limited to the following:

1. Permitted signs shall contain not more than one hundred square feet of surface area on any one side, or an aggregate of two hundred square feet of surface on all sides which can be utilized for display purposes;
2. Lighted signs shall be indirectly illuminated and non-flashing;
3. Identification signs shall be permitted within any required setback areas provided it does not extend into or overhang any parking area, sidewalk or other public right-of-way;
4. Signs located within vision clearance areas at intersections of streets shall conform to Section 17.60.110.

Response: Costco is proposing wall mounted signage that is proportional to the size of their building. This results in signage that is larger than the standard identified above. Further discussion of this and rational for approval is included in the Conditional Use portion of this narrative.

All sign illumination will be indirectly illuminated and non-flashing.

No Freestanding Signage is proposed so no sight or other obstructions will be created.

C. Signs in the M1 district shall be permitted and designed according to provisions of Chapter 15.24.

Response: Costco will fully comply with all the requirements of Central Point Municipal Code Chapter 15.24.

Chapter 17.64, OFF-STREET PARKING AND LOADING

17.64.030 Off-Street Loading.

A. In all districts for each use for which a building is to be erected or structurally altered to the extent of increasing the floor area to equal the minimum floor area required to provide loading space and which will require the receipt or distribution of materials or merchandise by truck or similar vehicle, there shall be provided off-street loading space in accordance with the standards set forth in Table 17.64.01, Off-street Loading Requirements.

TABLE 17.64.01 OFFSTREET LOADING REQUIREMENTS

Use Categories	Off-Street Loading Berth Requirement (fractions rounded up to the closest whole number)
RETAIL, RESTAURANTS, HOSPITALS, AND OTHER GOODS HANDLING	
Sq. Ft. of Floor Area	No. of Loading Berths Required
Over 100,000	3 plus 1 for each additional 80,000 sq. ft.

B. A loading berth shall not be less than ten feet wide, thirty-five feet long and have a height clearance of twelve feet. Where the vehicles generally used for loading and unloading exceed these dimensions, the required length of these berths shall be increased.

C. If loading space has been provided in connection with an existing use or is added to an existing use, the loading space shall not be eliminated if elimination would result in less space than is required to adequately meet the needs of the use.

D. Off-street parking areas used to fulfill the requirements of this title shall not be counted as required loading spaces and shall not be used for loading and unloading operations, except during periods of the day when not required to meet parking needs.

E. In no case shall any portion of a street or alley be counted as a part of the required parking or loading space, and such spaces shall be designed and located as to avoid undue interference with the public use of streets or alleys.

Response: Costco provides for all their loading needs on site and will not have any of their deliveries or delivery trucks impact the public use of streets or alleys during their loading or unloading of product. In addition to the 4 dedicated elevated truck docks there are 3 other on-site loading areas for tires and other smaller more local deliveries that can't use the elevated truck dock. This exceeds the 4 loading berths required in Table 17.64.01 (excerpt above).

17.64.040 Off-Street Parking Requirements

All uses shall comply with the number of off-street parking requirements identified in... Table 17.64.02B, Non-Residential Off-Street Parking Requirements. For non-residential uses the off-street parking requirements are presented in terms of both minimum and maximum off-street parking required. The number of off-street parking spaces in Table 17.64.02B, Non-Residential Off-Street Parking, may be reduced in accordance with subsection B of this section, Adjustments to Off-Street Vehicle Parking.

TABLE 17.64.02B NON-RESIDENTIAL OFF-STREET PARKING REQUIREMENTS

Use Categories	Minimum and Maximum Vehicle Parking Requirement (fractions rounded down to the closest whole number)
GENERAL COMMERCIAL	
Retail Stores, Personal Services	1 space per each 200 square feet of net floor area (excluding storage and other non-sales or non-display areas).

A. Calculation of Required Off-street Parking. off-street parking facility requirements set forth in ... Table 17.64.02B, Nonresidential Off-street Parking Requirements, shall be applied as follows:

1. Where the application of the schedule results in a fractional requirement it shall be rounded down to the lowest whole number.
2. For purposes of this chapter, gross floor area shall not include enclosed or covered areas used for off-street parking or loading, or bicycle facilities.
3. Where uses or activities subject to differing requirements are located in the same structure or on the same site, or are intended to be served by a common facility, the total parking requirement shall be the sum of the requirements for each use or activity computed separately, except as adjusted through the site plan and architectural review process under the provisions of subsection (B) of this section. The community development director, when issuing a permit(s) for multiple uses on a site, may restrict the hours of operation or place other conditions on the multiple uses so that parking needs do not overlap and may then modify the total parking requirement to be based on the most intense combination of uses at any one time.
4. Where requirements are established on the basis of seats or person capacity, the building regulations provisions applicable at the time of determination shall be used to define capacity.
5. Where residential use is conducted together with or accessory to other permitted uses, applicable residential requirements shall apply in addition to other nonresidential requirements.
6. The parking requirements outlined in ...Table 17.64.02B, Nonresidential Off-street Parking Requirements, include parking for handicapped persons shall be provided pursuant to the requirements of subsection C of this section, Accessible Parking Requirements.

Response: Per table 17.64.02B Costco will be required to provide not less than 670 parking stalls and not more than 670 parking stalls (134,064 sf / 200 sf/stall = 670 parking stalls). As mentioned earlier in this narrative, through Costco's extensive experience building these warehouses around the United States the proposed warehouse will need approximately 800 parking stalls to accommodate the demand. This request will be addressed in more detail both in our Parking Study and the Conditional Use Permit Discussion.

B. Adjustments to Non-residential Off-street Vehicle Parking. The off-street parking requirements in Table 17.64.02B, Nonresidential Off-street Parking Requirements, may be reduced, or increased in any commercial (C) or industrial (M) district as follows:

1. Reductions. The maximum off-street parking requirements may be reduced by no more than twenty percent.

2. Increases. The off-street parking requirements may be increased based on a parking demand analysis prepared by the applicant as part of the site plan and architectural review process. The parking demand analysis shall demonstrate and document justification for the proposed increase.

Response: See our submitted Parking Demand Analysis which describes Costco's need for around 800 parking stalls.

C. Accessible Parking Requirements. Where parking is provided accessory to a building, accessible parking shall be provided, constructed, striped, signed and maintained as required by ORS 447.233, and Section 1104 of the latest Oregon Structural Specialty Code as set forth in this section.

Response: Costco will meet or exceed Central Points required Accessible Parking Requirements.

I. Bicycle Parking. Bicycle parking shall be provided in accordance with Table 17.64.04, Bicycle Parking Requirements.

TABLE 17.64.04 BICYCLE PARKING REQUIREMENTS

Land Use	Minimum Requirement	Minimum Covered
Commercial		
Retail Sales	0.33 spaces per 1,000 sq. ft.	50%
Warehouse	0.1 space/1,000 sq. ft.	100%

Response: The .33 spaces/1,000 sq. ft. results in 57 bike spaces. Due to the nature of their business, Costco has found that bicycle traffic to their warehouses is rather limited. Some employees commute by bicycle, but very few customers do. For that reason, they believe the Central Point's Bicycle Parking for Warehouse standard, which results in 16 bike stalls, the most appropriate for a Costco warehouse. We will address this in the CUP criteria as well if it is determined that this is another deviation from a standard.

Chapter 17.72, SITE PLAN AND ARCHITECTURAL REVIEW

17.72.020 Applicability.

No permit required under Title 15, Buildings and Construction, shall be issued for a major or minor project, as defined in this section, unless an application for site plan and architectural review is submitted and approved, or approved with conditions, as set forth in this chapter.

B. Major Projects. The following are "major projects" for the purposes of the site plan and architectural review process and are subject to Type 2 procedural requirements as set forth in Chapter 17.05, Applications and Types of Review Procedures:

1. New construction, including private and public projects, that:

a. Includes a new building or building addition of five thousand square feet or more;

b. Includes the construction of a parking lot of ten or more parking spaces; or

c. Requires one or more variances or conditional use permits and, in the judgment of the director, will have a significant effect upon the aesthetic character of the city or the surrounding area;

Response: The proposed Costco warehouse will be a Major Project and will go through the Site Plan and Architectural Review process.

17.72.040 Site plan and architectural standards.

In approving, conditionally approving, or denying any site plan and architectural review application, the approving authority shall base its decision on compliance with the following standards:

A. Applicable site plan, landscaping, and architectural design standards as set forth in Chapter 17.75, Design and Development Standards;

B. City of Central Point Department of Public Works Department Standard Specifications and Uniform Standard Details for Public Works Construction;

C. Accessibility and sufficiency of firefighting facilities to such a standard as to provide for the reasonable safety of life, limb and property, including, but not limited to, suitable gates, access roads and fire lanes so that all buildings on the premises are accessible to fire apparatus.

Response: Costco will demonstrate compliance with each of these criteria through the drawing package submitted with this application and subsequent construction permit applications.

Chapter 17.75, Design and Development Standards

17.75.031 General connectivity, circulation and access standards.

A. Streets and Utilities. The public street and utility standards set forth in the City of Central Point Department of Public Works Standard Specifications and Uniform Standard Details for Public Works Construction shall apply to all development within the city.

Response: Costco will comply with all the public street and utility standards required by the City of Central Point.

B. Block Standards. The following block standards apply to all development:

1. Block perimeters shall not exceed two thousand feet measured along the public street right-of-way, or outside edges of access ways, or other acknowledged block boundary as described in subsection (B)(4) of this section.

2. Block lengths shall not exceed six hundred feet between through streets or pedestrian access ways, measured along street right-of-way, or the pedestrian access way. Block dimensions are measured from right-of-way to right-of-way along street frontages. A block's perimeter is the sum of all sides.

3. Access ways or private/retail streets may be used to meet the block length or perimeter standards of this section, provided they are designed in accordance with this section and are open to the public at all times.

4. The standards for block perimeters and lengths may be modified to the minimum extent necessary based on written findings that compliance with the standards are not reasonably practicable or appropriate due to:
    a. Topographic constraints;
    b. Existing development patterns on abutting property which preclude the logical connection of streets or access ways;
    c. Major public facilities abutting the property such as railroads and freeways;
    d. Traffic safety concerns;
    e. Functional and operational needs to create large commercial building(s); or
    f. Protection of significant natural resources.

Response: The surrounding existing roads together with Costco's internal drives comply with these requirements.

C. Driveway and Property Access Standards. Vehicular access to properties shall be located and constructed in accordance with the standards set forth in the City of Central Point Department of Public Works Standard Specifications and Uniform Standard Details for Public Works Construction, Section 320.10.30, Driveway and Property Access.

Response: The submitted site plan demonstrates compliance with this requirement.

D. Pedestrian Circulation. Attractive access routes for pedestrian travel shall be provided through the public sidewalk system, and where necessary supplemented through the use of pedestrian access ways as required to accomplish the following:
    1. Reducing distances between destinations or activity areas such as public sidewalks and building entrances;
    2. Bridging across barriers and obstacles such as fragmented pathway systems, wide streets, heavy vehicular traffic, and changes in level by connecting pedestrian pathways with clearly marked crossings and inviting sidewalk design;
    3. Integrating signage and lighting system which offers interest and safety for pedestrians;
    4. Connecting parking areas and destinations with retail streets or pedestrian access ways identified through use of distinctive paving materials, pavement striping, grade separation, or landscaping.

Response: The submitted site plan and landscape plan demonstrate compliance with this requirement.

17.75.039 Off-Street Parking Design And Development Standards.

A. Connectivity. Parking lots for new development shall be designed to provide vehicular and pedestrian connections to adjacent sites unless as a result of any of the following such connections are not possible:
    1. Topographic constraints;
    2. Existing development patterns on abutting property which preclude a logical connection;

3. Traffic safety concerns; or
4. Protection of significant natural resources.

Response: This requirement does not apply to Costco's development in that roads ring the site on three sides and there is no need to provide connections to adjacent sites.

B. Parking Stall Minimum Dimensions. Standard parking spaces shall conform to the following standards and the dimensions in Figure 17.75.03 and Table 17.75.02.

Response: As demonstrated in the Site Plan, Costco's parking lot complies with these standards.

C. Access. There shall be adequate provision for ingress and egress to all parking spaces.

Response: There is adequate provision for ingress and egress to all parking spaces and areas.

D. Driveways. Driveway width shall be measured at the driveway's narrowest point, including the curb cut. The design and construction of driveways shall be as set forth in the Standard Specifications and Public Works Department Standards and Specifications.

Response: Costco will comply or exceed the City's minimum standards.

E. Improvement of Parking Spaces.

1. When a concrete curb is used as a wheel stop, it may be placed within the parking space up to two feet from the front of a space. In such cases, the area between the wheel stop and landscaping need not be paved, provided it is maintained with appropriate ground cover, or walkway. In no event shall the placement of wheel stops reduce the minimum landscape or walkway width requirements.
2. All areas utilized for off-street parking, access and maneuvering of vehicles shall be paved and striped to the standards of the city of Central Point for all-weather use and shall be adequately drained, including prevention of the flow of runoff water across sidewalks or other pedestrian areas. Required parking areas shall be designed with painted striping or other approved method of delineating the individual spaces, with the exception of lots containing single-family or two-family dwellings.
3. Parking spaces for uses other than one and two family dwellings shall be designed so that no backing movements or other maneuvering within a street or other public right-of-way shall be necessary.
4. Any lighting used to illuminate off-street parking or loading areas shall be so arranged as to reflect the light away from adjacent streets or properties.
5. Service drives shall have a minimum vision clearance area formed by the intersection of the driveway centerline, the street right-of-way line, and a straight line joining the lines through points twenty feet from their intersection.
6. Parking spaces located along the outer boundaries of a parking lot shall be contained by a curb or a bumper rail so placed to prevent a motor vehicle from extending over an adjacent property line, a public street, public sidewalk, or a required landscaping area.
7. Parking, loading, or vehicle maneuvering areas shall not be located within the front yard area or side yard area of a corner lot abutting a street in any residential (R)

district, nor within any portion of a street setback area that is required to be landscaped in any commercial (C) or industrial (M) district.

Response: Costco's site plan, site lighting plan and landscape plan all demonstrate compliance with these standards.

F. Limitation on Use of Parking Areas. Required parking areas shall be used exclusively for vehicle parking in conjunction with a permitted use and shall not be reduced or encroached upon in any manner. The parking facilities shall be so designed and maintained as not to constitute a nuisance at any time, and shall be used in such a manner that no hazard to persons or property, or unreasonable impediment to traffic, will result.

Response: Costco agrees with and will comply with this requirement.

G. Parking/Loading Facility Landscaping and Screening. Parking lot landscaping shall be used to reinforce pedestrian and vehicular circulation, including parking lot entries, pedestrian access ways, and parking aisles. To achieve this objective the following minimum standards shall apply; However, additional landscaping may be recommended during the site plan and architectural review process (Chapter 17.72). All parking lots shall be landscaped in accordance with the following standards:

1. Perimeter and Street Frontage Landscaping Requirements. The perimeter and street frontage for all parking facilities shall be landscaped according to the standards set forth in Table 17.75.03.

   Response: Costco's site plan and landscape plan demonstrate compliance with this requirement.

2. Terminal and Interior Islands. For parking lots in excess of ten spaces all rows of parking spaces must provide terminal a minimum of six feet in width to protect parked vehicles, provide visibility, confine traffic to aisles and driveways, and provide a minimum of five feet of space for landscaping. In addition, when ten or more vehicles would be parked side-by-side in an abutting configuration, interior landscaped islands a minimum of eight feet wide must be located within the parking row. For parking lots greater than fifty parking spaces, the location of interior landscape island shall be allowed to be consolidated for planting of large stands of trees to break up the scale of the parking lot. The number of trees required in the interior landscape area shall be dependent upon the location of the parking lot in relation to the building and public right-of-way:

   a. Where the parking lot is located between the building and the public right-of-way, one tree for every four spaces;

   b. Where the parking lot is located to the side of the building and partially abuts the public right-of-way, one tree for every six spaces;

   c. Where the parking lot is located behind the building and is not visible from the public right-of-way, one tree for every eight spaces.

   Response: The provided landscape plan demonstrates compliance with these parking lot landscape design criteria.

3. Bio-swales. The use of bioswales within parking lots is encouraged and may be located within landscape areas subject to site plan and architectural review. The tree

planting standards may be reduced in areas dedicated to bioswales subject to site plan and architectural review.

Response: As shown in our site plan, landscape plan and civil plans large bio-swales are proposed along the northern edge of the site. Costco is not proposing to reduce the tree planting standards in these areas.

H. Bicycle Parking. The amount of bicycle parking shall be provided in accordance with Section 17.64.040 and constructed in accordance with the following standards:

1. Location of Bicycle Parking. Required bicycle parking facilities shall be located onsite in well lighted, secure locations within fifty feet of well used entrances and not farther from the entrance than the closest automobile parking space. Bicycle parking shall have direct access to both the public right-of-way and to a main entrance of the principal use. Bicycle parking may also be provided inside a building in suitable, secure and accessible locations. Bicycle parking for multiple uses (such as in a commercial center) may be clustered in one or several locations.

2. Bicycle Parking Design Standards. All bicycle parking and maneuvering areas shall be constructed to the following minimum design standards:

   a. Surfacing. Outdoor bicycle parking facilities shall be surfaced in the same manner as a motor vehicle parking area or with a minimum of a three inch thickness of hard surfacing (i.e., asphalt, concrete, pavers or similar material). This surface will be maintained in a smooth, durable and well drained condition.

   b. Parking Space Dimension Standard. Bicycle parking spaces shall be at least six feet long and two feet wide with minimum overhead clearance of seven feet.

   c. Lighting. Lighting shall be provided in a bicycle parking area so that all facilities are thoroughly illuminated and visible from adjacent sidewalks or motor vehicle parking lots during all hours of use.

   d. Aisles. A five-foot aisle for bicycle maneuvering shall be provided and maintained beside or between each row of bicycle parking.

   e. Signs. Where bicycle parking facilities are not directly visible from the public rights-of-way, entry and directional signs shall be provided to direct bicycles from the public right-of-ways to the bicycle parking facility.

Response: Costco will comply with Central Point's Bicycle standards.

17.75.043 Industrial Building Design Standards.

Reserved. (Ord. 1946 (part), 2011).

Response: Although there are no specific Design Standards in the Industrial zones of Central Point, Costco believes the plans, elevations and perspective drawings submitted demonstrate Costco's commitment to developing a high quality building and site.

17.76.040 Conditional Use Permit - Findings and Conditions.

The planning commission in granting a conditional use permit shall find as follows:

A. That the site for the proposed use is adequate in size and shape to accommodate the use and to meet all other development and lot requirements of the subject zoning district and all other provisions of this code;

Response: Costco believes they have demonstrated through the submitted plans and drawings that the proposed 18.25 acres site is adequate in size and shape to accommodate the proposed use and meet all the City's required standards.

B. That the site has adequate access to a public street or highway and that the street or highway is adequate in size and condition to effectively accommodate the traffic that is expected to be generated by the proposed use;

Response: The submitted Traffic Report indicates that adequate access to public streets will be provided. And the existing streets are or soon will be of adequate size and condition to effectively accommodate the traffic that is projected to be generated by Costco.

C. That the proposed use will have no significant adverse effect on abutting property or the permitted use thereof. In making this determination, the commission shall consider the proposed location of improvements on the site; Vehicular ingress, egress and internal circulation; setbacks; Height of buildings and structures; Walls and fences; landscaping; Outdoor lighting; And signs;

Response: The submitted plans, elevations, drawings and reports document that there will be no significant adverse effect on abutting properties.

D. That the establishment, maintenance or operation of the use applied for will comply with local, state and federal health and safety regulations and therefore will not be detrimental to the health, safety or general welfare of persons residing or working in the surrounding neighborhoods and will not be detrimental or injurious to the property and improvements in the neighborhood or to the general welfare of the community based on the review of those factors listed in subsection C of this section;

Response: Costco will with both the construction and operation of their proposed warehouse comply with all local, state and federal health and safety regulations. Therefore, the proposed development will not be detrimental to the health safety or general welfare of persons residing or working in the surrounding neighborhoods.

E. That any conditions required for approval of the permit are deemed necessary to protect the public health, safety and general welfare and may include:

1. Adjustments to lot size or yard areas as needed to best accommodate the proposed use; provided the lots or yard areas conform to the stated minimum dimensions for the subject zoning district, unless a variance is also granted as provided for in Chapter 17.13,

Response: Costco does not believe any adjustments to required yards are needed.

2. Increasing street widths, modifications in street designs or addition of street signs or traffic signals to accommodate the traffic generated by the proposed use,

   Response: Costco does not believe any modifications are needed to the surrounding roads or the required improvements to those roads.

3. Adjustments to off-street parking requirements in accordance with any unique characteristics of the proposed use,

   Response: Central Point's parking requirement for a retail use, stated as a minimum and a maximum, is 1 parking stall for every 200 sf of net floor area. In Costco's case, the net floor area is 134,000 sq. ft. which requires 670 parking stalls. Our current proposal is to provide 783 parking stalls which our Parking Demand Study supports.

4. Regulation of points of vehicular ingress and egress,

   Response: Costco believes ingress and egress points should be approved as submitted in the drawing package and no additional regulation should be required.

5. Requiring landscaping, irrigation systems, lighting and a property maintenance program,

   Response: Costco believes landscape and irrigation plans should be approved as submitted in the drawing package and no additional regulation should be required.

6. Regulation of signs and their locations,

   Response: Costco is proposing building mounted signage that is in excess of the standard permitted by code. For this reason Costco will be submitting a Class C Exception to the signage standard described in CPMC 17.48.080(A)(1).

   For background and context, Costco and their design team have designed a sign package that is integrated into the design of the building and is proportioned to match the scale and size of the building. The signs are not too small or too large in comparison to the scale of the building but they are substantially larger than what is allowed as standard in the industrial zone. The largest signs, which are proposed on three of the four sides, are 381 sf. However, this is in relationship with a wall façade that is over 16,000 sf on the long side and over 10,000 sf on the short side. In other words, the sign covers less than 3.8% of the smallest wall of the warehouse. In total, including the signage on the Fuel Facility which has a 21 sf sign on each side of the fuel canopy, the entire Costco site has 1,455 sf of mounted on their buildings. For additional information see the black and white elevation drawing, DD31-01, for the building

mounted signs and the specific Fuel Facility sheet, DD41-01, for the gas canopy signage.

7. Requiring fences, berms, walls, landscaping or other devices of organic or artificial composition to eliminate or reduce the effects of noise, vibrations, odors, visual incompatibility or other undesirable effects on surrounding properties,

   Response: Costco does not believe any additional measures to control noise, vibrations, odors, visual incompatibility or other undesirable effects are necessary.

8. Regulation of time of operations for certain types of uses if their operations may adversely affect privacy of sleep of persons residing nearby or otherwise conflict with other community or neighborhood functions,

   Response: None needed.

9. Establish a time period within which the subject land use must be developed,

   Response: None needed.

10. Requirement of a bond or other adequate assurance within a specified period of time,

    Response: None needed.

11. Such other conditions that are found to be necessary to protect the public health, safety and general welfare,

    Response: None needed.

Conclusion

With the drawings and background information that has been submitted with this application we believe that the proposed Costco development is consistent with the required findings that need to be made to approve this Development Permit application. Please feel free to contact Costco or MulvannyG2 should you have any questions or need further clarification.

Thank you for your time, consideration and assistance in this matter.

Respectfully: Steve Bullock, MG2

Transportation Impact Analysis

Central Point Costco Development

Central Point, Oregon

October 2015

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Transportation Impact Analysis

Central Point Costco Development

Central Point, Oregon

Prepared For:
Costco Wholesale
999 Lake Drive
Issaquah, Washington 98207
(425) 313-6052

Prepared By:
Kittelson & Associates, Inc.
101 South Capitol Boulevard, Suite 301
Boise, Idaho 83702
(208) 338-2683

Project Manager: Sonia Daleiden, PE PTOE
Project Principal: Julie Kuhn, PE
Project Analyst: Brett Korporaal

Project No. 19046

October 2015

TABLE OF CONTENTS

Executive Summary 8

Introduction 14

Project Description 14

Scope of the Report 17

Existing Conditions 19

Site Conditions and Adjacent Land USes 19

Transportation Facilities 19

Study Area Intersections 21

Intersection Operating Standards 23

Existing Peak Hour Traffic Conditions 25

Safety History Analysis 28

Transportation Impact Analysis 30

Planned Roadway Improvements 30

Planned In-Process Developments 33

Build-Year (2016) Background Traffic Conditions 33

Costco Trip Generation Database 36

Costco Trip Generation Characteristics 36

Trip Distribution and Trip Assignment 37

Build-Year (2016) Total Traffic Conditions 41

Build-Year (2016) Mitigations 46

Table Rock Road Access ALternatives 47

Future Year (2030) Background Traffic Conditions 51

Future Year (2030) Total Traffic Conditions 54

Future Year (2030) Mitigations 58

Parking Assessment 59

Conclusions & Findings 62

References 68

LIST OF FIGURES

Figure 1. Central Point Costco Site Plan 15
Figure 2. Site Vicinity 16
Figure 3. Study Intersection and Lane Configurations 22
Figure 4. Existing PM and Midday Peak Hour Traffic Conditions 27
Figure 5. Build-Year (2016) Background Traffic Conditions 35
Figure 6. Trip Distribution 38
Figure 7. Site-Generated Trip Assignment 39
Figure 8. Site-Generated Trip Assignment at the Site Accesses 40
Figure 9. Build-Year (2016) Total Traffic Conditions 43
Figure 10. Build-Year (2016) Total Traffic Conditions at Site Accesses 45
Figure 11. Future Year (2030) Background Traffic Conditions 52
Figure 12. Future Year (2030) Total Traffic Conditions 55
Figure 13. Future Year (2030) Total Traffic Conditions at Site Accesses 57

LIST OF TABLES

Table 1. Existing Study Transportation Facilities and Roadways 19
Table 2. City of Central Point's Level of Service Standards 24
Table 3. Operational Standards for Existing Study Intersections 25
Table 4. Existing PM and Midday Peak Hour Traffic Operations 26
Table 5. Crash Type and Severity (2009 - 2013) at Study Intersections 28
Table 6. Build-Year (2016) Background Traffic Operation Results 34
Table 7. Central Point Costco Development Trip Generation Estimate 36
Table 8. Build-Year (2016) Total Traffic Conditions 42
Table 9. Build-Year (2016) Total Traffic Conditions at Site Accesses 44
Table 10. Table Rock Road Access Alternative Comparison 48
Table 11. Table Rock Access Operations in 2017 48
Table 12. Table Rock Road Access Predictive Safety Comparison 50
Table 13. Future Year (2030) Background Traffic Operations 53
Table 14. Future Year (2030) Total Traffic Operations 56
Table 15. Future Year (2030) Total Traffic Operations at Site Accesses 58
Table 16. Typical Peak Parking Demand at Other Costco Warehouses in Oregon 60
Table 17. Central Point Costco Recommended Parking Supply 60

APPENDICES

Appendix A – Existing Count Data

Appendix B – Level of Service Description

Appendix C – Existing Traffic Operation Worksheets

Appendix D – Crash Data at Study Intersections

Appendix E – Build-Year (2016) Background Traffic Operation Worksheets

Appendix F – Base Year (2006) and Future Year (2038) Regional Travel Demand Model

Appendix G – Build-Year (2016) Total Traffic Operation Worksheets

Appendix H – Build-Year (2016) Mitigated Traffic Operation Worksheets

Appendix I – Future Year (2030) Background Traffic Operation Worksheets

Appendix J – Future Year (2030) Total Traffic Operation Worksheets

Appendix K – Future Year (2030) Mitigated Traffic Operation Worksheets

Section 1
Executive Summary

EXECUTIVE SUMMARY

Costco Wholesale is proposing to develop a new warehouse and fuel station located station located in the southwest quadrant of the Table Rock Road/Hamrick Road intersection in Central Point, Oregon. This report summarizes the evaluation of the transportation impacts of the proposed development and provides recommended mitigation measures to accommodate its development.

The analysis and evaluation completed for the Central Point Costco development resulted in the following findings:

Project Description

- Costco Wholesale is proposing to develop a new warehouse and fuel station located in the southwest quadrant of the Table Rock Road/Hamrick Road intersection in Central Point, Oregon.
    - The development plan includes a 160,000 square-foot Costco warehouse and a 24 fueling position Costco Gasoline fuel station. This new Central Point Costco will replace the existing Medford Costco located at 3639 Crater Lake Hwy in Medford, Oregon.
- The parcels of land that in which the proposed Costco would occupy are zoned as M-1 (Industrial) which allows the development of the Costco warehouse and fuel station with a conditional use permit (no land use or zoning changes are required).
- In order to best evaluate the anticipated transportation characteristics of the proposed Central Point Costco development, it was agreed that the Costco-specific data be used to most accurately represent the anticipated traffic characteristics of the unique development type.
- The proposed Costco development is estimated to generate a total of approximately 10,670 net new trips on a daily basis, 900 net new trip ends during the weekday p.m. peak hour and approximately 1,365 net new trip ends during the weekend midday peak hour.
- The distribution pattern for site generated trips was developed using zip code data from current memberships at the existing Costco warehouse located on OR 62 (Crater Lake Highway) in Medford, Oregon, as well as from the existing traffic patterns and major trip origins and destinations within the study area and the regional travel demand model.

Existing Conditions

- The study evaluated 12 off site intersections in addition to site access points.
- The study evaluated two time periods for each evaluation scenario: weekday p.m. peak hour and weekend midday peak hour.

- Based on recent traffic counts collected in May and July 2015, all of the study intersections were found to operate at acceptable operating standards during the existing weekday p.m. and weekend midday peak hours except for the Table Rock Road/Airport Road intersection during weekday p.m. peak.
    - The Table Rock Road/Airport Road intersection is stop controlled in the westbound direction. Under existing conditions in the weekday p.m. peak hour, there is high delay for the critical movement (westbound left-turn) resulting in LOS F.
- Crash data the most recent five years (2009 – 2013) at all of the study intersections was reviewed to identify historical safety trends.
    - Turning movement and rear-end crashes were the most common crash type at the intersections, accounting for approximately 82% of all crashes.
    - There were no fatality crashes.
    - Four study intersections were found to be in the 90th percentile and in compliance ODOT's SPIS: I-5 SB Ramps/E Pine Street, Table Rock Road/W Vilas Road, OR 62 (Crater Lake Highway)/W Vilas Road, and Table Rock Road/OR 99.

Build Year 2016 Analysis

- The transportation impact analysis evaluated two different future year scenarios: year 2016, the assumed build out year of the development, and year 2030 a long-term planning year.
- The 2016 build-year background traffic analysis (without inclusion of the project traffic) found that all of the study intersections are forecast to operate at acceptable levels of service and volume-to-capacity ratios during the weekday p.m. and weekend midday peak hours except for the Table Rock Road/Airport Road intersection during weekday p.m. peak hour.
    - As under existing conditions, during the weekday p.m. peak hour there is high delay for the critical movement (westbound left-turn) resulting in LOS F. In addition, the critical movement is also operating with a volume-to-capacity ratio of greater than 0.95 in the build year (2016) background conditions (with no traffic from the proposed Costco development).
- The build-year (2016) total traffic analysis (with inclusion of the project traffic) found that all study intersections will continue to operate at acceptable levels of service during the weekday p.m. and weekend midday peak hours with the exception of:
    - I-5 NB Ramps & East Pine Street exceeds ODOT standards (lane group v/c ratio ≤ 0.85) with the northbound right-turn lane group's v/c ratio of 0.87 during the weekday p.m. peak hour. The need for additional capacity for this northbound right-turn movement has been previously identified in the Final Draft IAMP: Exit 33 study which calls for the widening of the I-5 northbound off-ramp to add a second right-turn lane at the northbound approach to East Pine Street. ODOT and the City of

Central Point are currently in discussions to determine Costco's appropriate proportional fair share contribution to this improvement as mitigation for the site generated trip impacts.

- Table Rock Road & Airport Road, as under existing and 2016 background conditions, continues to operate at a LOS F during the weekend p.m. peak hour. Improvements to the Table Rock Road/Airport Road intersection are scheduled in year 2017 as part of Table Rock Road widening and a signal will be added to the intersection. This intersection is an existing deficiency; however, given that this improvement is not currently scheduled until 2017, Jackson County and the City of Central Point are currently in discussions to determine an appropriate contribution to this improvement as mitigation in the interim for the Costco project.
- Biddle Road & Airport Road experiences a higher delay for the critical movement of the westbound approach, dropping from LOS C to E during the weekday p.m. peak period due to site-generated traffic. Even with the site generated traffic, the intersection is operating at a very low volume-to-capacity ratio of 0.45 in the weekday p.m. peak hour and 0.14 in the weekday midday peak hour.

Site Access Analysis

- In the build year 2016 scenario, all site access intersections are projected to operate at acceptable levels-of-service and volume-to-capacity ratios during both the weekday p.m. and weekend midday peak hours, with the exception of the Table Rock Road/Northeast access. Note this is assuming this access is a full movement access and no improvements to Table Rock Road are completed. Under this scenario, the critical eastbound left-turn movements at the Table Rock Road/Northeast access is projected to operate at LOS F during the weekday p.m. peak hour, however, it is still projected to operate well under capacity and meet the County's operational standard.
- Even though the build year (2016) analysis showed that all of the site accesses will be able to operate as proposed upon site opening before the Table Rock Road improvements are constructed, an evaluation of access alternatives for Table Rock Road was also completed to compare how temporary improvements would impact the access operations in the interim.
- The access scenarios compared were:
  - Build Year (2016) Total Traffic Conditions (i.e., Full Access to Table Rock Road) with No Table Rock Road Improvements (as summarized above)
  - Build-Year (2016) Total Traffic Conditions with Temporary Table Rock Road Improvements (i.e., temporary widening of Table Rock Road along the site frontage to provide a center left-turn lane until the ultimate widening project is constructed)

- Build-Year (2016) Total Traffic Conditions with Restricted Right-In/Right-Out Site Accesses (restrict Table Rock Road access to right-in/right-out only until the ultimate widening project is constructed)

- The access alternatives evaluation found that:
  - Assuming full movement access and no improvements to Table Rock Road, the eastbound left-turns at the northeast access to Table Rock will experience relatively long delay (resulting in LOS F) but the access will still operate well under capacity and meet the County's operational standard during the critical time period.
  - Providing temporary widening along the site frontage to provide a temporary center turn lane will allow all Table Rock Road accesses to operate acceptably as full movements until the ultimate Table Rock Road widening improvements are constructed in 2017.
  - Restricting the site's Table Rock Road accesses to right-in/right-out only will allow those accesses to operate at acceptable levels of service and volume-to-capacity ratios. However, it will add additional left-turn movements at the Table Rock Road/Hamrick Road intersection thus resulting in over-capacity and LOS F conditions at that location. This impact could be reduced by adding temporary widening around the intersection to provide a northbound left-turn lane as well as a center refuge area north of Hamrick to allow vehicles turning left from Hamrick to make a two stage gap acceptance maneuver for the left-turn.
  - Once the ultimate Table Rock Road widening improvement is constructed in 2017, all site accesses to Table Rock Road will operate a good levels of service (LOS C or better) and volume-to-capacity ratios (v/c=0.21 or better) during the peak hour periods assuming they are full access movements.

- From a safety perspective, a predictive safety analysis found that:
  - Providing full movement accesses to Table Rock Road in the near-term with its current two lane configuration shows the probability for 1.2 crashes per year to occur combined at the two access points.
  - If these were restricted to right-in/right-out only driveways, the safety prediction lowers to a probability of 0.83 crashes per year (about a 30% decrease in probability).
  - If temporary widening was provided in the interim for a two-way left-turn lane along the site's frontage, the probability would lower to 0.76 crashes per year (about a 30% decrease in probability).
  - The safety predictive analysis also shows that once the ultimate Table Rock Road widening improvements are in place the safety prediction lowers as well to 0.77 crashes per year even with maintaining full movement accesses at both locations.

Future Year 2030 Analysis

- The future year (2030) background conditions analysis (without the project traffic) found that all study intersections will continue to operate at acceptable levels of service and volume-to-capacity ratios during the weekday p.m. and weekend midday peak hours with the following exceptions:
    - Hamrick Road & East Pine Street operates with a v/c ratio of >1.0 during the weekday p.m. peak hour
    - Biddle Road & Airport Road (as under the build year conditions) has a critical movement which operates at LOS F during the weekday p.m. peak hour although the movement is still operating under capacity with a v/c ratio of 0.55
- The future year (2030) total traffic analysis (with the project traffic) found that the site-generated trips did not impact any study intersections not previously identified in the 2030 background scenario.
- All of the proposed site accesses operate at acceptable levels of service during the weekday p.m. and weekend midday peak hours under the future year 2030 total traffic scenario. Because of the planned roadway improvements along Table Rock Road, there is a significant benefit to the traffic operations at the site accesses along Table Rock Road when compared to the build-year (2016) total traffic scenario.

Parking Assessment

- City of Central Point Municipal Code directs that a parking supply of 670 parking spaces be provided for the Costco development (assuming retail land use).
- The project is proposing to provide a total of 782 parking spaces on site.
- As part of this report, a parking demand analysis was completed to demonstrate and documents justification for the proposed increase in parking supply.
- Actual parking supply and demand data from other Costco sites in Oregon indicates that a minimum parking ratio of 4.71 spaces/1,000 sq-ft be provided in order to supply enough parking to meet Costco specific demands.
- Applying the demonstrated minimum parking supply of 4.71 spaces/1,000 sq-ft to the proposed Central Point Costco development equates to a minimum recommended parking supply of 753 spaces.
- This indicates that the proposed parking supply of 782 is slightly higher than this minimum amount but within a reasonable range and will provide an appropriate parking supply to accommodate typical peak periods as well as additional spaces for seasonal peaks as well.

Section 2
Introduction

INTRODUCTION

Kittelson & Associates, Inc. (KAI) has conducted a Transportation Impact Study (TIS) per requirements of City of Central Point's Zoning Code Section 17.05.900. The TIS examines the current transportation network and addresses the transportation impacts of the proposed Costco Wholesale development in Central Point, Oregon. The scope, methodology, and key assumptions within the TIS were reviewed and agreed upon by the City of Central Point, Jackson County, and the Oregon Department of Transportation. In addition, the City of Medford was given the opportunity to review and comment on these elements (although no comments were received).

PROJECT DESCRIPTION

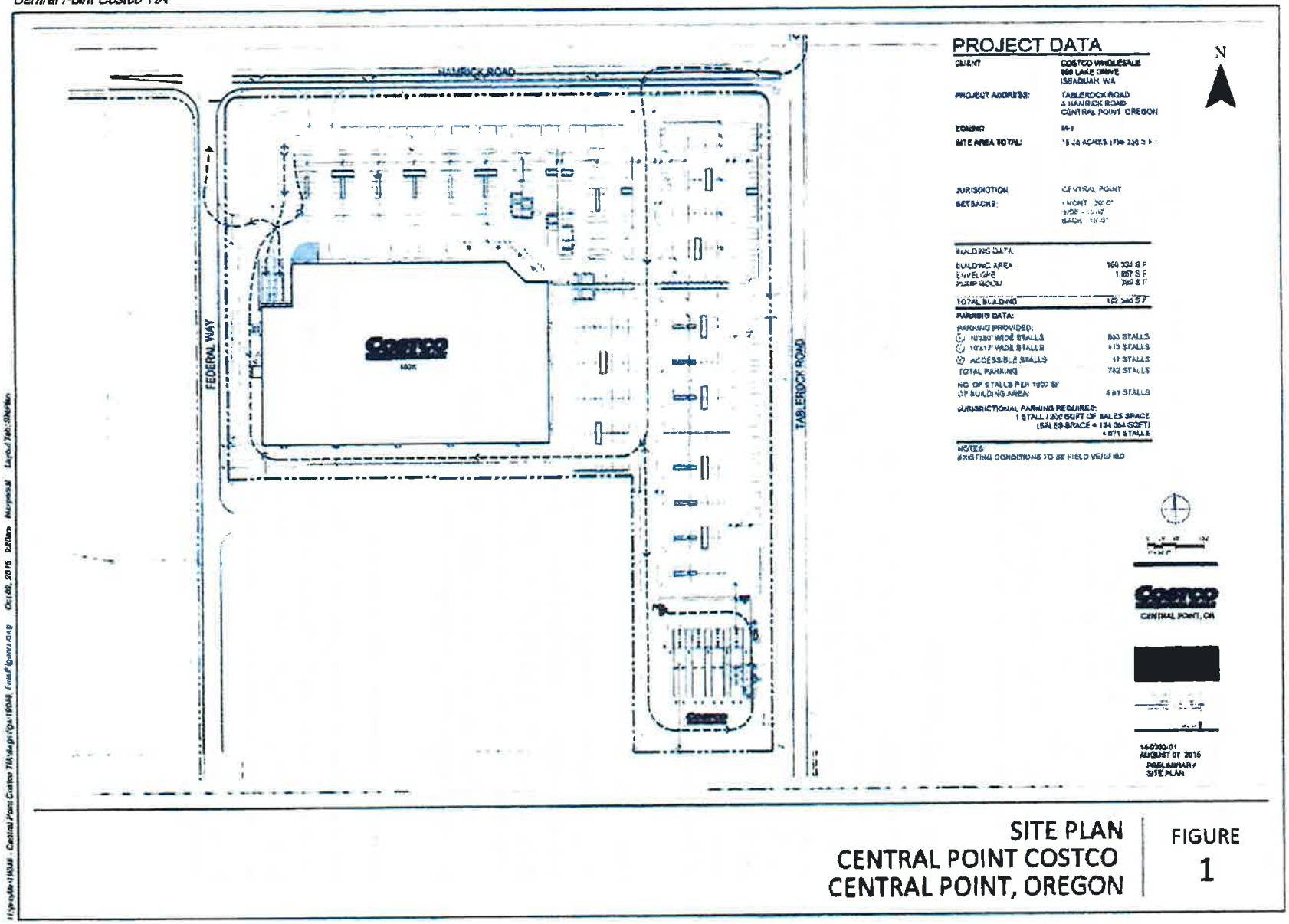
Costco Wholesale is proposing to develop a new warehouse and fuel station located roughly one mile southeast of the Interstate 5 (I-5) & Pine Street interchange in Central Point, Oregon. The site is located in the south-west quadrant of the Table Rock Road/Hamrick Road intersection. The development plan for the 18-acre site includes a 160,000 square-foot Costco warehouse and a 24 fueling position Costco Gasoline fuel station. Currently, the site is undeveloped. The development is planned to be completed and operational by October 2016. This new Central Point Costco will replace the existing Medford Costco located at 3639 Crater Lake Hwy in Medford, Oregon. The project site plan with access driveways to each of the bordering roadways is illustrated in Figure 1.

Project Location

The proposed site is situated south of Hamrick Road between Table Rock Road and Federal Way as illustrated in Figure 2 . Table Rock Road serves as the eastern boundary of the site. The property south of the site is currently owned and operated by FedEx Ground. The land use directly south, west and north of the site is designated as M-1 (Industrial) and M-2 (Industrial General) as referenced in *Central Point Comprehensive Land Use Plan 2008 – 2030* (Reference 1). The Costco development is an allowed use under the industrial zone designation with a conditions use permit.

Costco Trip Generation Characteristics

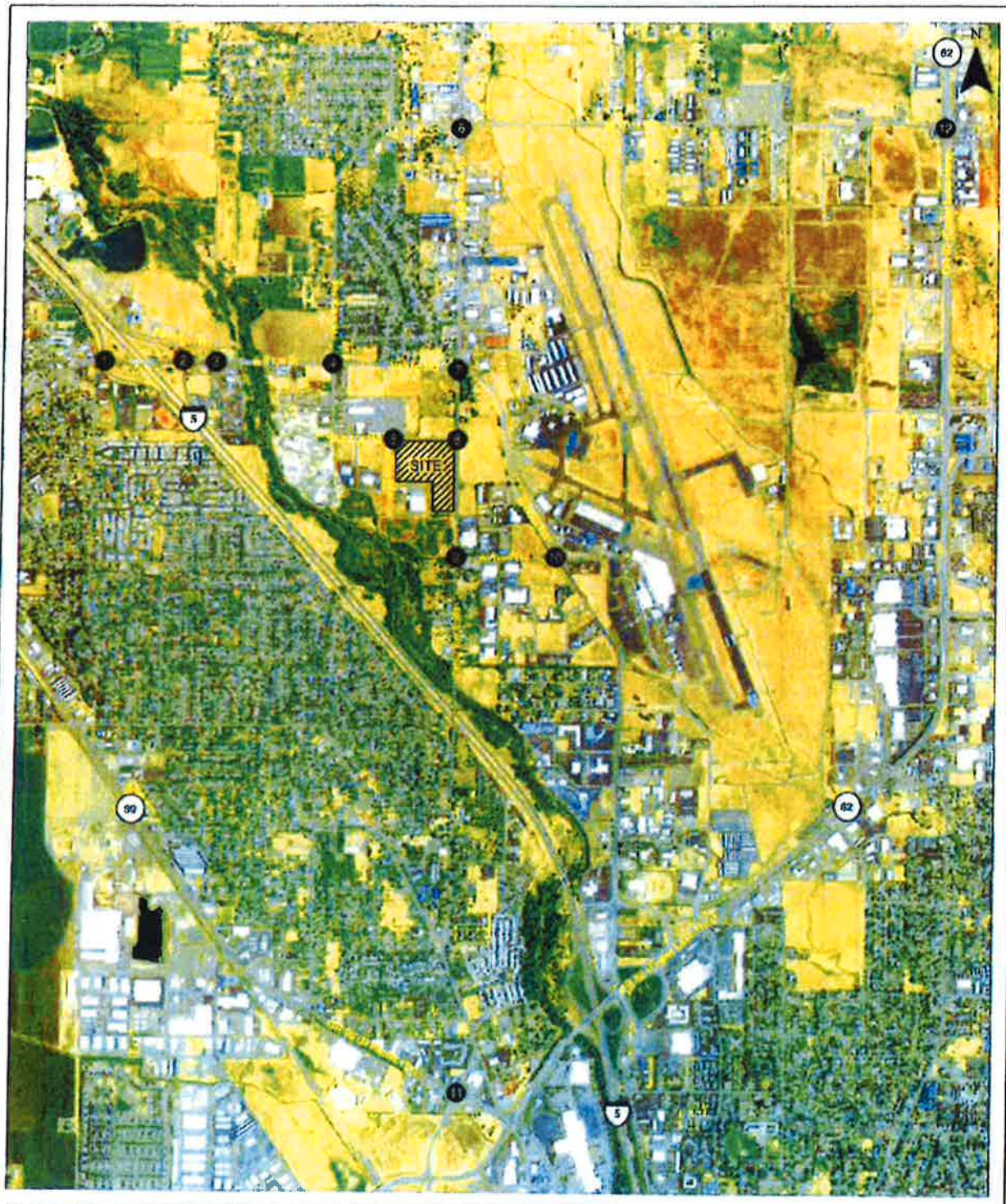
Before and after data from other comparable Costco sites was reviewed to determine a representative trip generation estimate for the development. Based on a 160,000 square foot warehouse and a 24-position gasoline facility, the proposed warehouse and fuel station is estimated to generate 10,670 net new daily trips. Of those trips, 900 net new (445 inbound, 455 outbound) trips and 1,365 net new (695 inbound, 670 outbound) trips are expected to occur during the weekday p.m. peak hour and weekend midday peak hour, respectively.



SITE PLAN
CENTRAL POINT COSTCO
CENTRAL POINT, OREGON

FIGURE
1

KITTELSON & ASSOCIATES, INC.



- STUDY INTERSECTION

SITE VICINITY
CENTRAL POINT, OREGON

FIGURE
2

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

SCOPE OF THE REPORT

This report evaluates the following transportation issues:

- Existing roadway, land-use and transportation system conditions within the site vicinity during the weekday p.m. and weekend midday peak periods;
- Planned developments and transportation improvements for area surrounding Costco;
- Build-year 2016 background (existing traffic counts plus background growth) traffic conditions during the weekday p.m. and weekend midday peak periods;
- Costco trip generation, distribution and trip assignment estimates for the proposed development;
- Build-year 2016 total (build-year background plus site-generated trips) traffic conditions during the weekday p.m. and weekend midday peak periods;
- Build-year 2016 mitigations to study intersections impacted by site-generated trips during the weekday p.m. peak hour and weekend midday peak hour;
- Future year 2030 background (build-year 2016 background plus 14 years of regional growth) traffic conditions during the weekday p.m. and weekend midday peak periods;
- Future year 2030 total (future year background plus site-generated trips) traffic conditions during the weekday p.m. and weekend midday peak periods;
- Future year 2030 mitigations to study intersections impacted by site-generated trips during the weekday p.m. peak hour and weekend midday peak hour;
- Operational and safety assessment of the proposed site accesses (including the Table Rock Road/Hamrick Road intersection) during the weekday p.m. and weekend midday peak hours during build-year and future year total traffic conditions.
- Parking assessment for Costco site; and
- Conclusions and findings.

Section 3
Existing Conditions

EXISTING CONDITIONS

The existing conditions analysis identifies the current site conditions and operational and geometric characteristics of the roadways within the study area. These conditions will be compared with build-year (2016) and future year (2030) conditions later in this report.

KAI staff visited and inventoried the proposed Central Point Costco development site and surrounding study area in May 2015. At that time, KAI collected information regarding site conditions, adjacent land uses, and transportation facilities in the study area. In addition, existing traffic counts at the study intersections were collected in May and July 2015.

SITE CONDITIONS AND ADJACENT LAND USES

The proposed site is located roughly one mile southeast of the Interstate 5 (I-5) & Pine Street interchange in Central Point, Oregon. The land uses in the vicinity of the site are light industrial to the immediately west and south of the site, general industrial immediately north of the site and tourist and office professional, as well as low and medium density residential, north of E Pine Street/Biddle Road. The parcels of land that in which the proposed Costco would occupy are zoned as M-1 (Industrial). The M-1 zoning designation allows the development of the Costco warehouse and fuel station with a conditional use permit. No land use or zoning changes are required for the Costco warehouse and gas station at the proposed site.

TRANSPORTATION FACILITIES

The transportation system inventory identifies the current characteristics of roadways within the study area. Major roadways within the study area were identified and catalogued. Table 1 provides a summary of the existing roadway facilities included in this study.

Table 1. Existing Study Transportation Facilities and Roadways

Roadway	Complete Street Type Description[1]	Number of Lanes	Posted Speed (mph[2])	Sidewalks	Bicycle Lanes	On-Street Parking
I-5 Ramps	Rural Interstate	2	30-45	No	No	No
Pine St	Minor Arterial	4	35-45	Partial	Yes	No
Peninger Rd	Major Collector	2	25-30	Partial	Yes	No
Hamrick Rd	Local	2	30	Partial	No	No
Federal Way	Local	2	30	No	No	No
Table Rock Rd	Minor Arterial	2-4	30-45	Partial	No	Partial
Biddle Rd	Minor Arterial	4	45	Partial	Partial	No
Vilas Rd	Minor Arterial	2	45	Yes	No	No
Airport Rd	Local	2	35	Partial	No	Partial

Notes: [1] Per ODOT TransGIS; [2] mph represents miles per hour

Roadway Facilities

The roadway network in the study area is comprised of an extensive street system made up of arterial, collector, and local roads. The roadway facilities within the study area are described below:

- The I-5 Northbound and Southbound Ramps provide entry and exit accesses to/from the Interstate. Interstate 5 extends from Southern California to the Washington-Canada border. The ramps provide access to Pine Street in both directions on the west side of the study area.
- Pine Street-Biddle Road is a five lane roadway running east/west through the center of the study area. The roadway is named Pine Street west of Hamrick Road with a name change to Biddle Road east of Hamrick Road. Both segments are classified as minor arterials. The roadway is a five lane road, including two lanes in each direction and a center turn throughout the study area. There is no on-street parking on either side of the street. Bike lanes extend from the I-5 Southbound Ramp to Table Rock Road. The posted speed is 35 miles per hour between Hamrick Road and I-5 south ramp and 45 miles per hour between Hamrick Road and Airport Road.
- Peninger Road is a 2-lane, major collector, serving as a frontage road running parallel to and on the east side of I-5. The facility serves a variety of commercial and recreational businesses. There are bike lanes both north and south of the Peninger Road/Pine Street intersection and sidewalks south of the intersection. Northbound from the intersection the roadway has a posted speed of 30 miles per hour and 25 miles per hour in the southbound direction.
- Table Rock Road ranges from 2-5 lanes and runs north/south throughout the study area. The roadway has two lanes south of Biddle Road, and is a five lane road with a center turn lane north of Biddle Road. Both segments of Table Rock Road are minor arterials. The only on-street parking is provided on the east side of the roadway for a 0.15 mile segment north of Airport Road. The segment north of Biddle Road has sidewalks on both sides of the roadway until Vilas Road. The posted speed is 30 miles per hour between Airport Road and Hamrick Road, and 45 miles per hour north of Hamrick Road.
- Hamrick Road is a 2-lane roadway that will service two Costco access driveways. Hamrick Road is a local road providing access for industrial companies such as Reddaway and Knife River Materials. There is no on street parking or bike lanes, however there are segments of sidewalk on both the north/south and east/west sections of the road. The posted speed is 30 miles per hour throughout the study area section. Directly north of the site, between Table Rock Road and Federal Way, the roadway consists of a 3-lane cross section with a two-way median turn lane.
- Federal Way is a local road that currently serves FedEx Ground at the southern end of the roadway. There are two proposed access points along Federal Way. There is no posted speed sign on this segment, nor are there pedestrian or bicycle facilities.

- Airport Road is a local 2-lane road, servicing both commercial and industrial businesses. Airport Road does not have on-street parking, or bike lanes, however there is a sidewalk on the north side of the roadway.

Transit Facilities

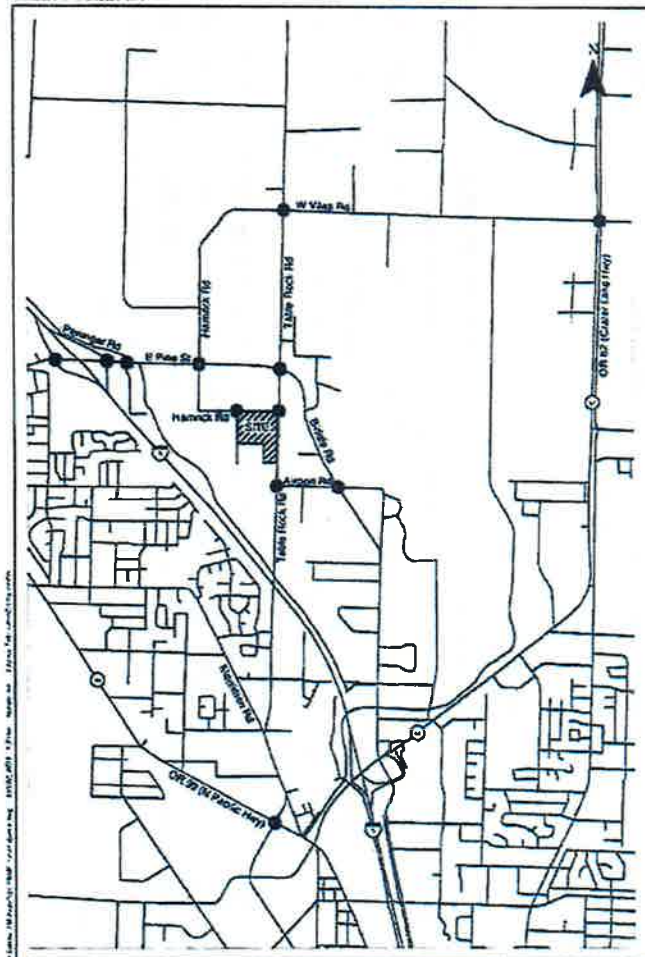
Rouge Valley Transportation District (RVTD) is a public transportation service provider, providing paratransit and fixed-route bus service within Jackson County. RVTD's central bus station is located in downtown Medford, providing eight fixed-route bus routes servicing the cities of Ashland, Central Point, Jacksonville, Medford, Phoenix, Talent, and White City. RVTD's Route 40 provides weekday service between Medford and Central Point with stops along East Pine Street west of I-5. However, Route 40 does not have any stops within the vicinity of the proposed Costco site. There are no fixed-bus routes or stops within the vicinity of the proposed site.

STUDY AREA INTERSECTIONS

The City of Central Point has completed several studies of transportation needs in partnership with Jackson County and ODOT. The *City of Central Point's 2030 Transportation System Plan* (Reference 2) offers a comprehensive assessment of long-term transportation needs within Central Point. In addition, ODOT recently completed an *Interchange Area Management Plan (IAMP) for the I-5/East Pine Street Interchange* (Reference 3). In addition, the Jackson County TSP is currently being updated (expected adoption in October or November 2015). Recognizing the long-term transportation needs, this TIA focuses on the analysis of study intersections within the site vicinity of the proposed Central Point Costco site. Based on knowledge of the transportation network within the site's vicinity and a previous coordination meeting with the City, County and ODOT, the following 12 study intersections were identified for inclusion in this report:

1. 1-5 SB Ramp & East Pine Street - (traffic signal)
2. 1-5 NB Ramp & East Pine Street - (traffic signal)
3. Peninger Road & East Pine Street - (traffic signal)
4. Hamrick Road & East Pine Street - (traffic signal)
5. Federal Way & Hamrick Road - (unsignalized intersection)
6. Table Rock Road & East Vilas Road - (traffic signal)
7. Table Rock Road & Biddle Road - (traffic signal)
8. Table Rock Road & Hamrick Road - (unsignalized intersection)
9. Table Rock Road & Airport Road - (unsignalized intersection)
10. Biddle Road & Airport Road - (unsignalized intersection)
11. Table Rock Road & OR 99 (North Pacific Coast Highway) - (signalized intersection)
12. OR 62 (Crater Lake Highway) & E Vilas Road - (signalized intersection)

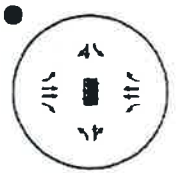
The study intersections and their traffic control and lane configurations are illustrated in Figure 3.



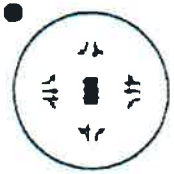
I-5 SB RAMPS & E PINE STREET

I-5 NB RAMPS & E PINE STREET

PENINGER ROAD & E PINE STREET



HAMRICK ROAD & E PINE STREET



FEDERAL WAY & HAMRICK ROAD

TABLE ROCK ROAD & W VILAS ROAD

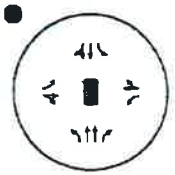


TABLE ROCK ROAD & BIDDLE ROAD

TABLE ROCK ROAD & HAMRICK ROAD

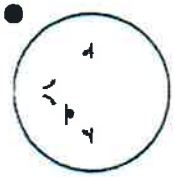
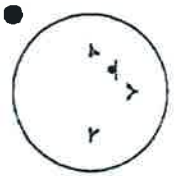


TABLE ROCK ROAD & AIRPORT ROAD



BIDDLE ROAD & AIRPORT ROAD

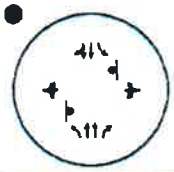
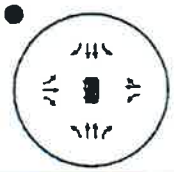


TABLE ROCK ROAD & OR 99

OR 62 & W VILAS ROAD



- STUDY INTERSECTION
- SIGNALIZED INTERSECTION
- STOP CONTROLLED INTERSECTION

STUDY INTERSECTIONS AND EXISTING LANE CONFIGURATIONS
CENTRAL POINT, OREGON

FIGURE 3

KITTELSON & ASSOCIATES, INC.

Data collection at these twelve intersections included turning movement counts collected during a typical weekday (Tuesday through Thursday) p.m. peak period (4:00 p.m. – 7:00 p.m.), and weekend midday (12:00 p.m. – 3:00 p.m.) peak period. In addition, existing lane geometry was documented, including turn pocket lengths, as well as pedestrian and bicycle facilities and the presence of transit and transit amenities. For signalized intersections, KAI obtained traffic signal timings from ODOT and the City of Central Point in order to correctly model and analyze each intersection. *Appendix "A" includes the existing weekday p.m. peak period and weekend midday peak period counts at each of the study intersections.*

In addition to analyzing the 12 study intersections, the proposed site plan includes six new driveways to access the site, each of which will be analyzed in accordance to the roadway jurisdiction it is located. As shown in Figure 1, the six proposed site access include:

- Northern full-access driveway located on Federal Way;
- Southern full-access driveway located on Federal Way;
- Eastern Hamrick Road driveway right-in/right-out access;
- Western Hamrick Road driveway full-access (full access);
- Northern full-access on Table Rock Road; and
- Southern full-access on Table Rock Road.

More information about the performance of these site accesses, as well as the assessment of access alternative scenarios, is provided later in this report.

INTERSECTION OPERATING STANDARDS

The operating standards of four jurisdictions were used to assess the operations of the 12 study intersections based on their respective location. The four jurisdictions are: City of Central Point, City of Medford, Jackson County, and Oregon Department of Transportation.

City of Central Point Operating Standards

Central Point uses performance standards based on level of service (LOS). All LOS analyses described in this report were performed in accordance with the procedures stated in the *2000 Highway Capacity Manual (HCM 2000)* (Reference 4) as required by the *City of Central Point's 2030 Transportation System Plan*. *HCM 2000* defines LOS as a quality measure describing operational conditions within a traffic stream, generally in terms such as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. When analyzing traffic conditions, LOS is used as a measure of performance (corresponding to delay) at an intersection with values ranging from LOS "A", indicating good operations and low vehicle delay, to LOS "F", which indicates an intersection at, or over capacity with high vehicle delay. Table 2 provides the City of Central Point's LOS standards for signalized and unsignalized intersections. The City's policies require intersections to operate at LOS D or better. *A description of level of service and its criteria is presented in Appendix "B".*

Table 2. City of Central Point's Level of Service Standards

LOS	Signalized Intersection	Unsignalized Intersection
A	≤10 seconds	≤10 seconds
B	10–20 seconds	10–15 seconds
C	20–35 seconds	15–25 seconds
D	35–55 seconds	25–35 seconds
E	55–80 seconds	35–50 seconds
F	≥80 sec	≥50 sec

Jackson County Operating Standards

The acceptable motor vehicle performance standard for signalized and unsignalized intersections per *Jackson County Transportation System Plan* (Reference 5) is a volume-to-capacity ratio (V/C Ratio) no greater than 0.95 within the boundary of the Metropolitan Planning Organization and 0.85 outside of the MPO boundary. Each study intersection is within the Rogue Valley Metropolitan Planning Organization (RVMPO) boundary. Therefore, intersections falling within the County's jurisdiction will be assessed assuming a V/C ratio standard of 0.95.

ODOT Operating Standards

ODOT operates and maintains the study intersections for the ramp termini of I-5. ODOT's operating standard for interchange ramps is a maximum V/C ratio for the ramp terminal that is more restrictive than the V/C ratio for the crossroad, or 0.85 as identified in the *ODOT OHP Policy 1F Revisions* (Reference 6). For signalized intersections on arterial roads under ODOT jurisdiction, the V/C ratio must be no greater than 0.95. At intersections where one or more approaches is maintained by a city or ODOT, the more restrictive of the agency's performance standard will be applied as stated in the *Jackson County Transportation System Plan*.

Intersections within the City of Central Point and the City of Medford limits will be assessed assuming ODOT operating standards must be met. Study intersections which have governing agencies for more than one approach include OR 99/Table Rock Road and OR 62 (Crater Lake Hwy)/East Villas Road intersections. Based on the direction from the *Jackson County Transportation System Plan*, ODOT's operating standards will be applied when analyzing these locations.

Table 3 summarizes the intersection operational standards and jurisdiction administering associated with the existing study intersections. *Central Point Street Jurisdiction Map* (Reference 7) was used to determine the jurisdiction of each study intersection.

Table 3. Operational Standards for Existing Study Intersections

ID	Study Intersection	Governing Agency Standard	Traffic Control	Operating Standard
1	I-5 SB Ramp & E Pine St	ODOT	Signalized	Lane group V/C ≤ 0.85
2	I-5 NB Ramp & E Pine St	ODOT	Signalized	Lane group V/C ≤ 0.85
3	Peninger Rd & E Pine St	ODOT, County	Signalized	V/C ≤ 0.95
4	Hamrick Rd & E Pine St	County, City of Central Point	Signalized	V/C ≤ 0.95 and LOS D or better
5	Federal Way & Hamrick Rd	County, City of Central Point	Stop Control on Federal Way	V/C ≤ 0.95 and LOS D or better
6	Table Rock Rd & E Vilas Rd	County	Signalized	V/C ≤ 0.95
7	Table Rock Rd & Biddle Rd	County	Signalized	V/C ≤ 0.95
8	Table Rock Rd & Hamrick Rd	County	Stop Control on Hamrick	V/C ≤ 0.95
9	Table Rock Rd & Airport Rd	County, City of Central Point	Stop Control on Airport	V/C ≤ 0.95 and LOS D or better
10	Biddle Rd & Airport Rd	City of Medford	Two-way Stop	LOS D or better
11	Table Rock Rd & OR 99	ODOT, County	Signalized	V/C ≤ 0.95
12	OR 62 (Crater Lake Hwy) & E Vilas Rd	ODOT, County	Signalized	V/C ≤ 0.95

EXISTING PEAK HOUR TRAFFIC CONDITIONS

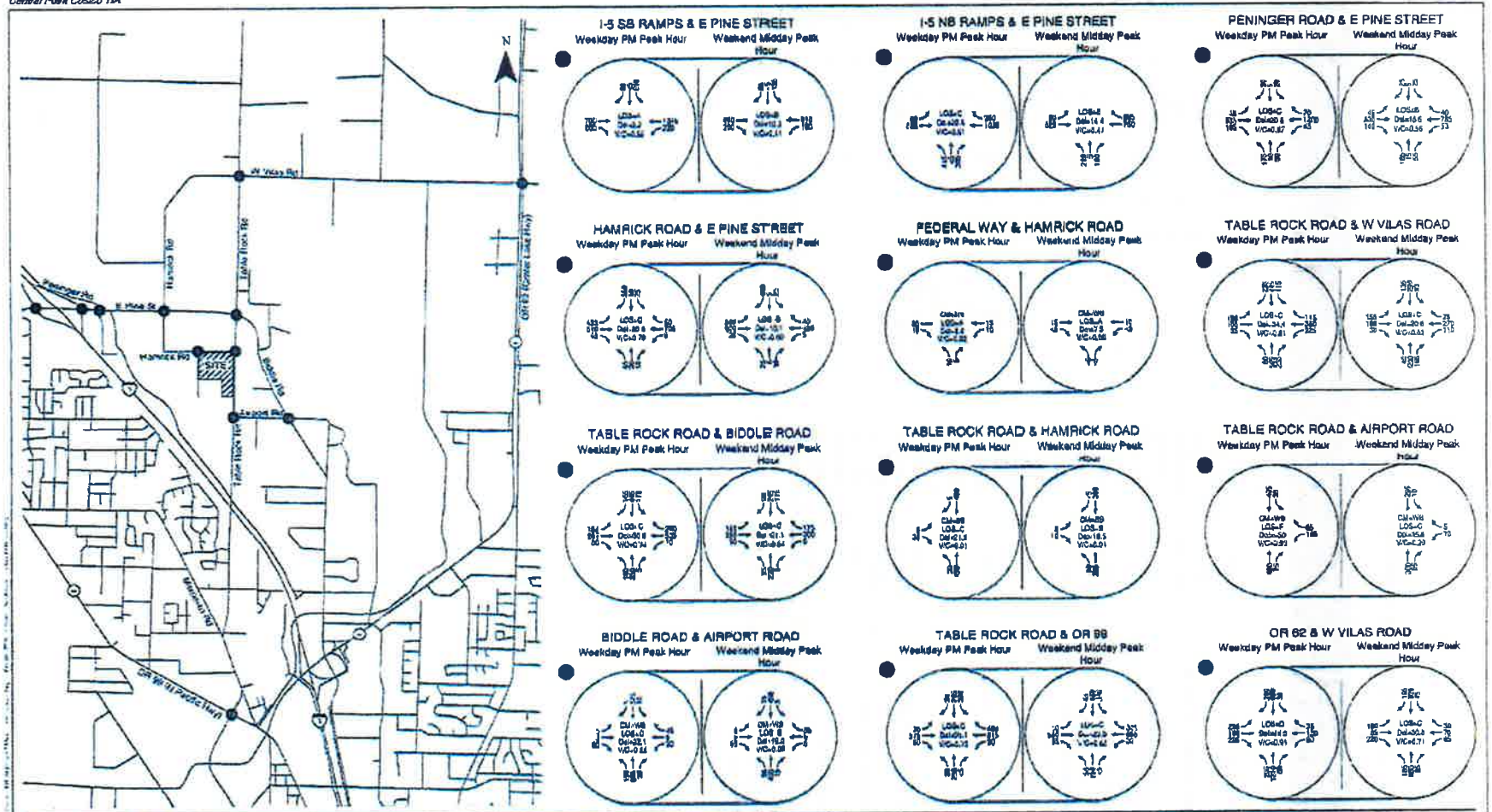
Existing peak hour traffic operations were analyzed for a typical weekday (Tuesday – Thursday) p.m. peak period (4:00 p.m. to 7:00 p.m.) and a weekend midday (12:00 p.m. to 3:00 p.m.) peak period. Existing turning movement counts collected in May and July 2015 were used in determining the existing operating conditions at each of the study intersections per jurisdictional standards.

Figure 4 provides the intersection turning movement counts and summarizes the intersection operational results for the existing weekday p.m. and weekend midday peak hour traffic conditions. As shown in Figure 4 and in Table 4, all of the study intersections operate at acceptable operating standards during the existing conditions weekday p.m. and weekend midday peak hours except for the Table Rock Road/Airport Road intersection during weekday p.m. peak. The Table Rock Road/Airport Road intersection is stop controlled in the westbound direction. Under existing conditions in the weekday p.m. peak hour, there is high delay for the critical movement (westbound left-turn) resulting in LOS F. *Appendix "C" includes the traffic operation worksheets for the existing traffic conditions scenarios.*

Table 4. Existing PM and Midday Peak Hour Traffic Operations

Study Intersection	Governing Agency Standard	Peak Period	Critical Movement[1]	Existing Traffic Operations		
				LOS[2]	Delay[3]	V/C Ratio[4]
1. I-5 SB Ramp & East Pine Street	ODOT	PM Peak	-	A	9.2	0.58
		MID Peak	-	B	10.3	0.41
2. I-5 NB Ramp & East Pine Street	ODOT	PM Peak	-	C	22.6	0.61
		MID Peak	-	B	14.4	0.41
3. Peninger Road & East Pine Street	ODOT, County, City	PM Peak	-	C	20.8	0.67
		MID Peak	-	B	18.6	0.56
4. Hamrick Road & East Pine Street	County, City	PM Peak	-	C	20.8	0.79
		MID Peak	-	B	10.1	0.60
5. Federal Way & Hamrick Road	County, City	PM Peak	Northbound	A	8.8	0.02
		MID Peak	Westbound	A	7.5	0.01
6. Table Rock Road & Vilas Road	County	PM Peak	-	C	34.4	0.81
		MID Peak	-	C	20.6	0.62
7. Table Rock Road & Biddle Road	County	PM Peak	-	C	30.6	0.74
		MID Peak	-	C	21.1	0.54
8. Table Rock Road & Hamrick Road	County	PM Peak	Eastbound	C	21.5	0.01
		MID Peak	Eastbound	B	13.5	0.01
9. Table Rock Road & Airport Road	County	***PM Peak***	***Westbound***	***F***	***77.1***	***0.93***
		MID Peak	Westbound	C	15.6	0.20
10. Biddle Road & Airport Road	City of Medford	PM Peak	Westbound	C	22.1	0.26
		MID Peak	Westbound	B	10.9	0.11
11. Table Rock Road & OR 99	ODOT, County	PM Peak	-	C	25.1	0.73
		MID Peak	-	C	23.0	0.62
12. OR 62 & East Vilas Road	ODOT, County	PM Peak	-	D	44.5	0.91
		MID Peak	-	C	30.8	0.71

Notes: [1] The critical movement is reported for all unsignalized intersections based on the *2000 Highway Capacity Manual*; [2] LOS = Level of Service; [3] Delay is reported in seconds per vehicle; [4] V/C Ratio is defined as vehicle-to-capacity ratio which calculates the number of vehicles divided by the capacity of the roadway/intersection during the peak 15 minutes of the peak hour; and **Bold *and Italics*** indicates an intersection operating below its jurisdiction's standards.



CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED))
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED))
V/C = CRITICAL VOLUME TO CAPACITY RATIO

EXISTING TRAFFIC CONDITIONS
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 4

KITTELSON & ASSOCIATES, INC.

SAFETY HISTORY ANALYSIS

Crash data available for the most recent five years (2009 – 2013) at all of the study intersections was provided by ODOT. Crash data was analyzed to document recent crash types and severity at study intersections and identify crash trends if applicable. In addition, study intersections were screened for compliance with ODOT's Safety Priority Index System (SPIS) and 90th percentile rates using the HCM prediction model. There were no reported crashes at the two of the study intersections:

- Federal Way & Hamrick Road
- Table Rock Road & Hamrick Road

In total, there were 192 crashes between all of the study intersections within the five year study period. Table 5 provides the reported crash type and severity at each of the study intersections. *Appendix "D" includes the five year summary of crash data at each of the study intersections.*

Table 5. Crash Type and Severity (2009 - 2013) at Study Intersections

	Collision Type							Crash Severity			
Study Intersection	Rear End	Turning Movement	Angle	Sideswipe	Fixed Object	Ped/ Bike	Other	PDO[1]	PI[2]	Fatality	Total
1. I-5 SB Ramps/E Pine St	6	6	0	0	1	0	2	8	7	0	15
2. I-5 NB Ramps/E Pine St	7	11	0	1	1	0	1	6	15	0	21
3. Peninger Rd/E Pine St	3	6	0	1	0	0	0	4	6	0	10
4. Hamrick Rd/E Pine St	2	21	2	0	0	0	0	14	11	0	25
5. Federal Way & Hamrick Rd	0	0	0	0	0	0	0	0	0	0	0
6. Table Rock Rd & E Vilas Rd	11	12	5	0	0	0	3	17	14	0	31
7. Table Rock Rd & Biddle Rd	7	3	0	0	0	0	0	5	5	0	10
8. Table Rock Rd/Hamrick Rd	0	0	0	0	0	0	0	0	0	0	0
9. Table Rock Rd/Airport Rd	3	2	0	0	0	0	0	3	2	0	5
10. Biddle Rd/Airport Rd	3	5	5	0	0	0	0	5	8	0	13
11. Table Rock Rd/OR 99	17	4	2	0	3	0	1	16	11	0	27
10. Table Rock Rd/OR 62	13	15	3	2	0	1	1	19	16	0	35
Total	72	85	17	4	5	1	8	97	95	0	192

Notes: [1] PDO = Property Damage Only; [2] PI = Personal Injury

Turning movement and rear-end crashes were the most common crash type at the intersections, accounting for approximately 82% of all crashes. Roughly half of the reported crashes were injury crashes. There were no fatality crashes. Four study intersections were found to be in the 90th percentile and in compliance ODOT's SPIS. The four intersections include:

- I-5 SB Ramps/E Pine Street,
- Table Rock Road/W Vilas Road,
- OR 62 (Crater Lake Highway)/W Vilas Road, and
- Table Rock Road/OR 99.

Section 4
Transportation Impact Analysis

TRANSPORTATION IMPACT ANALYSIS

The transportation impact analysis identifies how the study area's transportation system will operate under build-year (2016) and future year (2030) conditions without and with the proposed Costco development in place. The impact of traffic generated by the proposed Costco development during the typical weekday p.m. and weekend midday peak hours was examined as follows:

- Other planned in-process developments and transportation improvements within the study area were documented;
- General background growth in the area was estimated;
- Project-generated trips were estimated for build-out of the project;
- Project trip-distribution patterns were derived from Costco membership data, existing traffic patterns, a region wide travel demand model and a select zone analysis within Central Point were evaluated;
- Build-year (2016) and future year (2030) conditions were analyzed with the addition of site-generated traffic at each of the study intersections and site-access points during the weekday p.m. and weekend midday peak hours;
- Operational and safety assessments were completed at each of the proposed site accesses and the intersection of Table Rock Road/Hamrick Road build-year plus project, and future year plus project scenarios; and
- On-site parking standards and proposed parking supply was evaluated.

PLANNED ROADWAY IMPROVEMENTS

This section provides a summary of transportation improvements that are planned and can be assumed to be completed under the two future year scenarios (per agency direction). These transportation improvements have been identified by the City of Central Point, Jackson County, as well as ODOT and documented in the *City of Central Point's 2030 Transportation System Plan, Final Draft IAMP: I-5 Exit 33,* and Rogue Valley Metropolitan Planning Organization's *2009 – 2034 Regional Transportation Plan* (Reference 8).

Under the direction of the City of Central Point and ODOT, KAI has assumed the planned roadway improvements listed in the *Final Draft IAMP: I-5 Exit 33* based on the year of estimated completion, as well as all Tier 1 improvements (within the site's vicinity) listed in the *City of Central Point's 2030 Transportation System Plan.* Tier 1 improvements have been defined as financially constrained projects that can be reasonably funded within the next twenty years. These improvements have been classified as either short (2008 – 2012), medium (2013 – 2017) or long-term (2018 – 2030) improvements.

Final Draft IAMP: I-5 Exit 33 Planned Improvements

The Oregon Department of Transportation and City of Central Point have identified and prioritized roadway improvements at and around the I-5/East Pine Street interchange. Based on the findings from the most recent *Final Draft IAMP: I-5 Exit 33* completed in May 2015 the following planned roadway improvements will be assumed.

- I-5 Southbound On-Ramp: The description of the planned project includes widening East Pine Street beginning at the west end of the freeway overpass to add a second westbound left-turn lane with up to 200 feet of additional storage. This project includes the widening of the southbound on-ramp to create two receiving lanes that merge to a single lane. The estimated cost of the project is $1.7 million and has been designated as low to medium priority, therefore this project will be included the future year (2030) scenarios of this TIA.
- I-5 Northbound Ramp Terminal: The description of the planned project includes widening the I-5 northbound off-ramp to add a second right-turn lane at the northbound approach to East Pine Street. The second turn lane would provide an additional 350 feet of storage for to manage queuing on the off-ramp that cannot be managed with signal timing. The estimated cost of the project is $1.3 million and has been designated as low to medium priority, therefore this project will be included the future year (2030) scenarios of this TIA.
- East Pine Street at Hamrick Road: The study verifies and calls for the implementation of Central Point TSP Tier I Project #216, which widens the west and north approaches to add a dual left-turn lane and second receiving lane.

Central Point Transportation System Plan Planned Improvements

The planned transportation improvement program prioritized roadway improvement projects between 2008 and 2030. There was no Tier I short term (2008 – 2012) projects that occurred on the study roadways within the site's vicinity. Listed below are the Tier I roadway improvement projects that will be included in future (year 2030) analyses.

- Tier I Project # 213 – Table Rock Road & South Hamrick Road Intersection: Although the City's current TSP calls for a signal at the Table Rock Road/Hamrick Road, discussions with City of Central Point and Jackson County Staff have indicated this is no longer a planned or desired improvement. ***As such, no signal at the intersection of Table Rock Road/Hamrick Road has been assumed in the analysis.***
- Tier I Project # 216 – East Pine Street & Hamrick Road: The project description includes widening the west and north approaches in order to add a second eastbound left-turn lane and second receiving lane. The project also includes restriping the northbound approach to include dual left-turns and a single through-shared-right turn lane. In addition, the project includes restriping the southbound approach to include a left-turn, through and exclusive right-turn lanes. Identified as a medium priority, this project will be included in the future year (2030) scenarios.

- Tier I Project # 218 – East Pine Street & Table Rock Road: The project description includes widening the west approach to add a second eastbound left-turn lane to help reduce queuing and minimize delay at the intersection. The project has been identified as a long-term project and will be included in the future year (2030) scenarios.
- Tier I Project # 219 – Table Rock Road & West Vilas Road: The project description includes widening to increase capacity by adding an eastbound lane and shared through-right turn movement. The project has been identified as a long-term project and will be included in the future year (2030) scenarios.

RVMPO 2009 – 2034 Regional Transportation Plan Planned Improvements

- Table Rock Road Improvements: RVMPO, the City of Central Point, and Jackson County have identified significant capacity improvements to Table Rock Road between the I-5 overpass and Biddle Road. Under Project# 821, Table Rock Road is schedule to be widened from a two lane cross section to four lanes and a continuous center turn lane, with bike lanes and sidewalks on both sides of the roadway from Biddle Road to Airport Road. South of Airport Road, Table Rock Road will be widened to a three lane cross section with bike lanes and sidewalks on both sides of the roadway continuing to the I-5 overpass. Currently, this project is scheduled to be constructed in 2017. The project will also include the signalization of the Table Rock Road/Airport Road intersection.
- Federal Way Extension: Federal Way is currently only accessible via Hamrick Road and terminates just south of the FedEx Ground freight facility entrance. The *City of Central Point Transportation System Plan* shows the potential for a future connection of Federal Way to tie into the future signalized intersection at Table Rock Road/Airport Road. While the timing of the Federal Way connection has not been determined, the signalization the Table Rock Road/Airport Road intersection will occur in 2017 with completion of the Table Rock Road widening. The extension of Federal Way will be included in the future year (2030) scenarios.
- OR 62: I-5 to Dutton Road Planned Roadway Improvement: Currently, OR 62 (Crater Lake Highway) exceeds capacity standards. ODOT and the RVMPO has completed the necessary studies to begin the Oregon 62 Expressway project, which is a multimodal solution that will increase capacity and improve safety along the corridor, a critical business connection for freight, tourism and commuters (Reference 9). The 4.5 mile project will run on the east side of the Medford Airport, parallel to Crater Lake Highway, beginning at Whittle Avenue bypassing Commerce Drive, Coker Butte Road and Vilas Road before connecting back with OR 62 just north of Corey Road. The project is projected to begin construction in late fall 2016. For the purpose of this study, KAI has incorporated the change in travel patterns and growth based on the regional travel demand model for both future year (2030) background and total traffic scenarios. Based on the travel demand models, vehicular growth at the study intersection of OR 62/W Vilas Road will not experience growth in the northbound and southbound direction to and from OR 62 between the build-year (2016) and future year

(2030) background scenarios as northbound and southbound traffic shifts to the OR62 Expressway upon completion.

PLANNED IN-PROCESS DEVELOPMENTS

In-process development plans were obtained from the City of Central Point. The in-process developments to be assumed in this study include the approved residential development for White Hawk. This development includes apartments, duplexes, and a 5.5 acre city park at the intersection of Beebe Road and Gebhard Road. The project was granted approval in 2014 and has a design year of 2017. Site-generated trips and trip distribution information from this project was derived from the *White Hawk Development Traffic Impact Analysis* (Reference 10).

BUILD-YEAR (2016) BACKGROUND TRAFFIC CONDITIONS

The build-year (2016) background scenario analyzed how the study area's transportation system will operate without the site-generated traffic in year 2016. Build-year background traffic conditions were analyzed for both the weekday p.m. and weekend midday peak hours.

Background Growth Rates

Traffic growth within the study area is expected to follow the trends adopted in the Final Draft IAMP: I-5 Exit 33. The growth described in the IAMP used models prepared by ODOT's Transportation Planning Analysis Unit (TPAU). In conjunction with the forecasted growth of households, population and employment, a base year 2006 and future year 2038 travel demand model were provided by ODOT. After review of the study area's model and previous studies a 2.0% annual growth rate was determined and agreed upon to be applied to existing turning movement counts collected at the study intersections.

Traffic Volumes

The traffic volumes developed for the build-year (2016) background scenario reflect existing traffic counts plus one year of annual background growth and in-process development traffic.

Level of Service Analysis

As mentioned previously, all level of service analyses described in this section were performed in accordance with the procedures stated in the *2000 Highway Capacity Manual* as required by the *City of Central Point 2030 Transportation Systems Plan*. Operating standards at the study intersections were assessed based on the jurisdiction in which the study intersection is located.

Intersection Operations

Figure 5 presents the build-year (2016) background traffic volumes and operations results at each of the study intersections. As under existing conditions, the results of the build-year background traffic analysis indicate that all of the study intersections are forecast to operate at acceptable levels of service and volume-to-capacity ratios during the weekday p.m. and weekend midday peak hours except for the Table Rock Road/Airport Road intersection during weekday p.m. peak hour.

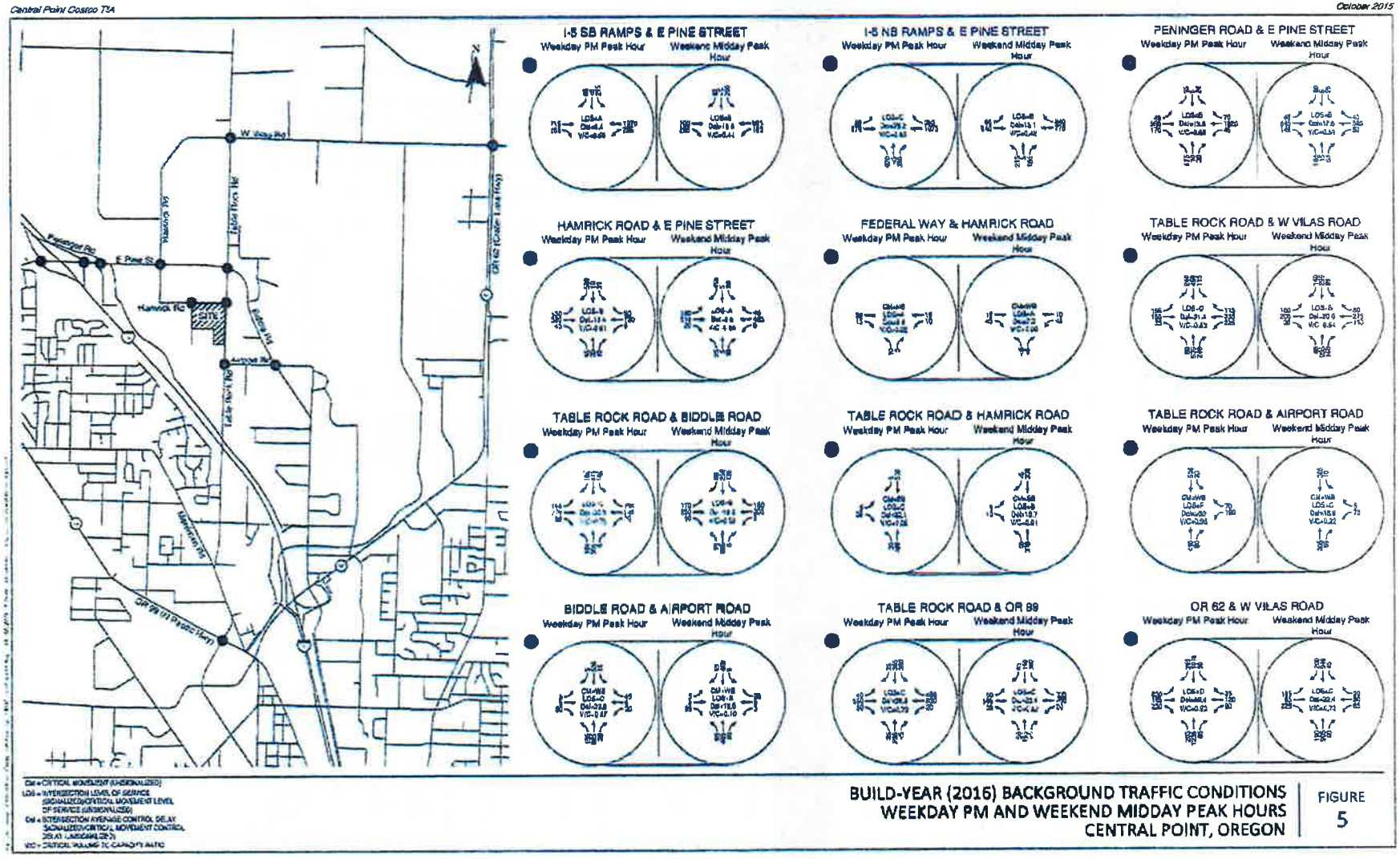
The Table Rock Road/Airport Road intersection is stop controlled in the westbound direction. As under existing conditions, during the weekday p.m. peak hour there is high delay for the critical movement (westbound left-turn) resulting in LOS F. In addition, the critical movement is also operating with a volume-to-capacity ratio of greater than 0.95 in the build year (2016) background conditions (with no traffic from the proposed Costco development).

Appendix "E" contains the build-year (2016) background traffic operation worksheets.

Table 3. Build-Year (2016) Background Traffic Operation Results

Study Intersection	Governing Agency Standard	Peak Period	Critical Movement[1]	Build-Year (2016) Background Traffic Operations		
				LOS[2]	Delay[3]	V/C Ratio[4]
1. I-5 SB Ramp & East Pine Street	ODOT	PM Peak	-	A	8.4	0.59
		MID Peak	-	B	10.6	0.44
2. I-5 NB Ramp & East Pine Street	ODOT	PM Peak	-	C	25.2	0.63
		MID Peak	-	B	15.1	0.42
3. Peninger Road & East Pine Street	ODOT, County, City	PM Peak	-	B	19.6	0.68
		MID Peak	-	B	17.8	0.54
4. Hamrick Road & East Pine Street	County, City	PM Peak	-	B	18.4	0.81
		MID Peak	-	A	8.6	0.56
5. Federal Way & Hamrick Road	County, City	PM Peak	Northbound	A	8.8	0.02
		MID Peak	Westbound	A	7.2	0.01
6. Table Rock Road & Vilas Road	County	PM Peak	-	C	31.4	0.83
		MID Peak	-	B	20.0	0.64
7. Table Rock Road & Biddle Road	County	PM Peak	-	C	30.5	0.75
		MID Peak	-	B	19.2	0.52
8. Table Rock Road & Hamrick Road	County	PM Peak	Eastbound Left	C	22.1	0.02
		MID Peak	Eastbound Left	B	13.7	0.01
9. Table Rock Road & Airport Road	County	***PM Peak***	***Westbound***	***F***	***90.0***	***0.98***
		MID Peak	Westbound	C	16.6	0.22
10. Biddle Road & Airport Road	City of Medford	PM Peak	Westbound	C	22.8	0.27
		MID Peak	Westbound	B	12.5	0.10
11. Table Rock Road & OR 99	ODOT, County	PM Peak	-	C	26.8	0.73
		MID Peak	-	C	23.4	0.62
12. OR 62 & East Vilas Road	ODOT, County	PM Peak	-	D	48.4	0.92
		MID Peak	-	C	32.4	0.73

Notes: [1] The critical movement is reported for all unsignalized intersections based on the *2000 Highway Capacity Manual;* [2] LOS = Level of Service; [3] Delay is reported in seconds per vehicle; [4] V/C Ratio is defined as vehicle-to-capacity ratio which calculates the number of vehicles divided by the capacity of the roadway/intersection during the peak 15 minutes of the peak hour; and **Bold *and italics*** indicates an intersection operating below its jurisdiction's standards.



CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED))
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED))
V/C = CRITICAL VOLUME TO CAPACITY RATIO

BUILD-YEAR (2016) BACKGROUND TRAFFIC CONDITIONS
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 5

KITTELSON & ASSOCIATES, INC.

COSTCO TRIP GENERATION DATABASE

For the past 15 years, KAI has maintained a database of traffic data and travel characteristics for Costco Wholesale. The database contains transportation information such as trip rates, trip type percentages, and parking demand for Costco locations in the United States, as well as Canada and Mexico. A large portion of the data is from existing Costco sites in the Pacific Northwest. The data base is updated and refined each time new Costco traffic counts or information become available to KAI. In order to best evaluate the anticipated transportation characteristics of the proposed Central Point Costco development, it was agreed that the Costco database information be used in this TIS since it provides use-specific data that most accurately represents the anticipated traffic characteristics of the unique development type.

Costco has invested significant effort into developing this site-specific trip generation database for both their warehouses and their fuel stations because of the unique characteristics of Costco customer travel that exists due to membership requirements and the nature of Costco sales. These unique elements apply to the trip generation and distribution for Costco warehouses, Costco Gasoline fuel stations, and the interaction of trips between the two.

COSTCO TRIP GENERATION CHARACTERISTICS

The data collected at existing Costco developments in Oregon and Washington indicates the trip generation characteristics summarized in Table 7 including total trip ends as well as pass-by trips ends from the surrounding street systems. Generally, trip generation characteristics of Costco warehouses also include diverted trips, however, due to the location of the proposed site and its distance from I-5, OR 62 (Crater Lake Highway) and other major facilities, it was agreed with the agencies that diverted trips would essentially be considered new trips through the outlined study intersections. Therefore, a specific diverted trip reduction was not applied in this study. In addition, the pass-by trip rates used in this study are significantly lower than those found at most Costco locations. Surveys at existing Costco sites typically demonstrate pass-by rates in the range of 30-35% during the weekday and weekend peak hours. However, again due to the relatively low volumes currently on the adjacent streets to the site, pass-by trips were constrained to no more than 15% of the adjacent street volume thus resulting in pass-by rates of only 7-15%.

Table 7. Central Point Costco Development Trip Generation Estimate

	Daily			PM Peak Hour			Saturday Peak Hour		
	Total	In	Out	Total	In	Out	Total	In	Out
Total Trip Ends (External Trip Ends)	12,140	6,070	6,070	1,055	520	535	1,465	745	720
Pass-by Trip Ends (12% D, 15% PM, 7% MID)	*-1,470*	*-735*	*-735*	*-155*	*-75*	*-80*	*-100*	*-50*	*-50*
Net New Trip Ends	**10,670**	**5,335**	**5,335**	**900**	**445**	**455**	**1,365**	**695**	**670**

As shown in Table 7, the proposed Costco development is estimated to generate a total of approximately 10,670 net new trips on a daily basis, 900 net new trip ends during the weekday p.m. peak hour and approximately 1,365 net new trip ends during the weekend midday peak hour.

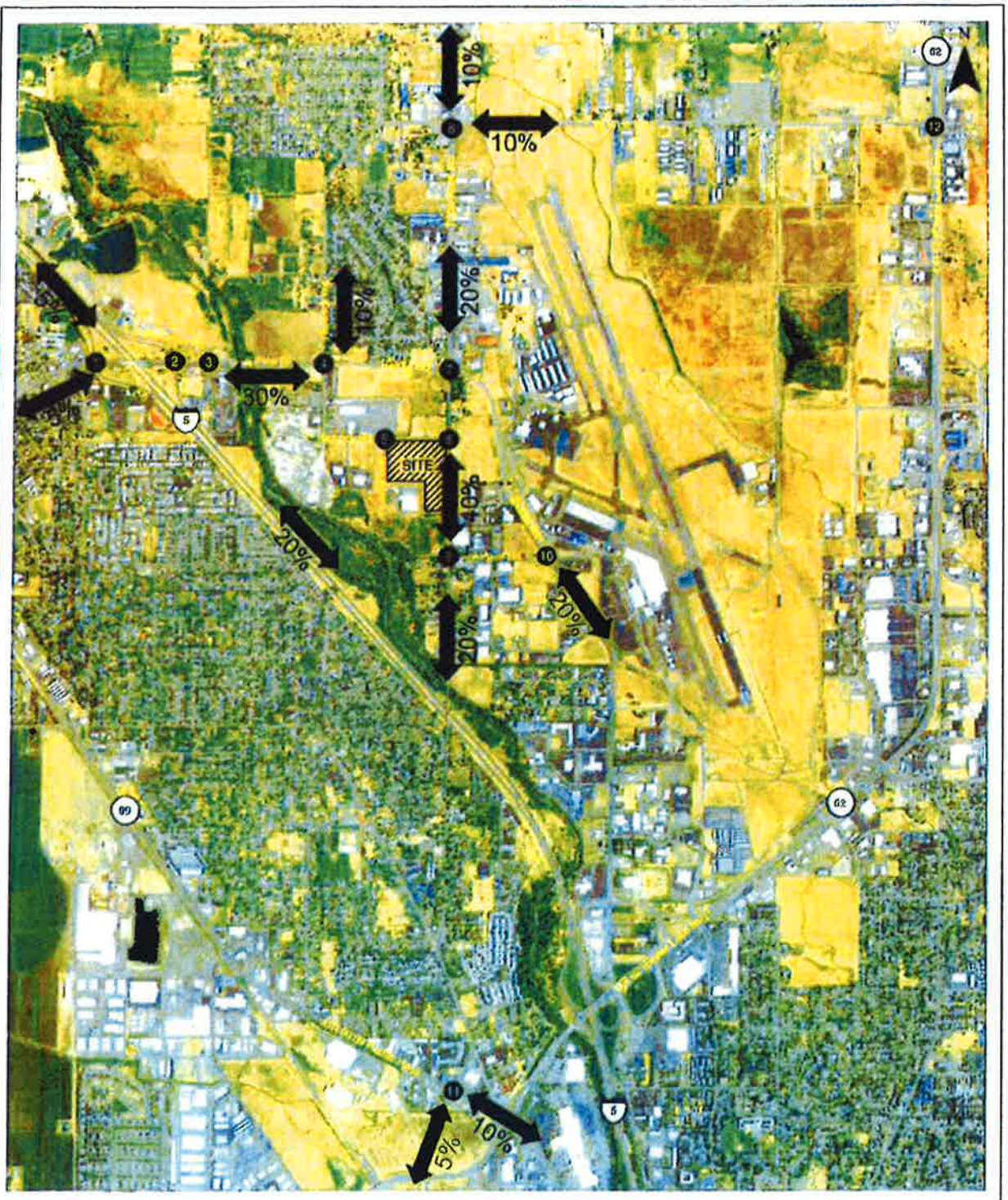
Pass-by Trips

A key trip characteristic considered was that of pass-by trip capture. Pass-by trips represent trips that are currently traveling on the surrounding street network for some other primary purpose (such as a trip from home to work) and stop into the site en route during their normal travel. As such, pass-by trips do not result in a net increase in traffic on the surrounding transportation system and, typically, their only effect occurs at the site driveways where they become turning movements. Again, based on existing traffic volumes on Table Rock Road and Hamrick Road, the pass-by trip reduction has been reduced to a maximum of 15% of existing weekday p.m. and weekend midday peak hour volumes along these roadways. This is compared to the 30-35% pass-by rate documented from surveys at existing Costco developments. We believe this represents a very conservative but defensible approach to the trip generation analysis.

TRIP DISTRIBUTION AND TRIP ASSIGNMENT

The trip distribution pattern for site generated trips was developed using zip code data from current memberships at the existing Costco warehouse located on OR 62 (Crater Lake Highway) in Medford, Oregon, as well as from the existing traffic patterns and major trip origins and destinations within the study area. Localized trip routing through the study intersections was assessed based on the land use, traffic counts completed at the study intersections, and general patterns in the site vicinity. Additionally, ODOT provided KAI with a base year (2006) and future year (2038) regional travel demand model, as well as a select zone analysis for the traffic analysis zone that the site will occupy. The models and select zone analysis verified the trip distribution patterns and site-generated trip assignment for the proposed Costco warehouse and fueling station.

Figure 6 illustrates the trip distribution throughout the site's vicinity. Based on the trip distribution throughout the study area, Figure 7 and Figure 8 present the site-generated turning movement counts at each of the study intersections and site accesses for the weekday p.m. and weekend midday peak hours to and from the proposed Costco site. *Appendix "F" includes the base year (2006) and future year (2038) regional travel demand models, as well as the select zone analysis provided by ODOT.*



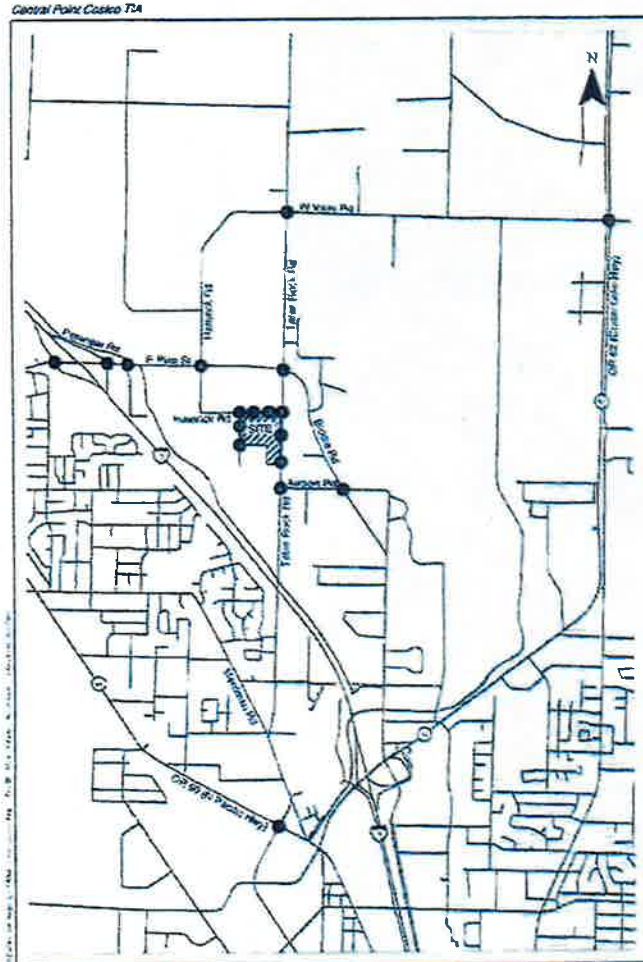
SITE-GENERATED TRIP DISTRIBUTION
CENTRAL POINT, OREGON

FIGURE 6

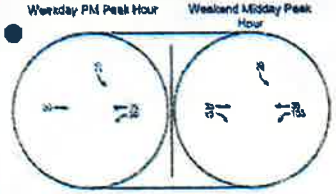
(##) - STUDY INTERSECTION

XX% - TRIP DISTRIBUTION

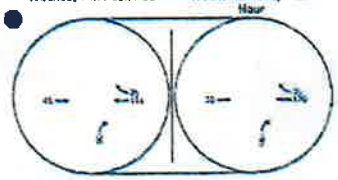
KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING



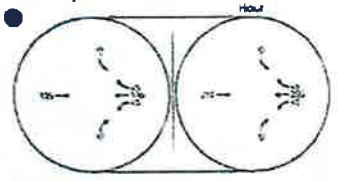
I-5 SB RAMPS & E PINE STREET



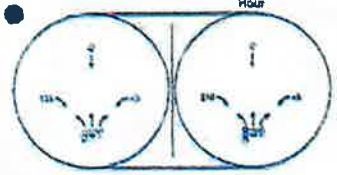
I-5 NB RAMPS & E PINE STREET



PENINGER ROAD & E PINE STREET



HAMRICK ROAD & E PINE STREET



FEDERAL WAY & HAMRICK ROAD

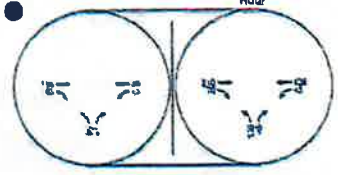


TABLE ROCK ROAD & W VILAS ROAD

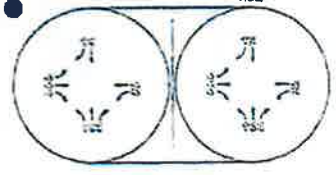


TABLE ROCK ROAD & BIDDLE ROAD

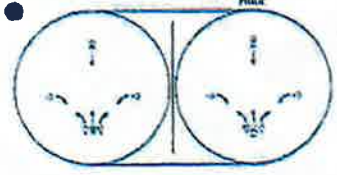
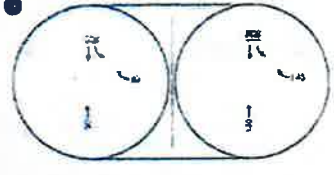


TABLE ROCK ROAD & HAMRICK ROAD

TABLE ROCK ROAD & AIRPORT ROAD



BIDDLE ROAD & AIRPORT ROAD

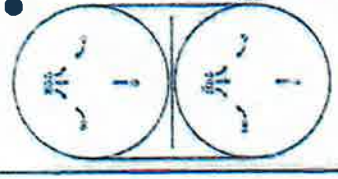
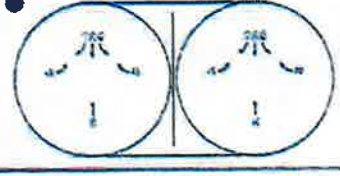
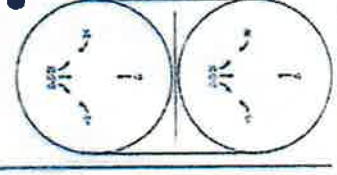


TABLE ROCK ROAD & OR 99



OR 62 & W VILAS ROAD

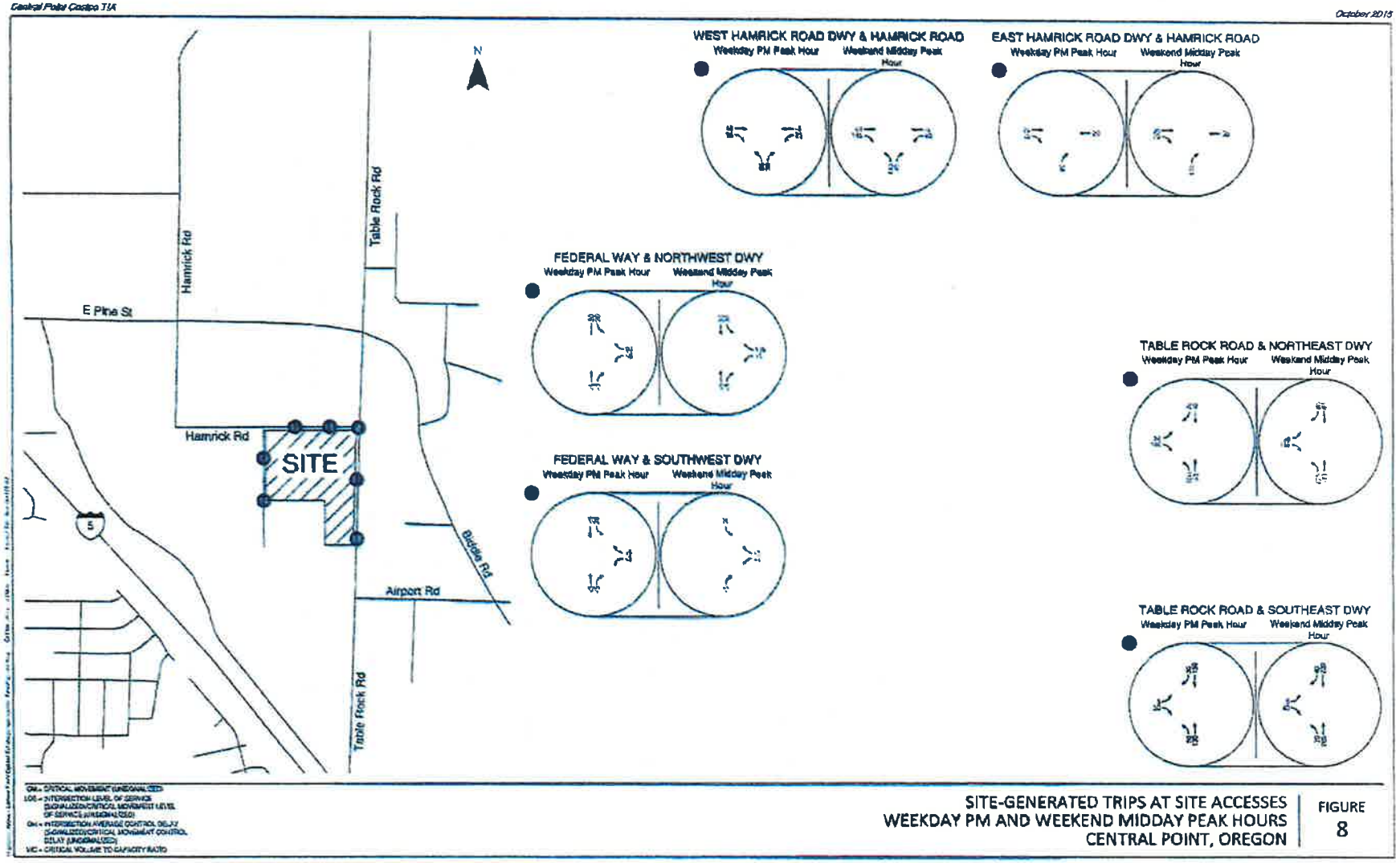


CM = CRITICAL MOVEMENT ANALYSIS
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
DH = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME TO CAPACITY RATIO

SITE-GENERATED TRIPS
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 7

KITTELSON & ASSOCIATES, INC



SITE-GENERATED TRIPS AT SITE ACCESSES
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 8

KITTELSON & ASSOCIATES, INC

BUILD-YEAR (2016) TOTAL TRAFFIC CONDITIONS

The build-year (2016) total traffic scenario analyzed how the study area's transportation system will operate with the site-generated traffic of the proposed Costco development. Any impacts due to site-generated traffic will be documented and mitigations will be identified at the impacted study intersections.

Traffic Volumes

Site-generated traffic volumes (shown in Figure 7 and Figure 8) were added to the build-year (2016) background traffic volumes for the weekday p.m. and weekend midday peak hours (shown in Figure 5) to arrive at the build-year (2016) total traffic conditions shown in Figure 9.

Intersection Operations

Figure 9 also summarizes the intersection operations analysis for the build-year (2016) total traffic scenario. The build-year (2016) total traffic scenario identified two additional intersections as not meeting operational standards compared to those not previously identified in the build-year (2016) background scenario.

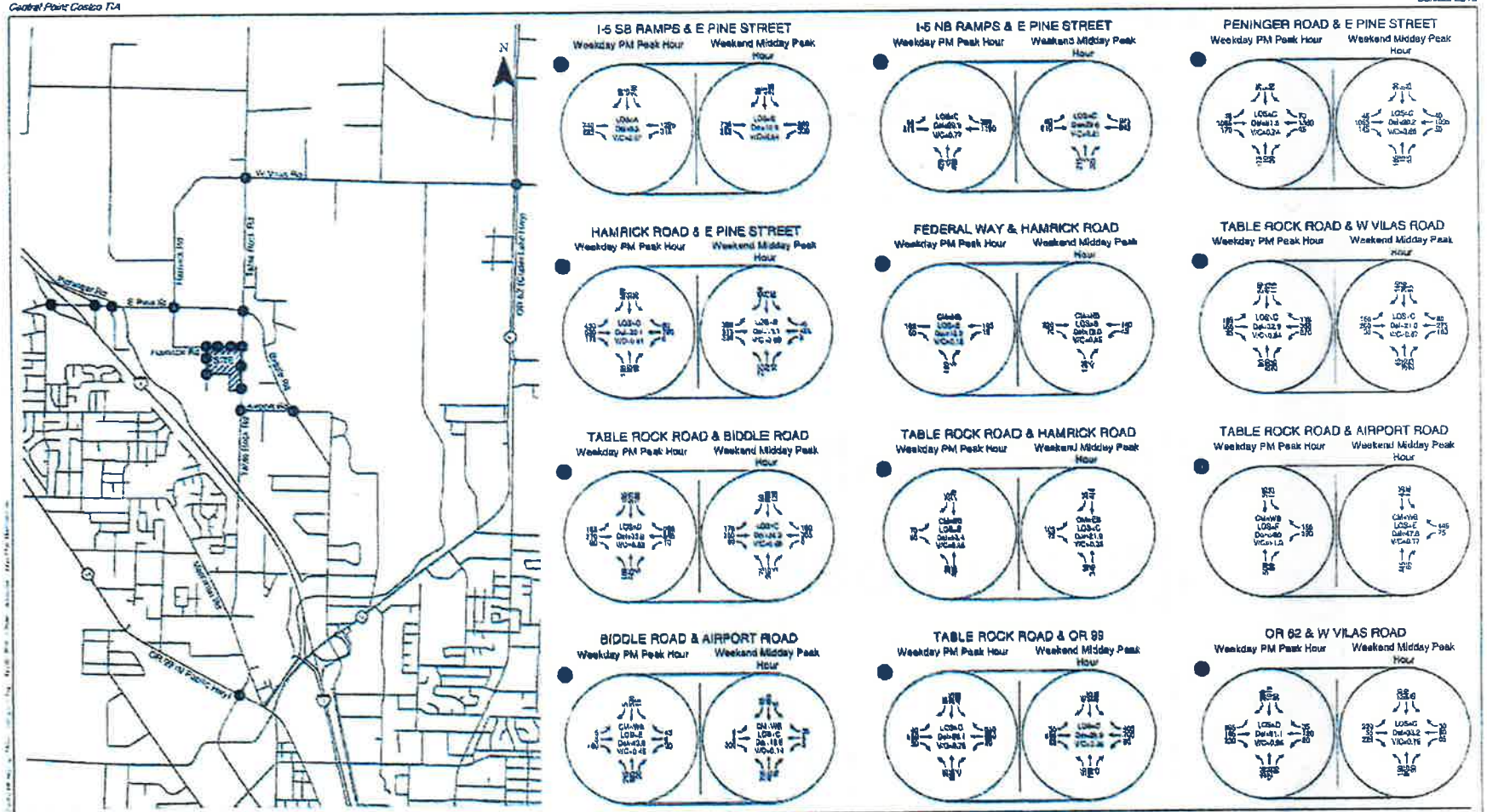
Table 6 also presents the build-year (2016) total traffic operation results at each of the study intersections. All of the study intersections operate at acceptable levels of service during the weekday p.m. and weekend midday peak hours with the exception of:

- **I-5 NB Ramps & East Pine Street** exceeds ODOT standards (lane group v/c ratio ≤ 0.85) with the northbound right-turn lane group's v/c ratio of 0.87 during the weekday p.m. peak hour.
- **Table Rock Road & Airport Road,** as under existing and 2016 background conditions, continues to operate at a LOS F during the weekend p.m. peak hour. However, delay at the intersection increases due to trips accessing Table Rock Road. During the weekend midday peak hour, site-generated traffic causes delay to increase by approximately 31 seconds, causing the level of service to drop from LOS C to LOS E.
- **Biddle Road & Airport Road** experiences a higher delay for the critical movement of the westbound approach, dropping from LOS C to E during the weekday p.m. peak period due to site-generated traffic. While no site-generated traffic is expected to be coming from the westbound approach, the delay increases because of the amount of vehicles making the northbound left at the unsignalized intersection. Even with the site generated traffic, the intersection is operating at a very low volume-to-capacity ratio of 0.45 in the weekday p.m. peak hour and 0.14 in the weekday midday peak hour.

Table 4. Build-Year (2016) Total Traffic Conditions

Study Intersection	Governing Agency Standard	Peak Period	Critical Movement	Build-Year (2016) Plus Project Traffic Operations		
				LOS[2]	Delay[3]	V/C Ratio[4]
1. I-5 SB Ramp & East Pine Street	ODOT	PM Peak	-	B	9.6	0.67
		MID Peak	-	B	10.4	0.64
2. I-5 NB Ramp & East Pine Street	ODOT	***PM Peak***	-	***C***	***29.9***	***0.77***
		MID Peak	-	C	22.6	0.61
3. Peninger Road & East Pine Street	ODOT, County, City	PM Peak	-	C	21.6	0.74
		MID Peak	-	C	20.2	0.66
4. Hamrick Road & East Pine Street	County, City	PM Peak	-	C	20.1	0.81
		MID Peak	-	B	13.1	0.60
5. Federal Way & Hamrick Road	County, City	PM Peak	Northbound	B	10.9	0.18
		MID Peak	Northbound	B	12.0	0.25
6. Table Rock Road & Vilas Road	County	PM Peak	-	C	32.9	0.84
		MID Peak	-	C	21.0	0.67
7. Table Rock Road & Biddle Road	County	PM Peak	-	C	35.9	0.82
		MID Peak	-	C	24.3	0.65
8. Table Rock Road & Hamrick Road	County	PM Peak	Eastbound Left	E	43.4	0.46
		MID Peak	Eastbound Left	C	21.9	0.35
9. Table Rock Road & Airport Road	County	***PM Peak***	***Westbound***	***F***	***>100.0***	***>1.00***
		MID Peak	Westbound	E	47.8	0.77
10. Biddle Road & Airport Road	City of Medford	***PM Peak***	***Westbound***	***E***	***43.6***	***0.45***
		MID Peak	Westbound	C	16.5	0.14
11. Table Rock Road & OR 99	ODOT, County	PM Peak	-	C	28.1	0.75
		MID Peak	-	C	25.0	0.66
12. OR 62 & East Vilas Road	ODOT, County	PM Peak	-	D	51.1	0.94
		MID Peak	-	C	33.2	0.75

Notes: [1] The critical movement is reported for all unsignalized intersections based on the *2000 Highway Capacity Manual*; [2] LOS = Level of Service; [3] Delay is reported in seconds per vehicle; [4] V/C Ratio is defined as vehicle-to-capacity ratio which calculates the number of vehicles divided by the capacity of the roadway/intersection during the peak 15 minutes of the peak hour; and **Bold *and italics*** indicates an intersection operating below its jurisdiction's standards.



CM = CRITICAL MOVEMENT (INTERSECTION)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/UNSIGNALIZED CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED))
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED))
V/C = CRITICAL VOLUME TO CAPACITY RATIO

BUILD-YEAR (2016) TOTAL TRAFFIC CONDITIONS
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 9

KITTELSON & ASSOCIATES, INC

Site Access Operations

There are six proposed driveways accessing the Central Point Costco site, two on each of the site's bordering frontage roads. On the west side of the site, two full accesses are proposed with movements accessible to northbound and southbound on Federal Way. A full access (closest to Federal Way) and right-in/right-out access (closest to Table Rock Road) are proposed on the north side of the site with access to and from Hamrick Road. Finally, there are two full accesses proposed on along Table Rock Road. The southern-most driveway on Table Rock Road would be the primary access for vehicles to access the Costco Gasoline fuel station.

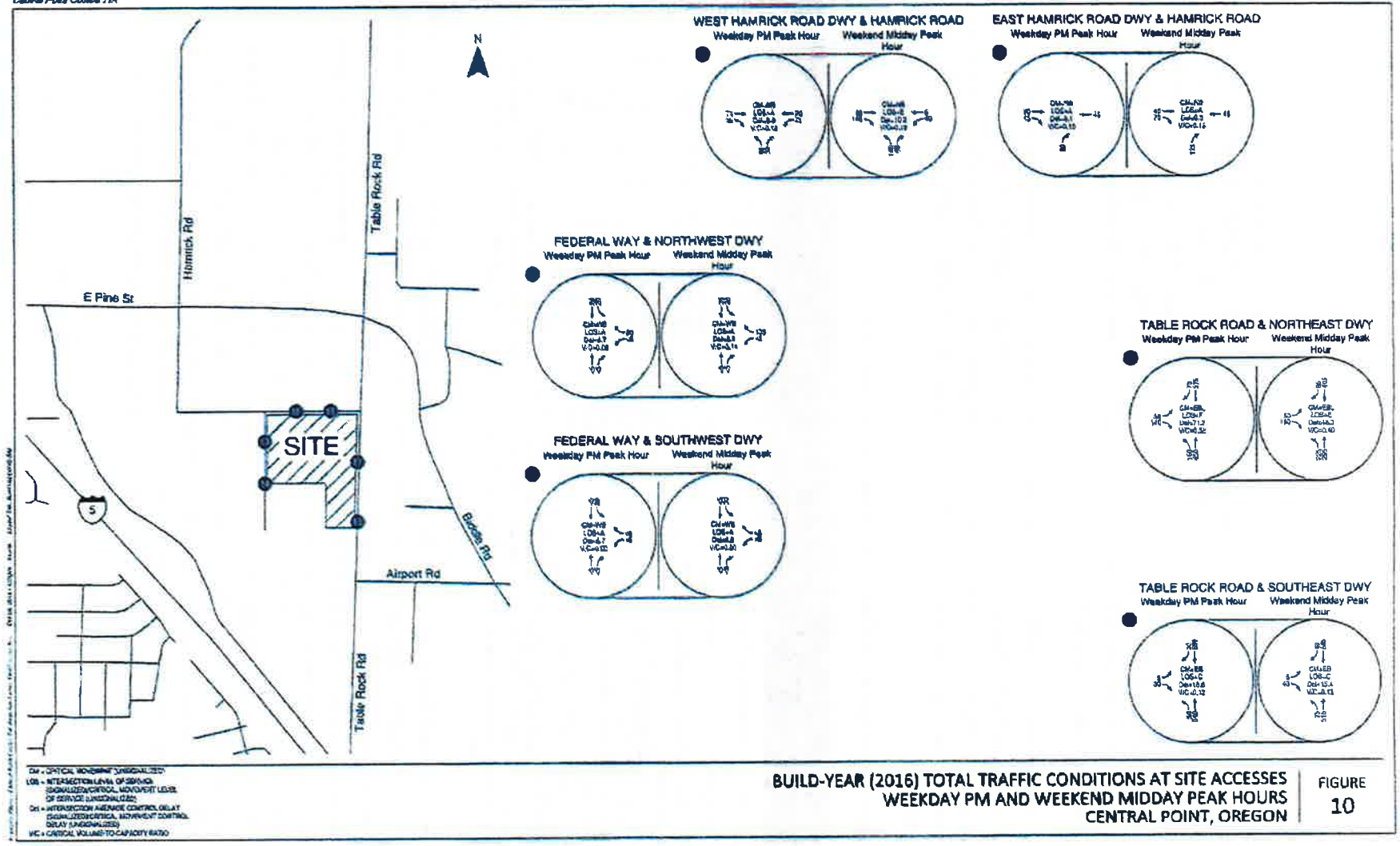
Table 9 presents the traffic operations at the proposed site accesses. The governing agency's standard is determined by the roadway in which the site access is located. Figure 10 also illustrates the build-year (2016) total traffic conditions at each of the proposed site access during the weekday p.m. and weekend midday peak hour. *Appendix "G" contains the build-year (2016) total traffic operation worksheets.*

Table 9. Build-Year (2016) Total Traffic Conditions at Site Accesses

Site Access	Governing Agency Standard	Peak Period	Critical Movement	Build-Year (2016) Plus Project Traffic Operations		
				LOS[2]	Delay[3]	V/C Ratio[4]
13. Federal Way & Northwest Driveway	City of Central Point	PM Peak	Westbound	A	8.7	0.09
		MID Peak	Westbound	A	8.8	0.14
14. Federal Way & Southwest Driveway	City of Central Point	PM Peak	Westbound	A	8.7	0.01
		MID Peak	Westbound	A	8.8	0.01
15. West Hamrick Road Driveway & Hamrick Road	City of Central Point	PM Peak	Northbound Left	A	9.9	0.12
		MID Peak	Northbound Left	B	10.2	0.19
16. East Hamrick Road (Right-in/Right-out) & Hamrick Road	City of Central Point	PM Peak	Northbound Right	A	9.1	0.10
		MID Peak	Northbound Right	A	9.3	0.15
17. Table Rock Road & Northeast Driveway	Jackson County	PM Peak	Eastbound Left	F	71.2	0.52
		MID Peak	Eastbound Left	E	48.3	0.40
18. Table Rock Road & Southeast Driveway	Jackson County	PM Peak	Eastbound	C	18.6	0.12
		MID Peak	Eastbound	C	15.4	0.12

[1] The critical movement is reported for all unsignalized intersections based on the *2000 Highway Capacity Manual*; [2] LOS = Level of Service; [3] Delay is reported in seconds per vehicle; [4] V/C Ratio is defined as vehicle-to-capacity ratio which calculates the number of vehicles divided by the capacity of the roadway/intersection during the peak 15 minutes of the peak hour; and ***Bold and Italics*** indicates an intersection operating below its jurisdiction's standards.

As can be seen from the table and figure, all of the site access intersections are projected to operate at acceptable levels-of-service and volume-to-capacity ratios during both the weekday p.m. and weekend midday peak hours, with the exception of the Table Rock Road/Northeast access. Note this is assuming this access is a full movement access and no improvements to Table Rock Road are completed. Under this scenario, the critical eastbound left-turn movements at the Table Rock Road/Northeast access is projected to operate at LOS F during the weekday p.m. peak hour, however, it is still projected to operate well under capacity and meet the County's operational standard with a volume-to-capacity ratio of 0.52. This means that while drivers wishing to make a left-turn out of this location will experience delay, they will still be able to find sufficient gaps in the traffic flow along Table Rock Road to complete the turn. Again, this is a near-term scenario for the first year of opening of the Costco development before the Table Rock Road widening improvements are constructed in 2017.



BUILD-YEAR (2016) TOTAL TRAFFIC CONDITIONS AT SITE ACCESSES
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 10

KITTELSON & ASSOCIATES, INC

BUILD-YEAR (2016) MITIGATIONS

This section provides a discussion on mitigations for the impacted intersections under build year (2016) total traffic conditions. As outlined above, the build year (2016) scenario identified two additional intersections as not meeting operational standards compared to those not previously identified in the build-year (2016) background scenario: the I-5 NB Ramp/E Pine Street and Table Rock Road/Airport Road intersections. Mitigations for both these locations have already been identified through previous planning efforts by the City of Central Point, Jackson County, and ODOT. These are discussed below. *Appendix "H" contains the build-year (2016) mitigated traffic operation worksheets for the intersections outlined below.*

I-5 NB Ramp & East Pine Street Mitigation

Site-generated trips increase the northbound right-turn lane's v/c ratio by 2% during the weekday p.m. peak hour, resulting in a v/c ratio for the lane group of 0.87. This is greater than ODOT's standard of a maximum v/c of 0.85 for each lane groups at a ramp interchange. The need for additional capacity for this northbound right-turn movement has been previously identified in the *Final Draft IAMP: Exit 33* study which calls for the widening of the I-5 northbound off-ramp to add a second right-turn lane at the northbound approach to East Pine Street. The second turn lane would provide an additional 350 feet of storage to manage queuing on the off-ramp that cannot be managed with signal timing. Based on the assumed parameters of the project, this project would have the following benefit at the I-5 NB Off-Ramp intersection:

- The northbound right-turn lane group would operate with a v/c ratio of 0.49 in the build-year (2016) total traffic scenario during the p.m. peak hour with the proposed improvements stated in the *Final Draft IAMP: Exit 33.*

ODOT and the City of Central Point are currently in discussions to determine Costco's appropriate proportional fair share contribution to this improvement as mitigation for the site generated trip impacts.

Table Rock Road & Airport Road Intersection

Improvements to the Table Rock Road/Airport Road intersection are scheduled in year 2017 as part of Table Rock Road widening. In addition to widening Table Rock Road at the intersection, a signal will be added to the intersection. The details of the signalized intersection have not yet been finalized; therefore, mitigated assumptions were based on the project description of Project# 821 in the RVMPO RTP. The signalized intersection has the following impact:

- With the addition of a signal, the level of service and delay improves significantly during both the weekday p.m. and weekend midday peak hour. Based on a 60 second cycle length the intersection operates at LOS A with an average delay of 9.7 seconds per vehicle and a v/c ratio of 0.51 during the weekday p.m. peak hour.

- The westbound approach improves to a LOS B with an approach delay of 15.4 seconds per vehicle with the signal, compared to LOS F and an approach delay over 100 seconds without a signal during the weekday p.m. peak hour under build-year (2016) total traffic conditions.

This intersection is an existing deficiency; however, given that this improvement is not currently scheduled until 2017, Jackson County and the City of Central Point are currently in discussions to determine an appropriate contribution to this improvement as mitigation in the interim for the Costco project.

TABLE ROCK ROAD ACCESS ALTERNATIVES

Even though the build year (2016) analysis showed that all of the site accesses will be able to operate as proposed upon site opening before the Table Rock Road improvements are constructed, an evaluation of access alternatives for Table Rock Road was also completed to compare how temporary improvements would impact the access operations in the interim until the Table Rock Road widening is completed in 2017. The access scenarios compared were:

- Build Year (2016) Total Traffic Conditions (i.e., Full Access to Table Rock Road) with No Table Rock Road Improvements (as summarized above)
- Build-Year (2016) Total Traffic Conditions with Temporary Table Rock Road Improvements (i.e., temporary widening of Table Rock Road along the site frontage to provide a center left-turn lane until the ultimate widening project is constructed)
- Build-Year (2016) Total Traffic Conditions with Restricted Right-In/Right-Out Site Accesses (restrict Table Rock Road access to right-in/right-out only until the ultimate widening project is constructed)

Operational Comparison

Table 10 compares the access operational results for these three scenarios. Also included for comparison are the operational results for the Table Rock Road/Hamrick Road intersection which does change depending on how the site's Table Rock Road accesses are configured.

Table 10. Table Rock Road Access Alternative Comparison

Study Intersection/Site Access	Governing Agency Standard	Peak Period	Critical Movement	LOS	Delay	V/C Ratio
Build Year (2016) Total Traffic Conditions (full movement accesses/no improvements to Table Rock Rd)						
8. Table Rock Road & Hamrick Road	Jackson County	PM Peak	Eastbound Left	E	43.4	0.46
		MID Peak	Eastbound Left	C	21.9	0.35
17. Table Rock Road & Northeast Driveway	Jackson County	PM Peak	Eastbound Left	F	71.2	0.52
		MID Peak	Eastbound Left	E	48.3	0.40
18. Table Rock Road & Southeast Driveway	Jackson County	PM Peak	Eastbound	C	18.6	0.12
		MID Peak	Eastbound	C	15.4	0.12
Build Year (2016) Total Traffic Conditions with Temporary Table Rock Widening (adding a center turn lane)						
8. Table Rock Road & Hamrick Road	Jackson County	PM Peak	Eastbound Left	C	15.7	0.19
		MID Peak	Eastbound Left	B	13.4	0.21
17. Table Rock Road & Northeast Driveway	Jackson County	PM Peak	Eastbound Left	C	20.3	0.19
		MID Peak	Eastbound Left	C	19.5	0.18
18. Table Rock Road & Southeast Driveway	Jackson County	PM Peak	Eastbound	C	15.1	0.09
		MID Peak	Eastbound	B	13.4	0.10
Build Year (2016) Total Traffic Conditions with Table Rock Road Accesses Restricted to RI/RO						
8. Table Rock Road & Hamrick Road[1]	Jackson County	PM Peak	Eastbound Left	F	>85.0	>1.0
		MID Peak	Eastbound Left	F	>85.0	>1.0
17. Table Rock Road & Northeast Driveway	Jackson County	PM Peak	Eastbound Left	C	16.6	0.33
		MID Peak	Eastbound Left	B	14.3	0.34
18. Table Rock Road & Southeast Driveway	Jackson County	PM Peak	Eastbound	B	14.6	0.08
		MID Peak	Eastbound	B	13.0	0.09

Note: [1] Note: Adding temporary widening around the intersection to provide a northbound left-turn lane as well as a center refuge area north of Hamrick to allow vehicles turning left from Hamrick to make a two stage gap acceptance maneuver for the left-turn will improve operations to LOS E, 39.7 s/veh, and v/c=0.58 in the weekday p.m. peak hour and LOS F, 67.7 s/veh, and v/c=0.80 in the weekend midday peak hour.

The following conclusions can be drawn from the comparison in Table 10:

- Assuming full movement access and no improvements to Table Rock Road, the eastbound left-turns at the northeast access to Table Rock will experience relatively long delay (resulting in LOS F) but the access will still operate well under capacity and meet the County's operational standard with a volume-to-capacity ratio of 0.52 during the critical time period.
- Providing temporary widening along the site frontage to provide a temporary center turn lane will allow all Table Rock Road accesses to operate acceptably as full movements until the ultimate Table Rock Road widening improvements are constructed in 2017.
- Restricting the site's Table Rock Road accesses to right-in/right-out only will allow those accesses to operate at acceptable levels of service and volume-to-capacity ratios. However, it will add additional left-turn movements at the Table Rock Road/Hamrick Road intersection thus resulting in over-capacity and LOS F conditions at that location. This impact could be reduced by adding temporary widening around the intersection to provide a northbound left-turn lane as well as a center refuge area north of Hamrick to allow vehicles turning left from Hamrick to make a two stage gap acceptance maneuver for the left-turn (will improve operations to LOS E and v/c=0.58 in the weekday p.m. peak hour and LOS F and v/c=0.80 in the weekend midday peak hour.

As requested by the City of Central Point, the operations of the site accesses to Table Rock Road in the year 2017 once the Table Rock Road widening improvements are constructed were also evaluated. These were evaluated to compare operations with the accesses as full movement accesses and as right-in/right-out only accesses. Table 11 summarizes the operations of the Table Rock Road site accesses in the year 2017 once the Table Rock Road improvements are in place.

Table 11. Table Rock Road Access Operations in 2017

Study Intersection/Site Access	Governing Agency Standard	Peak Period	Critical Movement	LOS	Delay	V/C Ratio
Full Accesses Along Table Rock Road (2017 – Full Build Out of Table Rock Road)						
8. Table Rock Road & Hamrick Road	Jackson County	PM Peak	Eastbound Left	C	15.0	0.18
		MID Peak	Eastbound Left	B	13.3	0.21
17. Table Rock Road & Northeast Driveway	Jackson County	PM Peak	Eastbound Left	C	18.8	0.17
		MID Peak	Eastbound Left	C	18.7	0.17
18. Table Rock Road & Southeast Driveway	Jackson County	PM Peak	Eastbound	B	12.1	0.07
		MID Peak	Eastbound	B	11.2	0.08
Right-in/Right-out Accesses Along Table Rock Road (2017 – Full Build Out of Table Rock Road)						
8. Table Rock Road & Hamrick Road	Jackson County	PM Peak	Eastbound Left	D	35.0	0.54
		MID Peak	Eastbound Left	F	56.6	0.75
17. Table Rock Road & Northeast Driveway	Jackson County	PM Peak	Eastbound Left	B	12.4	0.24
		MID Peak	Eastbound Left	B	11.8	0.27
18. Table Rock Road & Southeast Driveway	Jackson County	PM Peak	Eastbound	B	11.3	0.05
		MID Peak	Eastbound	B	10.7	0.06

The following conclusions can be drawn from the comparison in Table 11:

- Once the ultimate Table Rock Road widening improvement is constructed in 2017, all site accesses to Table Rock Road will operate a good levels of service (LOS C or better) and volume-to-capacity ratios (v/c=0.21 or better) during the peak hour periods assuming they are full access movements.
- The accesses will also operate acceptably as right-in/right-out only accesses once the ultimate Table Rock Road improvements are constructed, however, restricting those access will add additional left-turn movements at the Table Rock Road/Hamrick Road intersection. The additional left-turn demand will cause the critical eastbound left-turn movement to go from LOS C and v/c = 0.18 to LOS D and v/s = 0.54 in the weekday p.m. peak hour and LOS B and v/c = 0.21 to LOS F and v/c = 0.75 in the weekend midday peak hour.

Safety Comparison

In addition to the access operations comparison outlined above, the predicted safety performance of the accesses under the various alternatives was reviewed. A safety analysis was performed for the Table Rock Road accesses using the predictive crash methodology from Chapter 12 of the *Highway Safety Manual,* with adjusted crash calibration factors from ODOT's, *Calibrating the Highway Safety Manual Predictive Methods for Oregon Highways*. The accesses were evaluated as unsignalized intersections (since no specific safety predictive functions are provided for accesses). The analysis looked at five scenarios:

- Table Rock Road as Two Lanes with Full Movement Access
- Table Rock Road as Two Lanes with RI/RO Only Access
- Table Rock Road as Three Lanes with Full Movement Access
- Table Rock Road as Five Lanes with Full Movement Access
- Table Rock Road as Five Lanes with RI/RO Only Access

In order to predict crashes at right-in/right-out intersections, head-on collisions and angle crashes were omitted from the prediction methodology to represent a RIRO driveway.

Table 12 summarizes the results of this evaluation and safety comparison.

Table 12. Table Rock Road Access Predictive Safety Comparison

Site Access	Predicted Annual Average Crash Frequency: Fatal and Injury	PDO	Total
Full Access Site Driveways Along Table Rock Road (2 Lane Cross Section)			
Table Rock Road/Northeast Dwy	0.23	0.48	0.71
Table Rock Road/Southeast Dwy	0.16	0.33	0.49
Total Annual Predicted Crashes	**0.39**	**0.81**	**1.20**
Right-in/Right-out Access Only Along Table Rock Road (2 Lane Cross Section)			
Table Rock Road/Northeast Dwy	0.16	0.37	0.53
Table Rock Road/Southeast Dwy	0.10	0.20	0.30
Total Annual Predicted Crashes	**0.26**	**0.57**	**0.83**
Full Access Site Driveways Along Table Rock Road (3 Lane Cross Section)			
Table Rock Road/Northeast Dwy	0.16	0.32	0.48
Table Rock Road/Southeast Dwy	0.10	0.18	0.28
Total Annual Predicted Crashes	**0.26**	**0.50**	**0.76**
Full Access Site Driveways Along Table Rock Road (5 Lane Cross Section)			
Table Rock Road/Northeast Dwy	0.16	0.33	0.49
Table Rock Road/Southeast Dwy	0.11	0.17	0.28
Total Annual Predicted Crashes	**0.27**	**0.50**	**0.77**
Right-in/Right-out Access Only Along Table Rock Road (5 Lane Cross Section)			
Table Rock Road/Northeast Dwy	0.11	0.25	0.36
Table Rock Road/Southeast Dwy	0.07	0.13	0.20
Total Annual Predicted Crashes	**0.18**	**0.38**	**0.56**

Interpretation of the predictive safety results is complex. These are not absolute numbers and instead represent more of the probability for crashes to occur. In addition, the agencies must weigh the results of the safety predictive results with those of the traffic operational results as there are tradeoffs to each.

Providing full movement accesses to Table Rock Road in the near-term with its current two lane configuration shows the probability for 1.2 crashes per year to occur combined at the two access points. If these were restricted to right-in/right-out only driveways, the safety prediction lowers to a probability of 0.83 crashes per year (about a 30% decrease in probability). If temporary widening was provided in the interim for a two-way left-turn lane along the site's frontage, the probability would lower to 0.76 crashes per year (about a 30% decrease in probability).

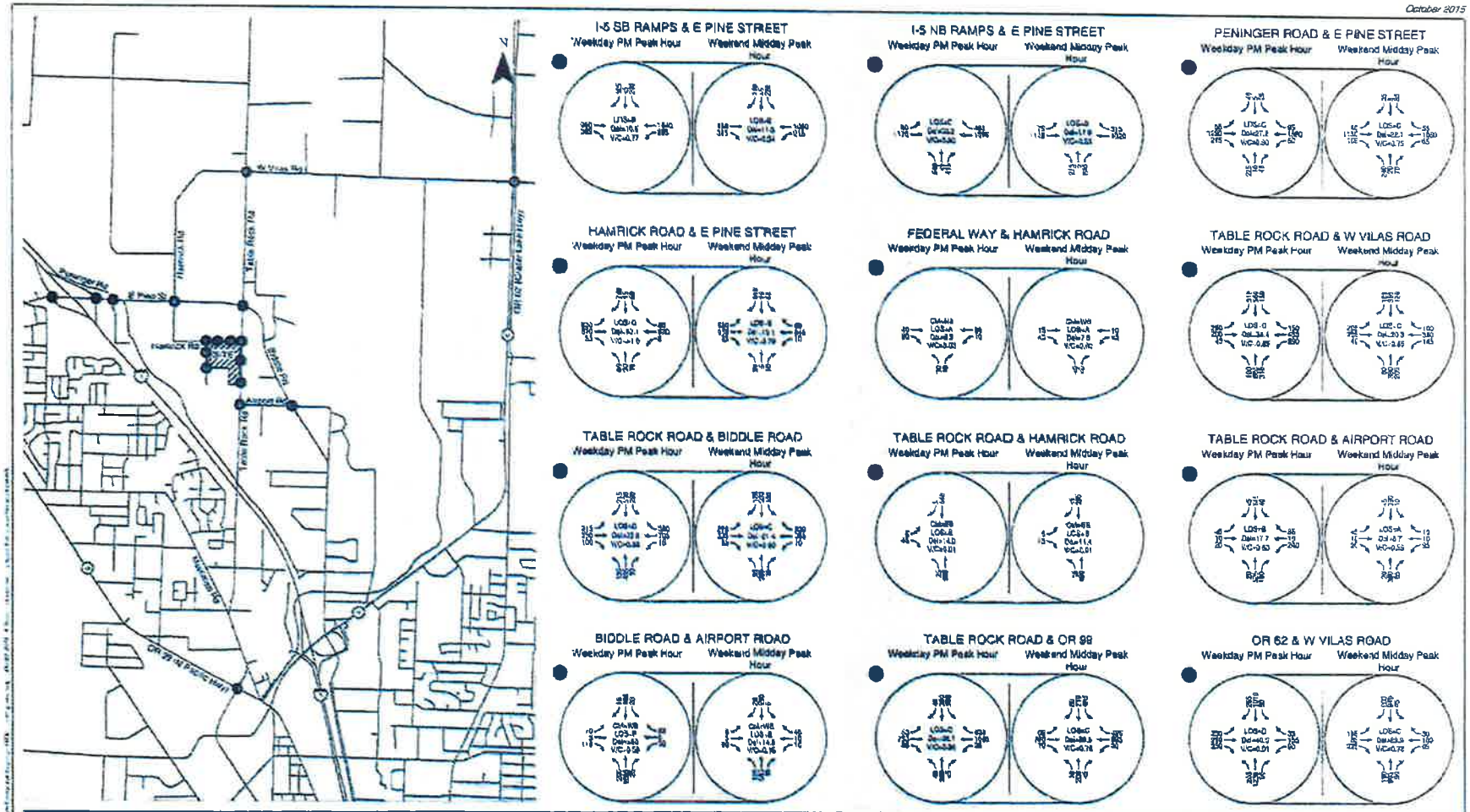
The safety predictive analysis also shows that once the ultimate Table Rock Road widening improvements are in place the safety prediction lowers as well to 0.77 crashes per year even with maintaining full movement accesses at both locations.

FUTURE YEAR (2030) BACKGROUND TRAFFIC CONDITIONS

The future year (2030) background scenario analyzed how the study area's transportation system will operate without the site-generated traffic in year 2030, representing a 15 year long-term future condition at the study intersections. Future year traffic conditions were analyzed for both the weekday p.m. and weekend midday peak hours. The future year (2030) background scenario includes the planned roadway improvements and land use developments previously mentioned for the build year as well as other planned improvements that are expected to be in place by the year 2030 such as the Table Rock Road widening and the Table Rock Road/Airport Road intersection signal. *Appendix "I" contains the future year (2030) background traffic operation worksheets for the intersections outlined below.*

Traffic Volumes

The 2030 background traffic volumes reflect existing traffic counts plus 15 years of annual background growth and in-process development traffic. Volumes along and accessing to and from OR 62 (Crater Lake Highway) were not grown by the annual growth rate due to the expected completion of the OR 62 Expressway project. The future year (2038) model provided by ODOT shows that daily volumes along OR 62 do not increase when compared to the base year (2008) volumes. The 2030 background conditions traffic volumes are summarized in Figure 11.



FUTURE YEAR (2030) BACKGROUND TRAFFIC CONDITIONS
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 11

KITTELSON & ASSOCIATES, INC.

Intersection Operations

Figure 11 and Table 13 present the future year (2030) background conditions operational results at each study intersection. All of study intersections operate at acceptable levels of service and volume-to-capacity ratios during the weekday p.m. and weekend midday peak hours with the following exceptions:

- **Hamrick Road & East Pine Street** operates with a v/c ratio of >1.0 during the weekday p.m. peak hour
- **Biddle Road & Airport Road** (as under the build year conditions) has a critical movement which operates at LOS F during the weekday p.m. peak hour although the movement is still operating under capacity with a v/c ratio of 0.55

Table 13. Future Year (2030) Background Traffic Operations

Study Intersection	Governing Agency Standard	Peak Period	Critical Movement	Future Year (2030) Background Traffic Operations		
				LOS[2]	Delay[3]	V/C Ratio[4]
1. I-5 SB Ramp & East Pine Street	ODOT	PM Peak	-	B	10.5	0.77
		MID Peak	-	B	11.5	0.54
2. I-5 NB Ramp & East Pine Street	ODOT	PM Peak	-	C	30.2	0.80
		MID Peak	-	B	17.9	0.55
3. Peninger Road & East Pine Street	ODOT, County, City	PM Peak	-	C	27.2	0.90
		MID Peak	-	C	22.1	0.75
4. Hamrick Road & East Pine Street	County, City	***PM Peak***	-	***D***	***53.1***	***1.04***
		MID Peak	-	B	15.1	0.79
5. Federal Way & Hamrick Road	County, City	PM Peak	Northbound	A	8.9	0.03
		MID Peak	Northbound	A	7.5	0.01
6. Table Rock Road & Vilas Road	County	PM Peak	-	C	34.4	0.85
		MID Peak	-	C	20.3	0.65
7. Table Rock Road & Biddle Road	County	PM Peak	-	D	35.2	0.86
		MID Peak	-	C	21.4	0.60
8. Table Rock Road & Hamrick Road	County	PM Peak	Eastbound Left	B	14.0	0.01
		MID Peak	Eastbound Left	B	11.4	0.01
9. Table Rock Road & Airport Road	County	PM Peak	-	B	17.7	0.80
		MID Peak	-	A	8.7	0.55
10. Biddle Road & Airport Road	City of Medford	***PM Peak***	***Westbound***	***F***	***54.3***	***0.59***
		MID Peak	Westbound	B	14.5	0.15
11. Table Rock Road & OR 99	ODOT, County	PM Peak	-	D	38.1	0.89
		MID Peak	-	C	30.5	0.76
12. OR 62 & East Vilas Road	ODOT, County	PM Peak	-	D	40.5	0.91
		MID Peak	-	C	29.9	0.72

Notes: [1] The critical movement is reported for all unsignalized intersections based on the *2000 Highway Capacity Manual*; [2] LOS = Level of Service; [3] Delay is reported in seconds per vehicle; [4] V/C Ratio is defined as vehicle-to-capacity ratio which calculates the number of vehicles divided by the capacity of the roadway/intersection during the peak 15 minutes of the peak hour; and **Bold *and Italics*** indicates an intersection operating below its jurisdiction's standards.

FUTURE YEAR (2030) TOTAL TRAFFIC CONDITIONS

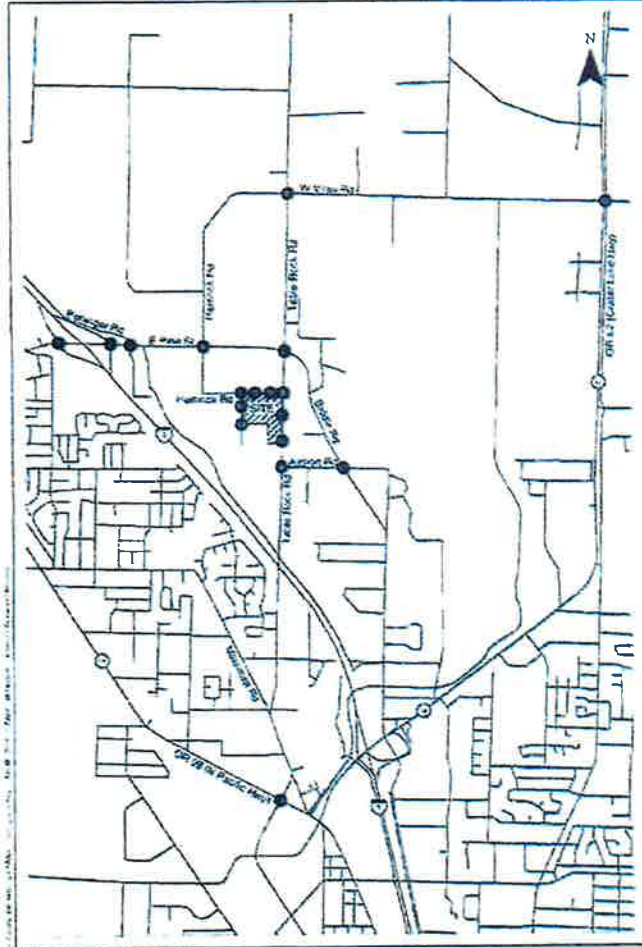
The future year (2030) total traffic scenario analyzed how the study area's transportation system will operate with Costco's site-generated trips in year 2030, representing a 15 year future condition with the addition of site-generated traffic at each of the study intersections. Future year traffic conditions were analyzed for both the weekday p.m. and weekend midday peak hours. The future year (2030) total scenario also includes the planned roadway improvements and land use developments previously mentioned. *Appendix "J" contains the future year (2030) total traffic operation worksheets for the intersections outlined below.*

Traffic Volumes

Traffic volumes for the future year (2030) total traffic scenario reflect the 2030 background scenario volumes plus the addition of site generated traffic. The future year 2030 total traffic volumes are summarized in Figure 12 for the off site study intersections.

Intersection Operations

The intersection operations for the 2030 total traffic scenario are also summarized in Figure 12 and in Table 14. As can be seen from the figure and table, the future year (2030) total scenario determined that site-generated trips did not impact any study intersections not previously identified in the future year (2030) background scenario. As in the 2030 background scenario, the Hamrick Road/East Pine Street intersection operates with a v/c ratio of >1.0 during the weekday p.m. peak hour and the critical movement at the Biddle Road/Airport Road operates at LOS F during the weekday p.m. peak hour.



I-5 SB RAMPS & E PINE STREET
Weekday PM Peak Hour | Weekend Midday Peak Hour

I-5 NB RAMPS & E PINE STREET
Weekday PM Peak Hour | Weekend Midday Peak Hour

PENINGER ROAD & E PINE STREET
Weekday PM Peak Hour | Weekend Midday Peak Hour

HAMRICK ROAD & E PINE STREET
Weekday PM Peak Hour | Weekend Midday Peak Hour

FEDERAL WAY & HAMRICK ROAD
Weekday PM Peak Hour | Weekend Midday Peak Hour

TABLE ROCK ROAD & W VILAS ROAD
Weekday PM Peak Hour | Weekend Midday Peak Hour

TABLE ROCK ROAD & BIDDLE ROAD
Weekday PM Peak Hour | Weekend Midday Peak Hour

TABLE ROCK ROAD & HAMRICK ROAD
Weekday PM Peak Hour | Weekend Midday Peak Hour

TABLE ROCK ROAD & AIRPORT ROAD
Weekday PM Peak Hour | Weekend Midday Peak Hour

BIDDLE ROAD & AIRPORT ROAD
Weekday PM Peak Hour | Weekend Midday Peak Hour

TABLE ROCK ROAD & OR 99
Weekday PM Peak Hour | Weekend Midday Peak Hour

OR 62 & W VILAS ROAD
Weekday PM Peak Hour | Weekend Midday Peak Hour

CM = CRITICAL MOVEMENT (SIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED))
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED))
VC = CRITICAL VOLUME TO CAPACITY RATIO

FUTURE YEAR (2030) TOTAL TRAFFIC CONDITIONS
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE
12

KITTELSON & ASSOCIATES, INC.

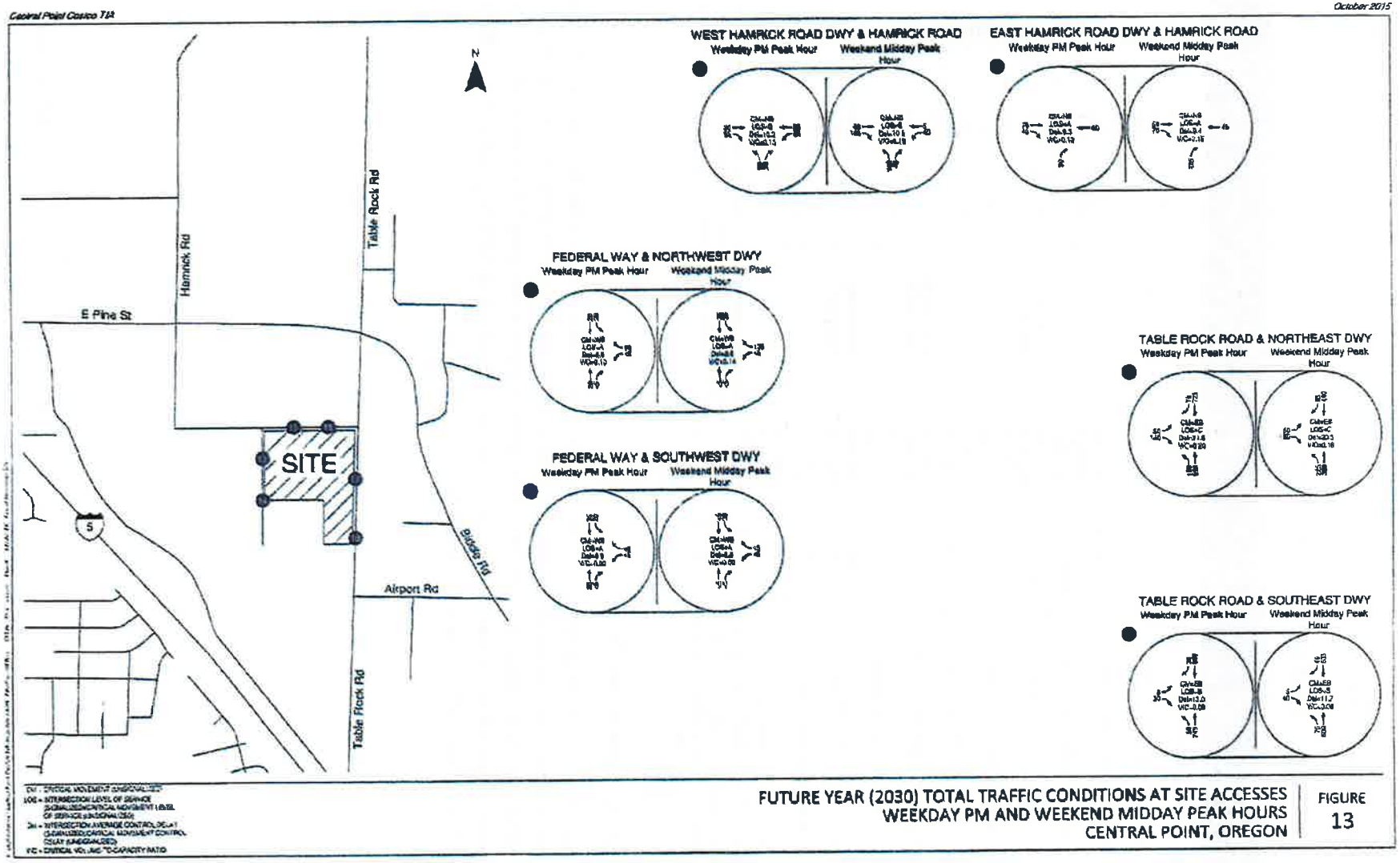
Table 14. Future Year (2030) Total Traffic Operations

Study Intersection	Governing Agency Standard	Peak Period	Critical Movement	Future Year (2030) Background Traffic Operations		
				LOS[2]	Delay[3]	V/C Ratio[4]
1. I-5 SB Ramp & East Pine Street	ODOT	PM Peak	-	B	11.4	0.79
		MID Peak	-	B	12.1	0.58
2. I-5 NB Ramp & East Pine Street	ODOT	PM Peak	-	C	31.8	0.84
		MID Peak	-	C	20.6	0.63
3. Peninger Road & East Pine Street	ODOT, County, City	PM Peak	-	C	27.8	0.95
		MID Peak	-	C	22.5	0.84
4. Hamrick Road & East Pine Street	County, City	***PM Peak***	-	***D***	***46.2***	***1.03***
		MID Peak	-	B	18.7	0.78
5. Federal Way & Hamrick Road	County, City	PM Peak	Northbound	B	11.1	0.19
		MID Peak	Northbound	B	12.0	0.25
6. Table Rock Road & Vilas Road	County	PM Peak	-	D	35.9	0.88
		MID Peak	-	C	21.7	0.68
7. Table Rock Road & Biddle Road	County	PM Peak	-	D	38.0	0.90
		MID Peak	-	C	24.0	0.69
8. Table Rock Road & Hamrick Road	County	PM Peak	Eastbound Left	C	17.3	0.21
		MID Peak	Eastbound Left	B	14.4	0.23
9. Table Rock Road & Airport Road	County	PM Peak	-	C	28.4	0.91
		MID Peak	-	B	11.5	0.67
10. Biddle Road & Airport Road	City of Medford	***PM Peak***	***Westbound***	***F***	***>100.0***	***>1.00***
		MID Peak	***Westbound***	***F***	***51.9***	***0.48***
11. Table Rock Road & OR 99	ODOT, County	PM Peak	-	D	40.9	0.91
		MID Peak	-	C	33.7	0.79
12. OR 62 & East Vilas Road	ODOT, County	PM Peak	-	D	43.0	0.93
		MID Peak	-	C	31.4	0.74

Notes: [1] The critical movement is reported for all unsignalized intersections based on the *2000 Highway Capacity Manual*; [2] LOS = Level of Service; [3] Delay is reported in seconds per vehicle; [4] V/C Ratio is defined as vehicle-to-capacity ratio which calculates the number of vehicles divided by the capacity of the roadway/intersection during the peak 15 minutes of the peak hour; and **Bold *and italics*** indicates an intersection operating below its jurisdiction's standards.

Year 2030 Site Access Operations

Figure 13 and Table 15 presents the year 2030 traffic conditions at each of the site accesses. All of the proposed site accesses operate at acceptable levels of service during the weekday p.m. and weekend midday peak hours. Because of the planned roadway improvements along Table Rock Road, there is a significant benefit to the traffic operations at the site accesses along Table Rock Road when compared to the build-year (2016) total traffic scenario.



FUTURE YEAR (2030) TOTAL TRAFFIC CONDITIONS AT SITE ACCESSES
WEEKDAY PM AND WEEKEND MIDDAY PEAK HOURS
CENTRAL POINT, OREGON

FIGURE 13

KITTELSON & ASSOCIATES, INC.

Table 15. Future Year (2030) Total Traffic Operations at Site Accesses

Site Access	Governing Agency Standard	Peak Period	Critical Movement[1]	Build Year (2016) Plus Project Traffic Operations		
				LOS[2]	Delay[3]	V/C Ratio[4]
13. Federal Way & Northwest Driveway	City of Central Point	PM Peak	Westbound	A	8.8	0.10
		MID Peak	Westbound	A	8.8	0.14
14. Federal Way & Southwest Driveway	City of Central Point	PM Peak	Westbound	A	8.9	0.01
		MID Peak	Westbound	A	8.8	0.01
15. West Hamrick Road Driveway & Hamrick Road	City of Central Point	PM Peak	Northbound Left	B	10.3	0.15
		MID Peak	Northbound Left	B	10.5	0.19
16. East Hamrick Road (Right-In/Right-out) & Hamrick Road	City of Central Point	PM Peak	Northbound Right	A	9.3	0.12
		MID Peak	Northbound Right	A	9.4	0.15
17. Table Rock Road & Northeast Driveway	Jackson County	PM Peak	Eastbound Left	C	21.8	0.20
		MID Peak	Eastbound Left	C	20.3	0.19
18. Table Rock Road & Southeast Driveway	Jackson County	PM Peak	Eastbound	B	13.0	0.08
		MID Peak	Eastbound	B	11.7	0.08

Notes: [1] The critical movement is reported for all unsignalized intersections based on the *2000 Highway Capacity Manual*; [2] LOS = Level of Service; [3] Delay is reported in seconds per vehicle; [4] V/C Ratio is defined as vehicle-to-capacity ratio which calculates the number of vehicles divided by the capacity of the roadway/intersection during the peak 15 minutes of the peak hour; and **Bold *and Italics*** indicates an intersection operating below its jurisdiction's standards.

FUTURE YEAR (2030) MITIGATIONS

This section includes the mitigations to the intersections identified as not meeting operational standards in the year 2030. As outlined previously, there are two locations found to not meet standards in the year 2030 background conditions. The additional of site generated traffic did not trigger any additional locations to not meet standards in the year 2030 scenarios. The two locations found to not meet standards in the year 2030 background conditions are:

- Hamrick Road & East Pine
- Biddle Road & Airport Road

The mitigated result for each impacted intersection is outlined below. *Appendix "K" contains the future year (2030) mitigated traffic operation worksheets for the intersections outlined below.*

Hamrick Road & East Pine Street Mitigations

The intersection of Hamrick Road/East Pine Street experiences a heavy volume of vehicles making a southbound right-turn at the intersection, with a v/c ratio for that movement of above 1.0 during the p.m. peak hour of the future year (2030) background traffic conditions. There have no improvements identified beyond Project #216 stated in the City Central Point's transportation system plan. In order to mitigate the intersection, there are several options:

- The addition of a southbound right-turn lane would improve intersection operations to LOS C with an overall v/c ratio of 0.76 and average delay of 25.2 seconds per vehicle. The v/c ratio of the southbound right-turn movement would decrease from 1.27 to 0.70 with the addition of an additional turn lane.

- The addition of a second eastbound left-turn lane would also mitigate the intersection to a volume-to-capacity ratio of <0.95 (currently under review as one option in the Jackson County TSP)
- The conversion of the intersection to a roundabout would also mitigate the intersection to a volume-to-capacity ratio of <0.95 (currently under review as one option in the Jackson County TSP)

Biddle Road & Airport Road Mitigations

This intersection operates at LOS F during both the 2030 background and 2030 total traffic conditions. The project is not adding any traffic to the critical westbound approach. There are no knows plans for improvements at this location by the City of Medford but the need for mitigation is not triggered by the project.

PARKING ASSESSMENT

City of Central Point Municipal Code 17.64.040 states that all land uses shall comply with the number off-street parking requirements. These requirements for non-residential land uses are stated in Table 17.64.02B. Retail store was assumed as the general commercial use for the proposed Costco development. This use states that no more and no less than 1 parking space per 200 square-feet of net floor area (excluding storage and other non-sales or non-display areas) be provided.

Based on the proposed 160,000 square-foot warehouse, of which 134,000 is usable sales space, this would equate to a minimum and maximum requirement of 670 parking spaces for the Costco development. Municipal Code 17.64.040.B.2 states that the off-street requirements may be increased based on a parking demand analysis prepared by the applicant as part of the site plan and architectural review. The parking demand analysis shall demonstrate and documents justification for the proposed increase.

Parking Demand Analysis

The proposed site plan as illustrated in Figure 1 provides a total of 782 parking spaces which is 30% more spaces than the maximum allowed based on Central Point's Municipal Code. Based on the nature of Costco sales and operations, the proposed parking has been carefully considered and is proposed given known parking demand characteristics for Costco sites. Costco is a unique use that demonstrates the need for a particular amount of parking to accommodate typical and peak demands. In fact, one of the reasons for relocating the existing Medford Costco to Central Point is to build on a site that can provide sufficient parking supply.

Table 16 provides a summary of the documented parking supply and demand at existing Costco warehouses in Oregon (including the current Medford location).

Table 16. Typical Peak Parking Demand at Other Costco Warehouses in Oregon

Costco Site Location	Warehouse Size (sq-ft)	Parking Supply	Peak Period Parking Demand	Parking Demand per 1,000 sq-ft	Parking Supply to Maintain 90% Utilization at Peak	Minimum Recommend Parking Ratio
Clackamas, Oregon	137,000	693	670	4.89	744	5.43
Medford, Oregon	136,297	654	579	4.25	644	4.72
Aloha (Beaverton), Oregon	148,030	682	528	3.57	587	3.96
Average	**140,442**	**676**	**592**	**4.24**	**658**	**4.71**

As shown in Table 16, these three other Costco locations demonstrate a typical peak parking demand of 4.24 spaces/1,000 sq-ft. Guidelines from the Institute of Transportation Engineer's Parking Generation, 4th Edition (Reference 11) recommend that users perceive a parking lot to be "full" once utilization reaches 90% of capacity, noting that increases in illegal parking and repeating circulation occur beyond this level. Given this guidance, our recommendation is to provide sufficient parking to maintain a utilization of below 90% during the typical peak periods. Table 16 shows that, based on data from other Costco developments, the parking ratio required to maintain 90% utilization during the peak or less is a minimum of 4.71 spaces/1,000 sq-ft.

Applying the demonstrated minimum parking supply of 4.71 spaces/1,000 sq-ft to the proposed Central Point Costco development equates to a minimum recommended parking supply as summarized in Table 17.

Table 17. Central Point Costco Recommended Parking Supply

Costco Site Location	Warehouse Size (sq-ft)	Parking Supply Proposed	Minimum Recommend Parking Spaces to Maintain 90% Utilization During Peak Hour
Central Point, Oregon	160,000	782	753

The table shows that a minimum of 753 parking spaces should be supplied in order to provide sufficient capacity for the likely parking demand on site. This indicates that the proposed parking supply of 782 is slightly higher than this minimum amount but within a reasonable range and will provide an appropriate parking supply to accommodate typical peak periods as well as additional spaces for seasonal peaks as well.

In addition to parking space totals, accessible parking requirements are presented in Table 17.64.03 of the City's Municipal Code. For land uses providing a total number of parking spaces between 501 and 1,000, which applies the proposed Central Point Costco site, 2% of total parking provided is required to be accessible. Costco has planned to include approximately 2.2% or 17 of its total parking spaces to be accessible parking, based on total parking spaces equaling 782. The site plan shows that this requirement is being met.

Section 5
Conclusions & Findings

CONCLUSIONS & FINDINGS

The analysis and evaluation completed for the Central Point Costco development resulted in the following conclusions and findings:

Project Description

- Costco Wholesale is proposing to develop a new warehouse and fuel station located in the southwest quadrant of the Table Rock Road/Hamrick Road intersection in Central Point, Oregon.
    - The development plan includes a 160,000 square-foot Costco warehouse and a 24 fueling position Costco Gasoline fuel station. This new Central Point Costco will replace the existing Medford Costco located at 3639 Crater Lake Hwy in Medford, Oregon.
- The parcels of land that in which the proposed Costco would occupy are zoned as M-1 (Industrial) which allows the development of the Costco warehouse and fuel station with a conditional use permit (no land use or zoning changes are required).
- In order to best evaluate the anticipated transportation characteristics of the proposed Central Point Costco development, it was agreed that the Costco-specific data be used to most accurately represent the anticipated traffic characteristics of the unique development type.
- The proposed Costco development is estimated to generate a total of approximately 10,670 net new trips on a daily basis, 900 net new trip ends during the weekday p.m. peak hour and approximately 1,365 net new trip ends during the weekend midday peak hour.
- The distribution pattern for site generated trips was developed using zip code data from current memberships at the existing Costco warehouse located on OR 62 (Crater Lake Highway) in Medford, Oregon, as well as from the existing traffic patterns and major trip origins and destinations within the study area and the regional travel demand model.

Existing Conditions

- The study evaluated 12 off site intersections in addition to site access points.
- The study evaluated two time periods for each evaluation scenario: weekday p.m. peak hour and weekend midday peak hour.
- Based on recent traffic counts collected in May and July 2015, all of the study intersections were found to operate at acceptable operating standards during the existing weekday p.m. and weekend midday peak hours except for the Table Rock Road/Airport Road intersection during weekday p.m. peak.

- The Table Rock Road/Airport Road intersection is stop controlled in the westbound direction. Under existing conditions in the weekday p.m. peak hour, there is high delay for the critical movement (westbound left-turn) resulting in LOS F.

- Crash data the most recent five years (2009 – 2013) at all of the study intersections was reviewed to identify historical safety trends.
  - Turning movement and rear-end crashes were the most common crash type at the intersections, accounting for approximately 82% of all crashes.
  - There were no fatality crashes.
  - Four study intersections were found to be in the 90th percentile and in compliance ODOT's SPIS: I-5 SB Ramps/E Pine Street, Table Rock Road/W Vilas Road, OR 62 (Crater Lake Highway)/W Vilas Road, and Table Rock Road/OR 99.

Build Year 2016 Analysis

- The transportation impact analysis evaluated two different future year scenarios: year 2016, the assumed build out year of the development, and year 2030 a long-term planning year.
- The 2016 build-year background traffic analysis (without inclusion of the project traffic) found that all of the study intersections are forecast to operate at acceptable levels of service and volume-to-capacity ratios during the weekday p.m. and weekend midday peak hours except for the Table Rock Road/Airport Road intersection during weekday p.m. peak hour.
  - As under existing conditions, during the weekday p.m. peak hour there is high delay for the critical movement (westbound left-turn) resulting in LOS F. In addition, the critical movement is also operating with a volume-to-capacity ratio of greater than 0.95 in the build year (2016) background conditions (with no traffic from the proposed Costco development).
- The build-year (2016) total traffic analysis (with inclusion of the project traffic) found that all study intersections will continue to operate at acceptable levels of service during the weekday p.m. and weekend midday peak hours with the exception of:
  - I-5 NB Ramps & East Pine Street exceeds ODOT standards (lane group v/c ratio ≤ 0.85) with the northbound right-turn lane group's v/c ratio of 0.87 during the weekday p.m. peak hour. The need for additional capacity for this northbound right-turn movement has been previously identified in the Final Draft IAMP: Exit 33 study which calls for the widening of the I-5 northbound off-ramp to add a second right-turn lane at the northbound approach to East Pine Street. ODOT and the City of Central Point are currently in discussions to determine Costco's appropriate proportional fair share contribution to this improvement as mitigation for the site generated trip impacts.

- Table Rock Road & Airport Road, as under existing and 2016 background conditions, continues to operate at a LOS F during the weekend p.m. peak hour. Improvements to the Table Rock Road/Airport Road intersection are scheduled in year 2017 as part of Table Rock Road widening and a signal will be added to the intersection. This intersection is an existing deficiency; however, given that this improvement is not currently scheduled until 2017, Jackson County and the City of Central Point are currently in discussions to determine an appropriate contribution to this improvement as mitigation in the interim for the Costco project.
- Biddle Road & Airport Road experiences a higher delay for the critical movement of the westbound approach, dropping from LOS C to E during the weekday p.m. peak period due to site-generated traffic. Even with the site generated traffic, the intersection is operating at a very low volume-to-capacity ratio of 0.45 in the weekday p.m. peak hour and 0.14 in the weekday midday peak hour.

Site Access Analysis

- In the build year 2016 scenario, all site access intersections are projected to operate at acceptable levels-of-service and volume-to-capacity ratios during both the weekday p.m. and weekend midday peak hours, with the exception of the Table Rock Road/Northeast access. Note this is assuming this access is a full movement access and no improvements to Table Rock Road are completed. Under this scenario, the critical eastbound left-turn movements at the Table Rock Road/Northeast access is projected to operate at LOS F during the weekday p.m. peak hour, however, it is still projected to operate well under capacity and meet the County's operational standard.
- Even though the build year (2016) analysis showed that all of the site accesses will be able to operate as proposed upon site opening before the Table Rock Road improvements are constructed, an evaluation of access alternatives for Table Rock Road was also completed to compare how temporary improvements would impact the access operations in the interim.
- The access scenarios compared were:
  - Build Year (2016) Total Traffic Conditions (i.e., Full Access to Table Rock Road) with No Table Rock Road Improvements (as summarized above)
  - Build-Year (2016) Total Traffic Conditions with Temporary Table Rock Road Improvements (i.e., temporary widening of Table Rock Road along the site frontage to provide a center left-turn lane until the ultimate widening project is constructed)
  - Build-Year (2016) Total Traffic Conditions with Restricted Right-In/Right-Out Site Accesses (restrict Table Rock Road access to right-in/right-out only until the ultimate widening project is constructed)
- The access alternatives evaluation found that:

- Assuming full movement access and no improvements to Table Rock Road, the eastbound left-turns at the northeast access to Table Rock will experience relatively long delay (resulting in LOS F) but the access will still operate well under capacity and meet the County's operational standard during the critical time period.
- Providing temporary widening along the site frontage to provide a temporary center turn lane will allow all Table Rock Road accesses to operate acceptably as full movements until the ultimate Table Rock Road widening improvements are constructed in 2017.
- Restricting the site's Table Rock Road accesses to right-in/right-out only will allow those accesses to operate at acceptable levels of service and volume-to-capacity ratios. However, it will add additional left-turn movements at the Table Rock Road/Hamrick Road intersection thus resulting in over-capacity and LOS F conditions at that location. This impact could be reduced by adding temporary widening around the intersection to provide a northbound left-turn lane as well as a center refuge area north of Hamrick to allow vehicles turning left from Hamrick to make a two stage gap acceptance maneuver for the left-turn.
- Once the ultimate Table Rock Road widening improvement is constructed in 2017, all site accesses to Table Rock Road will operate a good levels of service (LOS C or better) and volume-to-capacity ratios (v/c=0.21 or better) during the peak hour periods assuming they are full access movements.

- From a safety perspective, a predictive safety analysis found that:
  - Providing full movement accesses to Table Rock Road in the near-term with its current two lane configuration shows the probability for 1.2 crashes per year to occur combined at the two access points.
  - If these were restricted to right-in/right-out only driveways, the safety prediction lowers to a probability of 0.83 crashes per year (about a 30% decrease in probability).
  - If temporary widening was provided in the interim for a two-way left-turn lane along the site's frontage, the probability would lower to 0.76 crashes per year (about a 30% decrease in probability).
  - The safety predictive analysis also shows that once the ultimate Table Rock Road widening improvements are in place the safety prediction lowers as well to 0.77 crashes per year even with maintaining full movement accesses at both locations.

Future Year 2030 Analysis

- The future year (2030) background conditions analysis (without the project traffic) found that all study intersections will continue to operate at acceptable levels of service and volume-to-capacity ratios during the weekday p.m. and weekend midday peak hours with the following exceptions:
    - Hamrick Road & East Pine Street operates with a v/c ratio of >1.0 during the weekday p.m. peak hour
    - Biddle Road & Airport Road (as under the build year conditions) has a critical movement which operates at LOS F during the weekday p.m. peak hour although the movement is still operating under capacity with a v/c ratio of 0.55
- The future year (2030) total traffic analysis (with the project traffic) found that the site-generated trips did not impact any study intersections not previously identified in the 2030 background scenario.
- All of the proposed site accesses operate at acceptable levels of service during the weekday p.m. and weekend midday peak hours under the future year 2030 total traffic scenario. Because of the planned roadway improvements along Table Rock Road, there is a significant benefit to the traffic operations at the site accesses along Table Rock Road when compared to the build-year (2016) total traffic scenario.

Parking Assessment

- City of Central Point Municipal Code directs that a parking supply of 670 parking spaces be provided for the Costco development (assuming retail land use).
- The project is proposing to provide a total of 782 parking spaces on site.
- As part of this report, a parking demand analysis was completed to demonstrate and documents justification for the proposed increase in parking supply.
- Actual parking supply and demand data from other Costco sites in Oregon indicates that a minimum parking ratio of 4.71 spaces/1,000 sq-ft be provided in order to supply enough parking to meet Costco specific demands.
- Applying the demonstrated minimum parking supply of 4.71 spaces/1,000 sq-ft to the proposed Central Point Costco development equates to a minimum recommended parking supply of 753 spaces.
- This indicates that the proposed parking supply of 782 is slightly higher than this minimum amount but within a reasonable range and will provide an appropriate parking supply to accommodate typical peak periods as well as additional spaces for seasonal peaks as well.

Section 6
References

REFERENCES

1. City of Central Point. *Central Point Comprehensive Land Use Plan 2008-2030,* Central Point, Oregon, May 2013.
2. City of Central Point. *City of Central Point Transportation System Plan 2030,* Implemented by Ordinance #1922, Central Point, Oregon, December 18, 2008.
3. David Evans and Associates, Inc. *Final Draft IAMP: i-5 Exit 33 (Central Point),* Oregon Department of Transportation, Salem, Oregon, May 2015.
4. Transportation Research Board. *Highway Capacity Manual 2000,* Transportation Research Board of the National Academies of Science, Washington, D.C., 2000.
5. Kittelson & Associates, Inc. *Jackson County Transportation System Plan,* Ordinance No. 2005-3, White City, Oregon, March 16, 2005.
6. Oregon Transportation Commission. *OHP Policy 1F Revisions,* 1999 Oregon Highway Plan, Salem, Oregon, December 21, 2011.
7. City of Central Point GIS. *Street Jurisdiction Map,* Jackson County Smartmap, Central Point, Oregon, January 2014.
8. Rogue Valley Metropolitan Planning Organization. *2009-2034 Rogue Valley Regional Transportation Plan,* Central Point, Oregon, April 27, 2009.
9. Oregon Department of Transportation. *OR 62: I-5 to Dutton Road,* Oregon department of Transportation, http://www.oregon.gov/ODOT/HWY/REGION3/pages/hwy62_index.aspx, April 2013.
10. Southern Oregon Transportation Engineering. *White Hawk Development Traffic Impact Analysis,* Medford, Oregon, July 20, 2014.
11. Institute of Transportation Engineers. *Parking Generation, 4th Edition,* Institute of Transportation Engineers, Washington, D.C., 2010.

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
101 S Capitol Boulevard, Suite 301, Boise, ID 83702 · 208.336.2683 · 208.336.2685

MEMORANDUM

Date: November 10, 2015 Project #: 19046.0

To: Mr. Matt Samitore
City of Central Point
140 South Third Street
Central Point, Oregon 97502

From: Brett Korporaal, Julia Kuhn and Sonia Daleiden

Project: Central Point Costco TIA

Subject: Response to Comments – Central Point Costco TIA

This memorandum responds to comments submitted by staff from the City of Central Point (via Southern Oregon Transportation Engineering, LLC), related to the Central Point Costco Transportation Impact Analysis (TIA). Each comment is summarized below followed by our response.

COMMENT 1 – SUBMITTED BY CITY OF CENTRAL POINT

"Page 30 of the study in the last paragraph, KAI assumes that planned roadways in the IAMP as well as Tier 1 improvements listed in the City's TSP have been financially constrained and can be reasonably funded within the next twenty years. Many of the projects and/or improvements identified are not funded and there is no current mechanism for funding at this time. These include:

- Widening East Pine Street to add a second WBL and widening the I-5 SB on-ramp for two receiving lanes ($1.7 million)
- Widening the I-5 NB off ramp at East Pine Street to include an additional NBR ($1.3 million)
- Widening west and north approaches at Hamrick/Pine Street intersection
- Widening to include a dual eastbound left at Table Rock/Biddle Road intersection"

KAI RESPONSE

As part of the scoping process, KAI received confirmation from each of the jurisdictions that the Tier 1 projects identified in the IAMP and RVMPO's RTP should be included in the TIA analyses. As communicated in an email from Wei Wang, ODOT, on Thursday, July 2, 2015, "Page 8 of TIA, Planned Transportation Improvements – This should reference the RVMPO RTP Tier 1 projects and also

consider improvements/mitigations identified in IAMP 33. It is possible that some of them could be triggered earlier or may by mitigation for this development. Please review the Interchange Area Management Plan I-5 Exit 33 (IAMP 33). The proposed Costco TIA should be consistent with IAMP 33."

Based on this email, we submitted a "Scoping Memo Response to Comment" memorandum to the City of Central Point, Jackson County and ODOT that stated, "We will include any planned transportation improvements referenced in RVMPO RTP Tier 1 and IAMP 33 that will be completed during or prior to the proposed build out of the site."

Additionally, on Tuesday, September 29, 2015 KAI held a telephone conference with representing members from each agency to review and discuss the initial findings from the TIA. During this call, we verified with agency staff the funded Tier 1 projects from the RTP and IAMP to include in our analyses.

Our TIA is consistent with all of our previous correspondences from staff. We are unclear as to the change in direction about those projects to include in the analyses and would appreciate additional insights from agency staff.

COMMENT 2 – SUBMITTED BY CITY OF CENTRAL POINT

"The TIS doesn't include a queuing analysis, which is a requirement in the scoping letter. A queuing analysis should be performed in SimTraffic and follow the methodology outlined in ODOT's Analysis Procedures Manual (APM)."

KAI RESPONSE 2

KAI analyzed queuing for all site access points, the I-5 NB Ramps/E Pine Street and Table Rock Road/Hamrick Road intersections based on scoping direction from the City, County, and ODOT. Queuing was reviewed for the impact of the site-generated trips on 95th percentile queue lengths. Per the TIA, queues were calculated for the 2016 and 2030 scenarios during the weekday p.m. and weekend mid-day peak hours. For comparison purposes, the build-year (2016) total scenario also identifies queues lengths assuming an interim three lane configuration along Table Rock Road. The 2030 scenario provides the queuing assuming the planned and programed improvements to Table Rock Road are in place.

The queuing analysis was completed using SimTraffic within Synchro 8 software, which implements the *2000 Highway Capacity Manual* methodology and is in compliance with ODOT's APM. In order to provide a conservative analysis and reflect the worst-case conditions, queues were reported for a peak 15-minute analysis. Vehicle queue lengths were rounded to the next 25th foot (assuming 25-feet of storage per vehicle).

Build-Year (2016) Total Traffic Condition Queue Lengths

Table 1 presents the queue lengths for the build-year (2016) total traffic scenario. As documented in the TIA, the northbound right-turn at the I-5 NB Ramps/E Pine Street intersection exceeds capacity with the inclusion of site-generated trips. With the inclusion of site-generated trips, the queue lengths increase from approximately 125 feet under background conditions to 350 feet under total conditions. However, with site-generated trips the queue is still maintained within the right-turn lane storage and does not spillback into deceleration area of the northbound off-ramp during the weekday p.m. peak hour.

No queueing impacts were identified at the other intersections analyzed. In addition, a three-lane roadway along Table Rock Road does not change the estimated queue lengths northbound and southbound. However, it is important to note that the absence of a left-turn lane can cause delays to through travelers along Table Rock Road. Further, the absence of a left-turn lane also increases queue lengths and delay for vehicles making left-turns out of the site. The Table Rock Road widening is completed in year 2017 and will provide benefits to the overall transportation system.

Table 1. 95th Percentile Queuing – 2016 Conditions

Site Accesses	Peak Period	Queue Lengths (ft)[1] EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Build-Year (2016) Total Traffic Scenario									
2. I-5 NB Ramps/E Pine St	Storage Length[2]	150	-	-	265	335	380	-	-
	PM Peak	25	-	-	200	200	350	-	-
	MID Peak	50	-	-	150	125	225	-	-
8. Table Rock Rd/Hamrick Rd	Storage Length[2]	160	-	-	-	-	-	-	-
	PM Peak	75	25	-	-	25	-	-	0
	MID Peak	50	25	-	-	25	-	-	0
13. Federal Way/Northwest Dwy	PM Peak	-	-	0	25	-	0	25	-
	MID Peak	-	-	0	25	-	0	25	0
14. Federal Way/Southwest Dwy	PM Peak	-	-	0	0	-	0	25	-
	MID Peak	-	-	0	0	-	0	25	0
15. West Hamrick Rd Dwy/Hamrick Rd	PM Peak	-	0	25	-	25	25	-	-
	MID Peak	-	0	25	-	25	25	-	-
16. East Hamrick Rd (RIRO) Dwy/Hamrick Rd	PM Peak	-	0	-	-	-	25	-	-
	MID Peak	-	0	-	-	-	25	-	-
17. Table Rock Rd/Northeast Dwy	PM Peak	75	50	-	-	25	-	-	0
	MID Peak	50	50	-	-	50	-	-	0
18. Table Rock Rd/Southeast Dwy	PM Peak	25	0	-	-	25	-	-	0
	MID Peak	25	0	-	-	25	-	-	0
Build-Year (2016) Total Traffic Scenario with Temporary Improvements Along Table Rock Road[3]									
8. Table Rock Rd/Hamrick Rd	Storage Length[2]	160	-	-	-	-	-	-	-
	PM Peak	25	25	-	-	25	-	-	0
	MID Peak	25	25	-	-	25	-	-	0
17. Table Rock Rd/Northeast Dwy	PM Peak	25	50	-	-	25	-	-	0
	MID Peak	25	50	-	-	25	-	-	0
18. Table Rock Rd/Southeast Dwy	PM Peak	25	0	-	-	25	-	-	0
	MID Peak	25	0	-	-	25	-	-	0

Notes: [1] 95th percentile queue lengths have been rounded to the next 25th-foot, one vehicle represent 25 feet of storage; [2] Storage lengths were reported where applicable at the respective intersection. Storage lanes for left and right turns into the site are not included in the build-year (2016) total scenario with the exception of the West Hamrick Rd Dwy/Hamrick Rd site access where there is presently a two-way left-turn lane. [3] A two-way left-turn lane would be provided along Table Rock Road for access into and of the site driveways; **Bold** indicates 95th percentile queues exceeding storage length.

Future Year (2030) Total Traffic Condition Queue Lengths

Table presents queue lengths for the future (2030) total traffic scenario. As shown, all estimated queues can be accommodated within the storage provided during both peak hours analyzed.

Table 2. 95th Percentile Queuing – 2030 Conditions

Site Accesses	Peak Period	Queue Lengths (ft)[1] EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Future-Year (2030) Total Traffic Scenario									
2. I-5 NB Ramps/E Pine St	Storage Length[2]								
	PM Peak	50	-	-	125	325	200	-	-
	MID Peak	25	-	-	200	150	150	-	-
8. Table Rock Rd/Hamrick Rd	Storage Length[2]								
	PM Peak	25	25	-	-	25	-	-	0
	MID Peak	25	25	-	-	25	-	-	0
13. Federal Way/Northwest Dwy	PM Peak	-	-	0	25	-	0	25	-
	MID Peak	-	-	0	25	-	0	25	0
14. Federal Way/Southwest Dwy	PM Peak	-	-	0	0	-	0	25	-
	MID Peak	-	-	25	0	-	0	25	0
15. West Hamrick Rd Dwy/Hamrick Rd	PM Peak	-	0	25	-	25	25	-	-
	MID Peak	-	0	25	-	25	25	-	-
16. East Hamrick Rd (RIRO) Dwy/Hamrick Rd	PM Peak	-	0	-	-	-	25	-	-
	MID Peak	-	0	-	-	-	25	-	-
17. Table Rock Rd/Northeast Dwy	PM Peak	25	50	-	-	50	-	-	0
	MID Peak	25	50	-	-	50	-	-	0
18. Table Rock Rd/Southeast Dwy	PM Peak	25	0	-	-	25	-	-	0
	MID Peak	25	0	-	-	25	-	-	0

Notes: [1] 95th percentile queue lengths have been rounded to the next 25th-foot, one vehicle represent 25 feet of storage; [2] Storage lengths were reported where applicable at the respective intersection. Storage lanes along Table Rock Road will be includes within the two-way left-turn lane when the Table Rock Road improvements are completed in year 2017. At the West Hamrick Rd Dwy/Hamrick Rd site access there is presently a two-way left-turn lane. Future year scenario does not include storage lanes to accesses the site on Federal Way because of low volume of traffic and turning movements into and out of the site; **Bold** indicates 95th percentile queues exceeding storage length.

COMMENT 3 – SUBMITTED BY CITY OF CENTRAL POINT

"If multiple access points are being proposed on Table Rock Road and S Hamrick Road then City and County access spacing standards should be taken into consideration and shown to be in compliance or otherwise justified."

KAI RESPONSE

The City's Transportation System Plan (TSP) identifies Table Rock Road as a major arterial. Based on Table 5.2 in *Central Point's TSP* a minimum spacing standard of 500 feet applies given the 45 mph posted speed. The Table Rock Road/Northeast Driveway is approximately 420 feet south of the Table Rock Road/S Hamrick Road unsignalized intersection. This driveway serves as the site's main driveway. The Table Rock Road/Southeast Driveway is located at the very southern edge of the site boundary. The spacing between the two site driveways is 500 feet, meeting City access management standards.

Although distance between the main driveway and the S Hamrick Road intersection does not meet the City's standards, there are no queue conflicts or operational issues associated with the spacing.

Further, we have worked with the project team to maximize the spacing of access points and to optimize internal circulation for both the warehouse and fuel station.

We can work with the City to seek a design exception to the 500 feet standard between the main driveway and S Hamrick Road intersection with Table Rock Road.

Per Table 5.2 of the TSP, the applicable access spacing standard along S Hamrick Road is 300 feet. The East Hamrick Road Driveway/S Hamrick Road site access meets the spacing requirement between the driveway and the unsignalized intersection of Table Rock Road/S Hamrick Road intersection. The distance between the west and east driveways along S Hamrick Road is roughly 520 feet, also meeting the City's access spacing standards. The West Hamrick Road Driveway/S Hamrick Road site access is located approximately 200 feet west of the Hamrick Road/Federal Way unsignalized intersection, not meeting the City's spacing guidelines. While the spacing does not meet City guidelines, our analyses demonstrated that no operational or queuing conflicts are anticipated between this driveway and the S Hamrick Road/Federal Way unsignalized intersection.

We will also work with City staff to seek a design exception for the spacing between the west driveway and the S Hamrick Road/Federal Way intersection.

COMMENT 4 – SUBMITTED BY CITY OF CENTRAL POINT

"The proportional share for impacts to facilities such as the I-5 NB off ramp can be determined by a volume comparison. The 2016 no-build right turn volume is 310 PM trips. Proposed development in 2016 adds 90 PM trips. Adding 90 trips is approximately a 23% impact. The same methodology can be used for other facilities."

KAI RESPONSE

Thank you for clarifying the applicable methodology for proportionate share impacts. We will work with Costco and the agencies in determining the proportional share for projects which Costco will be responsible based on feedback from the agencies.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	71	79	19	484	569	26
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	77	86	21	526	618	28
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)					1076	
pX, platoon unblocked	0.70	0.70	0.70			
vC, conflicting volume	1201	634	648			
vC1, stage 1 conf vol	634					
vC2, stage 2 conf vol	567					
vCu, unblocked vol	1075	268	288			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.4			
p0 queue free %	81	84	97			
cM capacity (veh/h)	415	545	824			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	77	86	21	526	647
Volume Left	77	0	21	0	0
Volume Right	0	86	0	0	28
cSH	415	545	824	1700	1700
Volume to Capacity	0.19	0.16	0.03	0.31	0.38
Queue Length 95th (ft)	17	14	2	0	0
Control Delay (s)	15.7	12.8	9.5	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	14.2		0.4		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	50	141	161	453	576	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	153	175	492	626	78
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1509	666	705			
vC1, stage 1 conf vol	666					
vC2, stage 2 conf vol	842					
vCu, unblocked vol	1509	666	705			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.4			
p0 queue free %	81	67	78			
cM capacity (veh/h)	289	462	810			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	54	153	175	492	704
Volume Left	54	0	175	0	0
Volume Right	0	153	0	0	78
cSH	289	462	810	1700	1700
Volume to Capacity	0.19	0.33	0.22	0.29	0.41
Queue Length 95th (ft)	17	36	20	0	0
Control Delay (s)	20.3	16.6	10.7	0.0	0.0
Lane LOS	C	C	B		
Approach Delay (s)	17.6		2.8		0.0
Approach LOS	C				

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	29	50	609	688	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	32	54	662	748	32
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				726		
pX, platoon unblocked	0.80					
vC, conflicting volume	1535	765	780			
vC1, stage 1 conf vol	765					
vC2, stage 2 conf vol	771					
vCu, unblocked vol	1544	765	780			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.4			
p0 queue free %	98	92	93			
cM capacity (veh/h)	315	406	758			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	37	54	662	779
Volume Left	5	54	0	0
Volume Right	32	0	0	32
cSH	390	758	1700	1700
Volume to Capacity	0.09	0.07	0.39	0.46
Queue Length 95th (ft)	8	6	0	0
Control Delay (s)	15.2	10.1	0.0	0.0
Lane LOS	C	B		
Approach Delay (s)	15.2	0.8		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection: 8: Table Rock Rd & Hamrick Rd

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	180	77	65
Average Queue (ft)	43	34	9
95th Queue (ft)	93	57	37
Link Distance (ft)		248	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	160		150
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 17: Table Rock Rd & Northeast Dwy

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	74	92	216	173	50
Average Queue (ft)	33	44	67	6	8
95th Queue (ft)	58	70	142	57	31
Link Distance (ft)	191	191		671	364
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			150		
Storage Blk Time (%)			1	0	
Queuing Penalty (veh)			3	0	

Intersection: 18: Table Rock Rd & Southeast Dwy

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	53	53	19
Average Queue (ft)	26	13	1
95th Queue (ft)	44	40	6
Link Distance (ft)	141		671
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	104	77	8	344	410	36
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	84	9	374	446	39
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)					1076	
pX, platoon unblocked	0.81	0.81	0.81			
vC, conflicting volume	858	466	486			
vC1, stage 1 conf vol	466					
vC2, stage 2 conf vol	391					
vCu, unblocked vol	705	222	246			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.4			
p0 queue free %	79	87	99			
cM capacity (veh/h)	543	665	983			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	113	84	9	374	485
Volume Left	113	0	9	0	0
Volume Right	0	84	0	0	39
cSH	543	665	983	1700	1700
Volume to Capacity	0.21	0.13	0.01	0.22	0.29
Queue Length 95th (ft)	19	11	1	0	0
Control Delay (s)	13.4	11.2	8.7	0.0	0.0
Lane LOS	B	B	A		
Approach Delay (s)	12.4		0.2		0.0
Approach LOS	B				

Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	38.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	49	183	224	295	403	85
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	199	243	321	438	92
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1293	485	531			
vC1, stage 1 conf vol	485					
vC2, stage 2 conf vol	808					
vCu, unblocked vol	1293	485	531			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.4			
p0 queue free %	82	66	74			
cM capacity (veh/h)	301	585	946			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	53	199	162	402	530
Volume Left	53	0	162	81	0
Volume Right	0	199	0	0	92
cSH	301	585	946	946	1700
Volume to Capacity	0.18	0.34	0.26	0.26	0.31
Queue Length 95th (ft)	16	37	26	26	0
Control Delay (s)	19.5	14.3	10.1	4.6	0.0
Lane LOS	C	B	B	A	
Approach Delay (s)	15.4		6.2		0.0
Approach LOS	C				

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	39	75	514	545	41
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	42	82	559	592	45
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1337	616	638			
vC1, stage 1 conf vol	616					
vC2, stage 2 conf vol	722					
vCu, unblocked vol	1337	616	638			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.4			
p0 queue free %	99	91	91			
cM capacity (veh/h)	363	494	860			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	48	82	559	637
Volume Left	5	82	0	0
Volume Right	42	0	0	45
cSH	474	860	1700	1700
Volume to Capacity	0.10	0.09	0.33	0.37
Queue Length 95th (ft)	8	8	0	0
Control Delay (s)	13.4	9.6	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	13.4	1.2		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection: 8: Table Rock Rd & Hamrick Rd

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	93	74	51
Average Queue (ft)	40	37	9
95th Queue (ft)	70	55	36
Link Distance (ft)		248	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	160		150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 17: Table Rock Rd & Northeast Dwy

Movement	EB	EB	NB	NB	SB
Directions Served	L	R	L	LT	TR
Maximum Queue (ft)	74	119	93	312	22
Average Queue (ft)	36	55	17	93	3
95th Queue (ft)	70	89	51	187	15
Link Distance (ft)	191	191		671	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			150		
Storage Blk Time (%)				1	
Queuing Penalty (veh)				2	

Intersection: 18: Table Rock Rd & Southeast Dwy

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	52	77	22
Average Queue (ft)	25	29	1
95th Queue (ft)	48	65	7
Link Distance (ft)	156		671
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 2

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	66	996	1292	413	229	231	433
v/c Ratio	0.32	0.49	0.71	0.42	0.54	0.54	0.90
Control Delay	9.7	11.4	28.2	9.9	33.7	33.8	46.1
Queue Delay	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	9.7	11.4	28.7	9.9	33.7	33.8	46.1
Queue Length 50th (ft)	20	202	444	103	117	118	179
Queue Length 95th (ft)	22	258	513	194	191	193	#340
Internal Link Dist (ft)		1110	494			650	
Turn Bay Length (ft)	150			265	335		380
Base Capacity (vph)	211	2030	1808	978	489	490	537
Starvation Cap Reductn	0	0	169	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.49	0.79	0.42	0.47	0.47	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	71	79	19	484	569	26
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	77	86	21	526	618	28
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1076	
pX, platoon unblocked	0.70	0.70	0.70			
vC, conflicting volume	1201	634	648			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1075	268	288			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	54	84	97			
cM capacity (veh/h)	168	545	824			

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	77	86	547	647
Volume Left	77	0	21	0
Volume Right	0	86	0	28
cSH	168	545	824	1700
Volume to Capacity	0.46	0.16	0.03	0.38
Queue Length 95th (ft)	54	14	2	0
Control Delay (s)	43.4	12.8	0.7	0.0
Lane LOS	E	B	A	
Approach Delay (s)	27.3		0.7	0.0
Approach LOS	D			

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	91	0	0	22	22
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	99	0	0	24	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	72	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	72	0			0	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	91			99	
cM capacity (veh/h)	848	1091			1636	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	101	0	48
Volume Left	2	0	24
Volume Right	99	0	0
cSH	1084	1700	1636
Volume to Capacity	0.09	0.00	0.01
Queue Length 95th (ft)	8	0	1
Control Delay (s)	8.7	0.0	3.7
Lane LOS	A		A
Approach Delay (s)	8.7	0.0	3.7
Approach LOS	A		

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	16.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	2	0	2	22	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	2	0	2	24	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	51	1			2	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	51	1			2	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	872	1089			1633	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	2	26
Volume Left	2	0	24
Volume Right	2	2	0
cSH	969	1700	1633
Volume to Capacity	0.00	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	8.7	0.0	6.6
Lane LOS	A		A
Approach Delay (s)	8.7	0.0	6.6
Approach LOS	A		

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	76	94	27	18	96	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	83	102	29	20	104	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			185		212	134
vC1, stage 1 conf vol					134	
vC2, stage 2 conf vol					78	
vCu, unblocked vol			185		212	134
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			98		88	97
cM capacity (veh/h)			1224		841	921

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	185	29	20	104	30
Volume Left	0	29	0	104	0
Volume Right	102	0	0	0	30
cSH	1700	1224	1700	841	921
Volume to Capacity	0.11	0.02	0.01	0.12	0.03
Queue Length 95th (ft)	0	2	0	11	3
Control Delay (s)	0.0	8.0	0.0	9.9	9.0
Lane LOS		A		A	A
Approach Delay (s)	0.0	4.8		9.7	
Approach LOS				A	

Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	29.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	59	45	0	46	0	91
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	64	49	0	50	0	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			113		139	89
vC1, stage 1 conf vol					89	
vC2, stage 2 conf vol					50	
vCu, unblocked vol			113		139	89
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			100		100	90
cM capacity (veh/h)			1304		901	975

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	113	50	99
Volume Left	0	0	0
Volume Right	49	0	99
cSH	1700	1700	975
Volume to Capacity	0.07	0.03	0.10
Queue Length 95th (ft)	0	0	8
Control Delay (s)	0.0	0.0	9.1
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.1
Approach LOS			A

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	50	141	161	453	576	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	153	175	492	626	78
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1509	666	705			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1509	666	705			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	48	67	78			
cM capacity (veh/h)	105	462	810			

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	54	153	667	704
Volume Left	54	0	175	0
Volume Right	0	153	0	78
cSH	105	462	810	1700
Volume to Capacity	0.52	0.33	0.22	0.41
Queue Length 95th (ft)	59	36	20	0
Control Delay (s)	71.2	16.6	5.2	0.0
Lane LOS	F	C	A	
Approach Delay (s)	30.9		5.2	0.0
Approach LOS	D			

Intersection Summary				
Average Delay	6.3			
Intersection Capacity Utilization	86.6%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	29	50	609	688	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	32	54	662	748	32
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1535	765	780			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1535	765	780			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	95	92	93			
cM capacity (veh/h)	120	406	758			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	37	716	779
Volume Left	5	54	0
Volume Right	32	0	32
cSH	301	758	1700
Volume to Capacity	0.12	0.07	0.46
Queue Length 95th (ft)	10	6	0
Control Delay (s)	18.6	1.9	0.0
Lane LOS	C	A	
Approach Delay (s)	18.6	1.9	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

Intersection: 2: I-5 NB Ramps & E Pine St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	99	288	200	350	406	340	208	228	208
Average Queue (ft)	32	96	82	199	202	81	125	166	38
95th Queue (ft)	70	186	157	331	347	220	190	231	140
Link Distance (ft)		1153	1153	503	503			682	682
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150					265	335		
Storage Blk Time (%)		2			3				
Queuing Penalty (veh)		1			11				

Intersection: 8: Table Rock Rd & Hamrick Rd

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	91	72	115	22
Average Queue (ft)	45	38	27	1
95th Queue (ft)	80	64	91	7
Link Distance (ft)		249	364	985
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	160			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Federal Way & Northwest Dwy

Movement	WB
Directions Served	LR
Maximum Queue (ft)	57
Average Queue (ft)	32
95th Queue (ft)	51
Link Distance (ft)	150
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Federal Way & Southwest Dwy

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	163
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: West Hamrick Dwy & Hamrick Rd

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	50	56	56
Average Queue (ft)	4	30	21
95th Queue (ft)	26	44	48
Link Distance (ft)		154	154
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: East Hamrick Dwy (RIRO) & Hamrick Rd

Movement	NB
Directions Served	R
Maximum Queue (ft)	80
Average Queue (ft)	35
95th Queue (ft)	58
Link Distance (ft)	112
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: Table Rock Rd & Northeast Dwy

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	162	76	285	41
Average Queue (ft)	54	41	127	6
95th Queue (ft)	118	63	242	25
Link Distance (ft)	197	197	671	364
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: Table Rock Rd & Southeast Dwy

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	56	179	21
Average Queue (ft)	20	44	1
95th Queue (ft)	47	135	7
Link Distance (ft)	162	682	671
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 12

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	65	990	1027	297	118	117	351
v/c Ratio	0.20	0.45	0.52	0.30	0.34	0.34	0.84
Control Delay	6.2	9.2	22.1	10.0	31.8	31.7	40.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.2	9.2	22.1	10.0	31.8	31.7	40.2
Queue Length 50th (ft)	17	176	298	65	63	62	134
Queue Length 95th (ft)	27	257	387	m134	102	102	219
Internal Link Dist (ft)		1110	494			650	
Turn Bay Length (ft)	150			265	335		380
Base Capacity (vph)	321	2190	1964	980	489	491	539
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.45	0.52	0.30	0.24	0.24	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	104	77	8	344	410	36
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	84	9	374	446	39
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1076	
pX, platoon unblocked	0.81	0.81	0.81			
vC, conflicting volume	858	468	486			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	705	222	246			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	65	87	99			
cM capacity (veh/h)	325	665	983			

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	113	84	383	485
Volume Left	113	0	9	0
Volume Right	0	84	0	39
cSH	325	665	983	1700
Volume to Capacity	0.35	0.13	0.01	0.29
Queue Length 95th (ft)	38	11	1	0
Control Delay (s)	21.9	11.2	0.3	0.0
Lane LOS	C	B	A	
Approach Delay (s)	17.3		0.3	0.0
Approach LOS	C			

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	39.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	134	0	2	35	36
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	146	0	2	38	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	116	1			2	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	116	1			2	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	87			98	
cM capacity (veh/h)	792	1089			1633	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	148	2	77
Volume Left	2	0	38
Volume Right	146	2	0
cSH	1083	1700	1633
Volume to Capacity	0.14	0.00	0.02
Queue Length 95th (ft)	12	0	2
Control Delay (s)	8.8	0.0	3.7
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	3.7
Approach LOS	A		

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	2	0	2	35	1
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	2	0	2	38	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	78	1			2	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	78	1			2	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	100			98	
cM capacity (veh/h)	833	1089			1633	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	2	39
Volume Left	2	0	38
Volume Right	2	2	0
cSH	944	1700	1633
Volume to Capacity	0.00	0.00	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	8.8	0.0	7.1
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	7.1
Approach LOS	A		

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	78	144	40	4	139	39
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	85	157	43	4	151	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			241		254	163
vC1, stage 1 conf vol					163	
vC2, stage 2 conf vol					91	
vCu, unblocked vol			241		254	163
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			96		81	95
cM capacity (veh/h)			1163		807	887

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	241	43	4	151	42
Volume Left	0	43	0	151	0
Volume Right	157	0	0	0	42
cSH	1700	1163	1700	807	887
Volume to Capacity	0.14	0.04	0.00	0.19	0.05
Queue Length 95th (ft)	0	3	0	17	4
Control Delay (s)	0.0	8.2	0.0	10.5	9.3
Lane LOS		A		B	A
Approach Delay (s)	0.0	7.5		10.2	
Approach LOS				B	

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	47	70	0	44	0	134
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	76	0	48	0	146
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			127		137	89
vC1, stage 1 conf vol					89	
vC2, stage 2 conf vol					48	
vCu, unblocked vol			127		137	89
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			100		100	85
cM capacity (veh/h)			1288		901	974

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	127	48	146
Volume Left	0	0	0
Volume Right	76	0	146
cSH	1700	1700	974
Volume to Capacity	0.07	0.03	0.15
Queue Length 95th (ft)	0	0	13
Control Delay (s)	0.0	0.0	9.3
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	49	183	224	295	403	85
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	199	243	321	438	92
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1293	485	531			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1293	485	531			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	60	66	74			
cM capacity (veh/h)	135	585	946			

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	53	199	564	530
Volume Left	53	0	243	0
Volume Right	0	199	0	92
cSH	135	585	946	1700
Volume to Capacity	0.40	0.34	0.26	0.31
Queue Length 95th (ft)	42	37	26	0
Control Delay (s)	48.3	14.3	6.2	0.0
Lane LOS	E	B	A	
Approach Delay (s)	21.5		6.2	0.0
Approach LOS	C			

Intersection Summary				
Average Delay	6.6			
Intersection Capacity Utilization	72.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	39	75	514	545	41
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	42	82	559	592	45
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1337	616	638			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1337	616	638			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	96	91	91			
cM capacity (veh/h)	154	494	860			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	48	640	637
Volume Left	5	82	0
Volume Right	42	0	45
cSH	395	860	1700
Volume to Capacity	0.12	0.09	0.37
Queue Length 95th (ft)	10	8	0
Control Delay (s)	15.4	2.4	0.0
Lane LOS	C	A	
Approach Delay (s)	15.4	2.4	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection: 2: I-5 NB Ramps & E Pine St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	73	244	180	221	200	61	148	184	235
Average Queue (ft)	31	73	56	114	105	30	53	76	39
95th Queue (ft)	64	188	147	205	197	61	114	134	151
Link Distance (ft)		1153	1153	503	503			682	682
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150					265	335		
Storage Blk Time (%)		2							
Queuing Penalty (veh)		1							

Intersection: 8: Table Rock Rd & Hamrick Rd

Movement	EB	EB	NB
Directions Served	L	R	LT
Maximum Queue (ft)	69	55	135
Average Queue (ft)	40	34	5
95th Queue (ft)	63	56	46
Link Distance (ft)		249	364
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	160		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Federal Way & Northwest Dwy

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	82	31
Average Queue (ft)	36	1
95th Queue (ft)	57	10
Link Distance (ft)	150	177
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 14: Federal Way & Southwest Dwy

Movement	WB
Directions Served	LR
Maximum Queue (ft)	67
Average Queue (ft)	5
95th Queue (ft)	29
Link Distance (ft)	163
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: West Hamrick Rd & Hamrick Rd

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	46	55	56	55
Average Queue (ft)	2	17	42	26
95th Queue (ft)	15	49	62	48
Link Distance (ft)	222		154	154
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: East Hamrick Rd (RIRO) & Hamrick Rd

Movement	NB
Directions Served	R
Maximum Queue (ft)	107
Average Queue (ft)	38
95th Queue (ft)	69
Link Distance (ft)	112
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: Table Rock Rd & Northeast Dwy

Movement	EB	EB	NB	SB
Directions Served	L	R	LT	TR
Maximum Queue (ft)	96	95	208	50
Average Queue (ft)	43	51	98	4
95th Queue (ft)	81	72	198	23
Link Distance (ft)	197	197	671	364
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: Table Rock Rd & Southeast Dwy

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	31	166	22
Average Queue (ft)	26	39	1
95th Queue (ft)	43	112	10
Link Distance (ft)	162	682	671
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 1

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	84	1289	1289	377	151	150	416
v/c Ratio	0.30	0.54	0.60	0.35	0.59	0.59	0.76
Control Delay	4.3	6.7	20.2	7.4	45.7	45.4	31.9
Queue Delay	0.0	0.0	0.7	0.0	0.0	0.0	0.5
Total Delay	4.3	6.7	20.8	7.4	45.7	45.4	32.4
Queue Length 50th (ft)	11	223	373	83	89	88	84
Queue Length 95th (ft)	m11	257	m462	m159	147	146	134
Internal Link Dist (ft)		1110	494			650	
Turn Bay Length (ft)	150			265	335		380
Base Capacity (vph)	290	2376	2146	1071	340	341	678
Starvation Cap Reductn	0	0	466	0	0	0	0
Spillback Cap Reductn	0	7	0	0	0	0	58
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.54	0.77	0.35	0.44	0.44	0.67

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	134	0	2	35	36
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	146	0	2	38	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	116	1			2	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	116	1			2	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	87			98	
cM capacity (veh/h)	792	1089			1633	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	148	2	77
Volume Left	2	0	38
Volume Right	146	2	0
cSH	1083	1700	1633
Volume to Capacity	0.14	0.00	0.02
Queue Length 95th (ft)	12	0	2
Control Delay (s)	8.8	0.0	3.7
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	3.7
Approach LOS	A		

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	26.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	2	0	2	35	1
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	2	0	2	38	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	78	1			2	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	78	1			2	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	100			98	
cM capacity (veh/h)	833	1089			1633	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	2	39
Volume Left	2	0	38
Volume Right	2	2	0
cSH	944	1700	1633
Volume to Capacity	0.00	0.00	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	8.8	0.0	7.1
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	7.1
Approach LOS	A		

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	81	144	40	7	139	39
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	88	157	43	8	151	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			245		261	166
vC1, stage 1 conf vol					166	
vC2, stage 2 conf vol					95	
vCu, unblocked vol			245		261	166
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			96		81	95
cM capacity (veh/h)			1160		803	883

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	245	43	8	151	42
Volume Left	0	43	0	151	0
Volume Right	157	0	0	0	42
cSH	1700	1160	1700	803	883
Volume to Capacity	0.14	0.04	0.00	0.19	0.05
Queue Length 95th (ft)	0	3	0	17	4
Control Delay (s)	0.0	8.2	0.0	10.5	9.3
Lane LOS		A		B	A
Approach Delay (s)	0.0	7.0		10.2	
Approach LOS				B	

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	50	70	0	46	0	134
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	76	0	50	0	146
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			130		142	92
vC1, stage 1 conf vol					92	
vC2, stage 2 conf vol					50	
vCu, unblocked vol			130		142	92
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			100		100	85
cM capacity (veh/h)			1284		897	970

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	130	50	146
Volume Left	0	0	0
Volume Right	76	0	146
cSH	1700	1700	970
Volume to Capacity	0.08	0.03	0.15
Queue Length 95th (ft)	0	0	13
Control Delay (s)	0.0	0.0	9.4
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	49	183	224	383	492	85
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	199	243	416	535	92
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1277	315	628			
vC1, stage 1 conf vol	582					
vC2, stage 2 conf vol	695					
vCu, unblocked vol	1277	315	628			
tC, single (s)	6.8	6.9	4.5			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.4			
p0 queue free %	81	71	71			
cM capacity (veh/h)	288	686	831			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	53	199	243	208	208	357	271
Volume Left	53	0	243	0	0	0	0
Volume Right	0	199	0	0	0	0	92
cSH	288	686	831	1700	1700	1700	1700
Volume to Capacity	0.19	0.29	0.29	0.12	0.12	0.21	0.16
Queue Length 95th (ft)	17	30	31	0	0	0	0
Control Delay (s)	20.3	12.4	11.1	0.0	0.0	0.0	0.0
Lane LOS	C	B	B				
Approach Delay (s)	14.1		4.1			0.0	
Approach LOS	B						

Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	44.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	39	75	601	634	41
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	42	82	653	689	45
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				726		
pX, platoon unblocked						
vC, conflicting volume	1202	368	735			
vC1, stage 1 conf vol	712					
vC2, stage 2 conf vol	490					
vCu, unblocked vol	1202	368	735			
tC, single (s)	6.8	6.9	4.5			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.4			
p0 queue free %	99	93	89			
cM capacity (veh/h)	366	634	751			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	48	82	327	327	459	274
Volume Left	5	82	0	0	0	0
Volume Right	42	0	0	0	0	45
cSH	586	751	1700	1700	1700	1700
Volume to Capacity	0.08	0.11	0.19	0.19	0.27	0.16
Queue Length 95th (ft)	7	9	0	0	0	0
Control Delay (s)	11.7	10.4	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	11.7	1.2			0.0	
Approach LOS	B					

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	38.3%	ICU Level of Service		A
Analysis Period (min)	15			

Intersection: 2: I-5 NB Ramps & E Pine St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT	R	R
Maximum Queue (ft)	73	203	198	300	292	145	214	270	231	202
Average Queue (ft)	35	71	101	190	174	73	84	124	100	23
95th Queue (ft)	57	153	185	303	288	131	176	219	235	120
Link Distance (ft)		1152	1152	486	486			676	676	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150					265	335			380
Storage Blk Time (%)		0			1					
Queuing Penalty (veh)		0			2					

Intersection: 13: Federal Way & Northwest Dwy

Movement	WB
Directions Served	LR
Maximum Queue (ft)	80
Average Queue (ft)	40
95th Queue (ft)	63
Link Distance (ft)	150
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Federal Way & Southwest Dwy

Movement	WB
Directions Served	LR
Maximum Queue (ft)	66
Average Queue (ft)	6
95th Queue (ft)	32
Link Distance (ft)	162
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: West Hamrick Rd & Hamrick Rd

Movement	EB	WB	NB	NB
Directions Served	TR	L	L	R
Maximum Queue (ft)	40	70	120	30
Average Queue (ft)	1	12	43	24
95th Queue (ft)	13	43	83	42
Link Distance (ft)	222		154	154
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: East Hamrick Rd (RIRO) & Hamrick Rd

Movement	NB
Directions Served	R
Maximum Queue (ft)	77
Average Queue (ft)	36
95th Queue (ft)	55
Link Distance (ft)	112
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: Table Rock Rd & Northeast Dwy

Movement	EB	EB	NB	SB
Directions Served	L	R	L	TR
Maximum Queue (ft)	99	75	196	104
Average Queue (ft)	46	41	98	14
95th Queue (ft)	88	65	176	55
Link Distance (ft)	179	179		364
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			250	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 18: Table Rock Rd & Southeast Dwy

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	54	102	51
Average Queue (ft)	24	30	2
95th Queue (ft)	47	72	17
Link Distance (ft)	144		672
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		250	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 2

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	85	1317	1639	529	294	295	546
v/c Ratio	0.54	0.60	0.82	0.49	0.84	0.84	0.80
Control Delay	20.8	10.2	30.1	7.5	56.5	56.3	35.6
Queue Delay	0.0	0.0	28.0	0.2	0.0	0.0	2.3
Total Delay	20.8	10.2	58.2	7.7	56.5	56.3	37.9
Queue Length 50th (ft)	19	265	567	101	175	175	131
Queue Length 95th (ft)	m30	328	m624	m121	#310	#311	200
Internal Link Dist (ft)		1110	494			650	
Turn Bay Length (ft)	150			265	335		380
Base Capacity (vph)	157	2179	1987	1079	374	376	715
Starvation Cap Reductn	0	0	430	104	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	77
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.60	1.05	0.54	0.79	0.78	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	72	89	25	615	709	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	97	27	668	771	29
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)					1076	
pX, platoon unblocked						
vC, conflicting volume	1175	401	801			
vC1, stage 1 conf vol	786					
vC2, stage 2 conf vol	389					
vCu, unblocked vol	1175	401	801			
tC, single (s)	6.8	6.9	4.5			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.4			
p0 queue free %	79	84	96			
cM capacity (veh/h)	370	604	705			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	78	97	27	334	334	514	286
Volume Left	78	0	27	0	0	0	0
Volume Right	0	97	0	0	0	0	29
cSH	370	604	705	1700	1700	1700	1700
Volume to Capacity	0.21	0.16	0.04	0.20	0.20	0.30	0.17
Queue Length 95th (ft)	20	14	3	0	0	0	0
Control Delay (s)	17.3	12.1	10.3	0.0	0.0	0.0	0.0
Lane LOS	C	B	B				
Approach Delay (s)	14.4		0.4			0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	34.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	91	21	2	22	22
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	99	23	2	24	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	96	24			25	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	96	24			25	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	91			99	
cM capacity (veh/h)	821	1058			1603	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	101	25	48
Volume Left	2	0	24
Volume Right	99	2	0
cSH	1052	1700	1603
Volume to Capacity	0.10	0.01	0.01
Queue Length 95th (ft)	8	0	1
Control Delay (s)	8.8	0.0	3.7
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	3.7
Approach LOS	A		

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	2	21	2	22	33
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	2	23	2	24	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	108	24			25	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	108	24			25	
tC, single (s)	6.7	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.8	3.3			2.2	
p0 queue free %	100	100			99	
cM capacity (veh/h)	808	1058			1603	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	25	60
Volume Left	2	0	24
Volume Right	2	2	0
cSH	916	1700	1603
Volume to Capacity	0.00	0.01	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	8.9	0.0	3.0
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	3.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	87	94	27	25	96	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	109	118	34	31	120	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			226		266	168
vC1, stage 1 conf vol					168	
vC2, stage 2 conf vol					99	
vCu, unblocked vol			226		266	168
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			97		85	96
cM capacity (veh/h)			1179		804	882

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	226	34	31	120	35
Volume Left	0	34	0	120	0
Volume Right	118	0	0	0	35
cSH	1700	1179	1700	804	882
Volume to Capacity	0.13	0.03	0.02	0.15	0.04
Queue Length 95th (ft)	0	2	0	13	3
Control Delay (s)	0.0	8.1	0.0	10.3	9.3
Lane LOS		A		B	A
Approach Delay (s)	0.0	4.2		10.0	
Approach LOS				B	

Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	30.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	70	45	0	52	0	91
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	88	56	0	65	0	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			144		181	116
vC1, stage 1 conf vol					116	
vC2, stage 2 conf vol					65	
vCu, unblocked vol			144		181	116
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.5		3.5	3.3
p0 queue free %			100		100	88
cM capacity (veh/h)			1269		872	942

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	144	65	114
Volume Left	0	0	0
Volume Right	56	0	114
cSH	1700	1700	942
Volume to Capacity	0.08	0.04	0.12
Queue Length 95th (ft)	0	0	10
Control Delay (s)	0.0	0.0	9.3
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	50	141	161	590	726	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	153	175	641	789	78
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1500	435	868			
vC1, stage 1 conf vol	829					
vC2, stage 2 conf vol	671					
vCu, unblocked vol	1500	435	868			
tC, single (s)	6.8	6.9	4.5			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.4			
p0 queue free %	80	73	74			
cM capacity (veh/h)	268	574	661			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	54	153	175	321	321	526	341
Volume Left	54	0	175	0	0	0	0
Volume Right	0	153	0	0	0	0	78
cSH	268	574	661	1700	1700	1700	1700
Volume to Capacity	0.20	0.27	0.26	0.19	0.19	0.31	0.20
Queue Length 95th (ft)	19	27	27	0	0	0	0
Control Delay (s)	21.8	13.5	12.4	0.0	0.0	0.0	0.0
Lane LOS	C	B	B				
Approach Delay (s)	15.7		2.7			0.0	
Approach LOS	C						

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	47.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	29	50	745	838	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	32	54	810	911	32
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				726		
pX, platoon unblocked						
vC, conflicting volume	1441	472	943			
vC1, stage 1 conf vol	928					
vC2, stage 2 conf vol	514					
vCu, unblocked vol	1441	472	943			
tC, single (s)	6.8	6.9	4.5			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.4			
p0 queue free %	98	94	91			
cM capacity (veh/h)	301	543	616			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	37	54	405	405	607	335
Volume Left	5	54	0	0	0	0
Volume Right	32	0	0	0	0	32
cSH	486	616	1700	1700	1700	1700
Volume to Capacity	0.08	0.09	0.24	0.24	0.36	0.20
Queue Length 95th (ft)	6	7	0	0	0	0
Control Delay (s)	13.0	11.4	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	13.0	0.7			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection: 2: I-5 NB Ramps & E Pine St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT	R	R
Maximum Queue (ft)	96	191	239	377	376	340	410	536	582	230
Average Queue (ft)	47	108	126	245	235	123	239	293	179	81
95th Queue (ft)	90	190	213	396	386	290	422	508	344	236
Link Distance (ft)		1152	1152	486	486			676	676	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150					265	335			380
Storage Blk Time (%)		2			5	0	7	15		
Queuing Penalty (veh)		2			24	0	18	40		

Intersection: 8: Table Rock Rd & Hamrick Rd

Movement	EB	EB	NB	SB
Directions Served	L	R	L	TR
Maximum Queue (ft)	92	69	53	22
Average Queue (ft)	47	39	10	1
95th Queue (ft)	86	58	38	10
Link Distance (ft)		236		976
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	160		150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Federal Way & Northwest Dwy

Movement	WB
Directions Served	LR
Maximum Queue (ft)	55
Average Queue (ft)	32
95th Queue (ft)	41
Link Distance (ft)	150
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Federal Way & Southwest Dwy

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	30	31
Average Queue (ft)	4	1
95th Queue (ft)	20	10
Link Distance (ft)	162	514
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: West Hamrick Dwy & Hamrick Rd

Movement	WB	NB	NB
Directions Served	L	L	R
Maximum Queue (ft)	68	70	51
Average Queue (ft)	8	32	19
95th Queue (ft)	36	48	44
Link Distance (ft)		154	154
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: East Hamrick Dwy (RIRO) & Hamrick Rd

Movement	NB
Directions Served	R
Maximum Queue (ft)	54
Average Queue (ft)	33
95th Queue (ft)	44
Link Distance (ft)	112
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 17: Table Rock Rd & Northeast Dwy

Movement	EB	EB	NB	SB	SB
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	74	97	154	22	22
Average Queue (ft)	35	44	62	1	5
95th Queue (ft)	70	73	109	10	20
Link Distance (ft)	179	179		364	364
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 18: Table Rock Rd & Southeast Dwy

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	52	79
Average Queue (ft)	19	27
95th Queue (ft)	47	65
Link Distance (ft)	144	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		250
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 83

REVISED PUBLIC WORKS STAFF REPORT

January 5, 2016

AGENDA ITEM(S):

Costco Membership Warehouse and Four (4) Island Fuel Facility
Applicant: Costco Wholesale; Agent: Steve Bullock, MG2

BACKGROUND:

The applicant is requesting a Conditional Use Permit (File No. 15022) and Site Plan & Architectural Review (File No. 15028) approval for the construction of a Costco Wholesale membership warehouse, including a four (4) island fuel facility, with a scheduled opening date Fall 2016. The 18.28 acre project site is located on four (4) undeveloped lots within the Federal Way Business Park Subdivision. As a previously platted subdivision all utilities, with the exception of transportation infrastructure, are available and adequate to service the project.

The applicant has prepared a Transportation Impact Analysis (TIA) [1] identifying and addressing transportation impacts and mitigation measures. The TIA was prepared in accordance with input from the City of Central Point, City of Medford, Jackson County and the Oregon Department of Transportation. The TIA took into account the County's Table Rock widening project (four travel lanes, a center turn lane, bike lanes and sidewalks, and signalization of Table Rock Road and Airport Road) scheduled to begin construction one year (2017) after the opening of the Costco project.

EXISTING INFRASTRUCTURE:

Water:	There are 8-inch waterlines that exist in Hamrick Road and Federal Way.
Streets:	Hamrick Road is a City Collector Street. The right-of-way in front of the subject property varies from 72-76 feet, which is adequate to serve the proposed project.
Stormwater:	There is a 36-inch storm line in Hamrick Road.

TRAFFIC IMPACTS & MITIGATION:

The TIA evaluated twelve (12) intersections deemed to be affected by the project. Four of the intersections have issues at the opening of Costco (Build Year Fall 2016). Those intersections are:

1. Table Rock Road & Airport Road (Jackson County). Currently, this intersection operates at an unacceptable Level of Service (LOS F). This status persists at Build Year and will be resolved upon completion of the Table Rock Road Improvement project in 2017. Because of the timing between Build Year and completion of the Table Rock Road project no mitigation has been proposed or required by the County.

2. Table Rock Road & Hamrick Road (Jackson County/City of Central Point). The applicant has requested full access movements on the two access driveways on Table Rock Road. Per the County,

[1] Transportation Impact Analysis Central Point Costco Development, Kittelson & Associates, Inc., October 2015

3. access on Table Rock Road will be limited as follows:

    a. Prior to completion of the Table Rock Road project, both access drives will be limited to right-in/right-out movements. Median islands will need to be installed by the applicant to restrict access movements.

    b. Prior to the completion of the Table Rock Road project, for the Table Rock Road/Hamrick Road intersection the applicant will be required to construct a center turn lane and refuge lane within the existing Table Rock Road right-of-way.

    c. Upon completion of the Table Rock Road Improvement project, access movements will be limited to right-in/right-out, and left-in movements (no signalization) for the two access driveways on Table Rock Road.

4. Northbound I-5 Off-Ramp (ODOT). On the opening date for Costco, the NB I-5 off-ramp will exceed the allowable volume to capacity (v/c) ratio, triggering the need for dual right turn lanes (IAMP 33 Project No. 9). The estimated project cost is $1.3M. The project cost sharing shall be as follows:

ODOT:	$800,000
Costco:	$377,000 (Not to exceed)
City:	$123,000 (Not to exceed)

    Per ODOT, construction will commence at the earliest possible date. The applicant's proportional share will be payable to the City of Central Point prior to issuance of a building permit and is not SDC eligible.

5. Airport Road & Biddle Road (City of Medford). The TIA indicates that the westbound approach of Airport and Biddle Road exceeds the level of service standard for the City of Medford. Mitigation measures were not addressed in the TIA. Based on comments from the City of Medford, the Rogue Valley International Airport is opposed to a median at the intersection of Biddle Rd and Airport Road. The City of Medford recommends a condition that requires the developer to pay a proportional share toward a future traffic signal at this intersection. The estimated project cost for a traffic signal at this location is $450,000 including design, construction, and inspection. The development's contribution is 10% based on additional traffic at this intersection per the Traffic Impact Analysis, dated October 2015, prepared by Kittelson and Associates, Inc. This results in a $45,000 contribution from the developer to this future project.

6. Table Rock Road & Morningside Street (City of Medford). At the intersection of Table Rock Road and Morningside Street the City of Medford recommends a condition that requires the developer to pay a proportional share towards a future left turn lane at this intersection. Per the City of Medford letter dated December 24, 2015, this development will increase PM peak hour trips through the intersection by 20%. The City of Medford estimates the total cost for a left turn lane at this location to be $300,000 including design, construction and inspection. A 20% contribution would result in a $60,000 contribution from the developer to this future project.

It should be noted that the TIA indicates that by 2020 additional lane configurations will be needed for the intersection of East Pine Street/Hamrick Road. The City of Central Point is tentatively scheduled to complete these improvements by 2018, including improvements to the North-South Traffic to include a receiving lane, a thru lane, and designated right and left turn lanes on Hamrick Road North and South of the intersection. No additional improvements will be made on E. Pine Street/Biddle Road as part of this improvement project.

CONDITIONS OF APPROVAL:

1. Oregon Department of Transportation. Prior to issuance of a building permit Costco shall enter into a Cooperative Improvement Agreement with the Oregon Department of Transportation (ODOT) , or a similar agreement acceptable to the City and ODOT ("Agreement"), to fund development and construction of a dual right turn lane at the I-5 Exit 33 northbound off-ramp. The estimated project cost is $1.3M. The Agreement shall distribute costs as follows:

ODOT	$ 800,000
Costco:	$ 377,000 (Not to exceed)
City:	$ 123,000 (Not to exceed)
Total	$1,300,000

   Costco's contribution shall not exceed $377,000 and shall be paid prior to issuance of a building permit.

2. Transportation Conditions, Jackson County Roads. The following addresses Jackson County Roads conditions of development only. See Jackson County Roads memo for general comments not imposed as conditions of development.

   A. Jackson County Roads, Condition 1 – Prior to issuance of a Certificate of Occupancy, the applicant shall construct a left turn and left receiving lane on Table Rock at Hamrick Road. The turn and receiving lanes shall have adequate queuing to ensure safe and efficient operation of the intersection during the first year of opening. Applicants Engineers shall prepare plans identifying the length of improvements. Plans shall be approved by Jackson County Roads and City of Central Point prior to issuance of a building permit. This improvement is not System Development Charges (SDC) eligible as it is in exchange for the required frontage improvements. This work will require a Minor Road Improvement Permit from Jackson County.

   B. Jackson County Roads, Condition 2 – Prior to issuance of a Certificate of Occupancy the applicant shall construct median islands in Table Rock Road in front of the two Table Rock Road approaches. Until completion of the County's Table Rock Road project these two Table Rock Road approaches will be limited to right-in/right-out. This work may be included in either the Minor Road Improvement Permit or the Commercial Approach Permit.

   C. Jackson County Roads, Condition 3 – As part of the Table Rock Road Project, the Table Rock Road approaches will be constructed as right-in/left-in/right-out movements. The Table Rock Road Project will install the medians as part of the Table Rock Road Project's expenses.

D. Jackson County Roads, Condition 4 – At the County's Table Rock Road Project's expense the County will install a new signal at Airport Road and Table Rock Road.

E. Jackson County Roads, Condition 9 – The applicant shall submit construction drawings to Jackson County Roads and obtain county permits as required.

F. Jackson County Roads, Condition 10 – Prior to the issuance of a Building Permit the applicant shall obtain Commercial Approach permits from Jackson County Roads for any new approaches or improved approaches to Hamrick Road and Table Rock Road. The paved approaches shall have a 30' radii and a 40' width. Jackson County Roads requires the removal of any existing driveways not being used on Hamrick Road and Table Rock Road.

G. Jackson County Roads, Condition 13 – Utility permits are required from Jackson County Roads for any utility work within the county road right-of-way.

H. Jackson County Roads, Condition 16 – Prior to issuance of a Building Permit if drainage is directed to Hamrick Road and/or Table Rock Road, plans shall be submitted to Jackson County Roads for review and comment on the hydraulic report including the calculations and drainage plan. Capacity improvements or on-site detention shall be installed at the expense of the applicant. Upon completion of the project the developer's engineer shall certify that construction of the drainage system was constructed per plan and a copy of the certification shall be sent to Jackson County Roads.

3. City of Central Point

A. Hamrick Road and Federal Way Improvements – Prior to Public Works Final Inspection, the applicant shall install sidewalks and street trees per the Public Works Department Standards and Specifications.

B. Public Works Standard Specifications – The applicant shall use the 2014 revised Public Works Standards and Specifications for all new construction drawings.

4. City of Medford

A. Per the City of Medford letter dated January 5, 2016, prior to issuance of a building permit, the applicant shall provide evidence that it has contributed toward the construction of signalization improvements at the intersection of Airport and Biddle Road. The applicant's share of the signalization improvement shall not exceed $45K, which shall be payable to the City of Medford.

B. Per the City of Medford letter dated January 5, 2016, prior to issuance of a building permit, the applicant shall provide evidence that it has contributed toward the construction of left turn lane improvements at the intersection of Table Rock Road and Morningside Street. The applicant's share of the left turn lane improvement shall not exceed $60K, which shall be payable to the City of Medford.

JACKSON COUNTY
Roads

Roads Engineering

Mike Kuntz, P.E.
County Engineer

200 Antelope Rd.
White City, OR 97503
Phone: (541)774-6228
Fax: (541)774-6295
kuntzm@jacksoncounty.org

www.jacksoncounty.org

ATTACHMENT "E"

December 10, 2015

Attention: Stephanie Holtey
City of Central Point Planning
140 South Third Street
Central Point, OR 97502

RE: Conditional Use Permit and Site Plan & Architectural Review for construction of a 161,992 square foot membership warehouse and four island fuel facility, including 783 parking spaces and site landscaping off Hamrick Road and Table Rock Road – county-maintained roads.

Planning File: 15022 and 15028; 37-2W-12B Tax Lots 213, 214, 215, and 216.

Dear Stephanie:

Thank you for the opportunity to comment on this Conditional Use Permit and Site Plan & Architectural Review for construction of a 161,992 square foot membership warehouse and four island fuel facility, including 783 parking spaces and site landscaping on a 18.28 acre site in the Industrial M-1 –zoning district. The project site is adjacent to Hamrick Road and Table Rock Road. Jackson County Roads has the following comments:

1. Prior to opening, Jackson County requests construction of a left turn and left receiving lane on Table Rock Road at Hamrick Road. The turn and receiving lanes shall have adequate queuing to ensure safe and efficient operation of the intersection during the first year of opening. This work will require a Minor Road Improvement Permit from Jackson County.

2. Prior to opening, Jackson County requests construction of median islands in Table Rock Road in front of the two Table Rock Road approaches. Until the County's Table Rock Road Improvement project is complete, the Table Rock Road approaches will be limited to right-in/right-out. This work may be included in either the Minor Road Improvement Permit or the Commercial Approach Permit.

3. As part of the County's Table Rock Road Improvement Project, the Table Rock Road approaches will be constructed as right-in/left-in/right-out movements. The County's project will install these medians at the project's expense.

4. The County's Table Rock Road Improvement Project will install a new traffic signal at Airport Road at the project's expense.

5. The East Pine/Hamrick intersection will likely fail approximately one year after opening. Central Point should construct improvements to this intersection prior to failure.

6. Construction of the fourth leg of the Table Rock/Airport Road intersection, with Airport Road Connecting to Federal Way, will significantly improve traffic circulation in the project area. Jackson County would support any efforts which facilitate this improvement.

7. Once the fourth leg of the Airport intersection is complete and connected to Federal Way, the Federal Way access point will become a significant access for the project. The current site plan utilizes Table Rock and Hamrick Roads as the front of the project and for primary public access. Federal Way is primarily utilized for delivery access and as a minor public access. The site plan should perhaps be modified to make Hamrick Road and Federal Way the front of the project to recognize the long term circulation. Regardless of the final "front" of the project, the public access to Federal Way should receive a major upgrade to encourage public use of this access and improve long term circulation.

8. Jackson County estimates the value of the frontage improvements on Table Rock Road that will not be constructed by the applicant at $480,000.

9. The applicant shall submit construction drawings to Jackson County Roads and obtain county permits if required.

10. The applicant shall obtain Commercial Approach permits from Roads for any new or improved approaches to Hamrick Road and Table Rock Road. The paved approaches shall have 30' radii and a 40' width. Roads requests the removal of any existing driveways not being used on Hamrick Road and Table Rock Road.

11. The posted speed zone for Table Rock Road is 45 mph, requiring an approach sight distance minimum of 325'.

12. Hamrick Road is a Basic Speed Rule road. The required approach sight distance is 450'.

13. Utility Permits are required from Roads for any utility work within the county road right-of-way.

14. Please note Hamrick Road is a local road but the soon to be revised County TSP will designate it as a Minor Collector and is county-maintained with an Average Daily Traffic count of 799 as of 8/2014, 150' west of Table Rock Road.

15. Please note Table Rock Road is an Arterial Road with an Average Daily Traffic count of approximately 13,000 in the project area.

16. If drainage is directed to Hamrick Road and/or Table Rock Road, Jackson County Roads would like to review and comment on the hydraulic report including the calculations and drainage plan. Capacity improvements or on site detention, if necessary, shall be installed at the expense of the applicant. Upon completion of the project, the developer's engineer shall certify that construction of the drainage system was constructed per plan and a copy of the certification shall be sent to Jackson County Roads.

17. We would like to be notified of future development proposals, as county permits may be required.

18. We concur with any right-of-way dedicated.

Sincerely,

Mike Kuntz, P.E.
County Engineer

ATTACHMENT "F"

Oregon Department of Transportation
Region 3, District 8
100 Antelope Road
White City, OR 97503
(541) 774-6316
FAX (541 774-6397

Oregon

Kate Brown, Governor

December 14, 2015

STEPHANIE HOLTEY, PLANNER
CITY OF CENTRAL POINT PLANNING DEPARTMENT
140 SOUTH THIRD STREET
CENTRAL POINT, OR 97502

Re: Costco Wholesale Conditional Use Permit: 15022 and Site Plan/Architectural Review: 15028.

Thank you for the opportunity to review the Conditional Use Permit (CUP) application, Site Plan/Architectural Review application and associated traffic impact analysis (TIA) for the construction of a 161,992 square foot membership warehouse and four (4) island fuel facility, including 783 parking spaces and site landscaping. The 18,028 acre property is located at the southwest corner of the Table Rock Road and Hamrick Road intersection. 37-2W-12B Tax Lots 213, 214, 215, and 216.

ODOT is requesting that the City of Central Point include the following condition for CUP 15022:

- Costco shall enter into a Cooperative Improvement Agreement with the Oregon Department of Transportation (ODOT) to fund development and construction of a dual right turn lane at the I-5 Exit 33 northbound off-ramp. Costco's share of the estimated $1.3 million improvement shall be limited to $500,000, with ODOT funding the remaining cost of the improvement.

You may contact me at 541-774-6399 if you have any further questions or require additional information.

Thank you,

Don Morehouse
Senior Transportation Planner, Development Review

Cc: Ron Hughes, Michael Wang, Cathy Harshman, Jeremiah Griffin

Stephanie Holtey

From: Kelly A. Akin <Kelly.Akin@cityofmedford.org>
Sent: Thursday, December 03, 2015 12:11 PM
To: Stephanie Holtey
Subject: RE: Action Needed: Request for Agency Comments on Land Use Applications

Stephanie –

Thank you for the opportunity to comment on the Costco applications. The City of Medford Planning Department has no comments.

Kelly Akin
Principal Planner
City of Medford
Planning Department
411 W 8th Street
Medford OR 97501

From: Stephanie Holtey [mailto:Stephanie.Holtey@centralpointoregon.gov]
Sent: Monday, November 16, 2015 3:51 PM
To: Kelly A. Akin
Subject: Action Needed: Request for Agency Comments on Land Use Applications
Importance: High

Kelly,

The City has received the following applications for Costco Wholesale:

- Conditional Use Permit (File No. 15022)
- Site Plan & Architectural Review (File No. 15028)

This request for agency comments (attached) was also sent to Alex Georgevitch in Public Works. Due to the size of the application, the site exhibits, findings and traffic information analysis have been posted on the City's website at the following location: http://www.centralpointoregon.gov/cd/project/costco-conditional-use-permitsite-plan-architectural-review.

If you have any questions, please feel free to contact me.

Sincerely,

Stephanie Holtey, CFM
Community Planner II
City of Central Point
140 South 3rd Street
Central Point, OR 97502
Desk: (541) 664-7602, Ext. 244
Fax: (541) 664-6384
www.centralpointoregon.gov

ROGUE VALLEY SEWER SERVICES

Location: 138 West Vilas Road, Central Point, OR - Mailing Address: P.O. Box 3130, Central Point, OR 7502-0005
Tel. (541) 664-6300, Fax (541) 664-7171 www.RVSS.us

November 16, 2015

Stephanie Holtey
City of Central Point Planning Department
155 South Second Street
Central Point, Oregon 97502

Re: File 15022 CUP and 15028 SPR – Costco Wholesale, Tax Lots 213, 214, 215, and 216, Map 372W12B

Sanitary sewer service to the proposed development can be had by connecting to the existing 8 inch sewer main on Federal Way. The connection can be done either as a private service lateral or a public main line extension. There is an 8 inch pipe extended to the property at the Northwest corner that would facilitate this connection.

A private service lateral connection will require a permit from RVSS, which will be issued upon payment of related development fees.

A public sewer extension must be designed by a licensed engineer and constructed in accordance with RVSS standards.

The project is within the Phase 2 stormwater quality area and must comply with stormwater quality requirements outlined in the Regional Stormwater Design Manual. The proposed development does not involve any sewer construction.

The project does have stormwater quality impacts and must comply with the standards established in the regional Stormwater Quality Design Manual.

Rogue Valley Sewer Services requests that approval of this development be subject to the following conditions:

1. Applicant must submit sanitary sewer plans to RVSS for review and approval demonstrating compliance with RVSS standards prior to the start of construction.
2. Applicant must submit a stormwater management plan demonstrating compliance with the regional Stormwater Design Manual for review and approval by RVSS prior to the start of construction.
3. Applicant must obtain a construction site erosion and sediment control permit from RVSS prior to any ground disturbing activities.

Feel free to call me if you have any questions.

Carl Tappert

Carl Tappert, PE
Manager

K:\DATA\AGENCIES\CENTPT\PLANNG\SITEPLANREVIEW\2015\15028_COSTCO WHOLESALE.DOC

ATTACHMENT "I-1"

Continuous Improvement Customer Service
CITY OF MEDFORD
PUBLIC WORKS DEPARTMENT
ENGINEERING & DEVELOPMENT DIVISION
200 SOUTH IVY STREET
MEDFORD, OREGON 97501
www.ci.medford.or.us
TELEPHONE (541) 774-2100
FAX (541) 774-2552

January 5, 2016

Stephanie Holtey
City of Central Point
Planning Department
140 So. Third St.
Central Point, OR. 97502

Dear Ms. Holtey:

We have reviewed the Central Point Staff Report, dated January 5, 2016, for the proposed Costco Conditional Use Permit and have the following comments:

1. We understand the Rogue Valley International Airport is opposed to a median at the intersection of Biddle Rd and Airport Rd, as described in Condition No. 3. We recommend a condition that requires the developer to pay a proportional share towards a future traffic signal at this intersection. The City of Medford estimates the total cost for a traffic signal at this location to be $450,000 including design, construction, and inspection. We estimate the development's contribution at 10% from the additional traffic at this intersection shown in the Traffic Impact Analysis, dated October 2015, prepared by Kittelson and Associates, Inc. This results in a $45,000 contribution from the developer to this future project.
2. At the intersection of Table Rock Rd. and Morningside St. we recommend a condition that requires the developer to pay a proportional share towards a future left turn lane at this intersection. See attached accident history showing an existing pattern of northbound rear-end collisions at this intersection. Per our December 24, 2015 letter, this development will increase PM peak hour trips through the intersection by 20%. The City of Medford estimates the total cost for a left turn lane at this location to be $300,000 including design, construction, and inspection. A 20% contribution would result in a $60,000 contribution from the developer to this future project.

The City of Medford is open to discussing alternate mitigation designs, costs, and/or methodologies to calculate the developer's share of the cost of mitigating these traffic impacts to those as described above. These values are the best estimate we can make at this time with the information available. If you have questions, please contact me at (541) 774-2115.

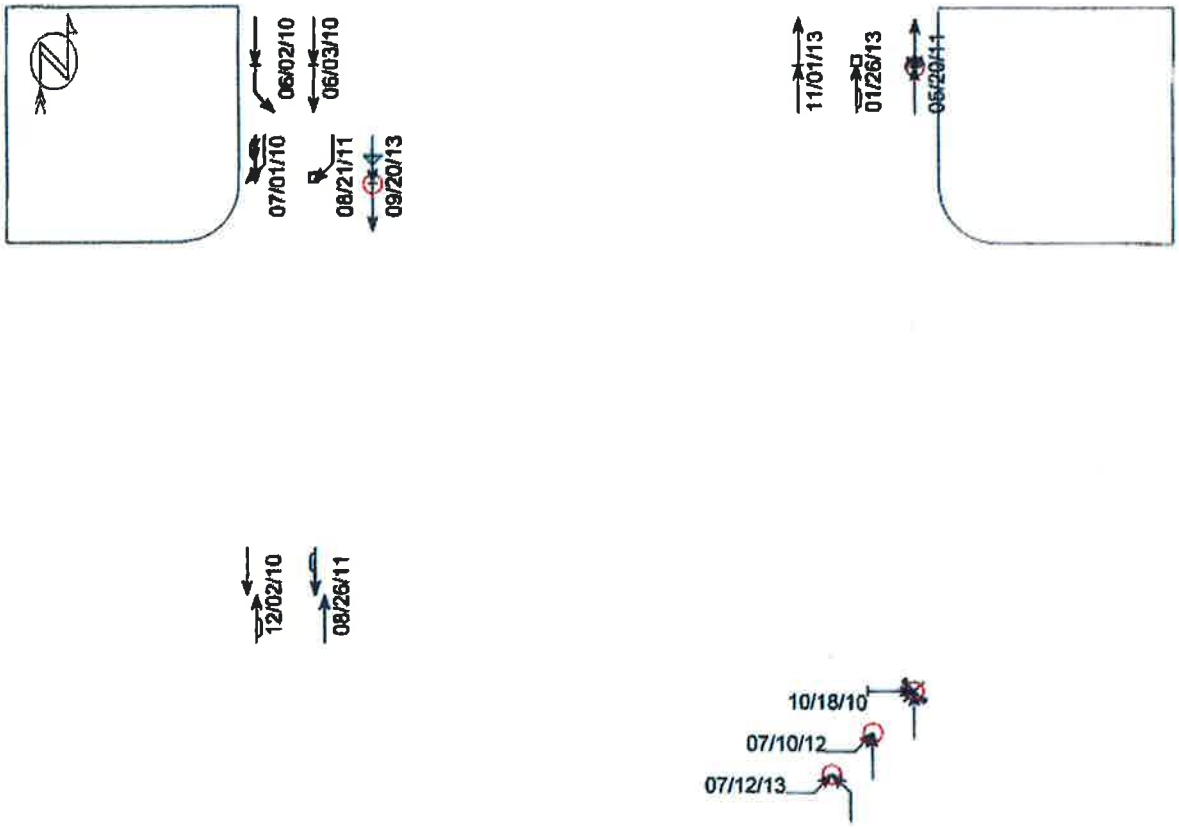
Sincerely,

Karl MacNair, PE
Transportation Manager

CC: Alex Georgevitch
File

Morningside St & Table Rock Rd

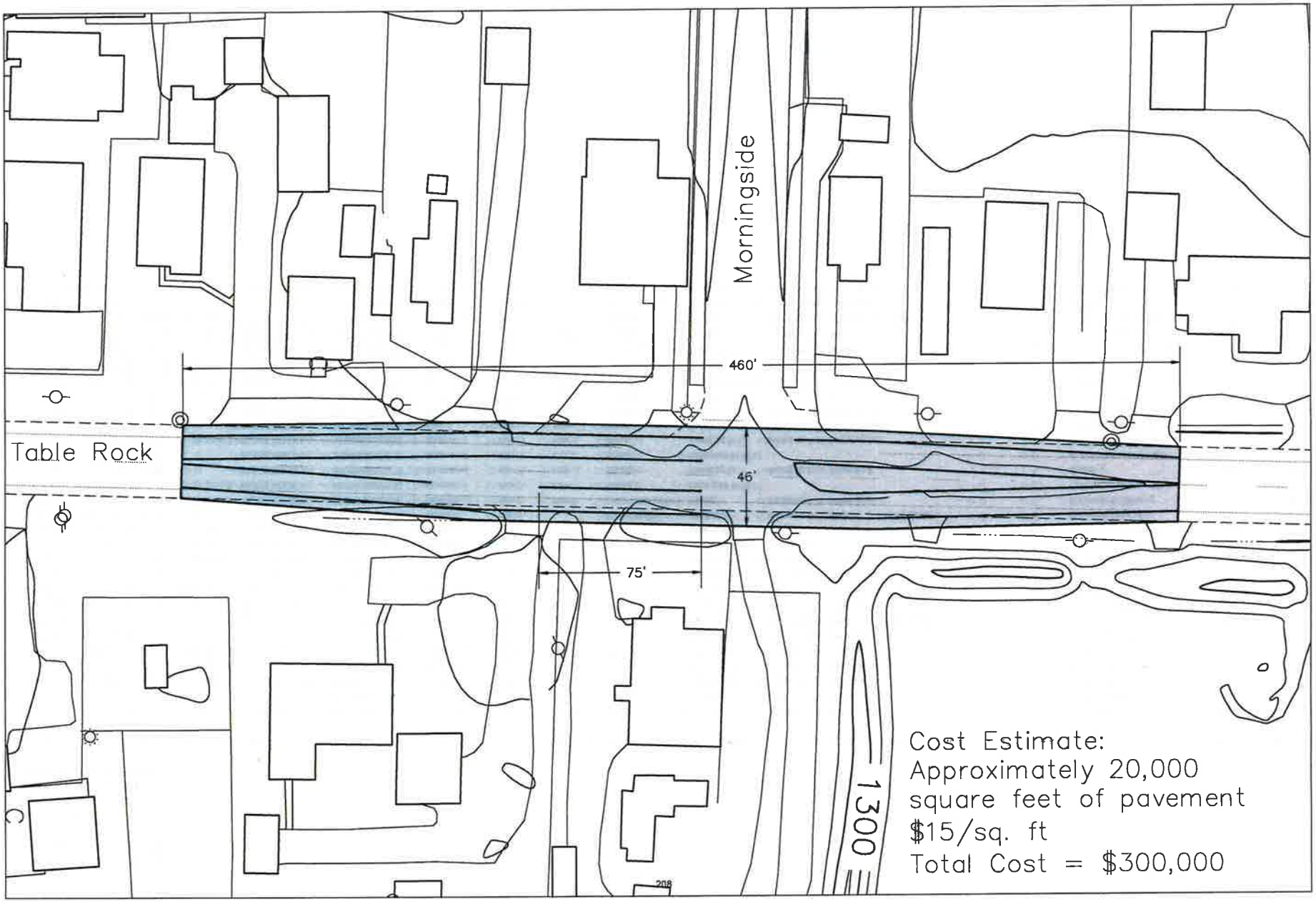
29 Accidents (rate:1.32) 01/01/10 - 12/04/14



Intersection Magic VER 6.725
City of Medford, OR 01/05/2016

Accident listing
01/01/2010 - 12/04/2014
Morningside St & Table Rock Rd
Sorted by <DATE;TIME;ACC#>

CASE ID	DATE	TIME	DISTA	DIR F	STREET 1	STREET 2	TYPE OF COLL	VEH 1 DIR	VEH 2 DIR	VEH 1 MOVE	VEH 2 MOVE	VEH 1 TYPE	VEH 2 TYPE	LANE POS	INJURY	SEVERITY	FATAL	ENFORCEMENT	AT FAULT	SEC CAUSE
1001341	1/23/2010	15:26	0	East	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	North	North	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1001958	2/2/2010	16:21	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Straight	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	
1004406	3/18/2010	17:21	75	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1008465	6/2/2010	15:23	200	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	South	South	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Careless Driving	Veh 1	Did not comp
1008541	6/3/2010	20:02	500	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	South	South	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	DUII Alcohol	Veh 1	
1009155	6/15/2010	12:54	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1010062	7/1/2010	9:37	0		TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	South	South	Overtaking	Turning Right	Moving Aut	Moving Aut	Right Shou	0	0	0	Improp Passing	Veh 1	
1016502	10/18/2010	16:26	0		MORNINGSIDE ST	TABLE ROCK RD	Angle	North	East	Straight	Stopped in Traf	Bicycle	Moving Aut		1	2	0	Careless Driving	Veh 1	
1018998	12/2/2010	0:44	1000	North	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	North	South	Straight	Straight	Moving Aut	Moving Aut	Off Road R	0	0	0	DUII Alcohol	Veh 1	Hit and Run
1107065	4/19/2011	16:36	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		1	1	0	Danger Move of Stp/Prk Ve	Veh 1	
1108914	5/20/2011	11:59	75	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	Animal
1110451	6/13/2011	16:11	50	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	
1110660	6/16/2011	19:37	50	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf				0	0	0	Following too close	Veh 1	Violated Tra
1114896	8/21/2011	10:31	0		TABLE ROCK RD	MORNINGSIDE ST	Head on	South		Turning Right	Stationary	Moving Aut	Object	Off Road R	0	0	0	Careless Driving	Veh 1	
1115263	8/26/2011	16:40	528	North	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	South	North	Leav Traf Ln Lef	Straight	Moving Aut	Moving Aut		0	0	0	Careless Driving	Veh 1	Did not comp
1116641	9/16/2011	17:12	30	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf				0	0	0	Following too close	Veh 1	
1119563	11/1/2011	14:00	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		1	1	0	None	Veh 1	Hit and Run
1203776	2/28/2012	15:57	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf				0	0	0	Following too close	Veh 1	
1209878	3/1/2012	14:47	40	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Turning Left	Moving Aut	Moving Aut		1	1	0	Following too close	Veh 1	
1212435	7/6/2012	16:14	0		TABLE ROCK RD	MORNINGSIDE ST	Angle	North	North	Straight	Turning Left	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	Did not comp
1212696	7/10/2012	13:29	0		TABLE ROCK RD	MORNINGSIDE ST	Angle	East	North	Turning Left	Straight	Moving Aut	Moving Aut		1	1	0	Fail to obey STOP SIGN	Veh 1	Did not comp
1215893	8/21/2012	16:10	0		TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1221590	11/5/2012	15:43	75	South	TABLE ROCK RD	MORNINGSIDE ST	Non collisio	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Following too close	Veh 1	
1301660	1/26/2013	7:54	500	North	TABLE ROCK RD	MORNINGSIDE ST	Sideswipe	North		Leav Traf Ln Lef	Stationary	Moving Aut	Object	Off Road L	0	0	0	None	Veh 1	Hit and Run
1313715	7/12/2013	11:11	0		MORNINGSIDE ST	TABLE ROCK RD	Angle	East	North	Turning Left	Turning Left	Moving Aut	Moving Aut		1	1	0	Fail to obey STOP SIGN	Veh 1	
1319092	9/20/2013	11:11	30	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	South	South	Straight	Stopped in Traf	Moving Aut	Moving Aut		1	1	0	Following too close	Veh 1	Violated Tra
1322177	11/1/2013	14:44	1000	North	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut	Off Road R	0	0	0	Following too close	Veh 1	
1324605	12/9/2013	14:18	0		MORNINGSIDE ST	TABLE ROCK RD	Angle	South	East	Turning Right	Stopped in Traf	Moving Aut	Moving Aut		0	0	0	Other	Veh 1	Weather
1413090	6/25/2014	16:21	30	South	TABLE ROCK RD	MORNINGSIDE ST	Rear end	North	North	Straight	Stopped in Traf	Moving Aut	Moving Aut		2	1	0	Following too close	Veh 1	


Morningside
460'
Table Rock
46'
75'
1300
Cost Estimate:
Approximately 20,000
square feet of pavement
$15/sq. ft
Total Cost = $300,000

ATTACHMENT "I-2"

Continuous Improvement Customer Service
CITY OF MEDFORD
PUBLIC WORKS DEPARTMENT
ENGINEERING & DEVELOPMENT DIVISION
200 SOUTH IVY STREET
MEDFORD, OREGON 97501
www.ci.medford.or.us
TELEPHONE (541) 774-2100
FAX (541) 774-2552

December 24, 2015

Stephanie Holtey
City of Central Point
Planning Department
140 So. Third St.
Central Point, OR. 97502

Dear Ms. Holtey:

We have reviewed the Traffic Impact Analysis, dated October 2015, for the proposed Costco Conditional Use Permit and have the following comments:

1. Mitigation is required at the intersection of Biddle Rd and Airport Rd due to project traffic degrading the level of service on the westbound approach below acceptable standards. The increase in traffic volume will increase competition for gaps in traffic for permissive movements resulting in the acceptance of smaller gaps and increase collision potential at the intersection.
2. The intersection of Table Rock Rd. and Morningside St. needs to be studied to mitigate safety effects of project trips on a decrease in safety at the intersection. The proposed increase in traffic will increase rear end pressure on northbound left turning motorists and decrease available gaps in southbound traffic. This will induce them to choose smaller gaps and increase collision potential at the intersection. The 90 P.M. peak hour project trips each way north and southbound represent a 20% increase over the 450 peak hour through trips each way counted on Table Rock in 2015. The development should contribute to a project to construct a northbound left turn lane at Morningside St and Table Rock Rd.

If you have questions, please contact me at (541) 774-2121.

Sincerely,

Peter Mackprang
Associate Traffic Engineer

CC: Kim Parducci
Don Burt
Dan O'Connor

FINDINGS OF FACT & CONCLUSIONS OF LAW
Costco Wholesale Conditional Use Permit
File No. 15022

January 5, 2016

Applicant:	)	Findings of Fact
Costco Wholesale	)	and
999 Lake Drive	)	Conclusion of Law
Issaquah, WA 98027	)	

PART 1 - INTRODUCTION

Costco Wholesale is requesting a Conditional Use Permit to develop 18.28 acres of vacant industrial land (M-1) zone with a membership warehouse and associated four (4) island fuel facility. The 161,992 square foot membership warehouse will be located on the southwest property boundary and the fuel facility on the southeast property boundary. It is the applicant's intent to relocate its existing facility to the proposed site with a scheduled opening date Fall 2016.

The project site is located on the eastern edge of the Central Point city limits at the southeast corner of Hamrick and Table Rock Road (Figure 1). The site also has frontage on Federal Way, a local street. Surrounding properties include developed and undeveloped industrial lands, including the M-1 and M-2 zoning districts.

In accordance with Table 17.05.01, the Costco Conditional Use Permit application has been processed using Type III procedures as set forth in Section 17.05.400 of the Central Point Municipal Code.

Including this introduction, these findings will be presented in three (3) parts as follows:

1. Introduction
2. Section 17.76.040, Conditional Use Findings & Conclusions
3. Summary Conclusion

Figure 1 **Location Map**

Proposed Costco Wholesale

PART 2 – CONDITIONAL USE FINDINGS & CONCLUSIONS

17.48.040 Conditional Uses.
The following uses and their accessory uses may be permitted in an M-1 district when authorized in accordance with Chapter 17.76:

A. Business offices and commercial uses that are compatible with and closely related in their nature of business to permitted uses in the M-1 district, or that would be established to serve primarily the uses, employees, or customers of the M-1 district;

B. Rail and trucking distribution facilities.

***Finding 17.48.040(A)**: The City, by Planning Commission Resolution 764 and City Council Resolution 1217[1], determined that membership warehouses are a commercial use compatible with and closely related to permitted uses in the M-1 zone.*

***Conclusion 17.48.040(A)**: Costco Wholesale, a membership warehouse that includes wholesale automobile fuel sales, is specifically allowed as a Conditional Use.*

***Finding 17.48.040(B):** There are no rail or trucking distribution facilities associated with the proposed use.*

***Conclusion 17.48.040(B):** Not applicable.*

17.76.040 Findings and Conditions
The planning commission in granting a conditional use permit shall find as follows:

A. That the site for the proposed use is adequate in size and shape to accommodate the use and to meet all other development and lot requirements of the subject zoning district and all other provisions of this code.

***Finding 17.76.040(A):** As evidenced in the applicant's site plan, the 18.28 acre project site is adequately sized to accommodate the proposed structures and off-street parking as follows:*

1) Setback Requirements (CPMC 17.48.060). The proposed structures meet the setback requirements of the M-1 zoning district as set forth in Table 1 below:

Table 1. Proposed Yard Setbacks			
Yard	**Minimum Setback**	**Warehouse**	**Fuel Canopy**
Front (North)	20-ft	275-ft	950-ft
Side (West)	10-ft	60-ft, 3-in	51-ft
Side (East)	10-ft	395-ft	35-ft
Rear (South)	10-ft	60-ft, 10-in.	160-ft 1-in.

[1] File No. 09022 – M-1 Code Amendment

2) *Off-Street Parking Requirements (CPMC 17.64.040). The applicant's parking plan proposes 783 parking spaces, which is 85 spaces in excess of the maximum 698 spaces allowed (Table 2).*

Table 2. Costco Parking Requirement

Proposed Costco Floor Area by Use	Building Area (Sq. Ft.)	Min./Max. Parking Standard	Parking Supply Ratio	Required Parking (No. Spaces)	Proposed Parking	Surplus/Deficit
Retail	134,064	1/200 s.f.	5.00	670	783	113
Warehouse	27,928	1/1,000 s.f.	1.00	28		(28)
TOTAL	161,992	1/232 s.f.	4.31	698	783	85
Proposed Adjustment	**161,992**	**1/207 s.f.**	**4.83**	**783**	**783**	-

In accordance with Section 17.64.040(B)(2), the applicant is requesting an increase to the maximum parking standard for the proposed use. Table 3 summarizes the data provided in the applicant's parking demand analysis, which is based upon the following:

- *Documented parking supply and demand at existing Costco Wholesale warehouses in Oregon; and,*
- *The Institute of Transportation Engineers (ITE) Parking Generation, 4th Edition recommendation to maintain a maximum parking utilization of 90% during the typical peak periods to avoid illegal parking and repeating circulation.*[2]

Table 3. Costco Parking Demand Analysis Summary

Costco Site Location	Warehouse Size (Sq. Ft.)	Parking supply	Peak Period Parking Demand	Parking Demand per 1,000 Sq. Ft.	Parking Supply to Maintain 90% utilization at Peak	Minimum Recommended Parking Ratio
Clackamas	137,000	693	670	4.89	744	5.43
Medford	136,297	654	579	4.25	644	4.72
Aloha	148,030	682	528	3.57	587	3.96
Average	**140,442**	**676**	**592**	**4.24**	**658**	**4.71**
Central Point, Proposed	161,992	782			753	4.83

The applicant's parking proposal for the Central Point location is slightly higher than the average minimum recommended parking ratio (Table 3) at 4.83 parking spaces per 1,000 s.f. GFA. Since the difference between the minimum recommendation and the proposed adjustment is within the range of acceptable statistical error (less than 5%) and is consistent with the ITE

[2] ITE Parking Generation, 4th Edition, 2010.

recommendation to stay below 90% utilization for typical and seasonal peaks, the request to increase the parking standard is warranted and can be accommodated as demonstrated by the applicant's site plan.

3) *Loading Requirements (Section 17.64.040). Loading required for retail buildings greater than 100,000 s.f. GFA includes 3 bays plus 1 bay for each additional 80,000 s.f.. On this basis the proposed 161,992 s.f. warehouse requires four (4) loading bays, which are provided on applicant's site plan and architectural elevations (north and west elevations). Additionally, the plans show three (3) loading areas for smaller truck/van deliveries.*

***Conclusion 17.76.040(A)**: The site is sufficient in size and shape to accommodate the use and meet the development and lot requirements of the M-1 zone.*

B. That the site has adequate access to a public street or highway and that the street or highway is adequate in size and condition to effectively accommodate the traffic that is expected to be generated by the proposed use.

***Finding 17.76.040(B):** The proposed Costco membership warehouse and fuel facility will generate approximately 10,670 new daily trips. In accordance with Section 17.05.900(A)(2)(c), the applicant prepared a Traffic Impact Analysis (TIA) for the proposed Costco membership warehouse and fuel facility. The scope of work for the TIA was based on scoping sessions held on June 2, 2015 and August 13, 2015 with affected transportation agencies (i.e. Oregon Department of Transportation, Jackson County, City of Medford[3] , and City of Central Point). It was agreed that the TIA would evaluate twelve (12) intersections and all proposed site access driveways.*

Per the TIA Costco membership data was utilized in conjunction with area-wide population, land use, employment and transportation information to determine how the transportation system will operate under build year (2016) and future year (2030) conditions with and without the proposed Costco development in place. The TIA accounted for Jackson County's Table Rock Road widening project, which is scheduled to begin construction one year (2017) after opening of the proposed Costco project. Upon completion of the project, Table Rock Road will include four travel lanes, continuous center turn lane, bicycle lanes and sidewalks on both sides of the roadway from Biddle Road to Airport Road. The roadway will then narrow to two (2) travel lanes with a continuous center turn lane, bicycle lanes and sidewalks on both sides of the roadway from Airport Road to the I-5 crossing. Signalization of the Table Rock/Airport Road intersection will be completed as part of this project. As a result of the planned improvements, traffic impacts on Table Rock Road (i.e. Intersections of Table Rock and Hamrick Road and Table Rock and Airport Road) will be resolved.

Based on the TIA and comments received from affected agencies, there are traffic impacts to the following six (6) roadways:

[3] City of Medford did not provide any input into the TIA's scope of work.

1. *Northbound I-5 Off-Ramp (ODOT).*
2. *Table Rock Road and Hamrick Road Intersection (Jackson County).*
3. *Table Rock Road and Airport Road Intersection (Jackson County).*
4. *Airport Road and Biddle Road Intersection (City of Medford*
5. *Hamrick Road/East Pine Street/Biddle Road (City of Central Point).*

Subsequent to completion of the TIA the City of Medford noted that a sixth intersection, the intersection of Table Rock Road and Morningside Street, would also be impacted by the project. The impacts and proposed mitigation for each of the above intersections are:

1. Northbound I-5 Off-Ramp. On the date of opening, the TIA indicates that the volume to capacity (v/c) ratio on the NB I-5 Off-Ramp will be exceeded trigging the need for implementation of IAMP 33 Project No. 9 (dual right turn lanes from the off-ramp to East Pine Street). To mitigate this condition ODOT required that Project No. 9 of IAMP 33 be required as a condition of development. Prior to commencement of construction of the applicant's project ODOT's Project No. 9 must be fully funded and scheduled for construction. Recognizing that the applicant's project was not responsible for the total impact it was agreed that the applicant will pay a prorated share of the costs.

2. Table Rock Road and Hamrick Road Intersection. During the interim (period between completion of the applicant's project and completion of the County's Table Rock Road Project) site access on Table Rock Road will be limited to right-in/right-out. As a result of the access restrictions, left turn delays at Hamrick Road and Table Rock will result unacceptable interim levels of service (LOS F). The TIA demonstrates that the identified interim impacts to the right-in/right-out access restrictions on the Hamrick/Table Rock Road intersection (non-signalized) are resolved upon completion of the Table Rock Widening project. To limit access and resolve the identified interim impact to Hamrick/Table Rock Road, the County is requiring the following conditions:

a. *Until the County's Table Rock Road project is complete, the private Table Rock Road approaches will be limited to right-in/right-out only. To assure this movement the applicant shall construct median islands in Table Rock Road in front of the two Table Rock Road private approaches.*

b. *Prior to certificate of occupancy, the applicant shall construct a left turn and left receiving lane on Table Rock Road at Hamrick Road. The turn and receiving lanes shall have adequate queuing to ensure safe and efficient operation of the intersection during the first year of opening.*

c. *As part of the County's Table Rock Improvement Project, the Table Rock Road approaches will be constructed as right-in/left-in/right-out movements. The County's project will install these medians at the project's expense.*

3. Table Rock and Airport Road Intersection. This intersection is currently at LOS F. With the applicant's project and the pending improvements to the intersection scheduled for 2017 as part of the Table Rock Road Widening Project the level of service will be improved to LOS A. During the interim it is agreed that a lower level of service is acceptable.

4. Airport Road and Biddle Road. This intersection currently operates at a LOS C. At build year, the intersection will operate at a LOS E. The City of Medford's review of the TIA, per a letter dated January 5, 2016, indicated that the preferred mitigation would be the eventual signalization of this intersection and recommended that the applicant pay their proportional share (10%) of the future (no planned date) signalization cost prior to commencement of construction of the applicant's project.

5. Hamrick Road and East Pine Street/Biddle Road Intersection. With completion of the applicant's project the intersection of Hamrick Road and East Pine Street/Biddle Road is not expected to exceed LOS D. However, the TIA confirmed that by 2020 the City's TSP Project #213 will be needed at this intersection to avoid an unacceptable level of service. The city of Central Point is tentatively scheduled to complete the necessary improvements as a Capital Improvement Project by 2018, including north-south traffic receiving lanes, a thru lane, and designated right and left turn lanes on Hamrick Road north and south of the intersection. The City is not requiring interim mitigation, since the identified impacts do not occur at the build year.

Table Rock Road and Morningside Street Intersection. Although not studied in the TIA the City of Medford, in letters dated December 24, 2015 and January 5, 2016, stated that increased project related traffic volume on Table Rock Road would increase collision potential to turning movements at the intersection. The City of Medford recommends that prior to commencement of construction of the applicant's project that the applicant contribute its proportional share (20%) toward future (no scheduled date) construction of left turn improvements at this intersection.

***Conclusion 17.76.040(B)**: Per the Applicant's TIA and the recommendations of the affected agencies, traffic impacts of the proposed use on public streets and highways have been identified and will be mitigated as noted in the above findings and as conditioned in the Revised Staff Report dated January 5, 2016.*

C. That the proposed use will have no significant adverse effect on abutting property or the permitted use thereof. In making this determination, the commission shall consider the proposed location of improvements on the site; vehicular ingress, egress and internal circulation; setbacks; height of buildings and structures; walls and fences; landscaping; outdoor lighting; and signs.

***Finding 17.76.040(C)**: The following characteristics were evaluated in consideration of the proposal's impacts to abutting properties:*

1. *Proposed Location of Site Improvements. As illustrated in the Site Plan, the location of the proposed warehouse, fuel facility, parking and landscape improvements are consistent with the site design and development requirements of the M-1 zoning district (See Finding 17.76.040(A)).*

2. *Vehicular Ingress, Egress and Internal Circulation. The project site proposes two access drives on each of the frontage roads (i.e. Federal Way, Hamrick Road and Table Rock Road). Per the TIA, access restrictions to private approaches on Table Rock Road, prior to completion of the Table Rock Road widening project, cause operational and safety issues at Hamrick Road. As demonstrated in Finding 17.76.040(B), access restrictions and mitigation measures resolve traffic impacts associated with ingress and egress as conditioned per the Revised Staff Report dated January 5, 2016.*

3. *Setbacks. The applicant's site plan identifies the location of structures and off-street parking areas consistent with the setback requirements in the M-1 zoning district (See Finding 17.76.040(A).*

4. *Building Height. Per the Architectural Elevations submitted by the applicant, the warehouse will have a varied roofline with a maximum height of 34-ft at the top of the highest parapet. The proposed building height is typical of surrounding warehouse development and within the maximum 60-ft building height allowed in the M-1 zone. The top of the fuel canopy is 17-ft 6-inches within the maximum height requirements of the M-1 zone.*

5. *Walls and Fences: Due to the nature of the proposed use as bulk retail sales, the applicant's proposal does not include site obscuring walls or fences. This proposal is typical of other commercial/retail development in the city, and is consistent with other permitted uses in the M-1 zone. As such, the no adverse impacts to adjacent properties or their permitted uses will result from the absence of fences and walls.*

6. *Landscaping. The applicant's Landscape Plan illustrates proposed street frontage and off-street parking area landscape improvements consistent with site development requirements in the M-1 zone. This is considered to be adequate and effective in avoiding adverse visual impacts to adjoining properties.*

7. *Outdoor Lighting. The applicant submitted a Site Photometric Plan that shows perimeter and interior lighting throughout the site. Lighting is oriented toward the interior site and is not deemed to cause an adverse impact to adjoining properties.*

8. *Signs. The Applicant has submitted a Class "C" Variance (File No. 15032) from the sign area standard of CPMC 17.48.080(A)(1). The signage variance request would allow wall signs that are proportional to the building scale and dimension consistent with signage permitted in other commercial (C) districts in the City. Based upon the applicant's proportionality rationale for the proposal, the variance request is deemed reasonable. However, if the variance is not approved, the applicant will be required to demonstrate compliance with the M-1 sign area standards prior to building permit issuance.*

***Conclusion 17.76.040(C)**: The applicant's project is typical of site development within the M-1 zone. As such, the site development standards for permitted uses in combination with the*

conditions of approval relative to vehicle ingress and egress (Finding 17.76.040(B)) are deemed sufficient to avoid adverse impacts to abutting properties or permitted uses thereof.

D. That the establishment, maintenance or operation of the use applied for will comply with local, state and federal health and safety regulations and therefore will not be detrimental to the health, safety or general welfare of persons residing or working in the surrounding neighborhoods and will not be detrimental or injurious to the property and improvements in the neighborhood or to the general welfare of the community based on the review of those factors listed in subsection C of this section.

***Finding 17.76.040(D)**: The issue of safety is regulated through the building code and in conjunction with the fire district. The proposed fueling station must be constructed and operated in compliance with all Federal, State and local regulation and shall be reviewed during the building permit process and prior to issuance of a building permit. The Applicant's findings affirm their commitment to complying with all Federal, State and local regulations.*

***Conclusion 17.76.040(D)**: The proposed Costco Wholesale is consistent with this criterion.*

E. That any conditions required for approval of the permit are deemed necessary to protect the public health, safety and general welfare and may include:

1. Adjustments to lot size or yard areas as needed to best accommodate the proposed use; provided the lots or yard areas conform to the stated minimum dimensions for the subject zoning district, unless a variance is also granted as provided for in Chapter 17.13,

   ***Finding 17.76.040(E)(1)**: The site is adequate to accommodate the proposed development as demonstrated in Finding 17.76.040(A). However, as a condition of approval, legal lot consolidation of the four (4) lots comprising the site will be required prior to building permit issuance to eliminate property boundary conflicts with the proposed structures.*

   ***Conclusion 17.76.040(E)(1)**: As conditioned, the required lot consolidation is sufficient to resolve the identified property boundary conflicts with proposed structures.*

2. Increasing street widths, modifications in street designs or addition of street signs or traffic signals to accommodate the traffic generated by the proposed use,

   ***Finding 17.76.040(E)(2):** See Finding 17.76.040(B).*

   ***Conclusion 17.76.040(E)(2):** As demonstrated in 17.76.040(B), the transportation system is sufficient to accommodate traffic generated by the proposed use as conditioned.*

3. Adjustments to off-street parking requirements in accordance with any unique characteristics of the proposed use,

Finding 17.76.040(E)(3): *Per the Parking Demand Assessment included in the Applicant's TIA, the proposed use has parking demands, unique to Costco, that necessitate an increase in allowable parking The applicant has proposed an increase to the City's off-street parking standard to allow 783 parking spaces, which is consistent with the minimum recommended parking for Costco and maintains a utilization rate less 90% utilization per the ITE's recommendation for off-street parking areas.*

Conclusion 17.76.040(E)(3)*: Per Finding 17.76.040(A), the requested parking increase for the proposed use is justified.*

4. Regulation of points of vehicular ingress and egress,

Finding 17.76.040(E)(4)*: See Finding 17.76.040(C).*

Conclusion 17.76.040(E)(4)*: Per Finding 17.76.040(C), the limitation of access and interim mitigation at the intersection of Table Rock Road is necessary to maintain operational standards and safety at the intersection.*

5. Requiring landscaping, irrigation systems, lighting and a property maintenance program,

Finding 17.76.040(E)(5)*: The applicant's project is typical of other uses/structures permitted in the M-1 district and as such the site development standards for permitted uses in the M-1 zoning district are deemed adequate to integrate the applicant's project into the surrounding neighborhood. Based upon evaluation of other Costco Wholesale locations being in good condition, no additional conditions are deemed necessary relative to maintenance.*

Conclusion 17.76.040(E)(5)*: Not applicable.*

6. Regulation of signs and their locations,

Finding 17.76.040(E)(6)*: The applicant's proposal for signs includes wall signage that exceeds the maximum area allowable in the M-1 zone.*

Conclusion 17.76.040(E)(6)*: As a condition of approval, the applicant's Class "C" Variance request (File No. 15032) shall be approved prior to issuance of a building permit. If the variance is not approved, the applicant will be required to demonstrate compliance with the M-1 sign area standards prior to building permit issuance.*

7. Requiring fences, berms, walls, landscaping or other devices of organic or artificial composition to eliminate or reduce the effects of noise, vibrations, odors, visual incompatibility or other undesirable effects on surrounding properties,

***Finding 17.76.040(E)(7)**: The project proposal is for bulk retail sales. With the exception of the automobile fuel sales, an outright permitted use per CPMC 17.48.020(G), all business operations (i.e. retail sales, food preparation, tire installation) will occur within an entirely enclosed structure. Given the characteristics of the proposed use and the compatibility of the site development (See Finding 17.76.040(A) and (C)), there are no noises, odors, or other adverse impacts from the proposed structures or use that would necessitate fences, berms, walls or additional landscaping.*

***Conclusion 17.76.040(E)(7)**: Not applicable.*

8. Regulation of time of operations for certain types of uses if their operations may adversely affect privacy of sleep of persons residing nearby or otherwise conflict with other community or neighborhood functions,

***Finding 17.76.040(E)(8)**: The project site is within the M-1 industrial zone. Surrounding properties are zoned M-1 Industrial and M-2 Industrial General. Costco uses standard business hours, normally between 10am and 9pm Monday through Friday and 10am to 5pm or 6pm on weekends, and its fuel station from 6am to 10pm daily.*

***Conclusion 17.76.040(E)(8)**: Based on the proposed operating hours and the zoning of surrounding properties no further regulation of operating hours is deemed necessary.*

9. Establish a time period within which the subject land use must be developed,

***Finding 17.76.040(E)(9)**: Per Section 17.76.060 the applicant has one year to obtain a building permit and diligently pursue construction to completion. The scheduled opening date for the proposed Costco Wholesale is Fall 2016 per the Applicant's findings.*

***Conclusion 17.76.040(E)(9):** Aside from the building permit requirement per Section 17.76.060, there are no issues with the proposed development timing.*

10. Requirement of a bond or other adequate assurance within a specified period of time,

***Finding 17.76.040(E)(10):** Per the Applicant's TIA and the recommendations of the affected agencies, traffic impacts of the proposed use on public streets and highways have been identified, will be mitigated, and applicant will be required to warrant improvements noted in the Findings 17.76.040(B) and as conditioned in the Revised Staff Report dated January 5, 2016.*

***Conclusion 17.76.040(E)(10):** As conditioned in the Revised Staff Report dated January 5, 2016, timely completion of warranted improvements is assured.*

11. Such other conditions that are found to be necessary to protect the public health, safety and general welfare,

    ***Finding 17.76.040(E)(11)**: Aside from the previously discussed conditions related to the development of a membership warehouse, there are no additional conditions.*

    ***Conclusion 17.76.040(E)(11)**: Not applicable.*

12. In considering an appeal of an application for a conditional use permit for a home occupation, the planning commission shall review the criteria listed in Section 17.60.190.

    ***Finding 17.76.040(E)(12):** There is no home occupation associated with the proposed Costco Wholesale.*

    ***Conclusion 17.76.040(E)(12):** Not applicable.*

PART 3 – SUMMARY CONCLUSION

As conditioned, the proposed Costco Wholesale has been found to comply with the criteria set forth in Section 17.76.040 for Conditional Use Permits.

PLANNING COMMISSION RESOLUTION NO. 827

A RESOLUTION APPROVING A CONDITIONAL USE PERMIT FOR A COSTCO WHOLESALE ON LANDS WITHIN THE M-1, INDUSTRIAL ZONE

(FILE NO. 15022)

WHEREAS, the City, by Planning Commission Resolution No. 764 and City Council Resolution No. 1217, determined that membership warehouses are a commercial use compatible with and closely related to permitted uses in the M-1 zone and therefore authorized them as a conditional use.

WHEREAS, the applicant has submitted an application for approval a Conditional Use Permit to develop an 18.28 acre site within the M-1, Industrial zone with a 161,992 square foot Costco Wholesale membership warehouse and four (4) island fuel facility; and

WHEREAS, on January 5, 2016, the City of Central Point Planning Commission conducted a duly-noticed public hearing on the application, at which time it reviewed the Staff Report and heard testimony and comments on the application; and

WHEREAS, the Planning Commission's consideration of the application is based on the standards and criteria applicable to Conditional Use Permits in accordance with Section 17.76 of the Central Point Municipal Code; and

WHEREAS, after duly considering the proposed use, it is the Planning Commission's determination that, subject to compliance with conditions as set forth in the Staff Report (Exhibit "A") dated January 5, 2016, the application does comply with applicable standards and criteria for approval of a conditional use permit.

NOW, THEREFORE, BE IT RESOLVED, that the City of Central Point Planning Commission, by this Resolution No. 827, does hereby approve the Conditional Use Permit application for Costco Wholesale. This approval is based on the findings and conditions of approval as set forth on Exhibit "A", the Planning Department Staff Report dated January 5, 2016 and the Findings of Fact and Conclusions of Law as set forth in Exhibit "B, " including attachments incorporated herein by reference.

PASSED by the Planning Commission and signed by me in authentication of its passage this 5th day of January, 2016.

_____
Planning Commission Chair

ATTEST:

_____
City Representative