



STAFF REPORT
 September 5, 2017

AGENDA ITEM: File No. ZC-17001

Consideration of a Zone (map) Change application from TOD Corridor Medium-Mix Residential (TOD-MMR) to TOD Corridor Low-Mix Residential (TOD-LMR) for 3.64 acres of property located at 3428 and 3470 Chicory Lane. The Property is identified on the Jackson County Assessor’s map as 37S 2W 11C, Tax Lots 8300 & 8400. **Applicant:** Bob Fellows Construction, LLC **Agent:** JCSA Planning, Ltd.

STAFF SOURCE:

Molly Bradley, Community Planner I

BACKGROUND:

The Applicant has requested a minor Zone Change for property that is in the UGB but has not yet been annexed into the City. This application was submitted concurrently with an application for Annexation (ANNEX-17001) and Comprehensive Plan Amendment (File No. CPA-17002). In considering the zone change there are three (3) components which need to be addressed:

- 1. Comprehensive Land Use Plan Compatibility.** The current Land Use Plan designation for the Property is TOD Corridor, (see Comprehensive Plan application, File No. CPA-17002), which allows those uses as illustrated in the following table:

Table 2	
Land Use Summary – TOD Corridor	
Existing Comprehensive Plan and Zoning Designations	Optional TOD Corridor Comprehensive Plan and Zoning Designations
Residential	
R-1-8 – Residential, Single Family District (8,000 sq. ft. min. lot size)	TOD-MMR – Medium-Mix Residential
R-2 – Residential, Two Family District (6,000 sq. ft. min. lot size)	TOD-LMR – Medium-Mix Residential
R-3 – Residential, Multiple Family District (6,000 sq. ft. min. lot size)	TOD-MMR – Medium-Mix Residential
Commercial	
C-2 – Commercial-Professional	TOD-HMR – High-Mix Residential
C-3 – Downtown Business District	TOD-EC – Employment Commercial
C-4 – Tourist and Office Professional District	TOD-EC – Employment Commercial
C-5 – Thoroughfare Commercial District	TOD-GC – General Commercial
Industrial	
M-1 – Industrial District	TOD-GC – General Commercial
M-2 – Industrial General District	TOD-GC – General Commercial

Comment: The current (TOD-MMR/R-3) and proposed (TOD-LMR/R-2) zoning are both consistent with the TOD Corridor land use designation. Per Table 2, the proposed zone change is compatible with the land uses set forth in the Comprehensive Plan.

2. **Committed Residential Density.** The City of Central Point participates in the Greater Bear Creek Valley Regional Plan, a land-use planning effort undertaken by several cities in the Rogue Valley. The Regional Plan is incorporated as an element in the City’s Comprehensive Plan, and establishes goals and policies which affect future urban development. The Regional Plan Element lists performance indicators to determine the level of compliance with the Regional Plan. One performance indicator is 4.1.5 Committed Residential Density, which states that land currently within a UGB but outside existing City Limits, shall be built to a minimum residential density of 6.9 units per gross acre¹.

Table 1.3. Proposed New Density, 2017-2037

Land Use Classification	New Minimum Gross Density	Gross Vacant Residential Acres Needed	Minimum Build-Out (DUs)
VLRes	1.00	13	13
LRes	4.00	151	605
MRes	8.00	50	403
HRes	20.00	38	756
Average Density	7.05	252	1,777

Table 1.3. Proposed New Density, 2017-2037

Land Use Classification	New Minimum Gross Density	Gross Vacant Residential Acres Needed	Minimum Build-Out (DUs)
VLRes	1.00	13	13
LRes	4.00	155	619
MRes	8.00	47	374
HRes	20.00	38	756
Average Density	6.99	252	1,762

Comment: The Minimum Average Gross Density standard applies only to vacant lands within the City’s urban area and is calculated on an average density basis. The above tables use the minimum densities and existing vacant residential acreage to analyze the impact of rezoning the Property. As illustrated in Table 1.3, the adjustment the 3.64 acres for the subject Property in the Medium Residential and Low Residential zones still exceeds the City’s overall average density goal of 6.9 units per gross acre. The Applicant has demonstrated that the decrease in density due to the zone change will not significantly affect the City’s ability to uphold its commitment to a residential density of 6.9 units per acre.

3. **Traffic Impact.** The subject property is currently designated General Industrial (GI) per Jackson County zoning maps, and is planned to assume the land use designation of TOD-MMR/R-3 zoning once annexed into the City. The Applicant is proposing a city zone change to TOD-LMR/R-2, a lower density residential zone, to more easily accommodate a subdivision for single-family dwelling units. Per the City’s requirements for Zone Change and Comprehensive Plan Amendment, a Traffic Impact Analysis (TIA) is required as part of the application(s).

Comment: Per the findings in the TIA, the nature of the zone change to decrease density requirements will not have an appreciable difference on traffic generation or impact, and may even alleviate projected traffic concerns (Attachment “B”). Adequate public services and transportation networks are available to serve the Property at the highest intensity its use.

ISSUES:

There are no issues relative to this application for minor Zone (Map) Change.

¹ City of Central Point Comprehensive Plan; Regional Plan Element, 4.1.5.

CONDITIONS OF APPROVAL:

A recommendation to approve a minor amendment may include conditions and, in this case, staff advises that approval of the zone change be contingent upon approval of the Comprehensive Plan amendment.

ATTACHMENTS:

Attachment “A” – Existing Comprehensive Plan Map and Proposed Zoning Map

Attachment “B” – Traffic Findings, S. O. Transportation Engineering, LLC, July 10, 2017

Attachment “C” – Applicant’s Findings of Fact, May 5, 2017

Attachment “D” – Applicant’s Supplemental Findings, July 6, 2017

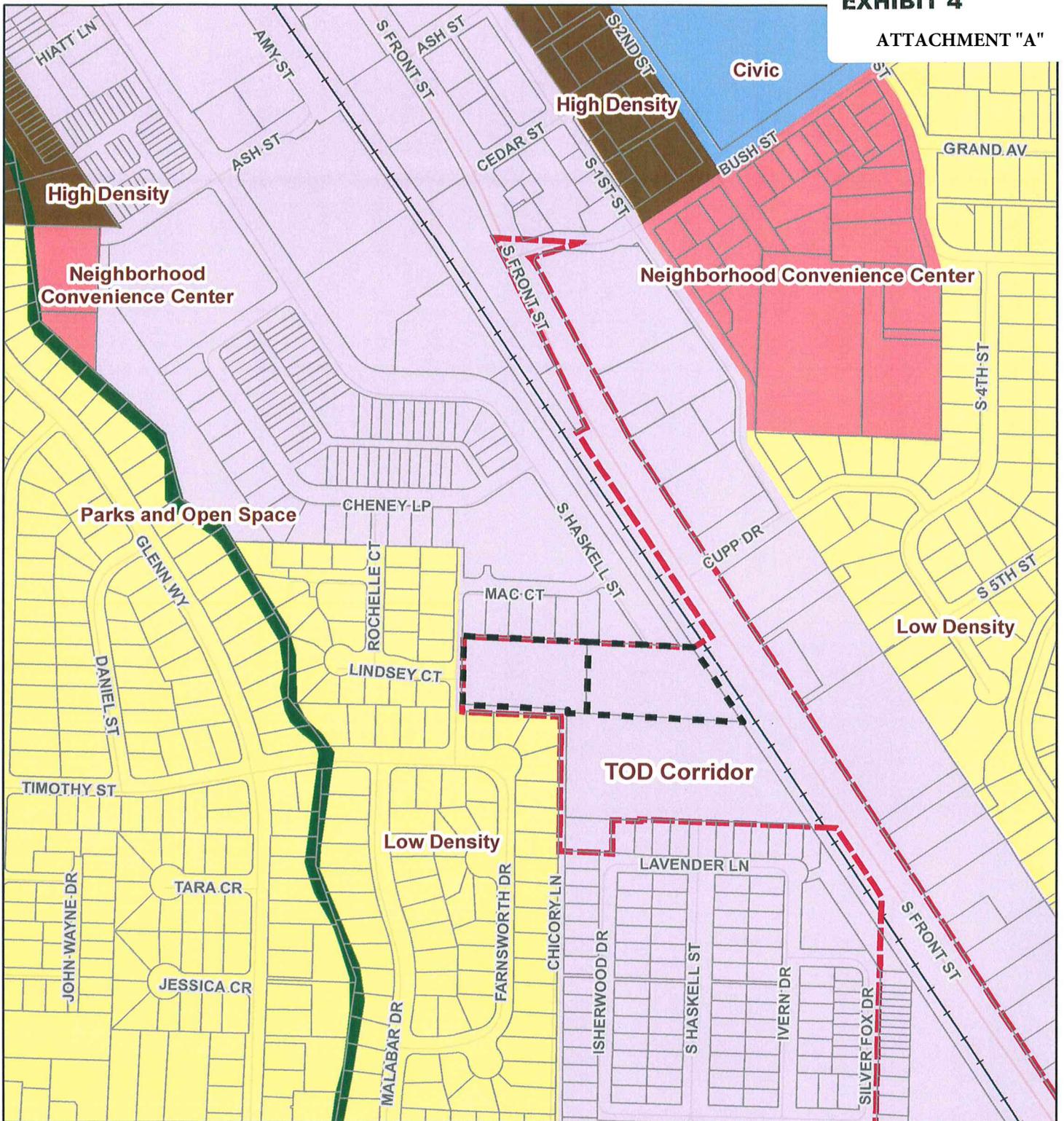
Attachment “E” – Resolution No. 846

ACTION:

Open public hearing and consider the proposed amendment to the Zoning Map, close public hearing and 1) recommend approval to the City Council; 2) recommend approval with revisions; or 3) deny the application.

RECOMMENDATION:

Recommend approval of Resolution No. 846. Per the Staff Report dated September 5, 2017 and supported by Findings of Fact.



	Subject Lots		Neighborhood Convenience Center
	Tax Lots		TOD Corridor
	City Limits		High Density Res.
	Urban Growth Boundary		Low Density Res.
	Railroad		Civic
			Parks and Open Space

Existing Comprehensive Plan

Annexation / Zone Change
 Bob Fellows Construction, LLC
 37-2W-11C tax lots 8300 & 8400



CSA Planning, Ltd.

400 200 0 400 Feet





	Subject Lots	City Zoning
	Tax Lots	 C-2(m)
	Railroad	 Civic
	County Zoning	 EC
		 GC
		 LMR
		 M-1
		 MMR
		 OS
		 R-1-6
		 R-1-8

Proposed Zoning Map

Annexation / Zone Change
 Bob Fellows Construction, LLC
 37-2W-11C tax lots 8300 & 8400







SOUTHERN OREGON TRANSPORTATION ENGINEERING, LLC

319 Eastwood Drive - Medford, Or. 97504 – Phone (541) 608-9923 – Email: Kwkp1@Q.com

July 10, 2017

Matt Samitore, Public Works Director
City of Central Point
140 South Third Street
Central Point, Oregon 97502

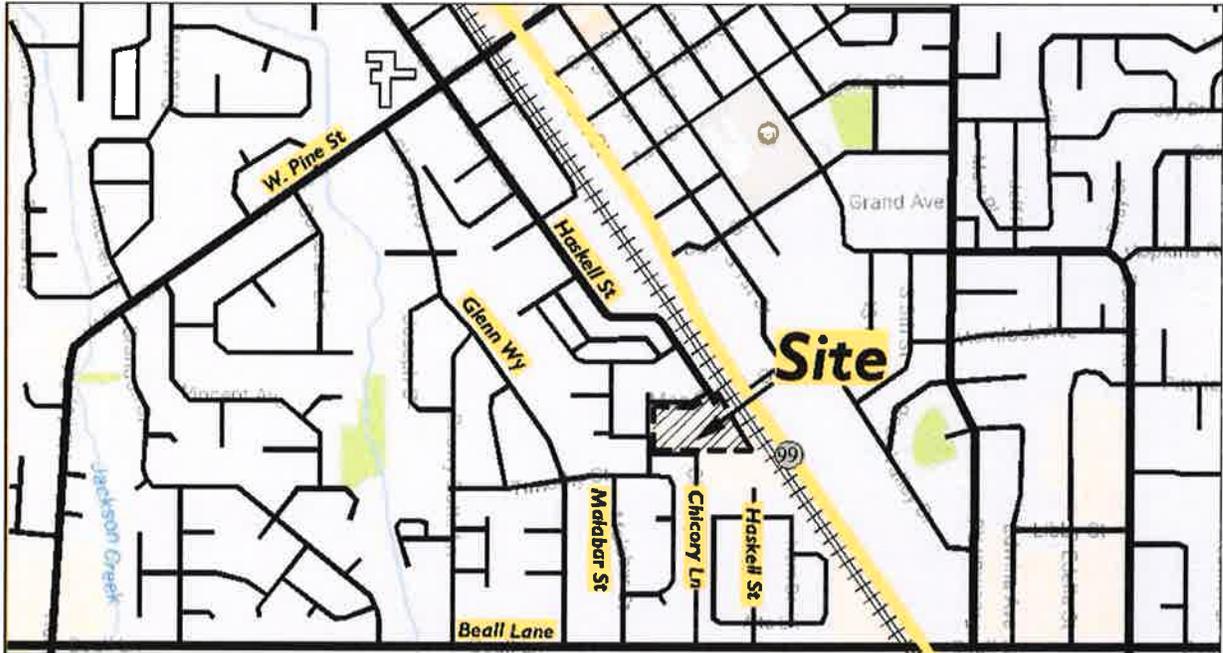
RE: Fellows Annexation Traffic Analysis

Dear Matt,

Southern Oregon Transportation Engineering, LLC prepared a limited traffic analysis for a proposed annexation, comprehensive plan map amendment, and zone change on property located east of Chicory Lane and south of Haskell Street on Township 37S Range 2W Section 11C tax lots 8300 and 8400.

Background

Access to the subject property is provided from Chicory Lane and Haskell Street. Haskell Street is the higher order street that provides connectivity to W. Pine Street to the north. Other lower order streets around the site provide alternate connectivity to both the north and south.



Malabar Street, Glenn Way, and Chicory Lane west of the site are all two-lane local streets with curb and gutter. Chicory Lane is unimproved north of Lindsey Court and is an alley south of the property. Haskell Street is a two-lane collector with curb and gutter in the vicinity of the site and terminates at the northeast corner of the property. Sidewalks and a park row will be added along the subject property frontage as part of development, connecting pedestrian facilities to the north and south on Haskell

Street. The nearest higher order intersection with Haskell Street is currently its intersection with W. Pine Street to the north. In the future, Haskell Street will extend to the south where it connects to Beall Lane, but at this time the only higher order intersection is Haskell Street and W. Pine Street. This intersection experiences its largest spike in traffic during the a.m. peak hour as a result of commuter traffic and school traffic from Mae Richardson Elementary occurring simultaneously Monday through Friday. As a result of this, the a.m. peak hour was used as the critical peak hour in the analysis.

Year 2017 No-Build Intersection Operations

Manual traffic counts were gathered in late February of 2017 at the study area intersection of Haskell Street and W. Pine Street. Counts were gathered during the a.m. peak period (7:00-9:00 a.m.) for three consecutive weekdays in an effort to capture a morning commute with heavy school traffic. Manual counts were also gathered on Pine Street at OR 99 (Front Street) during the a.m. peak period and at Haskell Street and W. Pine Street during an extended p.m. peak period (2:00-6:00 p.m.) to capture both school traffic and the commuter peak. All counts were seasonally adjusted to reflect peak conditions and then evaluated to determine how facilities currently operate. Results were prepared in an earlier analysis for the Creekside Apartments (March of 2017) and are unchanged for this analysis. They are summarized in Table 1.

Table 1 – Year 2017 No-Build Intersection Operations					
Intersection	Jurisdiction	Performance Standard	Traffic Control	Year 2017 No-Build A.M. Peak	Year 2017 No-Build P.M. Peak
Haskell Street / W. Pine Street	City of Central Point	LOS D	Signal	C, 21.1 sec	A, 9.2 sec

LOS = Level of Service, sec = seconds

Note: Exceeded performance standards are shown in bold, italic

Results of the analysis show the intersection of Haskell Street and Pine Street operating at a level of service (LOS) “C” under existing year 2017 no-build conditions during a.m. peak hour, which is shown to be significantly worse than the LOS “A” operation during the p.m. peak hour. Both operations are within the City’s LOS “D” performance standard, but this verifies that the a.m. peak hour is the critical peak hour of the day. Refer to the attachments for synchro output sheets.

Year 2017 No-Build Queuing and Blocking

Queuing is the stacking up of vehicles for a given lane movement, and it can have a significant effect on roadway safety and the overall operation of a transportation system. Long queue lengths in through lanes can block access to turn lanes, driveways, and minor street approaches, as well as spill back into upstream intersections. As a result of this, the estimation of queue lengths is an important aspect of the analysis process for determining how a transportation corridor operates.

Queue lengths are reported as the average, maximum, or 95th percentile queue length. The 95th percentile queue length is used for design purposes and is the queue length reported in this analysis. Five simulations were run and averaged in SimTraffic to determine 95th percentile queue lengths for a previous analysis for the Creekside Apartments (March of 2017) and are unchanged in this analysis. Queue lengths were rounded up to the nearest 25 feet (single vehicle length) and reported in Table 2 for applicable movements during the a.m. and p.m. peak hours.

Table 2 – Year 2017 No-Build 95th Percentile Queue Lengths

Intersection Movement	Available Link Distance (Feet)	95th Percentile Queue Length AM (feet)	95th Percentile Queue Length PM (feet)
<u>Haskell Street / W. Pine Street</u>			
Southbound Left	375	<i>750*</i>	150
Southbound Through/Right	150	<i>175*</i>	50
Northbound Left/Through/Right	525	<i>100*</i>	50
Eastbound Left	150	<i>175*</i>	50
Eastbound Through/Right	425	<i>675*</i>	175
Westbound Left	150	75	100
Westbound Through	375	200	250
Westbound Right	275	125	100

Note: Exceeded queue lengths are shown in bold, italic

* Queue lengths affected by downstream congestion at Pine Street / OR 99

Results of the queuing analysis show many exceeded queue lengths occurring under existing conditions during the a.m. peak hour as a result of downstream queuing on Pine Street at OR 99 (Front Street). In watching traffic in the field and verifying through model simulations, the eastbound traffic volume on Pine Street at OR 99 exceeds the single lane capacity provided, and the amount of green time for that movement cannot support the demand. This results in a queue length that backs up through the railroad crossing, Amy Street, and Haskell Street for approximately twenty minutes of the a.m. peak period. When this occurs, the southbound left, eastbound through, and northbound right turn movements at Haskell Street and W. Pine Street have no place to go when they have a green light. In order to properly show this, we evaluated the intersection of Haskell Street and W. Pine Street as an isolated intersection. The queuing results are shown in Table 3.

Table 3 – Year 2017 No-Build 95th Percentile Queue Lengths – Haskell / W. Pine Isolated

Intersection Movement	Available Link Distance (Feet)	95th Percentile Queue Length AM (feet)	Exceeded
<u>Haskell Street / W. Pine Street</u>			
Southbound Left	375	250	No
Southbound Through/Right	150	50	No
Northbound Left/Through/Right	525	75	No
Eastbound Left	150	125	No
Eastbound Through/Right	425	250	No
Westbound Left	150	75	No
Westbound Through	375	150	No
Westbound Right	275	100	No

Note: Exceeded queue lengths are shown in bold, italic

What is shown in Table 3 is that the intersection of Haskell Street and W. Pine Street does not have exceeded queue lengths during the a.m. peak hour when it isn't impacted by downstream queue lengths. The green splits provided for traffic movements are sufficient to handle the spike in traffic that occurs when school traffic and commuter traffic mix. The southbound left turn and eastbound through queue lengths are still shown to be long, but this is expected during the peak period, and both continue to stay within their available link distances. This confirms that the problem on the system is occurring downstream at Pine Street and OR 99.

Traffic signal timing adjustments were explored at the intersection of Pine Street and OR 99, but were not shown to solve the capacity problem occurring during the a.m. peak hour. The solution is to

provide two eastbound through lanes on Pine Street between Haskell Street and S. 2nd Street. When two travel lanes are provided, the eastbound queue on Pine Street at OR 99 does not back up and impact the intersection of Haskell Street and W. Pine Street. Table 4 summarizes queue lengths with mitigation in place.

Intersection Movement	Available Link Distance (Feet)	95th Percentile Queue Length AM (feet)	Exceeded
<u>Haskell Street / W. Pine Street</u>			
Southbound Left	375	275	No
Southbound Through/Right	150	75	No
Northbound Left/Through/Right	525	75	No
Eastbound Left	150	100	No
Eastbound Through/Right	425	250	No
Westbound Left	150	75	No
Westbound Through	375	150	No
Westbound Right	275	100	No

Note: Exceeded queue lengths are shown in bold, italic

As can be seen in Table 4, when two travel lanes are provided eastbound on Pine Street at OR 99, queue lengths at the Haskell Street and W. Pine Street are similar to those that were shown as an isolated intersection, which means that they aren't affected by downstream queuing. This mitigation was previously shown to be required in the year 2000 Central Point Transit Oriented Development Traffic Impact Study prepared by JRH Transportation. This study evaluated the need and benefit of a third railroad crossing at Twin Creeks to the north, which reduces traffic on Haskell Street and preserves future capacity at the intersection with W. Pine Street. Construction of this third railroad crossing is scheduled for completion by November of 2017, which will occur before the proposed 50-unit Creekside Apartments development builds out. For this reason, the year 2018 no-build and build analyses in this report assume re-routing of traffic from Haskell Street to OR 99 through the Twin Creeks railroad crossing, consistent with what was shown to occur in model runs provided for the JRH study.

Crash History

Crash data for the most recent 5-year period was provided from ODOT's Crash Analysis Unit. Results were provided for the period of January 1st, 2011 through December 31st, 2015.

Intersection safety is generally evaluated by determining the crash rate in terms of crashes per Million Entering Vehicles (MEV) at intersections or Million Vehicle Miles (MVM) for segments. The details of crash data are examined to identify any patterns that could be attributable to geometric or operational deficiencies. A crash rate higher than the ODOT published 90th percentile rate or trends of a specific type of crash may indicate the need for further investigation along a corridor.

Data at the study area intersection of Haskell Street and W. Pine Street showed ten collisions within a 5-year period. Tables 5 and 6 provide a summary of results. Crash data is provided in the attachments.

Intersection	2011	2012	2013	2014	2015	Total Crashes	AADT	Crash Rate	ODOT 90th %
Haskell Street / W. Pine Street	0	1	2	5	2	10	14,900	0.37	0.860

Table 6 - Crash History by Type, 2011-2015

Intersection	Collision Type					Severity		
	Rear-End	Turning/Angle	Fixed Object	Other	Ped/Bike	Non-Injury	Injury	Fatal
Haskell Street / W. Pine Street	3	6	1	0	0	10	0	0

There were ten reported collisions at the study area intersection of Haskell Street and W. Pine Street within a five year period. Six of the ten collisions were turning collisions, which is common at intersections with permissive movements because drivers are required to yield and often do not. Three of the ten were rear-end collisions, all of which occurred during either the a.m. or p.m. peak periods likely as a result of congestion. None of the collisions resulted in injury. There were no pedestrian or bicyclist related collisions, nor were there any fatalities.

The number of collisions at Haskell Street and W. Pine Street show an average of two per year, which is not considered excessive especially considering the high traffic spikes that are shown to occur during peak periods, but more importantly, the severity of collisions is low which reduces the safety concern. The intersection crash rate is significantly less than the ODOT published 90th percentile crash rate, which is used as a measure to determine whether further investigation should be taken. Based on all of this, no further investigation is shown to be necessary.

Design Year 2018 No-Build Conditions

Design year 2018 no-build conditions represent development build year conditions for the study area without consideration of proposed development trips. This condition is evaluated to determine how a study area will be impacted by area background growth. An annual growth rate was developed for traffic movements from the ODOT Future Volumes Table. Two locations were evaluated and averaged, which included OR 99 at Beall Lane and OR 99 at Scenic Ave. The average corresponding growth rate was 1.5% of growth per year through the future year 2035. Design year 2018 no-build conditions for this analysis also included re-routed trips from a third railroad crossing at Twin Creeks and in-process development trips from the previously approved Creekside Apartments. A spreadsheet with growth calculations and volume development is provided in the attachments.

Design Year 2018 No-Build Intersection Operations

The intersection of Haskell Street and W. Pine Street was evaluated under design year 2018 no-build conditions during the a.m. peak hour to evaluate impacts from background growth, re-routing of trips through the planned third railroad crossing at Twin Creeks, and additional development on Haskell Street. A mitigated scenario (additional eastbound lane on W. Pine Street) was also evaluated for comparison purposes. Results of both scenarios are summarized in Table 7.

Table 7 – Design Year 2018 No-Build Intersection Operations

Intersection	Jurisdiction	Performance Standard	Traffic Control	AM Peak No-Build	AM Peak Mitigated
Haskell Street / Pine Street	City of Central Point	LOS D	Signal	B, 17.0 sec	B, 17.6 sec

LOS = Level of Service, sec = seconds

Note: Exceeded performance standards are shown in bold, italic

Results of the analysis show the intersection of Haskell Street and W. Pine Street continues to operate acceptably under design year 2018 no-build scenarios with and without mitigation on W. Pine Street, but the additional eastbound lane does reduce congestion considerably, which can be seen in the queuing analysis below. Refer to the attachments for synchro output sheets.

Design Year 2018 No-Build Queuing and Blocking

Five simulations were run and averaged in SimTraffic to determine 95th percentile queue lengths at Haskell Street and W. Pine Street under design year 2018 no-build conditions. Queue lengths were rounded up to the nearest 25 feet (single vehicle length) and reported in Table 8 for applicable movements during the a.m. peak hour under no-build and mitigated no-build conditions.

Intersection Movement	Available Link Distance (Feet)	95th Percentile Queue Length AM No-Build	95th Percentile Queue Length AM Mitigated
<u>Haskell Street / W. Pine Street</u>			
Southbound Left	375	<i>450*</i>	275
Southbound Through/Right	150	75	50
Northbound Left/Through/Right	525	100	75
Eastbound Left	150	<i>100*</i>	100
Eastbound Through/Right	425	<i>700*</i>	275
Westbound Left	150	100	75
Westbound Through	375	175	150
Westbound Right	275	100	100

Note: Exceeded queue lengths are shown in bold, italic

* Queue lengths affected by downstream congestion at Pine Street / OR 99

As can be seen in Table 8, queue lengths continue to exceed link distances along W. Pine Street between Haskell Street and OR 99 in the eastbound direction (and southbound on Haskell Street as a direct result of the eastbound queue length) even with consideration of the third railroad crossing at Twin Creeks under design year 2018 no-build conditions. With consideration of an additional eastbound through lane on W. Pine Street east of Haskell Street (mitigated condition), all queue lengths are shown to stay within their available link distances during the a.m. peak hour. Full queuing and blocking reports are provided in the attachments.

Trip Generation

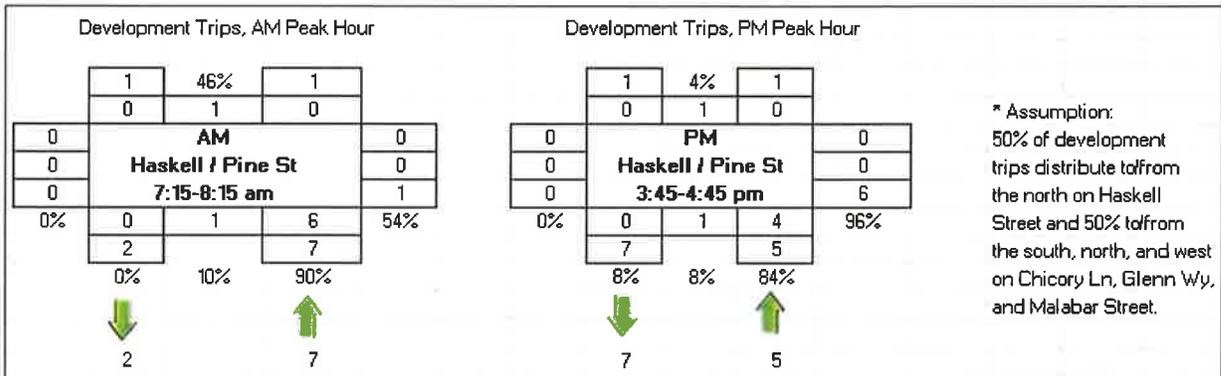
Trip generation calculations for proposed development trips were prepared utilizing the Institute of Transportation Engineers (ITE) *Trip Generation* 9th edition. The ITE rate was used for land use code 210 – Single Family Residential. All trips were considered new trips to the transportation system. A summary is provided in Table 9.

Land Use	Unit	Size	AM Rate	AM Peak Hour			PM Rate	PM Peak Hour		
				Total	(In)	(Out)		Total	(In)	(Out)
<i>210 – Single Family Residential</i>	DU	23	0.75	17	4	13	1.00	23	14	9
Net New Trips				17	4	13		23	14	9

DU = dwelling unit

Trip Distribution and Assignment

Development trips were assumed to distribute a little over 50% to/from the north on Haskell Street. The remaining 50% was assumed to distribute to surrounding local streets such as Chicory Lane, Glenn Way, and Malabar Street to travel to/from the north, south, and west. At W. Pine Street, trips were distributed in accordance with existing traffic patterns with one exception. The one exception was that trips weren't assumed to distribute to/from the west on W. Pine Street at Haskell Street because an assumption was made that trips wanting to travel to/from the west would more likely use an alternate route via Chicory Lane and Glenn Way. Refer to the diagram below for percentage splits and distributions at Haskell Street and W. Pine Street.



Traffic from proposed development trips can use several routes to travel to/from the north, south, and west. Haskell Street provides connectivity to and from the north. At some point in the future, Haskell Street is expected to extend further to the south, at which time it will provide a direct connection from the proposed development to the south. Chicory Lane, which borders the proposed development property on the west and south, provides connectivity to/from the south through an alley and indirectly to the west through Timothy Street. Timothy Street feeds Malabar Street and Glenn Way, which provide additional connections to/from the north and south. We assumed conservatively that at least 50% of development trips would use Haskell Street to travel to/from the north to W. Pine Street because this is the most direct route through a higher order street. The remaining trips were assumed to use other routes mentioned from surrounding local streets.

Design Year 2018 Build Conditions

Design year 2018 build conditions represent design year 2018 no-build conditions with the addition of proposed development trips considered. Build conditions are compared to no-build conditions to determine what impacts and/or mitigation measures will result from proposed development.

Design Year 2018 Build Intersection Operations

The intersection of Haskell Street and W. Pine Street was evaluated under design year 2018 build conditions during the a.m. peak hour to determine what impacts, if any, would result from proposed development trips. Results are summarized in Table 10 for build and mitigated build conditions.

Table 10 – Design Year 2018 Build Intersection Operations, A.M. Peak Hour					
Intersection	Jurisdiction	Performance Standard	Traffic Control	Year 2018 Build	Year 2018 Build-Mitigated
Haskell Street / Pine Street	City of Central Point	LOS D	Signal	B, 18.0 sec	B, 17.9 sec

LOS = Level of Service, sec = seconds

Note: Exceeded performance standards are shown in bold, italic

Results of the analysis show the intersection of Haskell Street and W. Pine Street continues to operate acceptably (within performance standards) with additional traffic from the proposed development. Refer to the attachments for synchro output sheets.

Design Year 2018 Build Queuing and Blocking

Five simulations were run and averaged in SimTraffic to determine 95th percentile queue lengths under design year 2018 build conditions. Queue lengths were rounded up to the nearest 25 feet (single vehicle length) and reported in Table 11 for traffic movements during the a.m. peak hour under build and mitigated build conditions.

Table 11 – Design Year 2018 Build 95th Percentile Queue Lengths –A.M. Peak Hour			
Intersection Movement	Available Link Distance (Feet)	95th Percentile Queue Length Build	95th Percentile Queue Length Build-Mitigated
<u>Haskell Street / W. Pine Street</u>			
Southbound Left	375	<i>475*</i>	250
Southbound Through/Right	150	75	50
Northbound Left/Through/Right	525	125	75
Eastbound Left	150	<i>175*</i>	100
Eastbound Through/Right	425	<i>800*</i>	250
Westbound Left	150	100	75
Westbound Through	375	175	150
Westbound Right	275	100	100

Note: Exceeded queue lengths are shown in bold, italic

* Queue lengths affected by downstream congestion at Pine Street / OR 99

Results of the queuing analysis show queue lengths at the intersection of Haskell Street and W. Pine Street continue to operate much like they did under design year 2018 no-build and mitigated no-build conditions during the a.m. peak hour. Slight increases occur in the eastbound through-shared-right turn movement as a result of development trips, but the change is insignificant. The additional eastbound

lane on W. Pine Street continues to adequately mitigate congestion between OR 99 and Haskell Street. Refer to the attachments for a full queuing and blocking report.

Conclusions

The findings of the traffic analysis conclude that the proposed annexation, zone change, and comprehensive plan map amendment resulting in the potential for 23 single family dwelling units can be approved without creating substantial impacts to the surrounding transportation system. Supporting factors include that Haskell Street has sufficient capacity to support proposed development, and the study area intersection of Haskell Street and W. Pine Street operates acceptably (within City performance standards) with and without proposed development. The only issue noted in the traffic analysis is an existing queuing problem on W. Pine Street at Haskell Street during the a.m. peak hour.

Queuing occurs on W. Pine Street at OR 99 (Front Street) in the eastbound direction during the a.m. peak hour because only one through lane is provided and this is not sufficient to handle the traffic demand. This eastbound queue length on W. Pine Street at OR 99 spills back past Haskell Street during the spike in traffic and impacts the signalized intersection of Haskell Street and W. Pine Street. The solution for this is to provide a second eastbound through lane on Pine Street, which was evaluated in this analysis and shown to mitigate congestion, but the logistics of this needs further investigation and should be pursued by the City to determine what options are available to provide such an improvement. Without the improvement, the study area intersection continues to operate at an acceptable level of service with and without the proposed development, but queuing on W. Pine Street will continue to affect Haskell Street approaches during the a.m. peak hour. This is expected to reduce when the third railroad crossing at Twin Creeks is in place in November of 2017. It will be fully mitigated when a second eastbound through lane on Pine Street at OR 99 is implemented.

Please feel free to contact me if you have any questions or need additional information regarding this letter.

Sincerely,



Kimberly Parducci PE, PTOE

SOUTHERN OREGON TRANSPORTATION ENGINEERING, LLC



Attachments: Count Data, Crash Data
Traffic Volume Development
Synchro Output/SimTraffic Output
Supporting Data

Cc: Client

ATTACHMENTS

*Southern Oregon
Transportation Engineering, LLC
Medford, Or. 97504*

North-South: S. Haskell Street
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Pine-Haskell_Tues
Site Code : 00000001
Start Date : 2/21/2017
Page No : 1

Groups Printed- Unshifted

Start Time	S. Haskell St From North					E. Pine St From East					S. Haskell St From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:45 AM	35	1	2	0	38	12	25	20	1	58	0	0	10	0	10	1	53	1	0	55	161
Total	35	1	2	0	38	12	25	20	1	58	0	0	10	0	10	1	53	1	0	55	161
07:00 AM	45	0	1	3	49	6	37	16	0	59	1	0	14	0	15	6	69	1	0	76	199
07:15 AM	83	1	7	0	91	4	37	52	1	94	2	1	8	0	11	12	82	0	1	95	291
07:30 AM	140	2	10	5	157	3	36	56	2	97	1	4	28	2	35	15	83	1	20	119	408
07:45 AM	120	2	13	5	140	19	66	42	3	130	0	3	20	0	23	12	89	2	23	126	419
Total	388	5	31	13	437	32	176	166	6	380	4	8	70	2	84	45	323	4	44	416	1317
08:00 AM	71	3	9	2	85	13	38	30	0	81	0	1	21	2	24	2	90	3	3	98	288
08:15 AM	69	0	1	2	72	9	35	30	0	74	3	2	7	1	13	2	59	1	1	63	222
08:30 AM	72	0	5	1	78	8	49	34	0	91	0	1	11	0	12	1	95	1	1	98	279
08:45 AM	47	2	3	0	52	20	44	27	2	93	3	2	12	1	18	1	52	1	3	57	220
Total	259	5	18	5	287	50	166	121	2	339	6	6	51	4	67	6	296	6	8	316	1009
Grand Total	682	11	51	18	762	94	367	307	9	777	10	14	131	6	161	52	672	11	52	787	2487
Apprch %	89.5	1.4	6.7	2.4		12.1	47.2	39.5	1.2		6.2	8.7	81.4	3.7		6.6	85.4	1.4	6.6		
Total %	27.4	0.4	2.1	0.7	30.6	3.8	14.8	12.3	0.4	31.2	0.4	0.6	5.3	0.2	6.5	2.1	27	0.4	2.1	31.6	

**Southern Oregon
Transportation Engineering, LLC
Medford, Or. 97504**

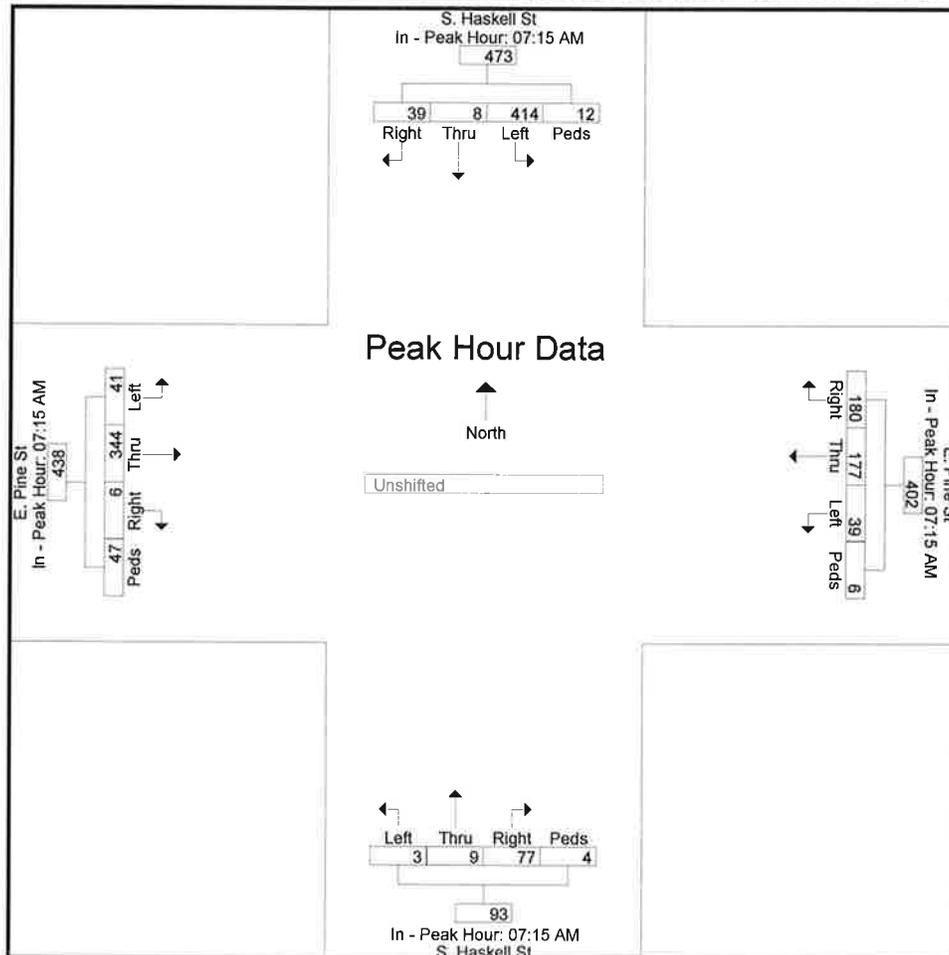
North-South: S. Haskell Street
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Pine-Haskell_Tues
Site Code : 00000001
Start Date : 2/21/2017
Page No : 2

Start Time	S. Haskell St From North					E. Pine St From East					S. Haskell St From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM					07:15 AM					07:15 AM				
+0 mins.	83	1	7	0	91	4	37	52	1	94	2	1	8	0	11	12	82	0	1	95
+15 mins.	140	2	10	5	157	3	36	56	2	97	1	4	28	2	35	15	83	1	20	119
+30 mins.	120	2	13	5	140	19	66	42	3	130	0	3	20	0	23	12	89	2	23	126
+45 mins.	71	3	9	2	85	13	38	30	0	81	0	1	21	2	24	2	90	3	3	98
Total Volume	414	8	39	12	473	39	177	180	6	402	3	9	77	4	93	41	344	6	47	438
% App. Total	87.5	1.7	8.2	2.5		9.7	44	44.8	1.5		3.2	9.7	82.8	4.3		9.4	78.5	1.4	10.7	
PHF	.739	.667	.750	.600	.753	.513	.670	.804	.500	.773	.375	.563	.688	.500	.664	.683	.956	.500	.511	.869



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Medford, Or. 97504*

North-South: S. Haskell Street
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Pine-Haskell_Wednesday
Site Code : 00000002
Start Date : 2/22/2017
Page No : 1

Groups Printed- Unshifted

Start Time	S. Haskell St From North					E. Pine St From East					S. Haskell St From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	43	0	2	1	46	9	35	19	0	63	0	0	14	0	14	3	49	1	0	53	176
07:15 AM	75	1	3	1	80	4	38	56	0	98	2	2	7	0	11	11	78	0	0	89	278
07:30 AM	145	1	12	5	163	9	21	52	1	83	1	2	36	0	39	18	88	2	24	132	417
07:45 AM	118	3	13	6	140	11	68	58	3	140	1	3	18	0	22	10	91	1	14	116	418
Total	381	5	30	13	429	33	162	185	4	384	4	7	75	0	86	42	306	4	38	390	1289
08:00 AM	90	1	4	4	99	15	41	32	0	88	0	0	9	1	10	3	85	2	5	95	292
08:15 AM	55	2	3	0	60	5	30	28	0	63	0	1	15	0	16	3	52	1	1	57	196
08:30 AM	66	0	5	1	72	8	33	22	0	63	1	1	11	1	14	0	61	0	4	65	214
08:45 AM	63	1	2	2	68	10	33	29	0	72	1	0	8	3	12	3	54	1	3	61	213
Total	274	4	14	7	299	38	137	111	0	286	2	2	43	5	52	9	252	4	13	278	915
Grand Total	655	9	44	20	728	71	299	296	4	670	6	9	118	5	138	51	558	8	51	668	2204
Apprch %	90	1.2	6	2.7		10.6	44.6	44.2	0.6		4.3	6.5	85.5	3.6		7.6	83.5	1.2	7.6		
Total %	29.7	0.4	2	0.9	33	3.2	13.6	13.4	0.2	30.4	0.3	0.4	5.4	0.2	6.3	2.3	25.3	0.4	2.3	30.3	

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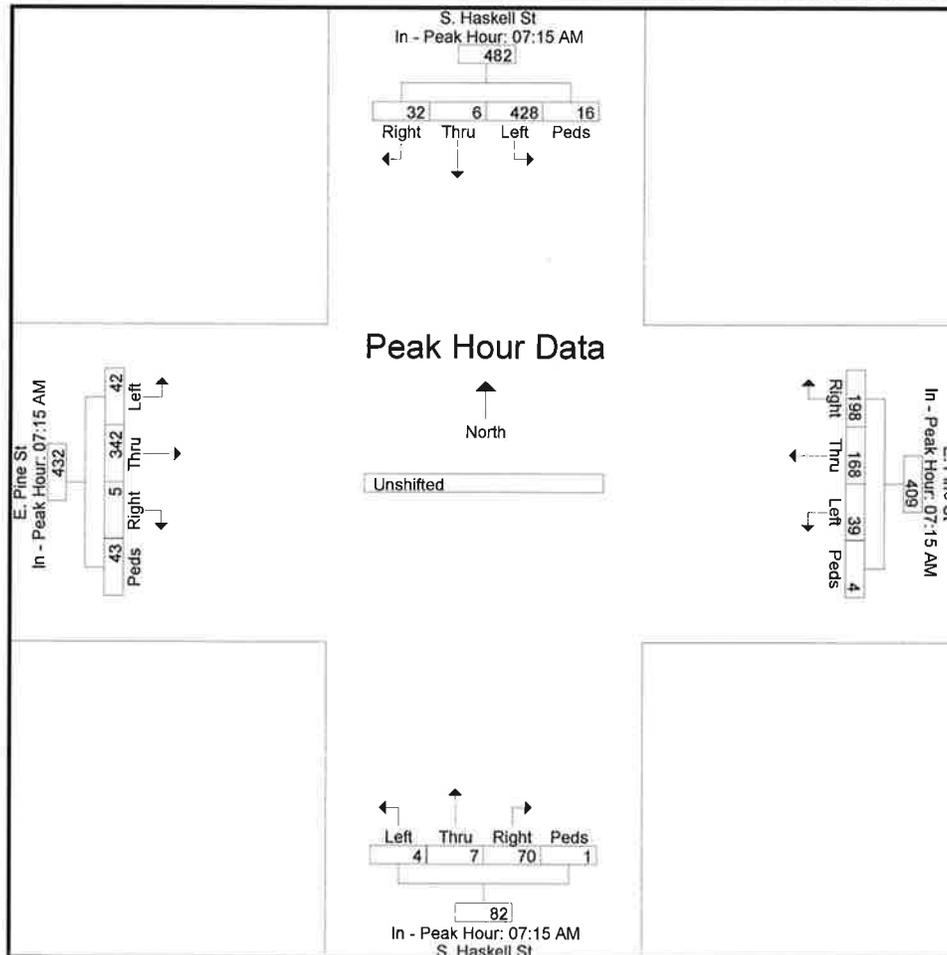
North-South: S. Haskell Street
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Pine-Haskell_Wednesday
Site Code : 00000002
Start Date : 2/22/2017
Page No : 2

Start Time	S. Haskell St From North					E. Pine St From East					S. Haskell St From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM					07:15 AM					07:15 AM				
+0 mins.	75	1	3	1	80	4	38	56	0	98	2	2	7	0	11	11	78	0	0	89
+15 mins.	145	1	12	5	163	9	21	52	1	83	1	2	36	0	39	18	88	2	24	132
+30 mins.	118	3	13	6	140	11	68	58	3	140	1	3	18	0	22	10	91	1	14	116
+45 mins.	90	1	4	4	99	15	41	32	0	88	0	0	9	1	10	3	85	2	5	95
Total Volume	428	6	32	16	482	39	168	198	4	409	4	7	70	1	82	42	342	5	43	432
% App. Total	88.8	1.2	6.6	3.3		9.5	41.1	48.4	1		4.9	8.5	85.4	1.2		9.7	79.2	1.2	10	
PHF	.738	.500	.615	.667	.739	.650	.618	.853	.333	.730	.500	.583	.486	.250	.526	.583	.940	.625	.448	.818



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North-South: S. Haskell St
East-West: E. Pine St
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Pine-Haskell_Thursday
Site Code : 00000003
Start Date : 2/23/2017
Page No : 1

Groups Printed- Unshifted

Start Time	S. Haskell From North					E. Pine St From East					S. Haskell From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	35	2	2	1	40	15	30	19	1	65	1	0	13	0	14	3	58	0	1	62	181
07:15 AM	83	7	4	2	96	5	35	51	0	91	0	2	19	0	21	9	73	1	0	83	291
07:30 AM	136	3	16	7	162	2	42	62	0	106	0	3	23	0	26	17	90	4	15	126	420
07:45 AM	122	3	18	3	146	13	55	50	3	121	1	1	23	5	30	15	92	3	23	133	430
Total	376	15	40	13	444	35	162	182	4	383	2	6	78	5	91	44	313	8	39	404	1322
08:00 AM	72	0	7	13	92	10	36	39	0	85	0	1	17	2	20	7	84	4	2	97	294
08:15 AM	59	1	2	0	62	8	35	33	0	76	0	2	17	0	19	4	61	2	3	70	227
08:30 AM	70	0	1	2	73	5	38	36	0	79	0	0	12	0	12	1	105	1	1	108	272
08:45 AM	40	3	2	0	45	21	53	36	0	110	2	0	10	0	12	1	59	1	1	62	229
Total	241	4	12	15	272	44	162	144	0	350	2	3	56	2	63	13	309	8	7	337	1022
Grand Total	617	19	52	28	716	79	324	326	4	733	4	9	134	7	154	57	622	16	46	741	2344
Apprch %	86.2	2.7	7.3	3.9		10.8	44.2	44.5	0.5		2.6	5.8	87	4.5		7.7	83.9	2.2	6.2		
Total %	26.3	0.8	2.2	1.2	30.5	3.4	13.8	13.9	0.2	31.3	0.2	0.4	5.7	0.3	6.6	2.4	26.5	0.7	2	31.6	

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Transportation Engineering, LLC
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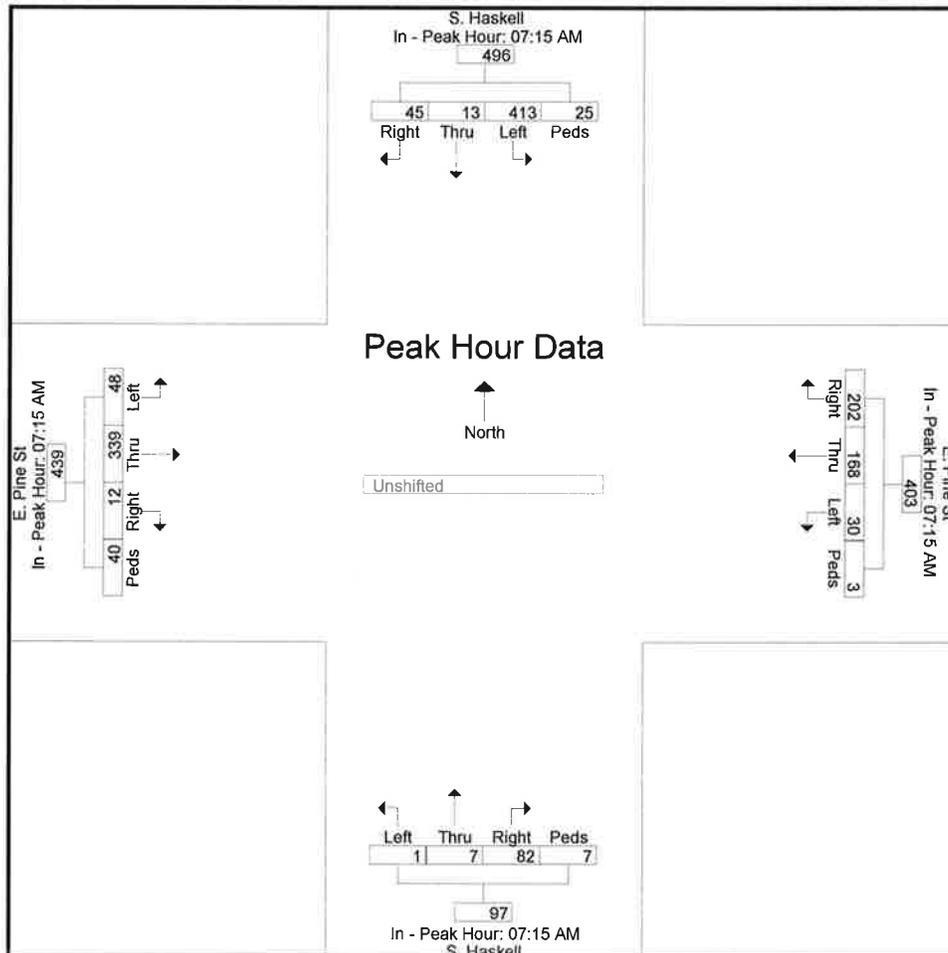
North-South: S. Haskell St
East-West: E. Pine St
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Pine-Haskell_Thursday
Site Code : 00000003
Start Date : 2/23/2017
Page No : 2

Start Time	S. Haskell From North					E. Pine St From East					S. Haskell From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM					07:15 AM					07:15 AM				
+0 mins.	83	7	4	2	96	5	35	51	0	91	0	2	19	0	21	9	73	1	0	83
+15 mins.	136	3	16	7	162	2	42	62	0	106	0	3	23	0	26	17	90	4	15	126
+30 mins.	122	3	18	3	146	13	55	50	3	121	1	1	23	5	30	15	92	3	23	133
+45 mins.	72	0	7	13	92	10	36	39	0	85	0	1	17	2	20	7	84	4	2	97
Total Volume	413	13	45	25	496	30	168	202	3	403	1	7	82	7	97	48	339	12	40	439
% App. Total	83.3	2.6	9.1	5		7.4	41.7	50.1	0.7		1	7.2	84.5	7.2		10.9	77.2	2.7	9.1	
PHF	.759	.464	.625	.481	.765	.577	.764	.815	.250	.833	.250	.583	.891	.350	.808	.706	.921	.750	.435	.825



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North-South: S. Haskell Street
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Haskell-Pine
Site Code : 00000005
Start Date : 2/23/2017
Page No : 1

Groups Printed- Unshifted

Start Time	S. Haskell St From North					E. Pine St From East					S. Haskell St From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
02:00 PM	39	3	3	3	48	8	36	38	0	82	2	4	5	1	12	6	37	4	0	47	189
02:15 PM	91	1	14	26	132	9	61	70	1	141	2	1	8	3	14	6	54	1	2	63	350
02:30 PM	77	1	10	6	94	13	63	76	0	152	4	0	13	0	17	5	64	1	0	70	333
02:45 PM	60	0	3	0	63	19	62	58	0	139	4	3	11	2	20	2	51	0	4	57	279
Total	267	5	30	35	337	49	222	242	1	514	12	8	37	6	63	19	206	6	6	237	1151
03:00 PM	44	2	1	2	49	8	73	48	1	130	2	2	13	0	17	2	57	0	5	64	260
03:15 PM	59	0	7	2	68	11	61	59	3	134	2	1	15	0	18	6	67	2	0	75	295
03:30 PM	52	1	3	1	57	22	79	54	1	156	1	2	16	0	19	0	76	2	0	78	310
03:45 PM	66	0	6	0	72	25	105	72	1	203	0	2	15	0	17	2	66	1	2	71	363
Total	221	3	17	5	246	66	318	233	6	623	5	7	59	0	71	10	266	5	7	288	1228
04:00 PM	63	0	3	2	68	18	106	64	2	190	2	1	13	0	16	3	65	0	0	68	342
04:15 PM	55	1	4	2	62	14	102	72	4	192	0	0	9	0	9	1	69	0	0	70	333
04:30 PM	49	0	1	0	50	14	98	73	5	190	2	1	10	0	13	1	66	1	0	68	321
04:45 PM	42	0	1	0	43	9	107	71	0	187	1	1	7	0	9	4	47	2	1	54	293
Total	209	1	9	4	223	55	413	280	11	759	5	3	39	0	47	9	247	3	1	260	1289
05:00 PM	61	0	1	0	62	16	95	85	0	196	1	2	26	1	30	5	49	2	4	60	348
05:15 PM	51	1	3	0	55	19	120	73	3	215	0	1	15	2	18	1	65	0	0	66	354
05:30 PM	56	0	2	3	61	15	88	89	5	197	3	0	14	0	17	2	65	2	0	69	344
05:45 PM	43	0	2	0	45	9	99	58	1	167	2	0	10	4	16	3	49	1	0	53	281
Total	211	1	8	3	223	59	402	305	9	775	6	3	65	7	81	11	228	5	4	248	1327
Grand Total	908	10	64	47	1029	229	1355	1060	27	2671	28	21	200	13	262	49	947	19	18	1033	4995
Apprch %	88.2	1	6.2	4.6		8.6	50.7	39.7	1		10.7	8	76.3	5		4.7	91.7	1.8	1.7		
Total %	18.2	0.2	1.3	0.9	20.6	4.6	27.1	21.2	0.5	53.5	0.6	0.4	4	0.3	5.2	1	19	0.4	0.4	20.7	

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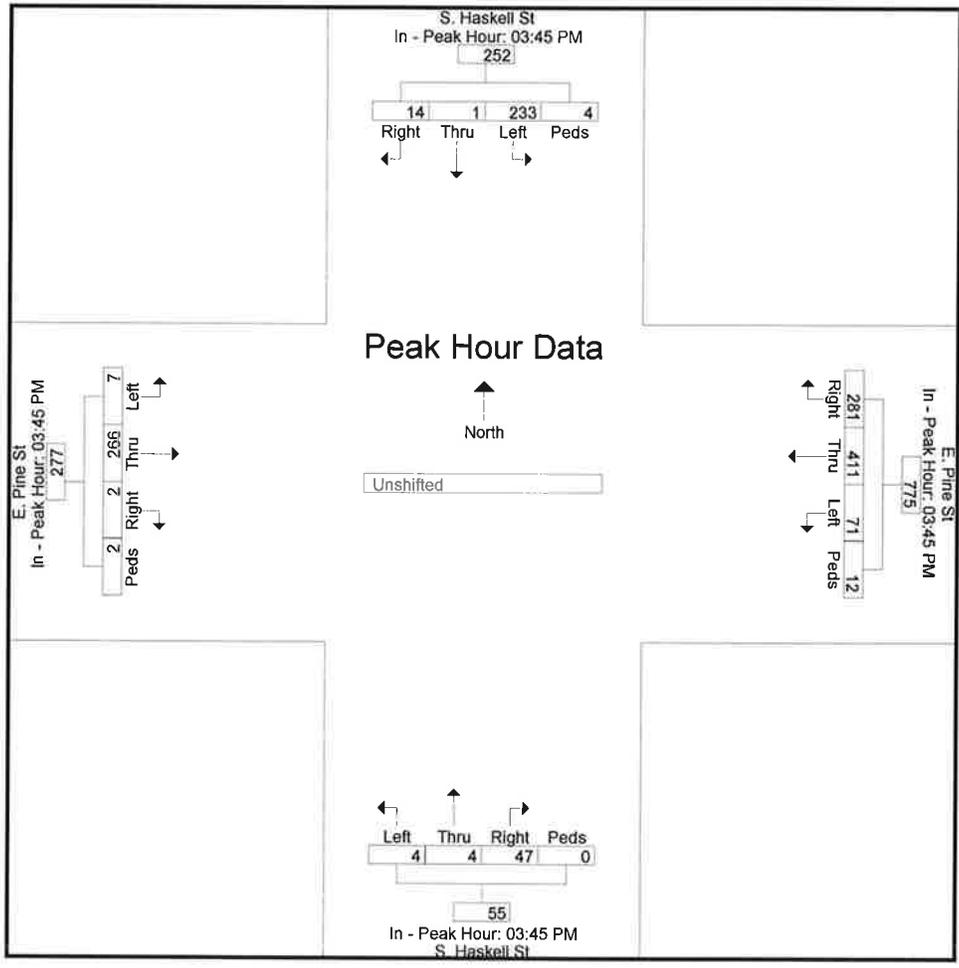
North-South: S. Haskell Street
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles

File Name : Haskell-Pine
Site Code : 00000005
Start Date : 2/23/2017
Page No : 2

Start Time	S. Haskell St From North					E. Pine St From East					S. Haskell St From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM					03:45 PM					03:45 PM					03:45 PM				
+0 mins.	66	0	6	0	72	25	105	72	1	203	0	2	15	0	17	2	66	1	2	71
+15 mins.	63	0	3	2	68	18	106	64	2	190	2	1	13	0	16	3	65	0	0	68
+30 mins.	55	1	4	2	62	14	102	72	4	192	0	0	9	0	9	1	69	0	0	70
+45 mins.	49	0	1	0	50	14	98	73	5	190	2	1	10	0	13	1	66	1	0	68
Total Volume	233	1	14	4	252	71	411	281	12	775	4	4	47	0	55	7	266	2	2	277
% App. Total	92.5	0.4	5.6	1.6		9.2	53	36.3	1.5		7.3	7.3	85.5	0		2.5	96	0.7	0.7	
PHF	.883	.250	.583	.500	.875	.710	.969	.962	.600	.954	.500	.500	.783	.000	.809	.583	.964	.500	.250	.975



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North-South: OR 99
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles (Thurs)

File Name : E Pine_OR 99_AM
Site Code : 00000004
Start Date : 2/23/2017
Page No : 1

Groups Printed- Unshifted

Start Time	OR 99 From North					E. Pine St From East					OR 99 From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	3	28	16	0	47	21	37	4	0	62	19	30	19	0	68	17	72	27	1	117	294
07:15 AM	7	35	17	0	59	37	47	5	0	89	32	43	14	1	90	33	94	36	2	165	403
07:30 AM	11	58	28	0	97	35	44	9	0	88	38	49	23	0	110	42	140	62	1	245	540
07:45 AM	7	69	25	4	105	45	72	13	2	132	41	60	31	2	134	54	116	67	0	237	608
Total	28	190	86	4	308	138	200	31	2	371	130	182	87	3	402	146	422	192	4	764	1845
08:00 AM	14	54	15	0	83	34	45	16	0	95	28	53	27	2	110	38	104	46	3	191	479
08:15 AM	9	40	21	1	71	37	40	11	0	88	16	55	27	0	98	34	74	30	1	139	396
08:30 AM	13	57	19	0	89	41	49	7	0	97	13	73	30	0	116	72	82	45	0	199	501
08:45 AM	16	58	25	0	99	52	58	11	1	122	24	65	29	0	118	27	52	25	1	105	444
Total	52	209	80	1	342	164	192	45	1	402	81	246	113	2	442	171	312	146	5	634	1820
Grand Total	80	399	166	5	650	302	392	76	3	773	211	428	200	5	844	317	734	338	9	1398	3665
Apprch %	12.3	61.4	25.5	0.8		39.1	50.7	9.8	0.4		25	50.7	23.7	0.6		22.7	52.5	24.2	0.6		
Total %	2.2	10.9	4.5	0.1	17.7	8.2	10.7	2.1	0.1	21.1	5.8	11.7	5.5	0.1	23	8.6	20	9.2	0.2	38.1	

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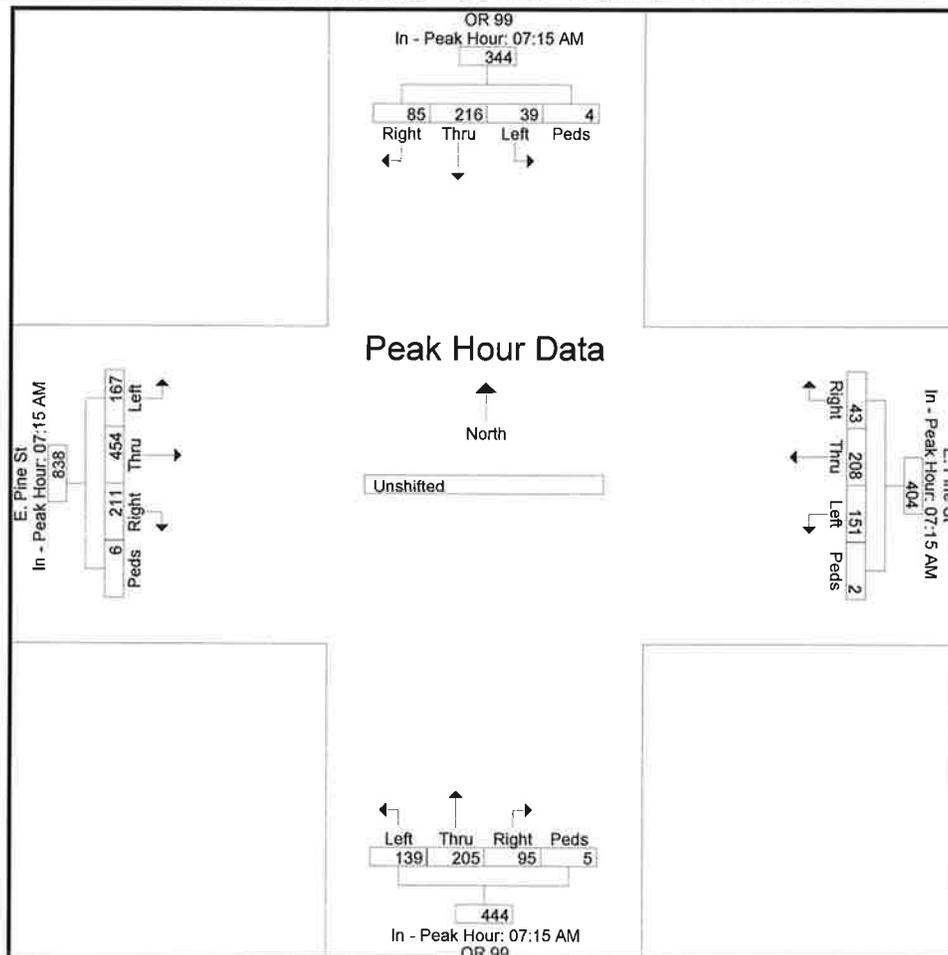
North-South: OR 99
East-West: E. Pine Street
Weather: Overcast, 45 deg
Veh Type: All Vehicles (Thurs)

File Name : E Pine_OR 99_AM
Site Code : 00000004
Start Date : 2/23/2017
Page No : 2

Start Time	OR 99 From North					E. Pine St From East					OR 99 From South					E. Pine St From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM					07:15 AM					07:15 AM					07:15 AM				
+0 mins.	7	35	17	0	59	37	47	5	0	89	32	43	14	1	90	33	94	36	2	165
+15 mins.	11	58	28	0	97	35	44	9	0	88	38	49	23	0	110	42	140	62	1	245
+30 mins.	7	69	25	4	105	45	72	13	2	132	41	60	31	2	134	54	116	67	0	237
+45 mins.	14	54	15	0	83	34	45	16	0	95	28	53	27	2	110	38	104	46	3	191
Total Volume	39	216	85	4	344	151	208	43	2	404	139	205	95	5	444	167	454	211	6	838
% App. Total	11.3	62.8	24.7	1.2		37.4	51.5	10.6	0.5		31.3	46.2	21.4	1.1		19.9	54.2	25.2	0.7	
PHF	.696	.783	.759	.250	.819	.839	.722	.672	.250	.765	.848	.854	.766	.625	.828	.773	.811	.787	.500	.855



Crash History by Month & Year

HASKELL ST at PINE ST | Milepoint to | 01/01/2011 to 12/31/2015

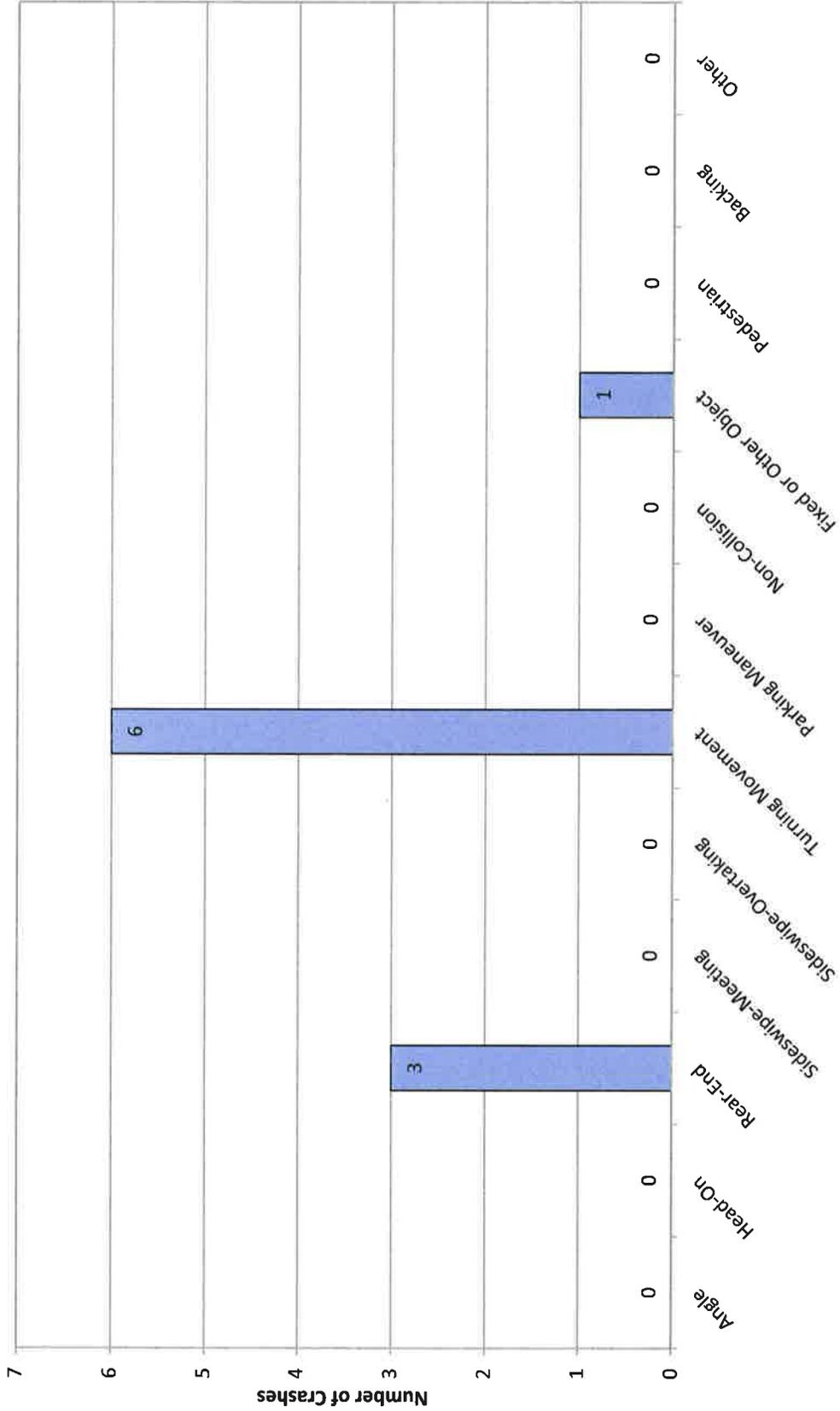
Mileage Type(s):



Crash History by Crash Type

HASKELL ST at PINE ST | Milepoint to | 01/01/2011 to 12/31/2015

Mileage Type(s):



Crash History by Injury Severity

HASKELL ST at PINE ST | Milepoint to | 01/01/2011 to 12/31/2015

Mileage Type(s):



shown in the table should be flagged for further analysis.

Exhibit 4-1 Intersection Crash Rates per MEV by Land Type and Traffic Control

	Rural				Urban			
	3SG	3ST	4SG	4ST	3SG	3ST	4SG	4ST
No. of Intersections	7	115	20	60	55	77	106	60
Mean Crash Rate	0.226	0.196	0.324	0.434	0.275	0.131	0.477	0.198
Median Crash Rate	0.163	0.092	0.320	0.267	0.252	0.105	0.420	0.145
Standard Deviation	0.185	0.314	0.223	0.534	0.155	0.121	0.273	0.176
Coefficient of Variation	0.819	1.602	0.688	1.230	0.564	0.924	0.572	0.889
90th Percentile Rate	0.464	0.475	0.579	1.080	0.509	0.293	0.860	0.408

Source: [Assessment Of Statewide Intersection Safety Performance](#), FHWA-OR-RD-18, Portland State University and Oregon State University, June 2011, Table 4.1, p. 47.

A [spreadsheet calculator](#) has been developed that implements the critical rate calculations for intersections. For additional information see pages 4-35 through 4-39 in HSM Volume 1. Example 4-2 illustrates the use of the Critical Rate method for urban area intersections.

Example 4-2 HSM Critical Rate for Intersections

As part of an urban street modernization project, a safety analysis needs to be done for Main Street. This street is a congested urban corridor with a mixture of unsignalized and signalized intersections with varying numbers of lanes.

The project engineer has created existing year average daily traffic (ADT) volumes from available intersection counts. The ADT counts were converted into AADT using appropriate seasonal factors which are shown as daily total entering volumes in the figure below. In addition, intersection crash data for the past five years are shown in the table below.

Data Needs:

Existing Year Annual Average Daily Entering Traffic Volumes

TREND	SEASONAL TREND TABLE (Updated: 8/30/16)												Seasonal Trend Peak Period Factor														
	1-Jan	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	15-Jun		1-Jul	15-Jul	1-Aug	15-Aug	1-Sep	15-Sep	1-Oct	15-Oct	1-Nov	15-Nov	1-Dec	15-Dec		
INTERSTATE ORGANIZED	1.0328	1.0423	1.0157	0.9891	0.9780	0.9670	0.9582	0.9493	0.9430	0.9387	0.9355	0.9322	0.9298	0.9275	0.9259	0.9182	0.9162	0.9163	0.9144	0.9146	0.9068	0.8992	0.8976	0.8959	1.0131	1.0001	0.9182
INTERSTATE NONURBANIZED	1.1488	1.2543	1.1997	1.1341	1.0685	1.0294	1.0043	0.9894	0.9804	0.9764	0.9732	0.9709	0.9693	0.9680	0.9668	0.9652	0.9628	0.9615	0.9613	0.9613	0.9524	0.9445	0.9425	1.1193	1.1721	0.8449	
COASTAL DESTINATION	1.2451	1.2828	1.2543	1.2244	1.1969	1.1694	1.1419	1.1144	1.0869	1.0594	1.0319	1.0044	0.9769	0.9494	0.9219	0.8944	0.8669	0.8394	0.8119	0.7844	0.7569	0.7294	0.7019	0.6744	1.0288	1.0481	0.9168
COASTAL DESTINATION ROUTE	1.5381	1.6205	1.4732	1.3319	1.2663	1.2007	1.1351	1.0695	1.0039	0.9383	0.8727	0.8071	0.7415	0.6759	0.6103	0.5447	0.4791	0.4135	0.3479	0.2823	0.2167	0.1511	0.0855	0.0199	1.3552	1.4189	0.9370
AGRICULTURE	1.2501	1.2671	1.2126	1.1581	1.1239	1.0996	1.0753	1.0510	1.0267	1.0024	0.9781	0.9538	0.9295	0.9052	0.8809	0.8566	0.8323	0.8080	0.7837	0.7594	0.7351	0.7108	0.6865	0.6622	1.1489	1.2487	0.8433
RECREATIONAL SUMMER	1.7175	1.7653	1.7144	1.6424	1.5416	1.4308	1.3200	1.2092	1.0984	0.9876	0.8768	0.7660	0.6552	0.5444	0.4336	0.3228	0.2120	0.1012	0.0904	0.0896	0.0898	0.0899	0.0900	0.0901	1.6746	1.6746	0.7248
RECREATIONAL SUMMER WINTER	1.8776	1.2510	1.2671	1.2831	1.3092	1.3353	1.3614	1.3875	1.4136	1.4397	1.4658	1.4919	1.5180	1.5441	1.5702	1.5963	1.6224	1.6485	1.6746	1.7007	1.7268	1.7529	1.7790	1.8051	1.8312	1.8573	1.8834
RECREATIONAL WINTER	0.8829	0.8405	0.9610	0.9814	1.0088	1.0363	1.0637	1.0911	1.1185	1.1459	1.1733	1.2007	1.2281	1.2555	1.2829	1.3103	1.3377	1.3651	1.3925	1.4199	1.4473	1.4747	1.5021	1.5295	1.5569	1.5843	1.6117
SUMMER	1.2664	1.2381	1.1933	1.1595	1.1163	1.0921	1.0679	1.0437	1.0195	0.9953	0.9711	0.9469	0.9227	0.8985	0.8743	0.8501	0.8259	0.8017	0.7775	0.7533	0.7291	0.7049	0.6807	0.6565	1.1381	1.0626	0.8356
SUMMER < 2490	1.2255	1.2325	1.2523	1.2332	1.1775	1.1198	1.0711	1.0223	0.9736	0.9249	0.8762	0.8275	0.7788	0.7301	0.6814	0.6327	0.5840	0.5353	0.4866	0.4379	0.3892	0.3405	0.2918	0.2431	1.1787	1.2675	0.8151

*Seasonal Trend Table factors are based on previous year ATR data. The table is updated yearly.
 *Grey shading indicates months were seasonal factor is greater than 30%

Commuter
Feb 23rd
Peak
Adjustment

HWY	MP	DIR	HS	DESCRIPTION	2013	2014	2015	2035	RSQ
062	40.95	1		0.02 mile east of Poodle Creek Road			4800	5600	0.2310
062	42.34	1		0.05 mile east of Knight Road			5800	6000	0.0000
062	43.86	1		Noti Automatic Traffic Recorder, Sta. 20-005, 3.06 miles west of Territorial Highway No. 200 (OR200)			6300	6400	0.1003
062	46.56	1		0.05 mile east of 8th Street			6800	7300	0.6673
062	47.02	1		0.10 mile east of Territorial Highway			10100	11500	0.0038
062	47.97	1		0.13 mile east of Huston Road			11500	13600	0.0913
062	49.73	1		0.02 mile west of Central Road			12300	14700	0.1338
062	49.77	1		0.02 mile east of Central Road			13800	15800	0.2023
062	52.20	1		0.10 mile east of Fisher Road			12500	15900	0.5030
062	52.48	1		0.10 mile east of Richmond Street			12700	15100	0.0395
063	0.50	1		0.16 mile south of the southbound Pacific Highway (I-5) ramps	5300			8100	MODEL
063	1.43	1		0.02 mile south of Scenic Avenue	7200			10100	MODEL
063	3.72	1		0.05 mile south of Beall Lane	14400			20100	MODEL
063	4.56	1		0.05 mile south of Sage Road	13000			17300	MODEL
063	4.84	1		0.02 mile southeast of Howard Avenue	13500			18100	MODEL
063	5.30	1		0.02 mile east of Elm Street	14500			19600	MODEL
063	8.18	1		0.05 mile south of Stewart Avenue	14700			20200	MODEL
063	9.74	1		0.05 mile north of South Stage Road	12000			15400	MODEL
063	9.81	1		0.02 mile south of South Stage Road	13300			17100	MODEL
063	11.13	1		0.02 mile north of Fern Valley Road	14800			18600	MODEL
063	11.27	1		0.02 mile south of Bolz Lane	13400			19300	MODEL
063	11.47	1		0.02 mile north of 4th Street	7200			8900	MODEL
063	11.51	1		0.02 mile south of 4th Street	6200			7600	MODEL

Raw 2017 Count data, AM/PM Peak Hour

471	45	13	257	340	85	216	39	415
48	AM		202	400	432	167	AM	43
339	Haskell / Pine St		168	454		206	OR 99 / Pine St	402
12		7:15-8:15 am	30	834	832	211	7:15-8:15 am	151
1	1	7	82	139	205	95		588
55		90	578			439		

Seasonally Adj 2017 Count data, AM/PM Peak Hour

515	15	455	280	345	65	220	40	430
50	AM		220	435	435	160	AM	45
370	Haskell / Pine St		160	910	915	225	OR 99 / Pine St	405
15		7:15-8:15 am	35	834	832	211	7:15-8:15 am	151
1	1	10	82	139	205	95		588
65		101	578			439		

IN-PROCESS TRAFFIC (2018 No-Build condition)
Trip Generation for 59-unit Creekside Apartments
220 - Apartment

Unit	Size	Rate	Trips	AM	PM
DU	50	6.65	333	0.51	26
Total				26	21

PROPOSED DEVELOPMENT
Trip Generation for 23-unit SFR Development
210 - Single Family Residential

Unit	Size	Rate	Trips	AM	PM
DU	23	9.52	219	0.75	17
Total				17	13

Design Year 2018 No Build, AM/PM Peak Hour

520	15	285	350	85	225	40	435	
50	AM		225	445	445	180	AM	45
375	Haskell / Pine St		165	920	925	230	OR 99 / Pine St	410
15		7:15-8:15 am	35	834	832	211	7:15-8:15 am	151
1	1	10	82	139	205	95		588
65		101	578			439		

Design Year 2018 Re-routed Build, AM/PM Peak Hour

470	15	245	350	85	225	40	500	
50	AM		225	445	445	180	AM	45
375	Haskell / Pine St		165	920	925	230	OR 99 / Pine St	410
15		7:15-8:15 am	35	834	832	211	7:15-8:15 am	151
1	1	10	82	139	205	95		588
65		101	578			439		

248	1	282	364	105	194	516
7	PM		281	763	760	101
256	Haskell / Pine St		411	546	552	124
2		3:45-4:45 pm	71	546	552	124
4	4	47	225	360	165	750
74		55	439			

271	1	320	395	115	210	560
10	PM		305	825	825	110
280	Haskell / Pine St		445	560	600	135
2		3:45-4:45 pm	75	565	600	135
5	5	60	245	390	165	750
78		60	475			

IN-PROCESS TRAFFIC (2018 No-Build condition)
Trip Generation for 59-unit Creekside Apartments
220 - Apartment

Unit	Size	Rate	Trips	AM	PM
DU	50	6.65	333	0.51	26
Total				26	21

PROPOSED DEVELOPMENT
Trip Generation for 23-unit SFR Development
210 - Single Family Residential

Unit	Size	Rate	Trips	AM	PM
DU	23	9.52	219	0.75	17
Total				17	13

Design Year 2018 No Build, AM/PM Peak Hour

520	15	285	350	85	225	40	435	
50	AM		225	445	445	180	AM	45
375	Haskell / Pine St		165	920	925	230	OR 99 / Pine St	410
15		7:15-8:15 am	35	834	832	211	7:15-8:15 am	151
1	1	10	82	139	205	95		588
65		101	578			439		

Design Year 2018 Re-routed Build, AM/PM Peak Hour

470	15	245	350	85	225	40	500	
50	AM		225	445	445	180	AM	45
375	Haskell / Pine St		165	920	925	230	OR 99 / Pine St	410
15		7:15-8:15 am	35	834	832	211	7:15-8:15 am	151
1	1	10	82	139	205	95		588
65		101	578			439		

364	194	516
105	PM	
281	763	760
411	546	552
71	546	552
225	360	165
439		

395	210	560
115	PM	
305	825	825
445	560	600
75	565	600
245	390	165
475		

IN-PROCESS TRAFFIC (2018 No-Build condition)
Trip Generation for 59-unit Creekside Apartments
220 - Apartment

Unit	Size	Rate	Trips	AM	PM
DU	50	6.65	333	0.51	26
Total				26	21

PROPOSED DEVELOPMENT
Trip Generation for 23-unit SFR Development
210 - Single Family Residential

Unit	Size	Rate	Trips	AM	PM
DU	23	9.52	219	0.75	17
Total				17	13

Design Year 2018 No Build, AM/PM Peak Hour

520	15	285	350	85	225	40	435	
50	AM		225	445	445	180	AM	45
375	Haskell / Pine St		165	920	925	230	OR 99 / Pine St	410
15		7:15-8:15 am	35	834	832	211	7:15-8:15 am	151
1	1	10	82	139	205	95		588
65		101	578			439		

Design Year 2018 Re-routed Build, AM/PM Peak Hour

470	15	245	350	85	225	40	500	
50	AM		225	445	445	180	AM	45
375	Haskell / Pine St		165	920	925	230	OR 99 / Pine St	410
15		7:15-8:15 am	35	834	832	211	7:15-8:15 am	151
1	1	10	82	139	205	95		588
65		101	578			439		

HCM Signalized Intersection Capacity Analysis
54: E Pine St & Front

03/09/2017

												
Movement	NBL	NBT	NBR	SEL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	140	205	95	40	220	85	180	510	225	150	210	45
Future Volume (vph)	140	205	95	40	220	85	180	510	225	150	210	45
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frbp, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1568	2810		1511	3107	1359	1628	1699	1420	1568	3008	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.54	1.00	1.00	0.16	1.00	
Satd. Flow (perm)	1568	2810		1511	3107	1359	930	1699	1420	262	3008	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	169	247	114	48	265	102	217	614	271	181	253	54
RTOR Reduction (vph)	0	42	0	0	0	86	0	0	66	0	11	0
Lane Group Flow (vph)	169	319	0	48	265	16	217	614	205	181	296	0
Confl. Peds. (#/hr)	4		5	5		4	2		6	6		2
Confl. Bikes (#/hr)			2			3			9			3
Heavy Vehicles (%)	6%	13%	8%	10%	7%	7%	2%	3%	2%	6%	8%	4%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases						6	4		4		8	
Actuated Green, G (s)	14.1	21.9		7.0	14.8	14.8	53.2	41.2	41.2	53.4	41.3	
Effective Green, g (s)	14.1	22.9		7.0	15.8	15.8	53.2	41.2	41.2	53.4	41.3	
Actuated g/C Ratio	0.14	0.23		0.07	0.16	0.16	0.54	0.42	0.42	0.54	0.42	
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	2.5	4.7		2.5	4.7	4.7	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	222	648		106	494	216	583	705	589	300	1252	
v/s Ratio Prot	c0.11	c0.11		0.03	0.09		0.05	c0.36		c0.07	0.10	
v/s Ratio Perm						0.01	0.15		0.14	0.25		
v/c Ratio	0.76	0.49		0.45	0.54	0.08	0.37	0.87	0.35	0.60	0.24	
Uniform Delay, d1	40.9	33.1		44.3	38.3	35.5	12.3	26.6	19.8	16.6	18.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.7	1.1		2.2	1.9	0.3	0.3	11.3	0.3	2.9	0.1	
Delay (s)	54.6	34.2		46.5	40.2	35.8	12.6	37.9	20.1	19.4	18.8	
Level of Service	D	C		D	D	D	B	D	C	B	B	
Approach Delay (s)		40.7			39.8			28.5			19.0	
Approach LOS		D			D			C			B	

Intersection Summary

HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	99.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 60: E Pine St & Haskell St.

03/09/2017

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	↖
Traffic Volume (vph)	450	15	50	1	10	90	50	370	15	35	180	220
Future Volume (vph)	450	15	50	1	10	90	50	370	15	35	180	220
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	0.96			0.97		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		0.97	1.00	1.00
Frt	1.00	0.88			0.88		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1615	1462			1470		1623	1685		1620	1549	1405
Flt Permitted	0.72	1.00			1.00		0.55	1.00		0.24	1.00	1.00
Satd. Flow (perm)	1225	1462			1469		944	1685		408	1549	1405
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	542	18	60	1	12	108	60	446	18	42	217	265
RTOR Reduction (vph)	0	27	0	0	48	0	0	1	0	0	0	174
Lane Group Flow (vph)	542	51	0	0	73	0	60	463	0	42	217	91
Confl. Peds. (#/hr)	7		25	25		7	3		40	40		3
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%	2%	3%	0%	0%	13%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			6				2
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	42.9	42.9			42.9		26.4	26.4		26.4	26.4	26.4
Effective Green, g (s)	42.9	42.9			42.9		26.4	26.4		26.4	26.4	26.4
Actuated g/C Ratio	0.55	0.55			0.55		0.34	0.34		0.34	0.34	0.34
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.5	2.5			2.5		2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	679	811			815		322	575		139	529	479
v/s Ratio Prot		0.04						c0.27				0.14
v/s Ratio Perm	c0.44				0.05		0.06			0.10		0.06
v/c Ratio	0.80	0.06			0.09		0.19	0.80		0.30	0.41	0.19
Uniform Delay, d1	13.7	7.9			8.1		17.9	23.1		18.7	19.5	17.9
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.3	0.0			0.0		0.2	7.8		0.9	0.4	0.1
Delay (s)	20.1	8.0			8.1		18.1	30.9		19.6	19.9	18.1
Level of Service	C	A			A		B	C		B	B	B
Approach Delay (s)		18.5			8.1			29.5			18.9	
Approach LOS		B			A			C			B	

Intersection Summary

HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	77.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 54: E Pine St & Front

03/13/2017

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	245	390	180	70	210	115	110	355	135	130	465	60
Future Volume (vph)	245	390	180	70	210	115	110	355	135	130	465	60
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Fr t	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Fl t Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1630	3053		1630	3260	1410	1630	1716	1428	1630	3198	
Fl t Permitted	0.95	1.00		0.95	1.00	1.00	0.29	1.00	1.00	0.26	1.00	
Satd. Flow (perm)	1630	3053		1630	3260	1410	492	1716	1428	440	3198	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	255	406	188	73	219	120	115	370	141	135	484	62
RTOR Reduction (vph)	0	37	0	0	0	91	0	0	83	0	8	0
Lane Group Flow (vph)	255	557	0	73	219	29	115	370	58	135	539	0
Confl. Peds. (#/hr)	14		14	14		14	1		1	1		1
Confl. Bikes (#/hr)			2			3			9			3
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases						6	4		4	8		
Actuated Green, G (s)	14.9	26.1		7.8	19.0	19.0	31.5	21.8	21.8	30.9	21.5	
Effective Green, g (s)	14.9	27.1		7.8	20.0	20.0	31.5	21.8	21.8	30.9	21.5	
Actuated g/C Ratio	0.18	0.33		0.10	0.24	0.24	0.38	0.27	0.27	0.38	0.26	
Clearance Time (s)	4.0	5.0		4.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	2.5	4.7		2.5	4.7	4.7	2.5	2.5	2.5	2.5	2.5	
Lane Grp Cap (vph)	295	1007		154	794	343	323	455	379	301	837	
v/s Ratio Prot	c0.16	c0.18		0.04	0.07		0.04	c0.22		c0.05	0.17	
v/s Ratio Perm						0.02	0.09		0.04	0.12		
v/c Ratio	0.86	0.55		0.47	0.28	0.09	0.36	0.81	0.15	0.45	0.64	
Uniform Delay, d1	32.6	22.5		35.2	25.2	24.0	17.2	28.2	23.1	18.3	26.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	22.0	1.0		1.7	0.4	0.2	0.5	10.4	0.1	0.8	1.5	
Delay (s)	54.6	23.6		36.9	25.5	24.2	17.7	38.6	23.2	19.1	28.4	
Level of Service	D	C		D	C	C	B	D	C	B	C	
Approach Delay (s)		32.9			27.2			31.3			26.6	
Approach LOS		C			C			C			C	

Intersection Summary

HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	82.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 60: E Pine St & Haskell St.

03/13/2017

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	↕
Traffic Volume (vph)	255	1	15	5	5	50	10	290	2	75	445	305
Future Volume (vph)	255	1	15	5	5	50	10	290	2	75	445	305
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	0.98			1.00		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00			1.00		0.99	1.00		1.00	1.00	1.00
Frt	1.00	0.86			0.89		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	1471			1494		1652	1681		1597	1699	1396
Flt Permitted	0.72	1.00			0.99		0.39	1.00		0.55	1.00	1.00
Satd. Flow (perm)	1216	1471			1481		683	1681		928	1699	1396
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	271	1	16	5	5	53	11	309	2	80	473	324
RTOR Reduction (vph)	0	11	0	0	35	0	0	0	0	0	0	173
Lane Group Flow (vph)	271	6	0	0	28	0	11	311	0	80	473	151
Confl. Peds. (#/hr)			4	4			12		2	2		12
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	3%	0%	0%	0%	0%	4%	0%	4%	0%	4%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	14.2	14.2			14.2		19.3	19.3		19.3	19.3	19.3
Effective Green, g (s)	14.2	14.2			14.2		19.3	19.3		19.3	19.3	19.3
Actuated g/C Ratio	0.34	0.34			0.34		0.47	0.47		0.47	0.47	0.47
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.5	2.5			2.5		2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	416	503			506		317	781		431	790	649
v/s Ratio Prot		0.00						0.18			c0.28	
v/s Ratio Perm	c0.22				0.02		0.02			0.09		0.11
v/c Ratio	0.65	0.01			0.06		0.03	0.40		0.19	0.60	0.23
Uniform Delay, d1	11.6	9.0			9.2		6.0	7.3		6.5	8.2	6.7
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.2	0.0			0.0		0.0	0.2		0.2	1.0	0.1
Delay (s)	14.8	9.0			9.2		6.1	7.5		6.7	9.3	6.8
Level of Service	B	A			A		A	A		A	A	A
Approach Delay (s)		14.5			9.2			7.5			8.1	
Approach LOS		B			A			A			A	

Intersection Summary

HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	41.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:10	7:10	7:10	7:10	7:10	7:10
End Time	8:15	8:15	8:15	8:15	8:15	8:15
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	2925	2995	2923	3027	3007	2974
Vehs Exited	2947	3037	2941	3037	3023	2997
Starting Vehs	80	106	75	79	77	80
Ending Vehs	58	64	57	69	61	59
Travel Distance (mi)	1006	1012	996	1032	1029	1015
Travel Time (hr)	77.5	76.7	72.2	96.4	83.8	81.3
Total Delay (hr)	38.9	37.8	34.0	56.7	44.1	42.3
Total Stops	3851	3846	3656	4205	3966	3907
Fuel Used (gal)	45.1	45.5	44.0	50.5	47.6	46.5

Interval #0 Information Seeding

Start Time 7:10
 End Time 7:15
 Total Time (min) 5
 Volumes adjusted by PHF, Growth Factors.
 No data recorded this interval.

Interval #1 Information Recording

Start Time 7:15
 End Time 7:30
 Total Time (min) 15
 Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	831	832	767	813	808	810
Vehs Exited	814	794	764	766	755	780
Starting Vehs	80	106	75	79	77	80
Ending Vehs	97	144	78	126	130	112
Travel Distance (mi)	285	277	272	268	269	274
Travel Time (hr)	24.1	24.8	24.3	24.1	24.9	24.4
Total Delay (hr)	13.1	14.1	13.8	13.8	14.6	13.9
Total Stops	1126	1207	1145	1112	1168	1152
Fuel Used (gal)	13.2	13.4	13.0	12.9	13.0	13.1

Interval #2 Information Recording

Start Time 7:30
End Time 8:15
Total Time (min) 45

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2094	2163	2156	2214	2199	2167
Vehs Exited	2133	2243	2177	2271	2268	2219
Starting Vehs	97	144	78	126	130	112
Ending Vehs	58	64	57	69	61	59
Travel Distance (mi)	721	736	724	764	760	741
Travel Time (hr)	53.4	51.9	48.0	72.3	58.9	56.9
Total Delay (hr)	25.7	23.6	20.1	42.9	29.5	28.4
Total Stops	2725	2639	2511	3093	2798	2756
Fuel Used (gal)	31.9	32.1	31.0	37.7	34.6	33.5

Queuing and Blocking Report
 Year 2017 No-Build, AM Peak Hour

03/11/2017

Intersection: 48: E Pine St & 2nd

Movement	SE	NW	NE	NE	SW	SW
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	78	103	69	90	112	64
Average Queue (ft)	39	43	20	15	37	4
95th Queue (ft)	61	79	54	63	85	29
Link Distance (ft)	354	346		233	259	259
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50			
Storage Blk Time (%)			0	1		
Queuing Penalty (veh)			1	2		

Intersection: 51: E Pine St & 1st

Movement	SE	NW	NE	SW	SW
Directions Served	LTR	LTR	LTR	LT	TR
Maximum Queue (ft)	60	103	166	93	126
Average Queue (ft)	28	44	28	22	15
95th Queue (ft)	56	81	108	67	74
Link Distance (ft)	313	295	221	233	233
Upstream Blk Time (%)			0		0
Queuing Penalty (veh)			0		0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
 Year 2017 No-Build, AM Peak Hour

03/11/2017

Intersection: 54: E Pine St & Front

Movement	NB	NB	NB	SB	SB	SB	SB	NE	NE	NE	SW	SW
Directions Served	L	T	TR	L	T	T	R	L	T	R	L	T
Maximum Queue (ft)	224	298	231	117	189	157	104	203	317	125	194	233
Average Queue (ft)	114	98	80	38	99	55	38	84	289	102	89	145
95th Queue (ft)	216	233	175	87	167	128	76	153	323	168	162	266
Link Distance (ft)		316	316		327	327		222	222		221	221
Upstream Blk Time (%)		1	0					0	39		0	4
Queuing Penalty (veh)		2	0					1	178		0	8
Storage Bay Dist (ft)	200			200			150			100		
Storage Blk Time (%)	9	0			0	0	0		49	1		11
Queuing Penalty (veh)	10	0			0	0	0		112	7		18

Intersection: 54: E Pine St & Front

Movement	SW
Directions Served	TR
Maximum Queue (ft)	150
Average Queue (ft)	112
95th Queue (ft)	178
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	125
Storage Blk Time (%)	10
Queuing Penalty (veh)	11

Intersection: 57: E Pine St & Amy

Movement	NB	NE	NE	SW	SW
Directions Served	R	T	TR	T	TR
Maximum Queue (ft)	49	125	323	143	109
Average Queue (ft)	12	67	206	11	7
95th Queue (ft)	39	166	383	69	52
Link Distance (ft)	247		276	222	222
Upstream Blk Time (%)			8	0	0
Queuing Penalty (veh)			78	1	0
Storage Bay Dist (ft)		100			
Storage Blk Time (%)		0	24		
Queuing Penalty (veh)		1	111		

Queuing and Blocking Report
 Year 2017 No-Build, AM Peak Hour

03/11/2017

Intersection: 60: E Pine St & Haskell St.

Movement	SE	SE	NW	NE	NE	SW	SW	SW
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	795	175	116	199	723	134	257	151
Average Queue (ft)	317	30	43	62	296	33	89	59
95th Queue (ft)	762	167	86	172	671	84	189	113
Link Distance (ft)	1332	1332	386		929		276	276
Upstream Blk Time (%)					2		1	
Queuing Penalty (veh)					0		1	
Storage Bay Dist (ft)				100		100		
Storage Blk Time (%)				1	40	0	10	
Queuing Penalty (veh)				4	21	0	4	

Intersection: 64: Front & Oak

Movement	NB	NB	SB	SB	SB	SW
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	39	28	51	36	56	78
Average Queue (ft)	3	1	18	2	2	39
95th Queue (ft)	27	10	49	17	24	62
Link Distance (ft)	491	491		316	316	194
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50			
Storage Blk Time (%)			1	0		
Queuing Penalty (veh)			1	0		

Intersection: 66: Front & Manzanita

Movement	NB	NB	SB	SB	SB	SW
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	14	36	35	24	20	69
Average Queue (ft)	1	1	4	1	1	29
95th Queue (ft)	9	16	21	13	9	55
Link Distance (ft)	327	327		421	421	184
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 572

SimTraffic Simulation Summary
 Year 2017 No-Build Isolated Intersection Evaluation, AM Peak Hour

03/13/2017

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:05	7:05	7:05	7:05	7:05	7:05
End Time	8:10	8:10	8:10	8:10	8:10	8:10
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	1444	1510	1441	1483	1458	1467
Vehs Exited	1462	1523	1472	1499	1459	1483
Starting Vehs	51	44	52	45	36	45
Ending Vehs	33	31	21	29	35	29
Travel Distance (mi)	701	729	699	723	707	712
Travel Time (hr)	34.1	35.8	34.5	35.1	35.3	35.0
Total Delay (hr)	6.5	7.0	7.1	6.7	7.4	6.9
Total Stops	922	975	943	948	990	955
Fuel Used (gal)	24.3	25.0	24.3	24.8	24.8	24.6

Interval #0 Information Seeding

Start Time 7:05
 End Time 7:10
 Total Time (min) 5
 Volumes adjusted by PHF, Growth Factors.
 No data recorded this interval.

Interval #1 Information Recording

Start Time 7:10
 End Time 7:25
 Total Time (min) 15
 Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	421	414	444	443	463	437
Vehs Exited	434	415	449	441	449	439
Starting Vehs	51	44	52	45	36	45
Ending Vehs	38	43	47	47	50	45
Travel Distance (mi)	207	197	218	214	224	212
Travel Time (hr)	10.6	10.1	11.6	10.9	11.8	11.0
Total Delay (hr)	2.4	2.3	3.0	2.5	3.0	2.7
Total Stops	285	280	330	303	335	308
Fuel Used (gal)	7.3	6.9	7.8	7.4	8.0	7.5

Interval #2 Information Recording

Start Time 7:25
 End Time 8:10
 Total Time (min) 45

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1023	1096	997	1040	995	1031
Vehs Exited	1028	1108	1023	1058	1010	1045
Starting Vehs	38	43	47	47	50	45
Ending Vehs	33	31	21	29	35	29
Travel Distance (mi)	494	531	482	509	483	500
Travel Time (hr)	23.5	25.7	22.9	24.2	23.4	24.0
Total Delay (hr)	4.1	4.6	4.0	4.2	4.4	4.3
Total Stops	637	695	613	645	655	648
Fuel Used (gal)	16.9	18.2	16.5	17.4	16.9	17.2

Queuing and Blocking Report
 Year 2017 No-Build Isolated Intersection Evaluation, AM Peak Hour

03/13/2017

Intersection: 60: E Pine St & Haskell St.

Movement	SE	SE	NW	NE	NE	SW	SW	SW
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	307	55	98	177	344	112	229	99
Average Queue (ft)	152	17	35	46	142	32	76	51
95th Queue (ft)	254	43	75	127	265	79	163	84
Link Distance (ft)	1331	1331	386		929		1457	1457
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				100		100		
Storage Blk Time (%)				0	15	0	4	
Queuing Penalty (veh)				1	8	1	1	

Network Summary

Network wide Queuing Penalty: 11

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:10	7:10	7:10	7:10	7:10	7:10
End Time	8:15	8:15	8:15	8:15	8:15	8:15
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	2952	3008	2950	2980	3014	2980
Vehs Exited	2986	3018	2967	2988	3017	2994
Starting Vehs	87	67	82	64	68	70
Ending Vehs	53	57	65	56	65	57
Travel Distance (mi)	1008	1010	989	1014	1017	1008
Travel Time (hr)	64.8	63.6	60.6	64.7	63.2	63.4
Total Delay (hr)	25.9	24.7	22.5	25.6	24.1	24.6
Total Stops	3337	3322	3160	3327	3308	3293
Fuel Used (gal)	43.0	42.3	41.5	42.6	42.4	42.4

Interval #0 Information Seeding

Start Time 7:10
 End Time 7:15
 Total Time (min) 5
 Volumes adjusted by PHF, Growth Factors.
 No data recorded this interval.

Interval #1 Information Recording

Start Time 7:15
 End Time 7:30
 Total Time (min) 15
 Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	852	809	828	853	779	822
Vehs Exited	835	805	840	833	772	819
Starting Vehs	87	67	82	64	68	70
Ending Vehs	104	71	70	84	75	75
Travel Distance (mi)	297	280	288	301	267	287
Travel Time (hr)	20.4	18.2	19.0	20.6	17.6	19.2
Total Delay (hr)	9.0	7.5	7.9	9.0	7.3	8.1
Total Stops	1066	963	1005	1071	929	1008
Fuel Used (gal)	12.8	12.0	12.4	13.0	11.4	12.3

Interval #2 Information Recording

Start Time 7:30
End Time 8:15
Total Time (min) 45

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2100	2199	2122	2127	2235	2159
Vehs Exited	2151	2213	2127	2155	2245	2179
Starting Vehs	104	71	70	84	75	75
Ending Vehs	53	57	65	56	65	57
Travel Distance (mi)	712	729	701	713	750	721
Travel Time (hr)	44.4	45.4	41.5	44.0	45.6	44.2
Total Delay (hr)	17.0	17.2	14.6	16.6	16.8	16.4
Total Stops	2271	2359	2155	2256	2379	2283
Fuel Used (gal)	30.2	30.4	29.0	29.6	31.0	30.0

Queuing and Blocking Report
 Year 2017 No-Build, AM Peak Hour, Mitigated

03/12/2017

Intersection: 48: E Pine St & 2nd

Movement	SE	NW	NE	NE	SW	SW
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	86	95	80	85	110	38
Average Queue (ft)	37	43	28	11	29	6
95th Queue (ft)	66	74	70	48	75	30
Link Distance (ft)	354	346	234	234	259	259
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 51: E Pine St & 1st

Movement	SE	NW	NE	NE	SW	SW
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	54	92	75	80	101	132
Average Queue (ft)	25	41	13	7	19	13
95th Queue (ft)	55	72	51	41	64	75
Link Distance (ft)	319	288	222	222	234	234
Upstream Blk Time (%)						0
Queuing Penalty (veh)						0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Queuing and Blocking Report
 Year 2017 No-Build, AM Peak Hour, Mitigated

03/12/2017

Intersection: 54: E Pine St & Front

Movement	NB	NB	NS	SB	SB	SB	SB	NE	NE	NE	SW	SW
Directions Served	L	T	TR	L	T	T	R	L	T	TR	L	T
Maximum Queue (ft)	220	271	206	108	185	136	69	200	273	296	191	226
Average Queue (ft)	102	73	64	37	83	37	35	87	162	208	82	140
95th Queue (ft)	188	169	131	88	143	98	65	171	255	299	150	246
Link Distance (ft)		318	318		328	328			223	223	222	222
Upstream Blk Time (%)		0							2	7	0	3
Queuing Penalty (veh)		0							7	33	0	6
Storage Bay Dist (ft)	200			200			150	100				
Storage Blk Time (%)	3				0	0		4	20			13
Queuing Penalty (veh)	3				0	0		11	37			20

Intersection: 54: E Pine St & Front

Movement	SW
Directions Served	TR
Maximum Queue (ft)	157
Average Queue (ft)	115
95th Queue (ft)	179
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	125
Storage Blk Time (%)	11
Queuing Penalty (veh)	12

Intersection: 57: E Pine St & Amy

Movement	NB	NE	NE	SW	SW
Directions Served	R	T	TR	T	TR
Maximum Queue (ft)	35	73	87	82	48
Average Queue (ft)	7	12	16	9	6
95th Queue (ft)	28	47	61	44	34
Link Distance (ft)	241	276	276	223	223
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
 Year 2017 No-Build, AM Peak Hour, Mitigated

03/12/2017

Intersection: 60: E Pine St & Haskell St.

Movement	SE	SE	NW	NE	NE	SW	SW	SW
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	321	112	91	195	284	69	181	158
Average Queue (ft)	156	20	35	36	136	27	80	59
95th Queue (ft)	277	68	68	100	246	63	155	112
Link Distance (ft)	1331	1331	373		929		276	276
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				100		100		
Storage Blk Time (%)				0	13	0	4	
Queuing Penalty (veh)				0	7	0	2	

Intersection: 64: Front & Oak

Movement	NB	NB	SB	SB	SB	SW
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	13	38	53	14	30	82
Average Queue (ft)	1	1	18	1	1	39
95th Queue (ft)	8	14	48	9	14	64
Link Distance (ft)	491	491		318	318	194
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50			
Storage Blk Time (%)			0	0		
Queuing Penalty (veh)			1	0		

Intersection: 66: Front & Manzanita

Movement	NB	NB	SB	SB	SB	SW
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	7	13	40	31	14	60
Average Queue (ft)	0	0	5	2	0	31
95th Queue (ft)	5	7	26	16	7	55
Link Distance (ft)	328	328		421	421	184
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 140

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	3:40	3:40	3:40	3:40	3:40	3:40
End Time	4:45	4:45	4:45	4:45	4:45	4:45
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	3044	3026	3207	2969	2972	3042
Vehs Exited	3057	3042	3163	2975	2994	3047
Starting Vehs	61	66	51	68	90	65
Ending Vehs	48	50	95	62	68	60
Travel Distance (mi)	923	914	964	901	920	924
Travel Time (hr)	69.1	70.6	86.7	64.5	83.5	74.9
Total Delay (hr)	33.3	35.2	49.5	29.6	47.9	39.1
Total Stops	3979	3714	4496	3566	3943	3937
Fuel Used (gal)	42.7	43.0	48.1	40.9	46.2	44.2

Interval #0 Information Seeding

Start Time	3:40
End Time	3:45
Total Time (min)	5
Volumes adjusted by PHF, Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	3:45
End Time	4:00
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	858	787	882	837	838	841
Vehs Exited	839	797	833	834	832	828
Starting Vehs	61	66	51	68	90	65
Ending Vehs	80	56	100	71	96	77
Travel Distance (mi)	247	229	251	248	249	245
Travel Time (hr)	18.6	16.4	19.1	19.1	23.2	19.3
Total Delay (hr)	9.0	7.5	9.4	9.5	13.6	9.8
Total Stops	1081	883	1082	1028	1151	1043
Fuel Used (gal)	11.4	10.3	11.7	11.6	12.8	11.6

Interval #2 Information Recording

Start Time 4:00
 End Time 4:45
 Total Time (min) 45

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2186	2239	2325	2132	2134	2202
Vehs Exited	2218	2245	2330	2141	2162	2220
Starting Vehs	80	56	100	71	96	77
Ending Vehs	48	50	95	62	68	60
Travel Distance (mi)	676	685	713	653	671	679
Travel Time (hr)	50.6	54.2	67.6	45.4	60.2	55.6
Total Delay (hr)	24.3	27.7	40.1	20.1	34.3	29.3
Total Stops	2898	2831	3414	2538	2792	2896
Fuel Used (gal)	31.3	32.6	36.4	29.3	33.4	32.6

Queuing and Blocking Report
 Year 2017 No-Build, PM Peak Hour

03/09/2017

Intersection: 54: E Pine St & Front

Movement	NB	NB	NB	SB	SB	SB	SB	NE	NE	NE	SW	SW
Directions Served	L	T	TR	L	T	T	R	L	T	R	L	T
Maximum Queue (ft)	224	323	304	122	167	118	92	136	242	125	162	244
Average Queue (ft)	180	184	158	53	80	39	42	59	220	96	73	206
95th Queue (ft)	262	375	306	101	138	100	74	109	262	168	127	279
Link Distance (ft)		316	316		327	327		222	222		221	221
Upstream Blk Time (%)		17	0						26			15
Queuing Penalty (veh)		69	1						78			49
Storage Bay Dist (ft)	200			200			150			100		
Storage Blk Time (%)	32	0			0	0			54	1		28
Queuing Penalty (veh)	62	0			0	0			73	2		83

Intersection: 54: E Pine St & Front

Movement	SW
Directions Served	TR
Maximum Queue (ft)	152
Average Queue (ft)	135
95th Queue (ft)	180
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	125
Storage Blk Time (%)	15
Queuing Penalty (veh)	34

Intersection: 57: E Pine St & Amy

Movement	NB	NE	NE	SW	SW
Directions Served	R	T	TR	T	TR
Maximum Queue (ft)	38	124	290	121	76
Average Queue (ft)	6	36	149	19	8
95th Queue (ft)	27	125	324	79	41
Link Distance (ft)	247		276	222	222
Upstream Blk Time (%)			5		
Queuing Penalty (veh)			30		
Storage Bay Dist (ft)		100			
Storage Blk Time (%)		0	19		
Queuing Penalty (veh)		0	58		

Queuing and Blocking Report
 Year 2017 No-Build, PM Peak Hour

03/09/2017

Intersection: 60: E Pine St & Haskell St.

Movement	SE	SE	NW	NE	NE	SW	SW	SW
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	170	71	72	53	224	122	290	115
Average Queue (ft)	84	7	28	10	92	47	133	62
95th Queue (ft)	146	39	61	39	174	109	251	105
Link Distance (ft)		467	386		455		276	276
Upstream Blk Time (%)								0
Queuing Penalty (veh)								2
Storage Bay Dist (ft)	150			100		100		
Storage Blk Time (%)	1				8	1	9	
Queuing Penalty (veh)	0				1	2	7	

Zone Summary

Zone wide Queuing Penalty: 551

HCM Signalized Intersection Capacity Analysis
 60: E Pine St & Haskell St.

07/07/2017

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Traffic Volume (vph)	405	16	50	1	12	109	50	375	16	38	160	185
Future Volume (vph)	405	16	50	1	12	109	50	375	16	38	160	185
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	0.96			0.97		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	0.89			0.88		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1617	1471			1471		1623	1685		1622	1549	1406
Flt Permitted	0.71	1.00			1.00		0.61	1.00		0.27	1.00	1.00
Satd. Flow (perm)	1203	1471			1471		1043	1685		467	1549	1406
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	476	19	59	1	14	128	59	441	19	45	188	218
RTOR Reduction (vph)	0	28	0	0	61	0	0	1	0	0	0	140
Lane Group Flow (vph)	476	50	0	0	82	0	59	459	0	45	188	78
Confl. Peds. (#/hr)	7		25	25		7	3		40	40		3
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%	2%	3%	0%	0%	13%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	35.8	35.8			35.8		24.5	24.5		24.5	24.5	24.5
Effective Green, g (s)	35.8	35.8			35.8		24.5	24.5		24.5	24.5	24.5
Actuated g/C Ratio	0.52	0.52			0.52		0.36	0.36		0.36	0.36	0.36
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.5	2.5			2.5		2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	630	771			771		374	604		167	555	504
v/s Ratio Prot		0.03						c0.27			0.12	
v/s Ratio Perm	c0.40				0.06		0.06			0.10		0.06
v/c Ratio	0.76	0.06			0.11		0.16	0.76		0.27	0.34	0.16
Uniform Delay, d1	12.8	8.0			8.2		14.9	19.3		15.5	16.0	14.9
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	0.0			0.0		0.1	5.2		0.6	0.3	0.1
Delay (s)	17.7	8.0			8.2		15.0	24.5		16.2	16.3	15.0
Level of Service	B	A			A		B	C		B	B	B
Approach Delay (s)		16.3			8.2			23.4			15.6	
Approach LOS		B			A			C			B	

Intersection Summary

HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	68.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
60: E Pine St & Haskell St.

07/07/2017

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖	
Traffic Volume (vph)	405	16	50	1	12	109	50	375	16	38	160	185	
Future Volume (vph)	405	16	50	1	12	109	50	375	16	38	160	185	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00	
Frbp, ped/bikes	1.00	0.96			0.98		1.00	1.00		1.00	1.00	0.97	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		0.98	1.00	1.00	
Frt	1.00	0.89			0.88		1.00	0.99		1.00	1.00	0.85	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1622	1471			1487		1623	1685		1622	1549	1406	
Flt Permitted	0.71	1.00			1.00		0.61	1.00		0.27	1.00	1.00	
Satd. Flow (perm)	1207	1471			1486		1044	1685		468	1549	1406	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	
Adj. Flow (vph)	476	19	59	1	14	128	59	441	19	45	188	218	
RTOR Reduction (vph)	0	28	0	0	61	0	0	1	0	0	0	140	
Lane Group Flow (vph)	476	50	0	0	82	0	59	459	0	45	188	78	
Confl. Peds. (#/hr)	7		25	25		7	3		40	40		3	
Confl. Bikes (#/hr)									1			1	
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%	2%	3%	0%	0%	13%	3%	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm	
Protected Phases		4			8			6			2		
Permitted Phases	4			8			6			2		2	
Actuated Green, G (s)	35.6	35.6			35.6		24.4	24.4		24.4	24.4	24.4	
Effective Green, g (s)	35.6	35.6			35.6		24.4	24.4		24.4	24.4	24.4	
Actuated g/C Ratio	0.52	0.52			0.52		0.36	0.36		0.36	0.36	0.36	
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	2.5	2.5			2.5		2.5	2.5		2.5	2.5	2.5	
Lane Grp Cap (vph)	631	770			777		374	604		167	555	504	
v/s Ratio Prot		0.03						c0.27			0.12		
v/s Ratio Perm	c0.39				0.06		0.06			0.10		0.06	
v/c Ratio	0.75	0.06			0.11		0.16	0.76		0.27	0.34	0.16	
Uniform Delay, d1	12.8	8.0			8.2		14.8	19.2		15.5	15.9	14.8	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00	
Incremental Delay, d2	4.9	0.0			0.0		0.1	5.2		0.6	0.3	0.1	
Delay (s)	17.6	8.0			8.2		15.0	24.4		16.1	16.2	14.9	
Level of Service	B	A			A		B	C		B	B	B	
Approach Delay (s)		16.3			8.2			23.3			15.6		
Approach LOS		B			A			C			B		
Intersection Summary													
HCM 2000 Control Delay			17.6									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.76										
Actuated Cycle Length (s)			68.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			75.7%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:10	7:10	7:10	7:10	7:10	7:10
End Time	8:15	8:15	8:15	8:15	8:15	8:15
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	2911	2983	2982	2954	2956	2956
Vehs Exited	2937	2983	2992	2967	2941	2962
Starting Vehs	86	71	65	73	67	71
Ending Vehs	60	71	55	60	82	60
Travel Distance (mi)	994	988	1012	990	995	996
Travel Time (hr)	73.2	79.2	75.9	75.7	80.8	77.0
Total Delay (hr)	35.1	41.2	37.0	37.6	42.4	38.7
Total Stops	3661	3852	3924	3876	3881	3837
Fuel Used (gal)	43.9	45.3	45.3	44.5	45.8	45.0

Interval #0 Information Seeding

Start Time	7:10
End Time	7:15
Total Time (min)	5
Volumes adjusted by PHF, Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:15
End Time	7:30
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	1	2	3	4	5	Avg
Vehs Entered	761	802	783	799	772	781
Vehs Exited	749	745	747	789	757	759
Starting Vehs	86	71	65	73	67	71
Ending Vehs	98	128	101	83	82	96
Travel Distance (mi)	263	262	268	272	265	266
Travel Time (hr)	23.8	27.5	21.3	23.6	19.7	23.2
Total Delay (hr)	13.7	17.4	11.1	13.2	9.4	13.0
Total Stops	1125	1218	1055	1166	982	1107
Fuel Used (gal)	12.6	13.4	12.3	12.9	11.7	12.6

SimTraffic Simulation Summary
Design Year 2018 No-Build, AM Peak Hour

07/07/2017

Interval #2 Information Recording

Start Time 7:30

End Time 8:15

Total Time (min) 45

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2150	2181	2199	2155	2184	2175
Vehs Exited	2188	2238	2245	2178	2184	2207
Starting Vehs	98	128	101	83	82	96
Ending Vehs	60	71	55	60	82	60
Travel Distance (mi)	730	726	744	718	730	730
Travel Time (hr)	49.4	51.7	54.7	52.0	61.1	53.8
Total Delay (hr)	21.4	23.8	26.0	24.5	32.9	25.7
Total Stops	2536	2634	2869	2710	2899	2730
Fuel Used (gal)	31.3	31.9	33.0	31.6	34.1	32.4

Queuing and Blocking Report
 Design Year 2018 No-Build, AM Peak Hour

07/07/2017

Intersection: 60: E Pine St & Haskell St.

Movement	SE	SE	NW	NE	NE	SW	SW	SW
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	514	133	119	200	758	126	226	103
Average Queue (ft)	218	24	51	63	311	35	83	51
95th Queue (ft)	439	76	100	180	705	88	169	89
Link Distance (ft)	1332	1332	386		929		276	276
Upstream Blk Time (%)					2		0	
Queuing Penalty (veh)					0		0	
Storage Bay Dist (ft)				100		100		
Storage Blk Time (%)				0	39	1	6	
Queuing Penalty (veh)				2	20	2	2	

Zone Summary

Zone wide Queuing Penalty: 26

SimTraffic Simulation Summary
 Design Year 2018 No-Build, AM Peak Hour, Mitigated

07/07/2017

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:10	7:10	7:10	7:10	7:10	7:10
End Time	8:15	8:15	8:15	8:15	8:15	8:15
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	2926	2968	2984	2919	2941	2947
Vehs Exited	2926	3013	2995	2918	2936	2955
Starting Vehs	65	90	80	61	61	70
Ending Vehs	65	45	69	62	66	56
Travel Distance (mi)	966	1006	992	979	974	983
Travel Time (hr)	60.3	63.3	60.2	60.8	59.2	60.8
Total Delay (hr)	23.0	24.5	21.9	23.1	21.8	22.9
Total Stops	3150	3192	3140	3114	3228	3166
Fuel Used (gal)	40.9	42.0	41.1	41.0	40.8	41.2

Interval #0 Information Seeding

Start Time 7:10
 End Time 7:15
 Total Time (min) 5
 Volumes adjusted by PHF, Growth Factors.
 No data recorded this interval.

Interval #1 Information Recording

Start Time 7:15
 End Time 7:30
 Total Time (min) 15
 Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	824	844	798	807	797	815
Vehs Exited	820	853	793	777	785	805
Starting Vehs	65	90	80	61	61	70
Ending Vehs	69	81	85	91	73	78
Travel Distance (mi)	285	291	271	275	272	279
Travel Time (hr)	19.8	20.0	17.4	18.0	17.3	18.5
Total Delay (hr)	8.8	8.7	7.0	7.4	6.8	7.8
Total Stops	1018	1039	933	944	926	973
Fuel Used (gal)	12.5	12.7	11.4	11.7	11.6	12.0

SimTraffic Simulation Summary
Design Year 2018 No-Build, AM Peak Hour, Mitigated

07/07/2017

Interval #2 Information Recording

Start Time 7:30
End Time 8:15
Total Time (min) 45

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2102	2124	2186	2112	2144	2135
Vehs Exited	2106	2160	2202	2141	2151	2153
Starting Vehs	69	81	85	91	73	78
Ending Vehs	65	45	69	62	66	56
Travel Distance (mi)	681	715	721	704	702	705
Travel Time (hr)	40.5	43.3	42.8	42.8	41.9	42.3
Total Delay (hr)	14.2	15.7	15.0	15.7	14.9	15.1
Total Stops	2132	2153	2207	2170	2302	2196
Fuel Used (gal)	28.4	29.3	29.7	29.3	29.2	29.2

Queuing and Blocking Report
 Design Year 2018 No-Build, AM Peak Hour, Mitigated

07/07/2017

Intersection: 60: E Pine St & Haskell St.

Movement	SE	SE	NW	NE	NE	SW	SW	SW
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	363	75	90	176	368	117	174	117
Average Queue (ft)	145	20	35	38	133	29	69	50
95th Queue (ft)	269	51	72	105	263	76	144	96
Link Distance (ft)	1331	1331	373		929		276	276
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				100		100		
Storage Blk Time (%)				0	12	0	3	
Queuing Penalty (veh)				1	7	0	1	

Zone Summary

Zone wide Queuing Penalty: 9

HCM Signalized Intersection Capacity Analysis
 60: E Pine St & Haskell St.

07/07/2017

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	405	17	50	1	13	115	50	375	16	39	160	185
Future Volume (vph)	405	17	50	1	13	115	50	375	16	39	160	185
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	0.96			0.97		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	0.89			0.88		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1617	1474			1471		1623	1685		1621	1549	1406
Flt Permitted	0.70	1.00			1.00		0.61	1.00		0.27	1.00	1.00
Satd. Flow (perm)	1187	1474			1471		1039	1685		462	1549	1406
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	476	20	59	1	15	135	59	441	19	46	188	218
RTOR Reduction (vph)	0	28	0	0	64	0	0	1	0	0	0	140
Lane Group Flow (vph)	476	51	0	0	87	0	59	459	0	46	188	78
Confl. Peds. (#/hr)	7		25	25		7	3		40	40		3
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%	2%	3%	0%	0%	13%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	36.5	36.5			36.5		24.7	24.7		24.7	24.7	24.7
Effective Green, g (s)	36.5	36.5			36.5		24.7	24.7		24.7	24.7	24.7
Actuated g/C Ratio	0.53	0.53			0.53		0.36	0.36		0.36	0.36	0.36
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.5	2.5			2.5		2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	626	777			775		370	601		164	552	501
v/s Ratio Prot		0.03						c0.27			0.12	
v/s Ratio Perm	c0.40				0.06		0.06			0.10		0.06
v/c Ratio	0.76	0.07			0.11		0.16	0.76		0.28	0.34	0.16
Uniform Delay, d1	12.9	8.0			8.2		15.2	19.7		15.9	16.3	15.1
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.2	0.0			0.0		0.1	5.5		0.7	0.3	0.1
Delay (s)	18.1	8.0			8.3		15.3	25.1		16.6	16.6	15.3
Level of Service	B	A			A		B	C		B	B	B
Approach Delay (s)		16.7			8.3			24.0			15.9	
Approach LOS		B			A			C			B	

Intersection Summary

HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	69.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
60: E Pine St & Haskell St.

07/07/2017

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↖	↗	↖	↗		↖	↗	↖
Traffic Volume (vph)	405	17	50	1	13	115	50	375	16	39	160	185
Future Volume (vph)	405	17	50	1	13	115	50	375	16	39	160	185
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96			0.98		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	0.89			0.88		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1622	1474			1487		1623	1685		1622	1549	1406
Flt Permitted	0.70	1.00			1.00		0.61	1.00		0.27	1.00	1.00
Satd. Flow (perm)	1191	1474			1487		1041	1685		465	1549	1406
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	476	20	59	1	15	135	59	441	19	46	188	218
RTOR Reduction (vph)	0	28	0	0	64	0	0	1	0	0	0	140
Lane Group Flow (vph)	476	51	0	0	87	0	59	459	0	46	188	78
Confl. Peds. (#/hr)	7		25	25		7	3		40	40		3
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%	2%	3%	0%	0%	13%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			6			2	
Permitted Phases	4			8			6			2		2
Actuated Green, G (s)	36.1	36.1			36.1		24.6	24.6		24.6	24.6	24.6
Effective Green, g (s)	36.1	36.1			36.1		24.6	24.6		24.6	24.6	24.6
Actuated g/C Ratio	0.53	0.53			0.53		0.36	0.36		0.36	0.36	0.36
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.5	2.5			2.5		2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	625	774			781		372	603		166	554	503
v/s Ratio Prot		0.03						c0.27			0.12	
v/s Ratio Perm	c0.40				0.06		0.06			0.10		0.06
v/c Ratio	0.76	0.07			0.11		0.16	0.76		0.28	0.34	0.16
Uniform Delay, d1	12.9	8.0			8.2		15.0	19.5		15.7	16.1	15.0
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.2	0.0			0.0		0.1	5.4		0.7	0.3	0.1
Delay (s)	18.1	8.0			8.3		15.2	24.8		16.4	16.4	15.1
Level of Service	B	A			A		B	C		B	B	B
Approach Delay (s)		16.7			8.3			23.7			15.8	
Approach LOS		B			A			C			B	
Intersection Summary												
HCM 2000 Control Delay		17.9										
HCM 2000 Volume to Capacity ratio		0.76										
Actuated Cycle Length (s)		68.7							8.0			
Intersection Capacity Utilization		76.1%										
Analysis Period (min)		15										
c Critical Lane Group												

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:10	7:10	7:10	7:10	7:10	7:10
End Time	8:15	8:15	8:15	8:15	8:15	8:15
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	2999	2968	2963	2953	2944	2965
Vehs Exited	2988	2984	3000	2955	2980	2982
Starting Vehs	74	83	92	74	83	76
Ending Vehs	85	67	55	72	47	66
Travel Distance (mi)	996	999	991	1002	996	997
Travel Time (hr)	72.6	81.4	87.0	75.9	71.8	77.7
Total Delay (hr)	34.3	42.8	48.7	37.4	33.5	39.4
Total Stops	3702	3919	4085	3830	3644	3832
Fuel Used (gal)	44.1	46.3	47.3	45.1	44.1	45.4

Interval #0 Information Seeding

Start Time 7:10
 End Time 7:15
 Total Time (min) 5
 Volumes adjusted by PHF, Growth Factors.
 No data recorded this interval.

Interval #1 Information Recording

Start Time 7:15
 End Time 7:30
 Total Time (min) 15
 Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	787	863	772	784	784	797
Vehs Exited	770	822	745	749	770	771
Starting Vehs	74	83	92	74	83	76
Ending Vehs	91	124	119	109	97	106
Travel Distance (mi)	268	288	257	266	261	268
Travel Time (hr)	20.5	32.0	26.7	22.3	22.2	24.8
Total Delay (hr)	10.2	20.8	16.8	12.1	12.2	14.4
Total Stops	1053	1348	1192	1121	1088	1162
Fuel Used (gal)	12.1	15.3	13.3	12.5	12.4	13.1

Interval #2 Information Recording

Start Time 7:30
End Time 8:15
Total Time (min) 45
Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2212	2105	2191	2169	2160	2170
Vehs Exited	2218	2162	2255	2206	2210	2209
Starting Vehs	91	124	119	109	97	106
Ending Vehs	85	67	55	72	47	66
Travel Distance (mi)	728	711	734	737	735	729
Travel Time (hr)	52.1	49.5	60.2	53.6	49.6	53.0
Total Delay (hr)	24.1	22.0	31.9	25.3	21.4	24.9
Total Stops	2649	2571	2893	2709	2556	2680
Fuel Used (gal)	32.0	31.1	33.9	32.6	31.8	32.3

Queuing and Blocking Report
 Design Year 2018 Build, AM Peak Hour

07/07/2017

Intersection: 60: E Pine St & Haskell St.

Movement	SE	SE	NW	NE	NE	SW	SW	SW
Directions Served	L	TR	LTR	L	TR	L	T	R
Maximum Queue (ft)	517	118	165	199	815	147	255	117
Average Queue (ft)	220	21	55	56	333	38	90	54
95th Queue (ft)	484	72	114	163	808	94	189	94
Link Distance (ft)	1332	1332	386		929		276	276
Upstream Blk Time (%)					4		0	
Queuing Penalty (veh)					0		1	
Storage Bay Dist (ft)				100		100		
Storage Blk Time (%)				1	37	1	7	
Queuing Penalty (veh)				5	19	2	3	

Zone Summary

Zone wide Queuing Penalty: 29

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	7:10	7:10	7:10	7:10	7:10	7:10
End Time	8:15	8:15	8:15	8:15	8:15	8:15
Total Time (min)	65	65	65	65	65	65
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3
# of Recorded Intervals	2	2	2	2	2	2
Vehs Entered	2918	2978	2953	2978	2982	2960
Vehs Exited	2936	2990	2969	2981	2982	2972
Starting Vehs	61	74	67	61	66	60
Ending Vehs	43	62	51	58	66	53
Travel Distance (mi)	978	987	978	987	995	985
Travel Time (hr)	58.7	60.4	60.7	60.4	61.0	60.2
Total Delay (hr)	21.0	22.5	23.2	22.4	22.6	22.4
Total Stops	3058	3138	3094	3160	3243	3139
Fuel Used (gal)	40.4	41.2	40.9	41.3	41.4	41.0

Interval #0 Information Seeding

Start Time 7:10
 End Time 7:15
 Total Time (min) 5
 Volumes adjusted by PHF, Growth Factors.
 No data recorded this interval.

Interval #1 Information Recording

Start Time 7:15
 End Time 7:30
 Total Time (min) 15
 Volumes adjusted by PHF, Growth Factors.

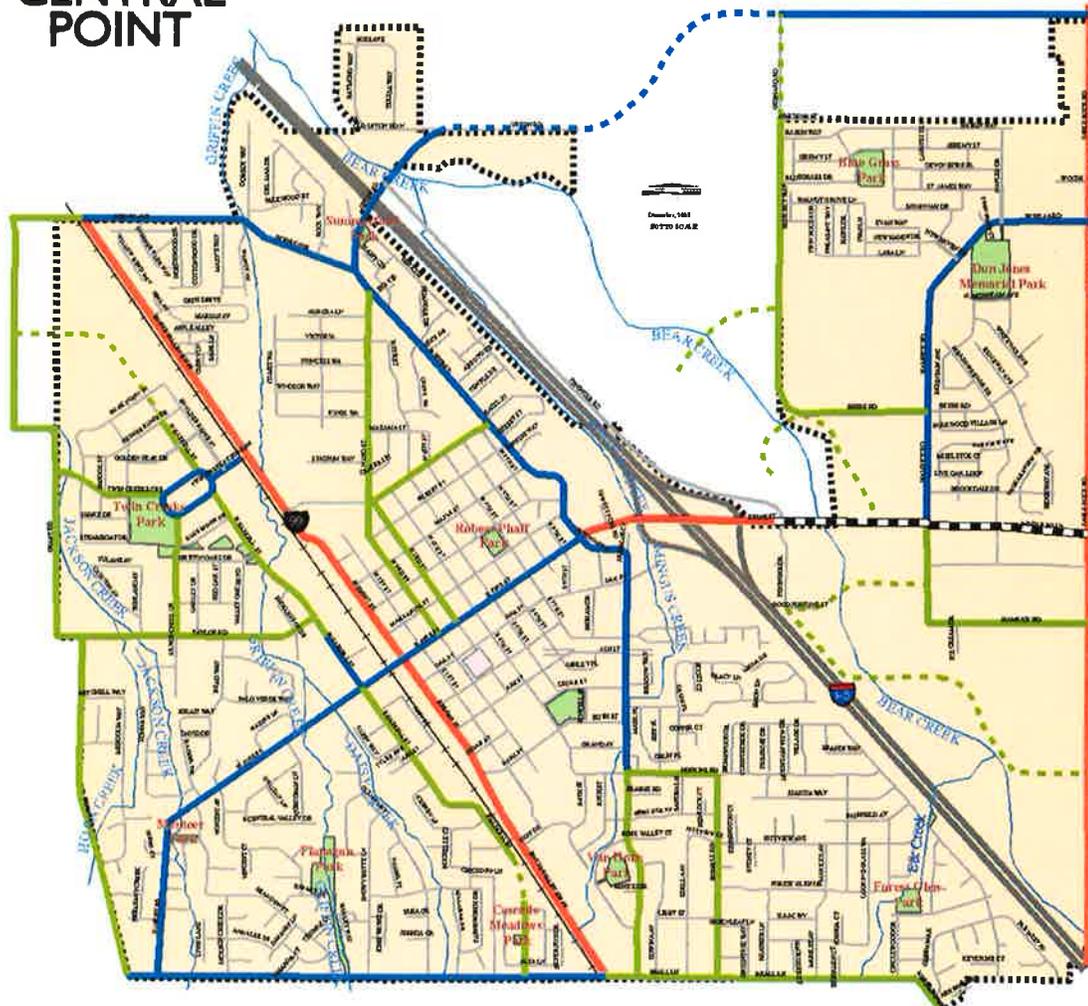
Run Number	1	2	3	4	5	Avg
Vehs Entered	792	815	839	810	810	817
Vehs Exited	772	825	830	809	811	809
Starting Vehs	61	74	67	61	66	60
Ending Vehs	81	64	76	62	65	69
Travel Distance (mi)	272	277	289	279	278	279
Travel Time (hr)	17.9	18.2	19.7	18.1	18.0	18.4
Total Delay (hr)	7.4	7.6	8.5	7.3	7.2	7.6
Total Stops	948	966	994	923	955	956
Fuel Used (gal)	11.6	11.9	12.5	11.9	11.7	11.9

Interval #2 Information Recording

Start Time 7:30
End Time 8:15
Total Time (min) 45

Volumes adjusted by Growth Factors, Anti PHF.

Run Number	1	2	3	4	5	Avg
Vehs Entered	2126	2163	2114	2168	2172	2151
Vehs Exited	2164	2165	2139	2172	2171	2163
Starting Vehs	81	64	76	62	65	69
Ending Vehs	43	62	51	58	66	53
Travel Distance (mi)	706	710	689	708	717	706
Travel Time (hr)	40.8	42.2	41.0	42.3	43.0	41.9
Total Delay (hr)	13.6	14.9	14.7	15.1	15.4	14.7
Total Stops	2110	2172	2100	2237	2288	2184
Fuel Used (gal)	28.8	29.2	28.4	29.4	29.7	29.1

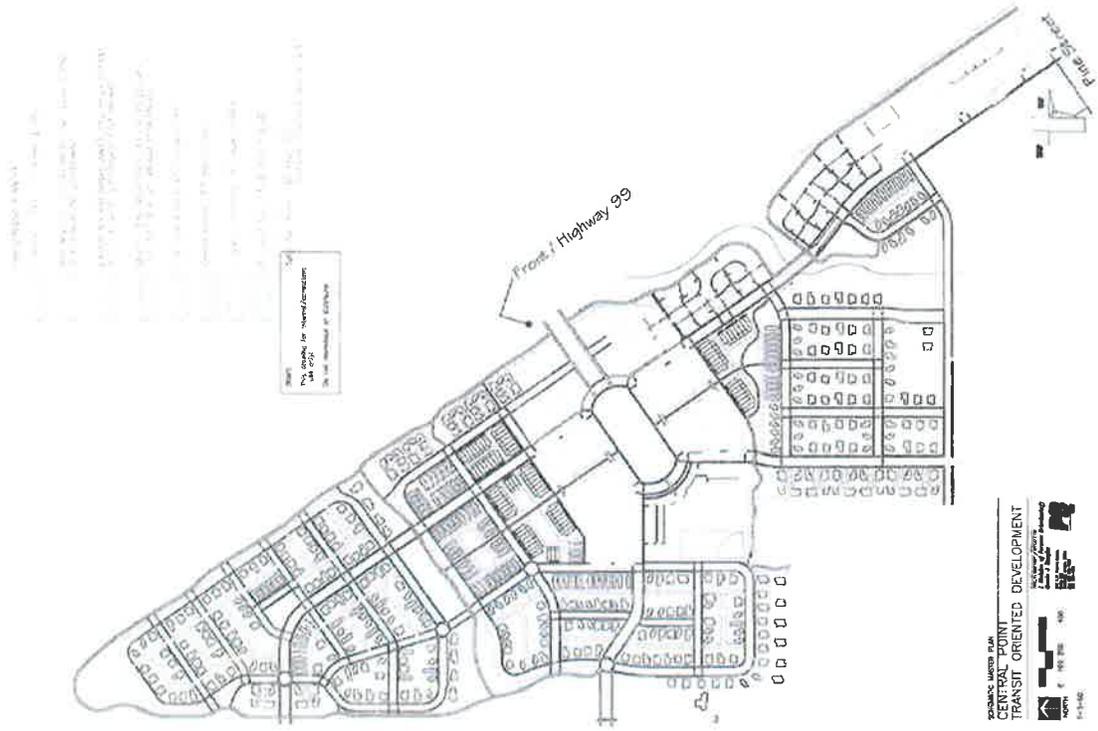


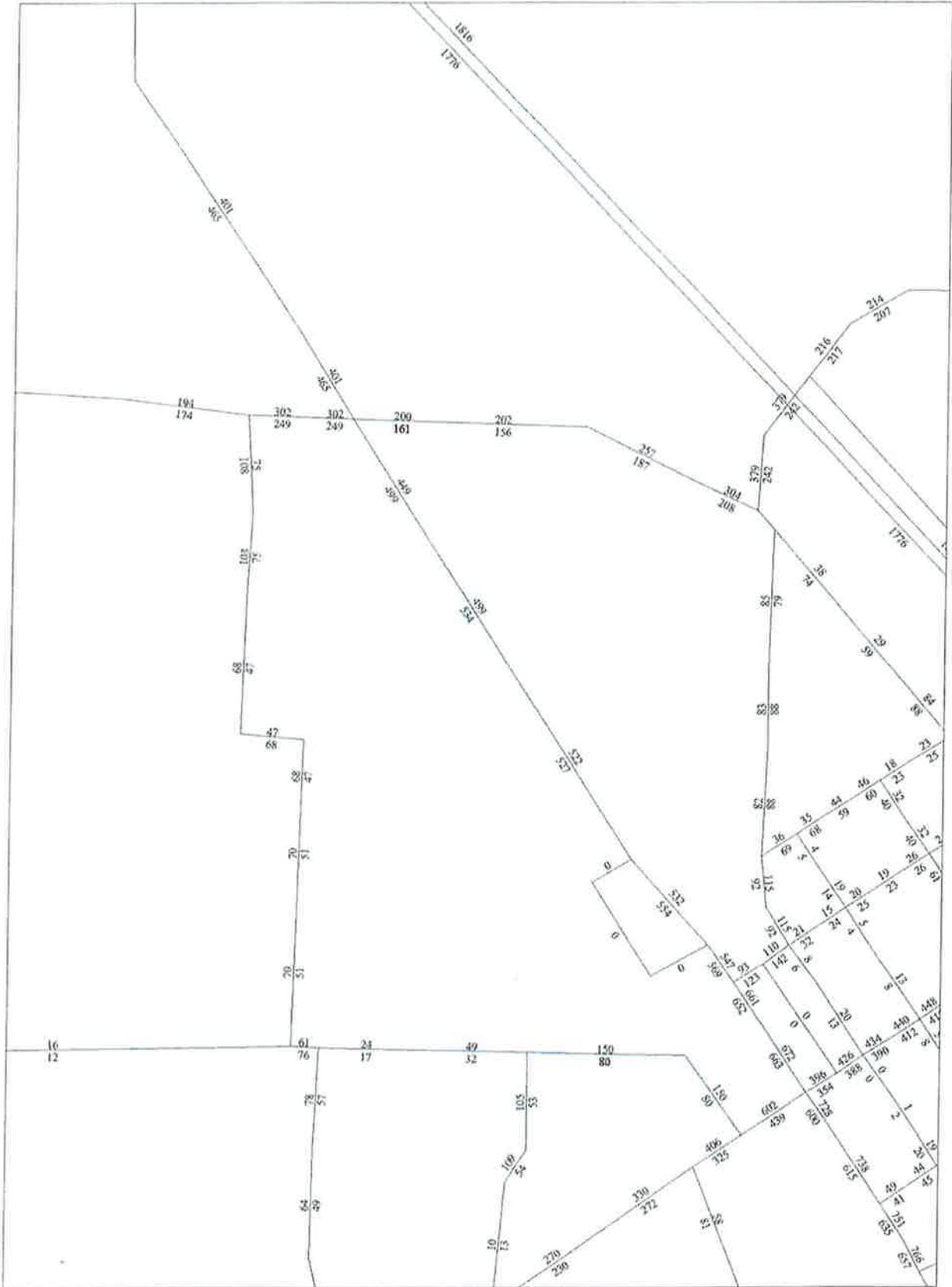
- Legend
- Urban Area
 - Principal Arterial
 - Collector
 - Public Parks
 - Intermodal Connector
 - Future Collector
 - Railroad
 - Minor Arterial
 - Local
 - Future Minor Arterial

Figure 7.1
Functional Classification &
Street Network Map
2008-2030

Figure 14

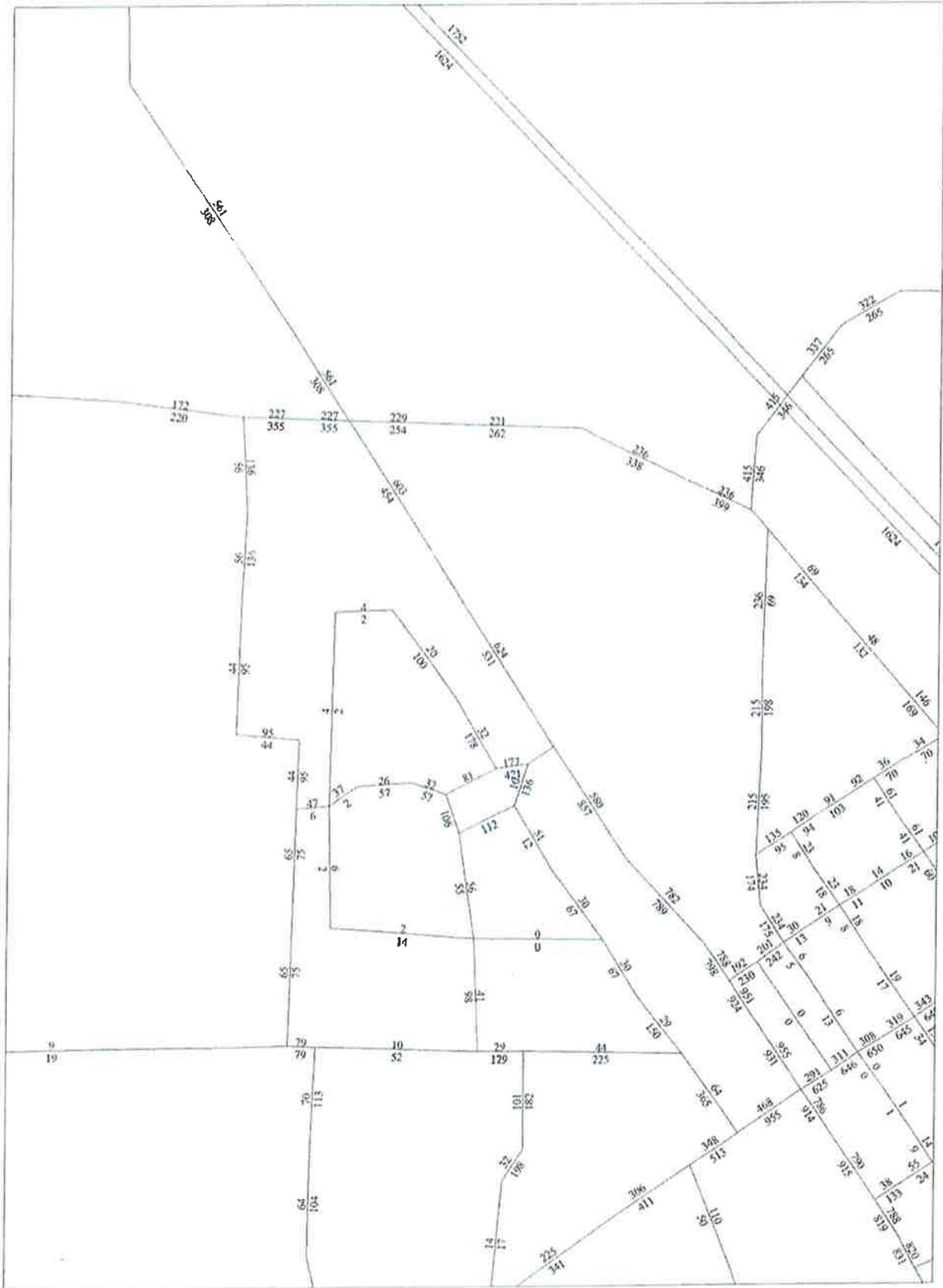
Central Point Transit Oriented Development





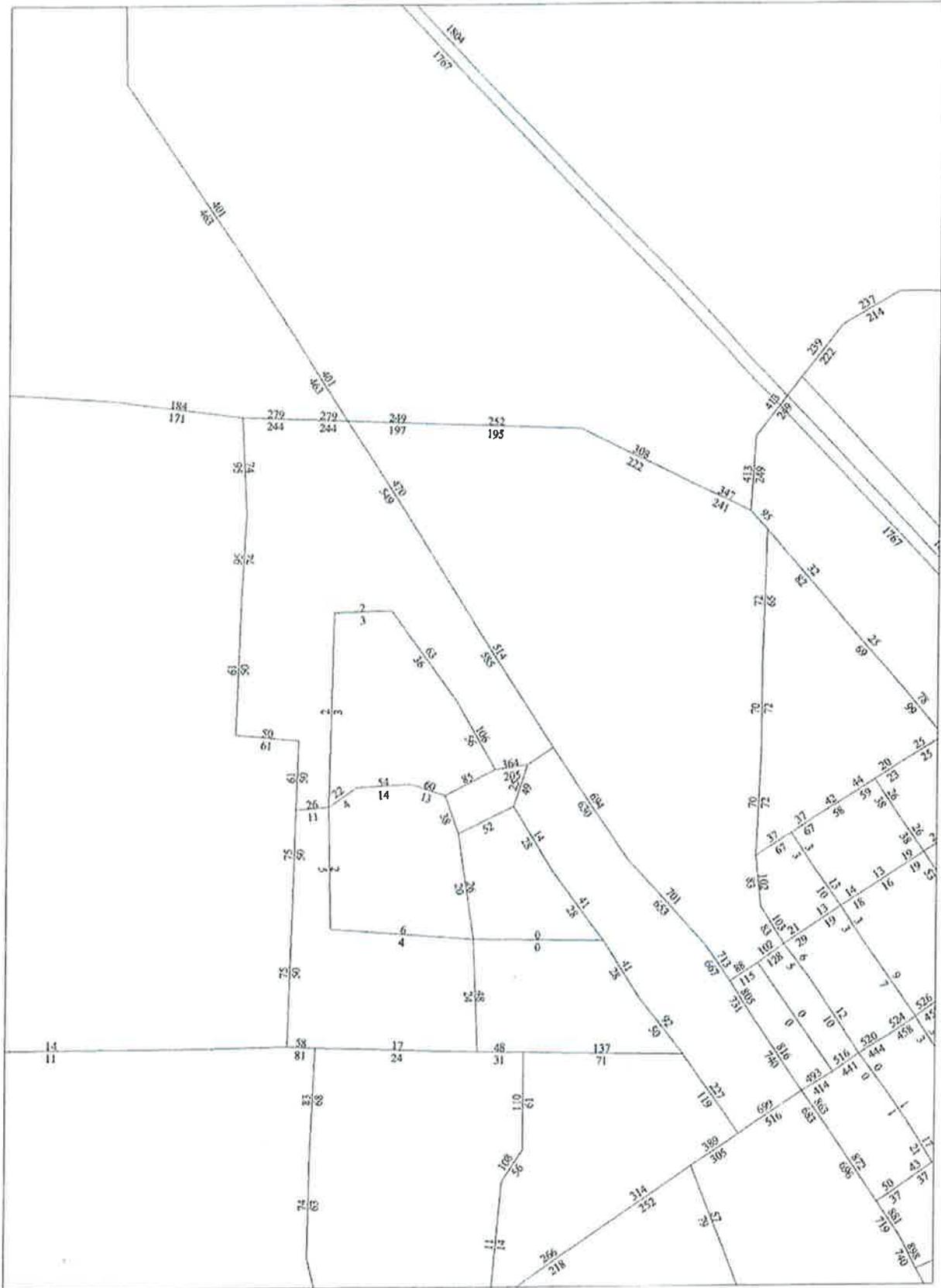
Scenario 150 (2020 Committed with Updated P&A)

2020 no-build PM



Scenario 550 (2020 Detailed Network)

2020 Build AM



Scenario 550 (2020 Detailed Network)

2020 Build PM

BEFORE THE PLANNING COMMISSION AND
CITY COUNCIL

FOR THE CITY OF CENTRAL POINT

STATE OF OREGON

IN THE MATTER OF A REQUEST FOR)
ANNEXATION AND ZONE CHANGE FOR)
TWO PARCELS THAT ARE ADDRESSED)
AS 3428 AND 3470 CHICORY LANE, AND)
ARE LOCATED EAST OF CHICORY)
LANE AT THE TERMINUS OF LINDSAY)
COURT. THE PROPERTY IS LOCATED)
IN THE CITY OF CENTRAL POINT AND)
IS MORE SPECIFICALLY IDENTIFIED AS)
TAX LOTS 8300 AND 8400 IN TOWNSHIP)
37 SOUTH, RANGE 2 WEST (WM),)
SECTION 11C.)

PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW

Applicants' Exhibit 2

Applicant/)
Owners: **Bob Fellows Construction, LLC**)
Agent: **CSA Planning, Ltd.**)

I

NATURE OF THE APPLICATION

Applicants request a consolidated annexation and zone change for two lots totaling 3.64 acres east of Chicory Lane and the terminus of Lindsay Court. The subject property has a Comprehensive Plan designation of TOD Corridor. The Applicant requests the City rezone the property as part of the annexation request to City zone and specifically requests the TOD LMR (R-2).

In addition to the zone change, the application includes a precautionary Comprehensive Plan Map amendment request in the event that the City (or the Courts on appeal) were to conclude that a Comprehensive Plan amendment is required for the requested zone change for the subject property.



II

EVIDENCE SUBMITTED WITH THE APPLICATIONS

Applicant herewith submits the following evidence with its land use application:

- Exhibit 1.** Completed application forms and Duly Executed Limited Powers of Attorney from Applicants and Owners authorizing CSA Planning, Ltd. to act on their behalf.
- Exhibit 2.** These proposed findings of fact and conclusions of law, demonstrating how the application complies with the applicable substantive criteria of Central Point's Land Development Ordinance and applicable State Law and Municipal Code.
- Exhibit 3.** Jackson County Assessor Plat Map 37-2W-11C
- Exhibit 4.** Current Comprehensive Land Use Plan Map
- Exhibit 5.** Current Zoning Map (County Zoning) on Aerial Photo
- Exhibit 6.** Proposed Zoning Map
- Exhibit 7.** Background and Historical Map and Ordinances
 - A) 1987 Zoning Map (adopted in 1989)
 - B) Ordinance 1793 and Related Information
 - C) Ordinance 1815 and Related Information
- Exhibit 8.** Annexation Petition
- Exhibit 9.** Public Facilities Maps
 - A) Waterline Map
 - B) Storm Drainage Map
 - C) Sanitary Sewer Map
- Exhibit 10.** Wetlands Study Map
- Exhibit 11.** Civil Analysis
- Exhibit 12.** Preliminary Plat and Legal Description

III

RELEVANT SUBSTANTIVE APPROVAL CRITERIA

The relevant substantive criteria prerequisite to approving an Annexation with a minor Comprehensive Plan Amendment and Zone Change under the City of Central Point Zoning Ordinance (“CPZO”) is recited verbatim below:

CITY OF CENTRAL POINT ZONING ORDINANCE (CPZO)

**Chapter 1.20
ANNEXATION PROCEDURE**

222.111 Authority and procedure for annexation.

- (1) When a proposal containing the terms of annexation is approved in the manner provided by the charter of the annexing city or by ORS 222.111 to 222.180 or 222.840 to 222.915, the boundaries of any city may be extended by the annexation of territory that is not within a city and that is contiguous to the city or separated from it only by a public right of way or a stream, bay, lake or other body of water. Such territory may lie either wholly or partially within or without the same county in which the city lies.
- (2) A proposal for annexation of territory to a city may be initiated by the legislative body of the city, on its own motion, or by a petition to the legislative body of the city by owners of real property in the territory to be annexed.
- (5) The legislative body of the city shall submit, except when not required under ORS 222.120, 222.170 and 222.840 to 222.915 to do so, the proposal for annexation to the electors of the territory proposed for annexation and, except when permitted under ORS 222.120 or 222.840 to 222.915 to dispense with submitting the proposal for annexation to the electors of the city, the legislative body of the city shall submit such proposal to the electors of the city. The proposal for annexation may be voted upon at a general election or at a special election to be held for that purpose.

222.120 Procedure for annexation without election; hearing; ordinance subject to referendum.

- (1) Except when expressly required to do so by the city charter, the legislative body of a city is not required to submit a proposal for annexation of territory to the electors of the city for their approval or rejection.
- (2) When the legislative body of the city elects to dispense with submitting the question of the proposed annexation to the electors of the city, the legislative body of the city shall fix a day for a public hearing before the legislative body at which time the electors of the city may appear and be heard on the question of annexation.
- (3) The city legislative body shall cause notice of the hearing to be published once each week for two successive weeks prior to the day of hearing, in a newspaper of general circulation in the city, and shall cause notices of the hearing to be posted in four public places in the city for a like period.
- (4) After the hearing, the city legislative body may, by an ordinance containing a legal description of the territory in question:
 - (a) Declare that the territory is annexed to the city upon the condition that the majority of the votes cast in the territory is in favor of annexation;
 - (b) Declare that the territory is annexed to the city where electors or landowners in the contiguous territory consented in writing to such annexation, as provided in ORS 222.125 or 222.170, prior to the public hearing held under subsection (2) of this section; or
- (7) For the purpose of this section, ORS 222.125 and 222.170, “owner” or “landowner” means the legal owner of record or, where there is a recorded land contract which is in force, the purchaser thereunder. If there is a multiple ownership in a parcel of land each consenting owner shall be counted as a fraction to the same extent as the interest of the owner in the land bears in relation to the interest of the other

owners and the same fraction shall be applied to the parcel's land mass and assessed value for purposes of the consent petition. If a corporation owns land in territory proposed to be annexed, the corporation shall be considered the individual owner of that land.

1.20.010 Generally.

All proposals for annexation of real property to the city under the provisions of Oregon Revised Statutes 222.111 to 222.180, now in effect or as hereafter amended, shall be accompanied by a preliminary plat, an exterior boundary legal description and the annexation fee as in this chapter provided. (Ord. 1166 §1, 1974).

1.20.011 Application and review.

Applications and review thereof shall conform to the provisions of Chapter 17.05 of the Central Point Municipal Code and all applicable laws of the state. Applications for annexation may be accompanied by other, concurrent applications, for amendment to the comprehensive plan, amendments to the zoning map and requests for withdrawal from special districts, provided that such concurrent applications meet all requirements therefor.

ZONE CHANGE CRITERIA

17.12.060 Zoning of annexed area. All future annexations are expected to include only lands within the city's urban growth boundary (UGB). The comprehensive plan of Central Point includes a plan for future land uses within the UGB area. The zoning map described in Section 17.12.030 is consistent with the comprehensive plan and will determine the district into which a newly annexed area is placed. The appropriate zoning district shall be applied to the area upon annexation.

17.10.200 Initiation of amendments.

A proposed amendment to the code or zoning map may be initiated by either:

- A. A resolution by the planning commission to the city council;
- B. A resolution of intent by the city council; or for zoning map amendments;
- C. An application by one or more property owners (zoning map amendments only), or their agents, of property affected by the proposed amendment. The amendment shall be accompanied by a legal description of the property or properties affected; proposed findings of facts supporting the proposed amendment, justifying the same and addressing the substantive standards for such an amendment as required by this chapter and by the Land Conservation and Development Commission of the state. (Ord. 1989 §1(part), 2014).

17.10.300 Major and minor amendments.

There are two types of map and text amendments:

- A. Major Amendments. Major amendments are legislative policy decisions that establish by law general policies and regulations for future land use decisions, such as revisions to the zoning and land division ordinance that have widespread and significant impact beyond the immediate area. Major amendments are reviewed using the Type IV procedure in Section 17.05.500.
- B. Minor Amendments. Minor amendments are those that involve the application of adopted policy to a specific development application, and not the adoption of new policy (i.e., major amendments). Minor amendments shall follow the Type III procedure, as set forth in Section 17.05.400. The approval authority shall be the city council after review and recommendation by the planning commission. (Ord. 1989 §1(part), 2014; Ord. 1874 §3(part), 2006).

17.10.400 Approval criteria.

A recommendation or a decision to approve, approve with conditions or to deny an application for a text or map amendment shall be based on written findings and conclusions that address the following criteria:

- A. Approval of the request is consistent with the applicable statewide planning goals (major amendments only);
- B. Approval of the request is consistent with the Central Point comprehensive plan (major and minor amendments);
- C. If a zoning map amendment, findings demonstrating that adequate public services and transportation networks to serve the property are either available, or identified for construction in the city's public facilities master plans (major and minor amendments); and

- D. The amendment complies with OAR [660-012-0060](#) of the Transportation Planning Rule. (Ord. 1989 §1(part), 2014; Ord. 1874 §3(part), 2006. Formerly 17.10.300(B)).

OREGON TRANSPORTATION PLANNING RULE
Oregon Administrative Rules Chapter 660, Division 12

SECTION 660-012-0060

- (1) Where an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation would significantly affect an existing or planned transportation facility, the local government shall put in place measures as provided in section (2) of this rule to assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility. A plan or land use regulation amendment significantly affects a transportation facility if it would:
- (a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);
 - (b) Change standards implementing a functional classification system; or
 - (c) As measured at the end of the planning period identified in the adopted transportation system plan:
 - (A) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;
 - (B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan; or
 - (C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

COMPREHENSIVE PLAN AMENDMENT CRITERIA

17.96.200 Initiation of amendments.

A proposed amendment to the comprehensive plan or urban growth boundary may be initiated by either:

- A. A resolution by the planning commission to the city council;
- B. A resolution of intent by the city council; or
- C. An application by one or more property owners, or their agents, of property affected by the proposed amendment.

17.96.300 Major revisions and minor changes.

Proposed amendments to the comprehensive plan, including urban growth boundary amendments, are categorized as either major or minor amendments as defined in Section [17.10.300](#). Proposals for major revisions shall be processed as a Type IV procedure per Section [17.05.500](#). Proposals for minor changes shall be processed as a Type III procedure per Section [17.05.400](#).

17.96.500 Approval criteria.

A recommendation or a decision to approve or to deny an application for an amendment to the comprehensive plan, or urban growth boundary shall be based on written findings and conclusions that address the following criteria:

- A. Approval of the request is consistent with the applicable statewide planning goals;
- B. Approval of the request is consistent with the Central Point comprehensive plan;
- C. For urban growth boundary amendments findings demonstrate that adequate public services and transportation networks to serve the property are either available, or identified for construction in the city's public facilities master plans (major and minor amendments); and
- D. The amendment complies with OAR [660-012-0060](#) of the Transportation Planning Rule.

IV

FINDINGS OF FACT

The following facts are established and found to be true with respect to this matter:

- 1. Ownership/Applicant:** Tax Lots 8300 and 8400 are owned in fee simple by Bob Fellows Construction, LLC. Agent CSA Planning, Ltd. is submitting this application on behalf of the Property Owner/Applicant.
- 2. Location:** The subject property is located on the east side of Chicory Lane, east of the terminus of Lindsay Court. The property is identified as Tax Lots 8300 and 8400 in Township 37 South, Range 02 West (W.M.), Section 11C. The site addresses are 3428 and 3470 Chicory Lane, Central Point, OR.
- 3. Parcel Size:** Tax Lot 8300 currently has 1.75 acres and Tax Lot 8400 currently has 1.89 acres. *See*, Exhibit 3. Total subject property size is 3.64 acres. Potential future development is likely to be laid out roughly according to table below:

SUBJECT PROPERTY ACREAGE		
Acreage Type	Net Acres	Percent of gross acres
Residential Area	1.92	53%
Right-of-Way/Parks	1.50	41%
Total	3.64	

- 4. Current Zoning:** The property is currently under Jackson County jurisdiction and is zoned GI, General Industrial. *See*, Exhibits 5.
- 5. Proposed Zoning Map:** Applicant requests the City apply the TOD LMR (R2) zoning to the subject property.
- 6. Existing Frontage and Access:** The subject property has 520 feet of frontage on Chicory Lane along the western and southwestern boundary lines. In addition, the property has approximately 97 feet of frontage at the terminus of the northern portion of S. Haskell Street.
- 7. Lot Legality:** Tax Lots 8300 and 8400 were originally part of Lot “K” of the Snowy Butte Orchard which was platted in 1910. In 1944 the North 5 acres of Lot “K” was sold leaving the subject property as one parcel. In 1956, what is now Tax Lot 8300 was partitioned off by sale, leaving the existing configuration of the subject property tract.
- 8. Existing Development:** Each parcel currently has one residence with related accessory structures.

9. Land Uses on Abutting Properties and Surrounding Area:

Overview of area: This area, west of the Southern Pacific Railroad right of way and south of Pine Street has been in the process of being developed as a transit-oriented corridor. A variety of residential development exists in the area.

East: The property abuts the Southern Pacific Railroad right of way on the east. Adjacent to the railroad right-of-way is the Highway 99 right-of-way. Highway 99 is a five-lane major arterial with four travel lanes and a center turn lane.

North: To the north is a small development of single-family houses with ADU units constructed around 2010 on lots that range in size from 7,299 to 7,950 square feet. There is also a 9,892 square foot open space area. Beyond that is a large church property.

West: To the west is a residential subdivision with medium-size lots ranging from .18 to .30 acres in size with single-family houses of various ages built out since the mid-70's.

South: The property abuts one 4 acre rural residential property to the south and beyond is a small lot subdivision with lots ranging from .11 to .15 acres.

10. Topography: The subject property is essentially level, sloping very gently to the northeast.

11. Water Facilities and Services: There is a 12 inch waterline at the terminus of Haskell Street and an 8 inch waterline in Chicory Lane, see Exhibit 9A.

12. Storm Drainage Facilities and Services: Underground storm drainage lines are located in the railroad right-of-way where a 12 inch culvert drains the property from one side of the railroad to the other. There are also storm drainage lines in Haskell Street and Lindsey Court. These storm drain lines are available for connection, see Exhibit 9B.

13. Sanitary Sewer Facilities and Services: There are 8 inch RVSS sewer lines in both Chicory Lane and at the stub of Haskell Street that are available for connection, see Exhibit 9C.

14. Power and Natural Gas: Underground power is available from Pacific Power and underground gas is available from Avista Utilities for extension from Haskell Street.

15. Fire and Police Protection: The subject properties are located within and are served by Fire District No. 3. Police service is provided by the City of Central Point Police Department.

16. Wetlands, Streams and floodplain: The subject property does not contain any streams or floodplain. Preliminary determination of wetlands on the site is provided on Exhibit 10.

17. Transportation and Access:

A. Zone Change (and precautionary Plan Amendment Findings): Applicant is requesting the City apply the TOD-LMR zoning with the base zoning of R-2. These zoning designations allow a density up to 12 units to the net acre. Assuming 41% of

the site would be consumed by infrastructure, this translates to approximately 1.92 net acres or about 23 total dwelling units. Single-family dwellings generate just under 1 peak hour trip per unit. The existing General Industrial designation in the County would generate approximately 7.26 trips per acre¹. Assuming 13% of the site would be consumed for street development (Haskell Street only) 3.17 acres would be left for development, this would yield approximately 23 trips from the current zoning. Thus, the net trip effect of the proposed zone change is net 0 PM change to peak hour trips. Applicant's position is that since the net-trip impact is zero, it does not warrant a detailed transportation impact analysis.

B. Access and Circulation: Access to the site is via Lindsey Court and Haskell Street, and along its frontage with Chicory Lane. If the annexation and zone change is approved, it is expected that future development access will occur as a result of extension of Lindsey Court through the subject property to a future extension of Haskell Street.

18. Comprehensive Plan Map and Zoning Map Analysis:

A. Historical Map Analysis: The subject property and surrounding area has a somewhat complicated map designation history. The site was designated as Industrial on the Comprehensive Plan. The City's 1987 zoning map showed the property as M-1 even though the property was still in the County and zoned General Industrial. The M-1 zone is the City's base industrial zone and allows for a wide variety of industrial and manufacturing uses. During this period, the land to the north and south was planned Industrial and the City's zoning map depicts M-2 to the north and M-1 to the south.

In September of 1998, the City of Central Point did a large legislative amendment that included multiple ordinances. Those ordinances re-arranged land uses in the City's UGB and also amended the Urban Growth Management Agreement (UGMA) with Jackson County. Ordinance No. 1793 amended the Comprehensive Plan Map designation for this area as "Area 2" in that package of legislative amendments. The land uses were re-designated from Industrial to Low-Density Residential and High Density Residential. Most of this area was outside the City limits at the time, but the City adopted a new zoning map for this area that depicted the subject property and the land immediately to the south as R-3 with lands further to the South as R-1-6.

During the adoption proceedings DLCD raised concerns and the City responded to those concerns as follows:

DLCD Correspondence: *The first statement made by DLCD staff is that industrial, commercial and residential acreages need to "balance" so that the city continues to have a twenty year supply of land for each use. Statewide Planning Goals 9, 10 and 14 are cited as the legislative requirements for a twenty year supply and it is pointed out that Central Point's proposal will*

¹ This rate is from the ITE Trip Generation Handbook 7th Edition. This is CSA's most recent copy. A more recent version is available but would not be expected to change the estimates enough to result in a different outcome- that the change in trip generation potential is *de minimus*. See also below analysis regarding net-to-gross factors for the site.

decrease the amount of industrial land by 104 acres and increase both commercial land (by 32 acres) and residential land by 94 acres. The state asks that justification be provided to ensure the City will have enough of a land use mix to meet future employment needs with its industrial and commercial land inventory (as defined by Oregon Administrative Rule 660-09-0250) and future housing needs (as defined by OAR 660-08-010). The belief is that failing to balance jobs and housing will lead to an increase in work-related vehicle trips and the corresponding failure to meet regional transportation objectives.

City of Central Point response: There are no specific statements in any of the Goals regarding the "balance" DLCD discusses however Goal 9 does encourage municipalities to provide an adequate supply of sites of suitable sizes, types and locations for a variety of industrial and commercial uses consistent with plan policies. For nearly twenty years the City of Central Point has regularly experienced, residential prosperity ... not shared by the commercial and industrial sectors ... A major objective of this (Comp) Plan is to promote a greater emphasis on commercial and industrial growth ... (refer to Central Point Comprehensive Plan, Economics Page IX-14). The land use designations that the City is now proposing to change were created in the 1980's. Of the three land use categories, the industrial land has been the slowest to develop and in most cases has been farmed or remained vacant throughout the planning period. Recent attempts to develop industrial land west of Interstate 5 have met with significant local opposition.

In contrast, the City has received two separate requests in the last 60 days to annex a total of 50 acres of industrially designated land east of I-5 for immediate development. It is the City's conviction that the potential for marketing industrial land east of I-5 (and in the vicinity of the airport) is greater than it is west of I-5 in spite of the land's proximity to the railroad. In response to OAR 660-09-015, the City has not only identified industrial and commercial sites (in Area #3) that could reasonably be expected to locate or expand in the planning area ... and likely to be needed, but has identified sites for which there is now a development demand. The letter from Bear Creek Orchards, Inc. (which was read into the public record on May 5, 1998) also substantiates the City's analysis and findings.

Over the years, Jackson County has received authorization from the State to develop the White City industrial complex which is also served by the railroad. Heavier industrial uses have found the area more desirable due to the number of large vacant parcels with ample infrastructure and no municipal taxes. When viewed in a regional and historic context, Central Point has an adequate supply of industrially designated land and a net reduction of 104 acres does not materially diminish this supply. In fact, DLCD has previously stated to City staff that light industry often generates higher numbers of employees than heavy industrial uses.

The RVMPO Regional Transportation Plan, prepared by David Evans and Associates, Inc. speaks to the issue of regional land use development patterns (RVMPO RTP, Page XIII-I). The Plan states that, evaluations and research conducted in Oregon and elsewhere suggests that a mix of land uses involving residential and commercial activity in adjoining areas can contribute to lower travel demand than a development scheme with more

widely-separated uses. This is one of the reasons the City wishes to develop residential land in closer proximity to its downtown commercial business district and is also proposing small-scale commercial uses near prospective residential subdivisions in Areas 1 and 4. It should be noted that industrial land uses generate fewer vehicle trips than do commercial uses (reference the OTE Manual). Therefore the balance between residential and commercial uses is more significant in terms of lowering travel demand than the balance between residential and industrial uses. There is a 3:1 ratio between the residential and commercial zone changes being proposed.

The City's findings (at Record Page 122-123) reject DLCDC's notion that a precise balance of land uses was required at the time of the amendments. Instead, the findings make a more generalized determination that the adopted land use re-designations are appropriate based upon market demand and locational factors.

Following the major legislative amendment to the City's UGB, the City undertook another major legislative amendment in the form of Ordinance No. 1815. That ordinance created the Transit Oriented Development (TOD) standards and established two new Comprehensive Plan Map Designations: TOD District and the TOD Corridor. The main difference between these two designations is that the TOD District lands are required to apply the new TOD zoning districts and the TOD Corridor lands are afforded the option to develop under the original zoning or under the new TOD zoning district standards.

What is not clear from Ordinance No. 1815, is how future changes between zoning districts within these TOD designation areas relates to the overall arrangement of land uses on the Comprehensive Plan Map. Both the TOD District and the TOD Corridor allow for a variety of zoning districts including a wide variety of employment and industrial uses. For lands that were already in the City, this is somewhat less problematic because the zoning map that went with the Ordinance actually applied the new zoning to those lands. However, in the case of lands not in the City the zoning map is more "prospective" and it is unclear whether a zone change alone is adequate to apply a different zone at the time of annexation than the "prospective zone" depicted on the City's zoning map within the TOD District Corridor or whether such a change also requires a Comprehensive Plan amendment. Because of this procedural ambiguity, the Applicant has addressed the criteria for Comprehensive Plan Map amendment as a precautionary measure to assure an adequate factual base for the requested annexation and zone change.

Not long after the TOD Corridor was created, the land south of the Quillen property (TL 1000) was annexed and rezoned to TOD-LMR and was developed as the Cascade Meadows Subdivision in 2002. Subsequently, land to the north was rezoned from TOD-GC (M-1) to TOD-LMR and TOD-Civic.

- B. Residential Land Supply and Demand Analysis:** Based upon the structure of the City's regulations and the particular history associated with the subject property it is a little discern exactly what the contemplated zoning for the property is - following the TOD Corridor establishment from a quantitative standpoint. However, the prior amendments that redistributed land uses in the City contemplated the subject property

as High Density Residential (R-3). While those amendments did not include precise calculations of the supply and demand implications of the redistribution, the Comprehensive Plan amendments did treat the subject property as High Density Residential and so a quantitative comparison in relation to the subject property between the two zoning districts is useful, as follows:

To do this, first calculate the potential range of density for the property:

DENSITY CALCULATIONS						
	LMR Density			MMR Density		
	6 units/acre	12 units/acre	14 units/acre	32 units/acre		
	Minimum	Maximum	Minimum	Maximum		
Net unit range on 1.92 Acres	12	-	23	27	-	61

Then compare the potential number of units under each zoning districts:

DENSITY DIFFERENTIAL	Minimum Regulatory Differential		Maximum Regulatory Differential		Likely Regulatory Differential	
	Dwelling Units	Density ¹	Dwelling Units	Density ¹	Dwelling Units	Density ¹
TOD-LMR (R-2)	23	12	12	6	18	9.4
TOD-MMR (R-3)	27	14	61	32	30	15.6
Net Dwelling Units	-4		-49		-12	

¹ Density is provided in dwelling units per net acre. Net acres assume 41% net-to-gross factor

From a pure regulatory standpoint, the range of potential dwelling unit differences is from as small as 4 to as much as 49.

From a technical perspective, it is important to explain the 41% net-to-gross factor. This factor is higher than is typical, but preliminary design work on the site indicates this is appropriate given the requirements to address potential wetlands mitigation, a collector road right-of-way and the need to extend Lindsey Court.

From an actual build-out standpoint, the implications of zoning the property TOD-LMR versus TOD-MMR or R-3 are expected to be small. Our client is not interested in doing a large apartment project on the site and would design to the minimum density under the MMR zoning of 14 units per acre. It would be impossible to achieve more than 30 units on the site without a large apartment building component. Under the LMR zoning, preliminary design work indicates units per the net acre would be expected to come in around 9.4. The proposed TOD-LMR zoning is expected to result in approximately 12 fewer units from a real-world perspective. Twelve units is a small number that has relatively little impact on the ability of the City, as a whole, to comply with its Statewide Planning Goal 10 requirements.

C. Qualitative and Locational Analysis: The Applicant believes there are a number of qualitative and locational considerations that make the TOD-LMR zoning the most appropriate zoning for the area. Locational and qualitative reasons to zone the property TOD-LMR include the following:

- i. The property to the north remained industrial at the time the land use redistribution was done in 1998. At that time, the subject property represented a transition area from single-family to the south to industrial to the north. This concept was perpetuated when the TOD Corridor was adopted where a large area of TOD-GC (M-2) existed to the north. This circumstance no longer exists. The land immediately to the north is now zoned TOD-LMR and is developed with single-family dwellings. The site will no longer serve as a transition area between single family and more intensively developed areas as is described for MMR by Ordinance No. 1815, “The moderate density in these areas is intended to continue the transition from lower density residential uses on the perimeter of the TOD District to the more densely developed center of the district.”
- ii. There is now approximately half the acreage remaining in the TOD-GC (M-2 & M-1) designation to the north than there was at the time the TOD Corridor designation was in place. Consequently, there are fewer opportunities for interactions between housing and employment/commercial uses. The only employment use west of the railroad and within a quarter mile of the site is an office use (Microvellum) and there are no commercial retail uses within a quarter mile that are west of the railroad tracks. The opportunities for high density housing to interact with commercial development to the north has been reduced to an extent that development to the upper density of the TOD-MMR range less desirable and thereby making the practical difference in expected future housing supply to be small.
- iii. In addition to the technical land use planning reasons to designate the property TOD-LMR (R-2), there are market reasons for this designation. The TOD standards for mixed housing types at MMR level densities works best on larger sites with more developable acreage. From a housing market perspective, economies of scale are important for economic multi-family development. Four eight-plex rental apartment buildings mixed in with 12 for-sale small lot houses is difficult to make work but something like this is really all that would fit on a site this size if the project is going to achieve anything close to the mid-point or above for the MMR density range. Neither housing type is going to work very well. Four apartment buildings is not enough to support construction and maintenance of the kind of amenities you want for apartment projects – like a pool, pool-house/rec center, playground etc as well as cost effective utilities and grounds maintenance. Meanwhile, the small-lot single-family unit prices are likely to be negatively affected by the immediate proximity of the apartment building project component. The single-family quality components are likely to suffer as a result.

The Applicant, Bob Fellows Construction, has a proven track record of supplying new single-family houses that represent good value. The Applicant's concept for the project is still to attain a reasonable density with small lots (~4,500 square feet) and house plans appropriate for the lot size. This project concept is expected to deliver an excellent value proposition for aging homeowners looking to downsize and young families looking for that first or second home. The Applicant believes this market segment is important to the community and is underserved in Central Point.

* * * * *

V

**CONCLUSIONS OF LAW
ANNEXATION & ZONE CHANGE**

CITY OF CENTRAL POINT ZONING ORDINANCE (CPZO)

The following conclusions of law and ultimate conclusions are reached under each of the relevant substantive criteria which are recited verbatim and addressed below. The conclusions of law are supported by Applicants' evidentiary Exhibits at Section II and Findings of Fact in Section IV.

**Chapter 1.20
ANNEXATION PROCEDURE**

222.111 Authority and procedure for annexation.

- (1) When a proposal containing the terms of annexation is approved in the manner provided by the charter of the annexing city or by ORS 222.111 to 222.180 or 222.840 to 222.915, the boundaries of any city may be extended by the annexation of territory that is not within a city and that is contiguous to the city or separated from it only by a public right of way or a stream, bay, lake or other body of water. Such territory may lie either wholly or partially within or without the same county in which the city lies.
- (2) A proposal for annexation of territory to a city may be initiated by the legislative body of the city, on its own motion, or by a petition to the legislative body of the city by owners of real property in the territory to be annexed.
- (5) The legislative body of the city shall submit, except when not required under ORS 222.120, 222.170 and 222.840 to 222.915 to do so, the proposal for annexation to the electors of the territory proposed for annexation and, except when permitted under ORS 222.120 or 222.840 to 222.915 to dispense with submitting the proposal for annexation to the electors of the city, the legislative body of the city shall submit such proposal to the electors of the city. The proposal for annexation may be voted upon at a general election or at a special election to be held for that purpose.

Conclusions of Law: Based upon the evidence in Exhibit 4, the City of Central Point Planning Commission and City Council (henceforth "the City") concludes the existing City limit is adjacent to the subject property and will result in a contiguous City limit following the annexation. The City herewith incorporates and adopts the annexation petition at Exhibit 8 and based thereupon concludes the proposal for annexation has been initiated by the owners of the real property in the territory to be annexed. The City further incorporates its findings under ORS 222.120 below and concludes based upon the same that ORS 222.120 allows the City Council to dispense with submission of the proposal for annexation to the electors of the City and does not herewith.

222.120 Procedure for annexation without election; hearing; ordinance subject to referendum.

- (1) Except when expressly required to do so by the city charter, the legislative body of a city is not required to submit a proposal for annexation of territory to the electors of the city for their approval or rejection.
- (2) When the legislative body of the city elects to dispense with submitting the question of the proposed annexation to the electors of the city, the legislative body of the city shall fix a day for a public hearing before the legislative body at which time the electors of the city may appear and be heard on the question of annexation.

- (3) The city legislative body shall cause notice of the hearing to be published once each week for two successive weeks prior to the day of hearing, in a newspaper of general circulation in the city, and shall cause notices of the hearing to be posted in four public places in the city for a like period.
- (4) After the hearing, the city legislative body may, by an ordinance containing a legal description of the territory in question:
 - (a) Declare that the territory is annexed to the city upon the condition that the majority of the votes cast in the territory is in favor of annexation;
 - (b) Declare that the territory is annexed to the city where electors or landowners in the contiguous territory consented in writing to such annexation, as provided in ORS 222.125 or 222.170, prior to the public hearing held under subsection (2) of this section; or
- (7) For the purpose of this section, ORS 222.125 and 222.170, "owner" or "landowner" means the legal owner of record or, where there is a recorded land contract which is in force, the purchaser thereunder. If there is a multiple ownership in a parcel of land each consenting owner shall be counted as a fraction to the same extent as the interest of the owner in the land bears in relation to the interest of the other owners and the same fraction shall be applied to the parcel's land mass and assessed value for purposes of the consent petition. If a corporation owns land in territory proposed to be annexed, the corporation shall be considered the individual owner of that land.

Conclusions of Law: Based upon the evidence provided by the Applicant and the evidence in the record, the City concludes that it has properly followed the hearing procedures for annexation and herewith declare the territory annexed pursuant to 222.120(4)(b).

1.20.010 Generally.

All proposals for annexation of real property to the city under the provisions of Oregon Revised Statutes 222.111 to 222.180, now in effect or as hereafter amended, shall be accompanied by a preliminary plat, an exterior boundary legal description and the annexation fee as in this chapter provided. (Ord. 1166 §1, 1974).

Conclusions of Law: Based upon the conclusions of law hereinabove, the City concludes it has followed the provisions of ORS 222.111 to 222.180 and that the proposal for annexation is accompanied by a preliminary plat and exterior boundary legal description provided at Exhibit 12. The City further concludes that the application includes the required annexation fee.

1.20.011 Application and review.

Applications and review thereof shall conform to the provisions of Chapter 17.05 of the Central Point Municipal Code and all applicable laws of the state. Applications for annexation may be accompanied by other, concurrent applications, for amendment to the comprehensive plan, amendments to the zoning map and requests for withdrawal from special districts, provided that such concurrent applications meet all requirements therefor.

Conclusions of Law: The City concludes it has properly applied the procedures specified in Chapter 17.05. The City further concludes that the request of annexation is accompanied by a request for zone change as allowed by Section 1.20.011 as well as findings and evidence addressing the same herein (as well as the precautionary plan amendment also addressed herein).

* * * * *

APPROVAL CRITERIA FOR ZONE CHANGE

Chapter 17.10 ZONE CHANGE

17.10.400 Approval criteria.

A recommendation or a decision to approve, approve with conditions or to deny an application for a text or map amendment shall be based on written findings and conclusions that address the following criteria:

A. Approval of the request is consistent with the applicable statewide planning goals (major amendments only);

Conclusions of Law: The City herewith concludes that the proposed zone change is a minor (quasi-judicial amendment) and concludes accordingly that the criterion is not applicable to the subject application².

B. Approval of the request is consistent with the Central Point comprehensive plan (major and minor amendments);

Conclusions of Law: The City concludes the proposed TOD-LMR (R-2) zoning is a permissible zone within the TOD Corridor Comprehensive Plan Map Designation and is therefore consistent. The City further concludes that prior legislative Comprehensive Plan processes contemplated that the subject site would be zoned TOD-MMR (R-3) and that the proposed zoning is still a residential zone and one that is not expected to result in fewer dwelling units to such a degree as to be inconsistent with the Comprehensive Plan³.

C. If a zoning map amendment, findings demonstrating that adequate public services and transportation networks to serve the property are either available, or identified for construction in the city's public facilities master plans (major and minor amendments); and

Conclusions of Law: Based upon the evidence in Section II and the findings of fact in Section IV, the City concludes as follows with respect to public services and transportation networks to serve the property:

- Water, Sewer and Storm Drainage facilities exist at the property and are adequate in condition and capacity to serve the property.
- The proposed zone change will result in little or no change in trip generation potential of the site therefore it is expected that no significant transportation impacts will result.
- Police and Fire protection exist at the site currently and fire protection will continue at similar levels following the zone change while police service will then become primary responsibility of the Central Point Police Department.

² Applicant has also provided conclusions of law for a precautionary Comprehensive Plan amendment and the Statewide Planning Goals are addressed therein where substantively the same conclusions would be reached for the subject zoning map amendment.

³ If the City ultimately concludes that a Comprehensive Plan amendment is required, then the City would adopt the alternative conclusion of law as follows: The City concludes the proposed TOD-LMR (R-2) zoning is consistent with the Comprehensive Plan because the proposed zone is a permissible zone within the TOD Corridor Comprehensive Plan Map Designation and the City herewith incorporates and adopts the precautionary plan amendment conclusions of law herein below which demonstrates that the TOD-LMR (R-2) can be explained as an appropriate amendment to the City's Comprehensive Plan.

D. The amendment complies with OAR [660-012-0060](#) of the Transportation Planning Rule.

Conclusions of Law: The City herewith incorporates and adopts its conclusions of law below regarding the Transportation Planning Rule and concludes the City the proposed zoning is consistent in all ways with those conclusions demonstrating compliance with the Transportation Planning Rule.

OREGON TRANSPORTATION PLANNING RULE
Oregon Administrative Rules Chapter 660, Division 12

SECTION 660-012-0060

- (1) Where an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation would significantly affect an existing or planned transportation facility, the local government shall put in place measures as provided in section (2) of this rule to assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility. A plan or land use regulation amendment significantly affects a transportation facility if it would:
- (a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);
 - (b) Change standards implementing a functional classification system; or
 - (c) As measured at the end of the planning period identified in the adopted transportation system plan:
 - (A) Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;
 - (B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan; or
 - (C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.

Conclusions of Law (continued): The City concludes the proposed amendment from County General Industrial to City TOD-LMR (R-2) will not significantly affect a transportation facility based upon the Findings in Section IV which supports the following conclusions:

- The proposed amendment will not change the functional classification of an existing or planned transportation facility because the projected number of new residential trips each direction on all the streets used by the subject application is equal to the amount of industrial traffic that would be possible under the existing zoning.
- The amendment is a minor map amendment and does not propose any changes to standards implementing the City's functional classification system.
- From a trip generation potential standpoint, the proposed amendment does not allow uses that generate materially more traffic than the existing designation so nothing about the amendment will allow land uses or level of development that are inconsistent with the functional classification of existing and planned transportation facilities in the area that are already planned in the City's TSP to residential uses at the subject property.
- From a trip generation potential standpoint, the proposed amendment does not allow uses that generate materially more traffic than the existing designation so nothing

about the amendment would reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standards for facilities projected to meet adopted standards at the end of the planning period or worsen the performance of any facilities otherwise projected to exceed performance standards at the end of the planning period.

* * * * *

VI

**CONCLUSIONS OF LAW
PLAN AMENDMENT
(PRECAUTIONARY)**

In an abundance of caution, the Applicant herewith provides conclusions of law addressing the Comprehensive Plan amendment criteria. Applicant believes the City could properly interpret its Comprehensive Plan and development code to apply the requested zoning because the Evidence in Section II and the Findings of Fact in Section IV explain that the proposed TOD-LMR zoning district is an allowed zone in the TOD Corridor Plan designation. However, that evidence and findings also point up that the structure of the City's Plan results in some degree of ambiguity regarding the need for a Comprehensive Plan amendment in the context of the subject application requesting the TOD-LMR (R-2) zoning instead of a TOD-MMR (R-3) zone at the time of annexation. If the City (or the Courts on Appeal) were to conclude that a Comprehensive Plan amendment is required for the requested zone change, the Applicant herewith provides the following conclusions of law to be reached under each of the relevant substantive criteria which are recited verbatim and addressed below. The conclusions of law are supported by Applicants' evidentiary Exhibits at Section II and Findings of Fact in Section IV.

The Conclusions of Law below are structured as an amendment to change the Comprehensive Plan in a manner that allows TOD-LMR (R-2) on the subject property instead of TOD-MMR(R-3).

APPROVAL CRITERIA FOR COMPREHENSIVE PLAN AMENDMENT

**Chapter 17.96
COMPREHENSIVE PLAN AMENDMENT**

17.96.500 Approval criteria.

A recommendation or a decision to approve or to deny an application for an amendment to the comprehensive plan, or urban growth boundary shall be based on written findings and conclusions that address the following criteria:

- A. Approval of the request is consistent with the applicable statewide planning goals;

Conclusions of Law: The City herewith incorporate and adopt the below conclusions of law with respect to each applicable statewide planning goal, as follows:

Goal 1: Citizen Involvement

To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process...*[balance omitted for brevity]*

Conclusions of Law: The City concludes the Comprehensive Plan Map amendment is quasi-judicial in nature and therefore citizen involvement is assured by and through application of the City's adopted and acknowledged procedures for the conduct and noticing of quasi-judicial reviews, including noticing and public hearings.

Goal 2: Land Use Planning

PART I -- PLANNING

To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions...*[balance omitted for brevity]*

Conclusions of Law: The City concludes that the subject application is quasi-judicial in nature and requires demonstration of compliance with predetermined criteria and approval of the requested plan map amendment requires substantial evidence to demonstrate each of the relevant criteria have been satisfied. The City herewith incorporates the balance of the conclusions of law addressing all other criteria applicable to the plan amendment, and concludes based thereupon, that adequate evidence exists in the application submittal and associated record to conclude all applicable criteria are satisfied.

The City further concludes that the requested plan amendment is a narrow one from the standpoint of map designations between two residential designations that allow many of the same uses but will permit a modestly lower residential density on the subject property.

Goal 3: Agricultural Lands

To preserve and maintain agricultural lands...*[balance omitted for brevity]*

Conclusions of Law: The City concludes the subject property is within its Urban Growth Boundary and is planned for urban residential use and is not, therefore, subject to Goal 3 protection.

Goal 4: Forest Lands

To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture...*(balance omitted for brevity)*

Conclusions of Law: The City concludes the subject property is within its UGB and is planned for urban residential use and the proposed amendment is not subject to Goal 4 protection.

Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces

To protect natural resources and conserve scenic and historic areas and open spaces...*[balance omitted for brevity]*

Conclusions of Law: The City concludes the subject property is not subject to any adopted Goal 5 protections and therefore the amendment from one residential designation to another will have no effect on the City's plan to achieve Goal 5. While not mapped on any identified inventories, a preliminary wetlands assessment indicates a portion of the site may contain wetlands in the area of the future Haskell Street extension; nothing about the plan amendment will alter the City's plans in its TSP to extend a higher order street in this location and the same will require further work to address this potential wetland issue.

Goal 6: Air, Water and Land Resources Quality

To maintain and improve the quality of the air, water and land resources of the state. All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plans, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs; (2) degrade such resources; or (3) threaten the availability of such resources...*[balance omitted for brevity]*

Conclusions of Law: Based upon the Findings of Fact in Section IV, the City concludes that the proposed amendment will allow for single-family residential development which will be required to comply with agency permits (such as NPDES permits for stormwater) but the City and other agencies have standards in place to assure compliance and the development of the subject property and there is no evidence that the subject property is subject to unique circumstances that would be expected to make it infeasible to comply with applicable standards through the normal residential development review process.

Goal 7: Areas Subject to Natural Hazards

To protect people and property from natural hazards...*[balance omitted for brevity]*

Conclusions of Law: The City concludes that the subject property is not subject to any known specific natural hazards that require special planning or implementation measures except the general earthquake risks that exist in all of western Oregon and the same are adequately handled by applicable building codes.

Goal 8: Recreational Needs

To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts...*[balance omitted for brevity]*

Conclusions of Law: The City concludes the subject property has not been adopted into any local parks plans to achieve Goal 8. It is not known to contain any unique resources necessary to attain Goal 8 and the proposed amendment from one residential designation to another will have no appreciable impact on the City's ability to achieve Goal 8.

Goal 9: Economic Development

To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

Comprehensive plans and policies shall contribute to a stable and healthy economy in all regions of the state. Such plans shall be based on inventories of areas suitable for increased economic growth and activity after taking into consideration the health of the current economic base; materials and energy availability and cost; labor market factors; educational and technical training programs; availability of key public facilities; necessary support facilities; current market forces; location relative to markets; availability of renewable and non-renewable resources; availability of land; and pollution control requirements...*[balance omitted for brevity]*

Conclusions of Law: The subject amendment concerns two categories of residential development, and based thereupon, the City concludes that the proposed amendment will have no meaningful effect on the City's ability to achieve Goal 9.

Goal 10: Housing

To provide for the housing needs of citizens of the state...*[balance omitted for brevity]*

Conclusions of Law: Based upon the evidence and the Finding of Fact in Section IV, the City concludes as follows with respect to Goal 10:

- The land use pattern around the subject property is different from the pattern that existed when the site was contemplated for R-3 zoning (and later TOD-MMR). The site (together with the Quillen property to the south) is surrounded by single-family development and the TOD-LMR zoning represents a designation that will still supply needed housing at appropriate densities.
- The City concludes that the actual delivered housing unit difference is expected to be on the order of 12 fewer dwelling units which is a negligible reduction in the context of the City's entire UGB.
- Ultimately, the City concludes that this amendment is beneficial because it is expected to supply needed housing now rather than forcing a zoning designation the property owner does not want in the hopes that some future development may result in a small number of additional dwellings on the subject property. The Council concludes that it is has been many years since the City has amended its UGB for residential lands, and while currently underway, completion of that process is still several years in the future. Planning for the total UGB-wide housing needs can and must be fulfilled through that process. However, in the immediate term, the City is experiencing shortfalls of just the type of housing the Applicant wishes to construct and approval of the amendment herein is expected to deliver housing for which current needs exist.

Goal 11: Public Facilities and Services

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development...*[balance omitted for brevity]*

Conclusions of Law: Based upon the Evidence in Section II and the Findings of Fact in Section IV, the City concludes the proposed amendment is located in an area where water, sewer, storm drainage, and streets are readily available to the property and future development can feasibly utilize such facilities. Moreover, the Council observes that the TOD-LMR designation would be expected to demand slightly less in the way of public facilities than would the TOD-MMR designation.

Goal 12: Transportation

To provide and encourage a safe, convenient and economic transportation system...*[balance omitted for brevity]*

Conclusions of Law: The City concludes that OAR 660 Division 012 implements Goal 12 and OAR 660-012-0060 sets forth specific regulations for comprehensive plan map amendments and zone changes. The City herewith incorporates and adopts its conclusions of law addressing TPR herein above and based upon the same concludes that no significant impacts to the transportation system will occur as a result of the amendment. The City further concludes that TOD-LMR (R-2) would be expected to generate slightly fewer trips

than would be generated under TOD-MMR (R-3) and this is another reason to conclude significant impacts to the transportation system are not expected.

Goal 13: Energy Conservation

To conserve energy...*[balance omitted for brevity]*

Conclusions of Law: The City concludes that the change between slightly different residential designations is such that the City's land use planning for energy conservation will be little affected by the proposed amendment.

Goal 14: Urbanization

To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities...*[balance omitted for brevity]*

Conclusions of Law: The City concludes the proposed amendment concerns a map designation change between residential categories with similar allowed uses. The City concludes the proposed TOD-LMR designation is slightly less dense than the TOD-MMR zone but that it is still urban in nature and the actual expected yield difference between the two zones is approximately 12 units which is a nominal difference in the context of compliance with Goal 14 on citywide basis.

Summary Conclusions of Law: In sum, the City concludes the proposed amendment from TOD-MMR (R-3) to TOD-LMR (R-2) is consistent in all ways with the Statewide Planning Goals.

B. Approval of the request is consistent with the Central Point comprehensive plan;

Conclusions of Law: The City concludes criteria that require general compliance with the Comprehensive Plan does not automatically transform all the Goals and Policies of the Comprehensive Plan into decisional criteria for a quasi-judicial land use application, *see Bennett vs. The City of Dallas*. The City has reviewed its Comprehensive Plan and it finds that the language and context of only the following goals and policies are intended to function as approval criteria for the subject application:

Housing Element Conclusion #1 Policy 2:

Provide for a range of housing types, styles, and costs, including single-family homes, condominiums, rental housing and mobile homes.

The City concludes this policy is a sort of restatement of Goal 10 requirements to plan for a range of housing types and price ranges. The proposed amendments will not preclude advancement of this policy. The City TOD-LMR district still allows for multiple housing types and the stated intent of the Applicant is to supply housing at a price point (for new housing) that is very limited in Central Point that will provide more options for younger families looking for their first or second home and older residents looking to downsize.

Land Use Element Policy 5:

Continue to ensure that long-range planning and zoning reflects the need to locate the highest densities and greatest numbers of residents in the closest possible proximity to shopping, employment, major public facilities, and public transportation corridors.

The City concludes that this policy is a major reason why this amendment is now appropriate. When the subject property was contemplated for the R-3 zoning, there was substantially more employment land planned nearby to the north (almost twice the acreage). That area is now primarily zoned residential instead. As such, advancement of this policy, can be better achieved as part of the legislative UGB review for housing to locate larger high density areas nearer to areas where expanding (rather than contracting) employment areas are planned and allow this property to meet current market needs for smaller single-family development. Moreover, because of the Railroad, the subject site is over half a mile from practical physical access to the nearest RVTD route.

- C. For urban growth boundary amendments findings demonstrate that adequate public services and transportation networks to serve the property are either available, or identified for construction in the city's public facilities master plans (major and minor amendments); and

Conclusions of Law: The City concludes the proposed amendment does not concern a UGB amendment.

- D. The amendment complies with [OAR 660-012-0060](#) of the Transportation Planning Rule.

Conclusions of Law: The City herewith incorporates and adopts the above conclusions of law below conclusions of law addressing the Transportation Planning Rule under the zone change criteria. The Council further concludes that a significant effect on the transportation system is not expected where the amendment involves a modest reduction of residential density from TOD-MMR to TOD-LMR because the trip generation potential is expected to go down.

* * * * *

VII

SUMMARY OF APPLICANTS' STIPULATIONS

Applicants herewith agree to stipulate to the following, which they agree to observe if the same are attached as conditions to approval of the subject site plan review application:

Stipulation 1: *[RESERVED- The applicant did not identify the need for specific stipulations for the subject application but may supplement the initially submitted findings with certain stipulations if the same are found to be necessary during the course of the review process]*

* * * * *

VIII

ULTIMATE CONCLUSIONS; DECISION

Based upon the record and the foregoing findings of fact and conclusions of law, it is concluded that the applications for Annexation and Zone Change are consistent with the requirements of all of the relevant substantive approval criteria which have been addressed hereinabove. It is further concluded that if a Comprehensive Plan Amendment is determined to be necessary by the City (or by the Courts on Appeal) the proposal can be found to comply with all relevant City of Central Point criteria for Comprehensive Plan amendment as provided as a precautionary submittal herein above.

Respectfully submitted on behalf of Applicants and Property Owners.

CSA Planning, Ltd.



Jay Harland
Principal

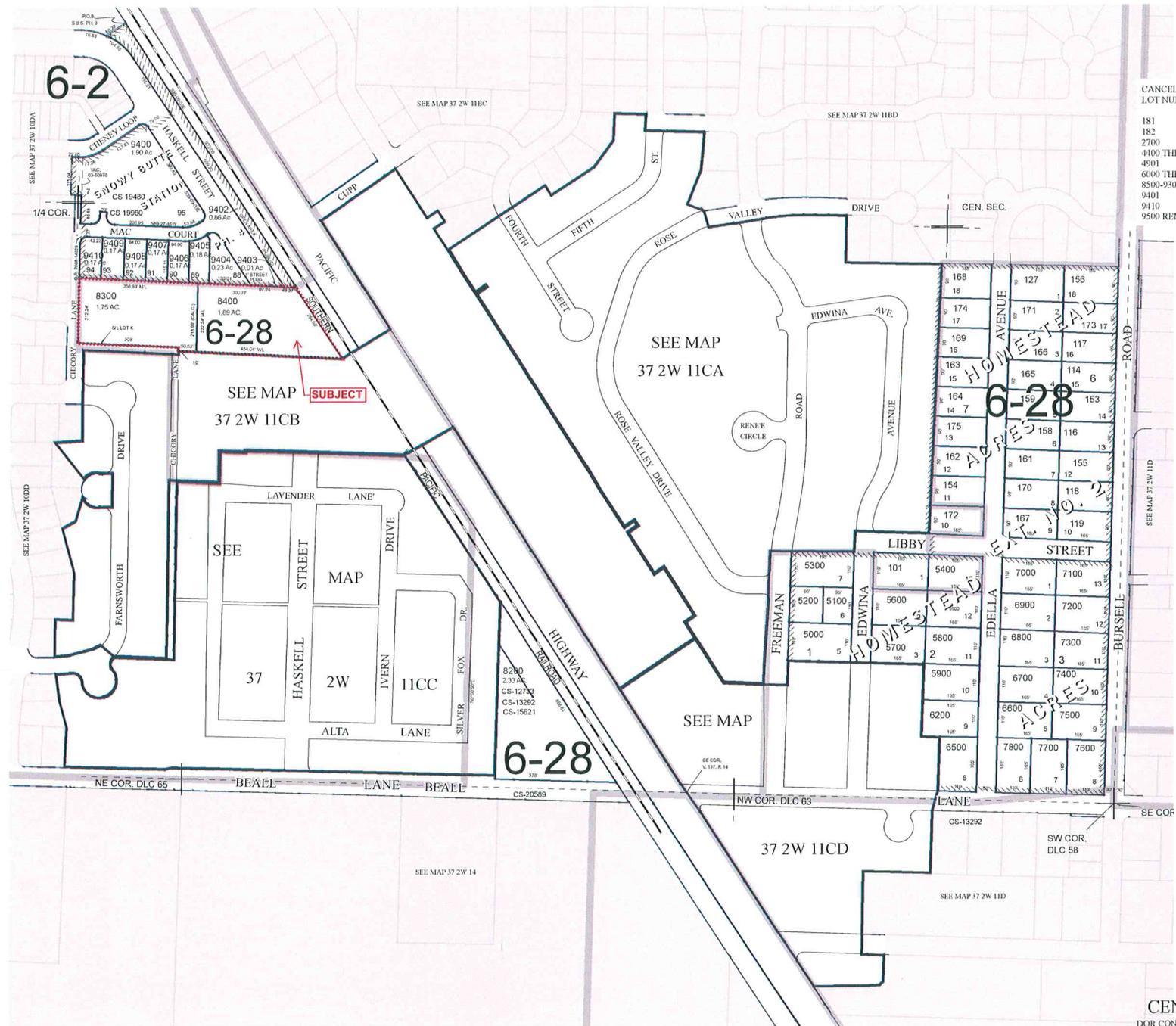
May 9, 2017

FOR ASSESSMENT AND TAXATION ONLY

S.W.1/4, SEC.11, T.37S., R.2W., W.M.
JACKSON COUNTY
1" = 200'

EXHIBIT 3

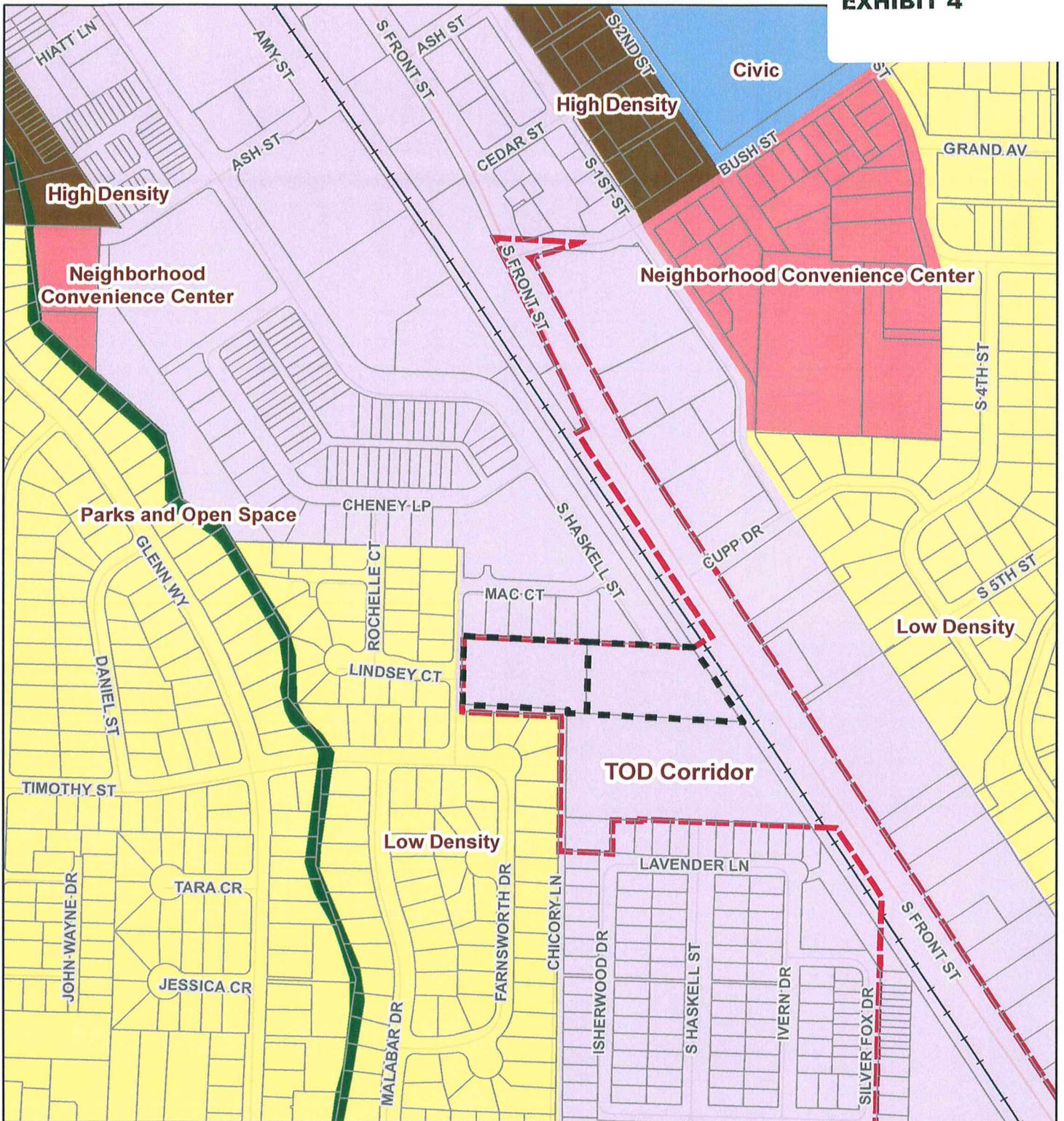
37 2W 11C
& INDEX
CENTRAL POINT



CANCELLED TAX LOT NUMBERS:

- 181
- 182
- 2700
- 4400 THRU 4900
- 4901
- 6000 THRU 6400
- 8500-9300 REMAPPED TO 372W11CC
- 9401
- 9410
- 9500 REMAPPED TO 372W11CC

37 2W 11C
& INDEX
CENTRAL POINT
DOR CONVERSION MARCH 29, 2000
REV JUNE 17, 2008



	Subject Lots		Neighborhood Convenience Center
	Tax Lots		TOD Corridor
	City Limits		High Density Res.
	Urban Growth Boundary		Low Density Res.
	Railroad		Civic
			Parks and Open Space

Existing Comprehensive Plan

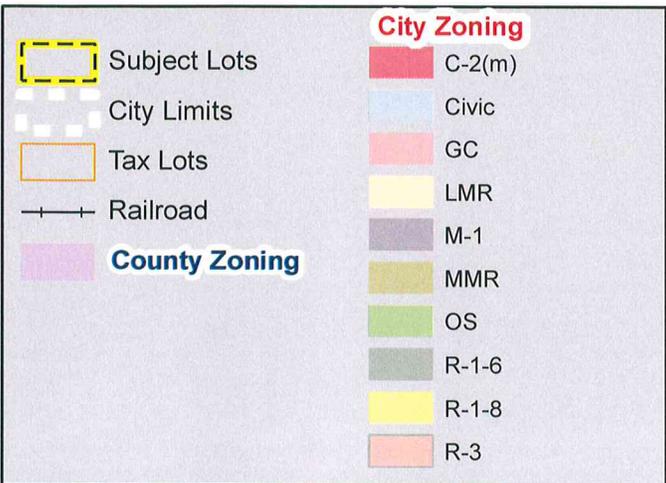
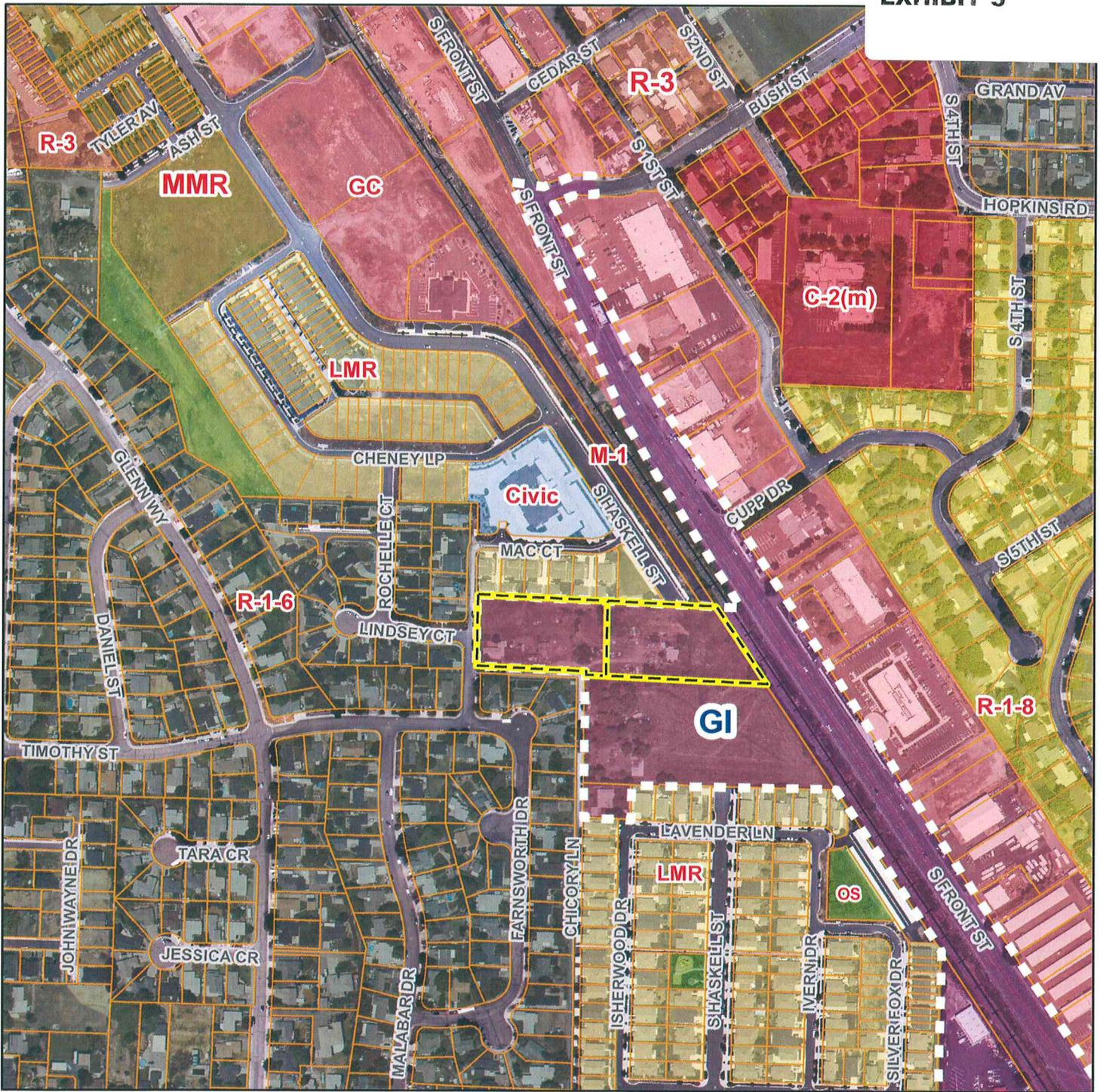
Annexation / Zone Change
 Bob Fellows Construction, LLC
 37-2W-11C tax lots 8300 & 8400



CSA Planning, Ltd.

400 200 0 400 Feet





2012 Aerial

Existing Zoning on Aerial

Annexation / Zone Change
 Bob Fellows Construction, LLC
 37-2W-11C tax lots 8300 & 8400

400 200 0 400 Feet

CSA Planning, Ltd.



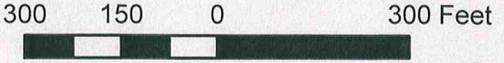
	Subject Lots	City Zoning
	Tax Lots	 C-2(m)
	Railroad	 Civic
	County Zoning	 EC
		 GC
		 LMR
		 M-1
		 MMR
		 OS
		 R-1-6
		 R-1-8

Proposed Zoning Map

Annexation / Zone Change
 Bob Fellows Construction, LLC
 37-2W-11C tax lots 8300 & 8400



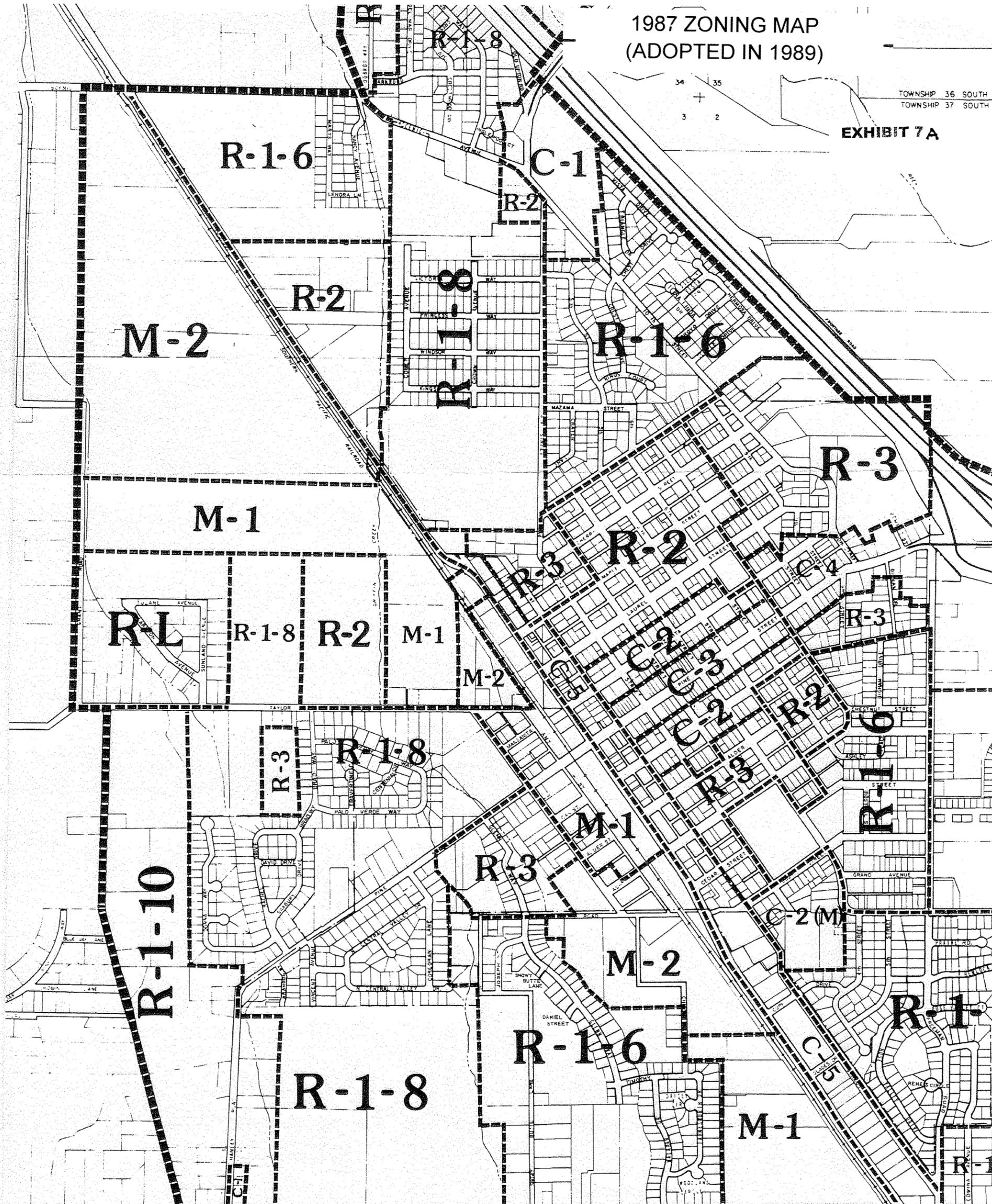




1987 ZONING MAP
(ADOPTED IN 1989)

TOWNSHIP 36 SOUTH
TOWNSHIP 37 SOUTH

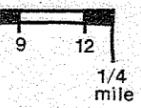
EXHIBIT 7A



ADOPTED VIA RESOLUTION NO. 1615
BY CENTRAL POINT CITY COUNCIL
ON 3/16/89
Proposed 11/3/87

City of
Central Point
ZONING MAP

- R-L - RESIDENTIAL LOW-DENSITY
- R-1-6 - RESIDENTIAL SINGLE-FAMILY (6,000 sq.ft.)
- R-1-8 - RESIDENTIAL SINGLE-FAMILY (8,000 sq.ft.)
- R-1-10 - RESIDENTIAL SINGLE-FAMILY (10,000 sq.ft.)
- R-2 - RESIDENTIAL TWO-FAMILY
- R-3 - RESIDENTIAL MULTIPLE-FAMILY
- C-1 - NEIGHBORHOOD CONVENIENCE SHOPPING
- C-2 - COMMERCIAL-PROFESSIONAL
- C-3 - DOWNTOWN BUSINESS DISTRICT
- C-4 - TOURIST AND OFFICE-PROFESSIONAL
- C-5 - THOROUGHFARE COMMERCIAL
- M-1 - INDUSTRIAL
- M-2 - GENERAL INDUSTRIAL
- BCG - BEAR CREEK GREENWAY



Prepared by the RVCOG

* C-2(M) Zone pertains to the Concept Plan for hospital-related medical office development, as discussed on page XII-18 of the Comprehensive Plan.

AN ORDINANCE AMENDING THE CENTRAL POINT COMPREHENSIVE PLAN FOR
AREA # 2**RECITALS:**

1. The City of Central Point ("City") is authorized under Oregon Revised Statute (ORS) Chapter 197 to prepare and adopt comprehensive plans and implementing ordinances consistent with the Statewide Land Use Planning Goals.

2. The City has coordinated its planning efforts with the State in accordance with ORS 197.040(2)(e) and OAR 660-030-0060 to assure compliance with goals and compatibility with City and County Comprehensive Plans.

3. Pursuant to authority granted by the City charter and the Oregon Revised Statutes, the City has determined to amend the *Central Point Comprehensive Plan and Zoning Map* which was originally adopted on August 29, 1980, and has been amended at various times since then.

4. Pursuant to the requirements set forth in CPMC Chapter 1.24 and Chapter 17.96, the City has conducted the following duly advertised public hearings to consider the proposed amendments:

- (a) Citizen's Advisory Committee hearing on February 26, 1998.
- (b) Planning Commission hearings on May 5th and May 19th, 1998.
- (c) City Council hearing on August 6, 1998.
- (d) Accepted written comments through September 11, 1998

Now, therefore;

THE PEOPLE OF THE CITY OF CENTRAL POINT, OREGON, DO ORDAIN AS FOLLOWS:

Section 1. At its public hearing on August 6, 1998, the City Council received the findings of the Citizen's Advisory Committee and the Planning Commission, reviewed the City Staff Report, and received public testimony from all interested persons. Furthermore, written comments were accepted by the City through September 11, 1998. Based upon all the information received, the City Council adopts the findings of fact and conclusions of law set forth by City Staff, and based upon the same, the City Council finds that there is sufficient public need and justification for the proposed changes, and the proposed changes are hereby adopted entirely.

Section 2. The City Comprehensive Plan and Zoning Map are hereby amended as set forth on Exhibits "A" & "B", including all maps and attachments to such exhibits, which are attached hereto and by this reference incorporated herein.

Section 3. The City Administrator is directed to conduct post acknowledgment procedures defined in ORS 197.610 et seq. upon adoption of the Comprehensive Plan Amendment and changes to the Zoning Map.

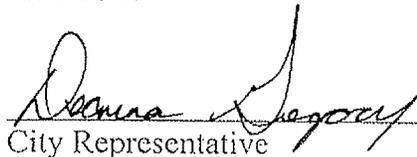
Section 4. This update being necessary for the immediate preservation of the public health, safety and welfare of the City of Central Point, Oregon, and based upon the need to conclude associated comprehensive plan amendment procedures, second reading of this ordinance is hereby waived and an emergency is declared to exist, and this ordinance shall be in full force and effect immediately upon its passage by the Council and approval by the Mayor.

Passed by the Council and signed by me in authentication of its passage this 18th day of September, 1998.



Mayor Rusty McGrath

ATTEST:



City Representative

Approved by me this 18th day of September, 1998.



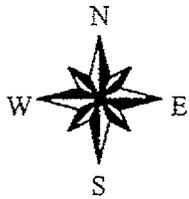
Mayor Rusty McGrath

EXHIBIT A

Comprehensive Plan amendments include the redistribution of certain land uses within the Urban Growth Boundary and Comprehensive Plan text amendments to reflect the proposed redistribution of land uses. Zoning Map changes are consistent with the new land use designations. The land use or map amendments are described as follows for Area # 2:

Change the land use designation and zoning of Area 2 on the attached map from Light Industrial (M-1) to Low Density Residential (R-1-6), High Density Residential (R-3) and General Commercial (C-4).

AREA 2



-  Tax Lot Boundary
-  New Development
-  Text Street Names
-  Central Oregon & Pacific Railroad
-  M-1 to R-1
-  M-1 to C-4
-  M-1 to R-3



155 South Second Street
 Central Point, Oregon 97502
 (541) 664-3321
 (541) 664-6384
 E-Mail cporegon@cdsinternet.com

EXHIBIT B

PROPOSED CHANGES TO THE CENTRAL POINT COMPREHENSIVE PLAN

ENVIRONMENTAL MANAGEMENT (SECTION VI)

HISTORY OF CENTRAL POINT

THE RAILROAD

The impact of the railroad on the community ~~has been~~ *was significant in the past*. It was primarily responsible for the short life of the Old Central Point and the new direction of community growth and development ~~after~~ *since* the 1880s. The railroad ~~is still very~~ *remains* important to ~~the~~ wood products industry and other industries located along it *but to a lesser extent today than in the past, and will continue to be*.

POLICIES FOR NOISE REDUCTION

Policies:

3. The City shall ~~rely heavily on~~ *require property owners to master plan the* land use and design of new developments to control and minimize noise through such requirements as site orientation, buffering, distance separation, insulation, or other design features.

ECONOMICS (SECTION IX)

PLANNING AND REGULATION

Policies:

2. Continue to emphasize the need to maximize the potential of major existing facilities that represent major public investments, but are presently under-utilized. (Emphasis on railroad, highway 99, and the I-5 Freeway *and the airport* related to industrial development, and Pine Street/Head Road for commercial, office-professional and tourist development.) Pg. IX-24

ENERGY UTILIZATION & CONSERVATION (SECTION X)

4 - TRANSPORTATION-RELATED ENERGY CONSERVATION

Goal:

Policies:

- c. The City will continue to plan for new industrial development *but rather than limit development to land* that is located adjacent to rail facilities, ~~and the City will also encourage industrial development in the vicinity of highways and airports~~ *energy efficient rail freight transport.* Pg.X-21

CIRCULATION/TRANSPORTATION (SECTION XI)

OTHER FACILITIES

RAILROAD

Paragraphs 1 & 2

The *Central Oregon & Pacific Railroad* (formerly Southern Pacific Railway) serves the Central Point area and parallels Highway 99 through the community. The railroad played a key role in the City's development during the late 1800s and into this century. The original City grid pattern of streets was laid out shortly after the rail line was built.

The railroad no longer provides passenger service to Central Point or the Rogue Valley, the Central Point depot is not longer in existence. However, the rail facilities still play a significant role in the area's economy and serve the industries that are located along its route, mostly within the present City limits. ~~Previous studies have indicated that the rail facilities that exist are not being used to their maximum potential. Also, recent changes in rail rates for shipping products have made rail usage more competitive with truck transport.~~

Policies:

15. *Maximize Retain the industrial potential of the existing industrial land uses along railroad facilities as proposed in this Comprehensive Plan.*

CORRECTIVE MEASURES TO SPECIFIC PROBLEMS

REDUCTION OF NOISE

A summary of some of the major considerations are:

Ensuring that no residential neighborhoods *that* are located immediately adjacent to the railroad right-of-way *satisfy safety requirements and accepted industry standards for noise mitigation.*

LAND USE (SECTION XII)

RESIDENTIAL LAND USE

Policies:

10. *Where residential development is proposed on parcels adjacent to a railroad, a sub-area master plan will be required by the City which could result in subsequent rezoning or other acceptable methods to provide effective land use buffering and minimize threats to safety and/or quality of life for local residents.*

INDUSTRIAL LAND USE

Policies:

1. ~~Maximize the~~ Retain existing industrial development potential of along the Highway 99/Southern Pacific railroad corridor through the City by providing sites for industrial development along the corridor to meet the needs to the year 2000, including adequate flexibility for industrial expansion. ~~beyond 2000.~~

PLANNING DEPARTMENT MEMORANDUM

DATE: May 19, 1998

TO: Central Point Planning Commission

FROM: Tom Humphrey, Planning Director

SUBJECT: Planning Department Response to Correspondence Received from DLCD & ODOT

The following is a discussion and analysis of the letters Central Point has received from two State agencies regarding the proposed City-wide plan amendments and zone changes being contemplated. Staff will attempt to address each issue as it is presented in the letters received and then provide the Commission with evidence to enable you to arrive at a decision.

Discussion

DLCD Correspondence

The first statement made by DLCD staff is that *industrial, commercial and residential acreages need to “balance” so that the city continues to have a twenty year supply of land for each use. Statewide Planning Goals 9, 10 and 14 are cited as the legislative requirements for a twenty year supply and it is pointed out that Central Point’s proposal will decrease the amount of industrial land by 104 acres and increase both commercial land (by 32 acres) and residential land by 94 acres. The state asks that justification be provided to ensure the City will have enough of a land use mix to meet future employment needs with its industrial and commercial land inventory (as defined by Oregon Administrative Rule 660-09-0250) and future housing needs (as defined by OAR 660-08-010). The belief is that failing to balance jobs and housing will lead to an increase in work-related vehicle trips and the corresponding failure to meet regional transportation objectives.*

There are no specific statements in any of the Goals regarding the “balance” DLCD discusses however Goal 9 does encourage municipalities to *provide an adequate supply of sites of suitable sizes, types and locations for a variety of industrial and commercial uses consistent with plan policies.* For nearly twenty years the City of Central Point has regularly experienced, *residential prosperity ... not shared by the commercial and industrial sectors ... A major objective of this (Comp) Plan is to promote a greater emphasis on commercial and industrial growth ...* (refer to Central Point Comprehensive Plan, Economics Page IX-14). The land use designations that the City is now proposing to change were created in the 1980's. Of the three land use categories, the industrial land has been the slowest to develop and in most cases has been farmed or remained vacant throughout the planning period. Recent attempts to develop industrial land west of Interstate 5 have met with significant local opposition.

In contrast, the City has received two separate requests in the last 60 days to annex a total of 50 acres of industrially designated land east of I-5 for immediate development. It is the City's conviction that the potential for marketing industrial land east of I-5 (and in the vicinity of the airport) is greater than it is west of I-5 in spite of the land's proximity to the railroad. In response to OAR 660-09-015, the City has not only *identified industrial and commercial sites (in Area #3) that could reasonably be expected to locate or expand in the planning area ... and likely to be needed*, but has identified sites for which there is now a development demand. The letter from Bear Creek Orchards, Inc. (which was read into the public record on May 5, 1998) also substantiates the City's analysis and findings.

Over the years, Jackson County has received authorization from the State to develop the White City industrial complex which is also served by the railroad. Heavier industrial uses have found the area more desirable due to the number of large vacant parcels with ample infrastructure and no municipal taxes. When viewed in a regional and historic context, Central Point has an *adequate supply* of industrially designated land and a net reduction of 104 acres does not materially diminish this supply. In fact, DLCD has previously stated to City staff that light industry often generates higher numbers of employees than heavy industrial uses.

The RVMPO Regional Transportation Plan, prepared by David Evans and Associates, Inc. speaks to the issue of regional land use development patterns (RVMPO RTP, Page XIII-1). The Plan states that, *evaluations and research conducted in Oregon and elsewhere suggests that a mix of land uses involving residential and commercial activity in adjoining areas can contribute to lower travel demand than a development scheme with more widely-separated uses*. This is one of the reasons the City wishes to develop residential land in closer proximity to its downtown commercial business district and is also proposing small-scale commercial uses near prospective residential subdivisions in Areas 1 and 4. It should be noted that industrial land uses generate fewer vehicle trips than do commercial uses (reference the OTE Manual). Therefore the balance between residential and commercial uses is more significant in terms of lowering travel demand than the balance between residential and industrial uses. There is a 3:1 ratio between the residential and commercial zone changes being proposed.

DLCD staff have identified Area 1 as perhaps *one of the best sites in the region for rail-oriented industrial development*. The reasons given to substantiate this claim include the area's size; proximity to state highways and the Central Oregon & Pacific Railroad; and the site meets *federal and state air quality standards*. The Oregon Rail Freight Plan is cited twice to emphasize the value that can be added to rail-served industrial land and the inherent compatibility problems created by residential uses located adjacent to railroad tracks. Parallel streets and buffers are recommended in the Freight Plan.

DLCD does not elaborate upon its air quality statement but it can be assumed they are referring to PM10 (Particulate Matter) related issues as opposed to CO (Carbon Monoxide). The Rogue Valley COG has Air Quality Modeling "Grids" which identify PM 10 Exceedences in Medford and west of White City (refer to RVCOG map). Projections to the year 2015 show no significant deterioration within the grid area west of White City but do add several grids to the Medford core area.

City staff would argue that there are various other rail-oriented industrial sites, particularly in White City which meet federal and state air quality standards and are equally, if not more valuable for development. After speaking with Central Oregon & Pacific General Manager Bill Libby, it was confirmed that the COP's service to the Rogue Valley is increasing in support of bulk commodities or for loads longer than those permitted on highways. Historically, lumber and wood products have been the principal commodities, however support manufacturing products such as glue, resin, wood chips, methanol, propane and cement are also transported into the region. COP's Central Point clients are the mill and Grange CO-OP. The Rail carrier has most recently added new clients Certainteed and BOC Gases to its service in White City. The COP comes off its main line at Tolo for daily service to White City.

The last item raised by DLCD involved the Transportation Planning Rule, regional objectives and the traffic analysis performed by the Rogue Valley COG. The concerns expressed have to do with the effect land use changes will have on the number and length of automobile trips and whether changes will make it more difficult for the region to meet its VMT (Vehicle Miles Traveled) objectives.

As the Commission is aware, Hardey Engineering & Associates performed a Transportation Impact Study which was submitted at the last meeting. Excerpts from this study are included in the Commission packet and the conclusions are similar to those of the COG EMME/2 model analysis. Hardey states that, based on the results of their analysis, they *believe that the proposed zone changes decrease the overload on the surrounding street system in comparison to the existing zoning* (Page 6). Furthermore, *all intersections are expected to operate at better levels of service under the proposed zone change* (refer to Table on Page 5).

ODOT Correspondence

ODOT responded to the Hardey TIS, have no concerns with the amendment to Policy 9 of the City/County Urban Growth Boundary Policy Agreement, and concur with the engineering analysis. They have concurred with the discussion of *Rail Issues* raised by Jim Hinman of DLCD but are primarily concerned that the City recognize that once rail-oriented industrial sites are gone, they cannot be replaced.

Conclusion

The issues raised by the State are not complex but require analysis and evidence to justify the City's decision. The Commission may receive additional testimony at the public hearing which could support or result in the modification of this proposal. If you believe the issues raised have been adequately dealt with, the public hearing may be closed and a decision (recommendation) rendered.

ORDINANCE NO. 1815

**AN ORDINANCE AMENDING THE CENTRAL POINT COMPREHENSIVE PLAN
AND ZONING CODE TEXT AND MAPS TO CREATE A TRANSIT-ORIENTED
DEVELOPMENT (TOD) DISTRICT AND TOD CORRIDOR DISTRICT**

RECITALS:

1. The City of Central Point ("City") is authorized under Oregon Revised Statute (ORS) Chapter 197 to prepare and adopt comprehensive plans and implementing ordinances consistent with the Statewide Land Use Planning Goals.

2. The City has coordinated its planning efforts with the State in accordance with ORS 197.040(2)(e) and OAR 660-030-0060 to assure compliance with goals and compatibility with City and County Comprehensive Plans.

3. Pursuant to authority granted by the City charter and the Oregon Revised Statutes, the City has determined to amend the *Central Point Comprehensive Plan and Zoning Map* which was originally adopted on August 29, 1980, and has been amended at various times since then.

4. Pursuant to the requirements set forth in CPMC Chapter 1.24 and Chapter 17.96, the City has conducted the following duly advertised public hearings to consider the proposed amendments:

- (a) Citizen's Advisory Committee hearing on August 29, 2000.
- (b) Planning Commission hearings on September 19 and October 3, 2000.
- (c) City Council hearings on October 26, November 16 and 30, 2000.

Now, therefore;**THE PEOPLE OF THE CITY OF CENTRAL POINT, OREGON, DO ORDAIN AS FOLLOWS:**

Section 1. At its public hearing on November 30, 2000, the City Council received the findings of the Citizen's Advisory Committee and the Planning Commission, received the City Staff Report, and received public testimony from all interested persons. Based upon all the information received, the City Council adopts the findings and conclusions set forth in the TOD CPA/ZC Proposal, Applicable Review Criteria, and based upon the same, the City Council finds that there is sufficient public need and justification for the proposed changes, and the proposed changes are hereby adopted entirely.

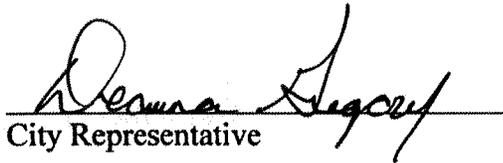
Section 2. The City Comprehensive Plan and Zoning Map are hereby amended as set forth on Exhibit "A" the Central Point TOD Design Requirements and Guidelines, with changes through November 30, 2000 including all maps and attachments to said exhibit, which are attached hereto and by this reference incorporated herein.

Section 3. The City Administrator is directed to conduct post acknowledgment procedures defined in ORS 197.610 et seq. upon adoption of the Comprehensive Plan Amendment and changes to the Zoning Map.

Passed by the Council and signed by me in authentication of its passage this 14th day of Dec., 2000.


Mayor Bill Walton

ATTEST:


City Representative

Approved by me this 14th day of December, 2000.


Mayor Bill Walton



Central Point TOD Design Requirements and Guidelines

- **A Comprehensive Plan Amendment**
- **A Zoning Code Text and Map Amendment**

**DRAFT
10/17/00**



APPLICATION SUMMARY

PURPOSE

For a Comprehensive Plan Amendment and a Zoning Code Text and Map Amendment to establish TOD (Transit Oriented Development) design requirements and guidelines in specific areas within the city of Central Point Urban Growth Boundary (UGB).

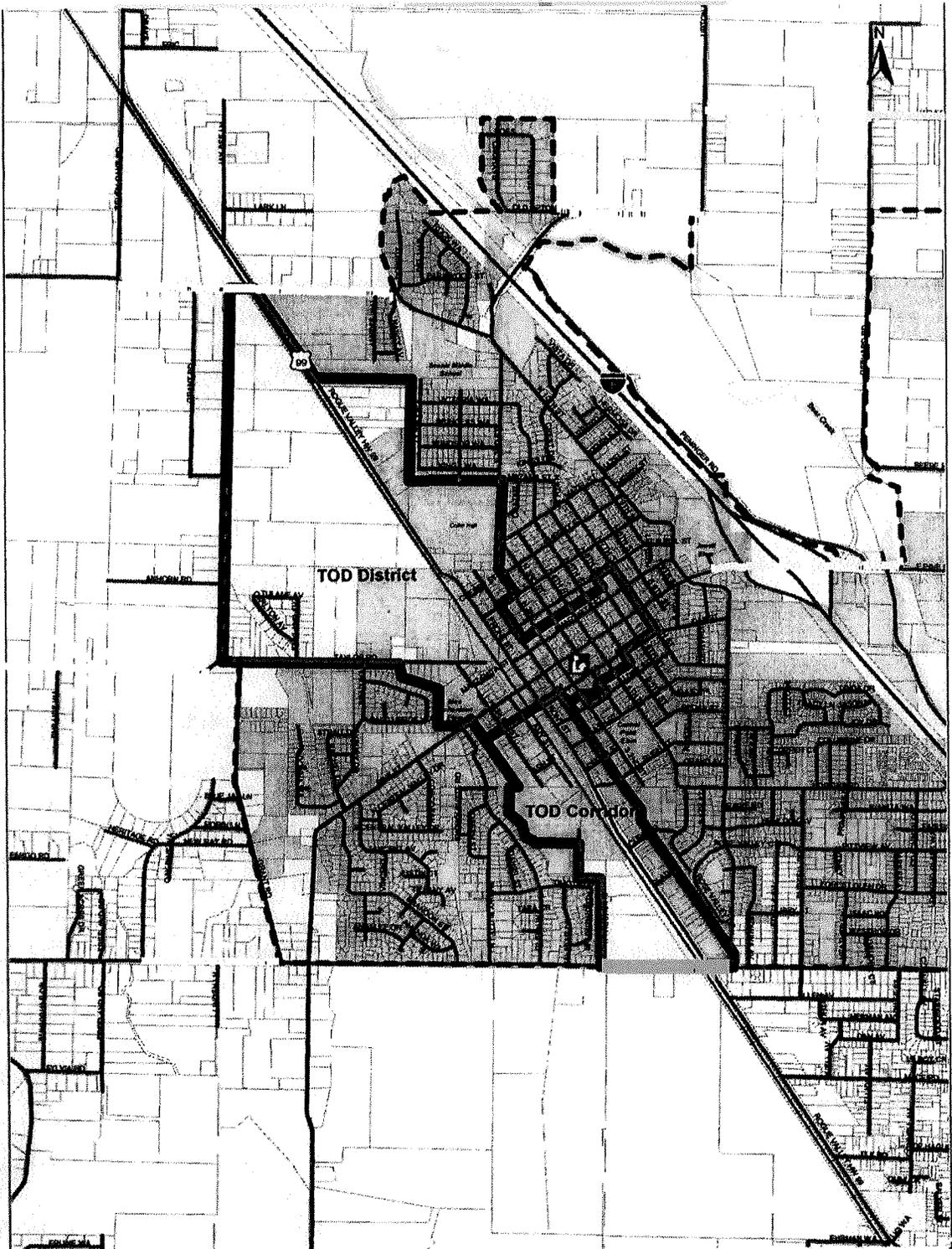
The purposes of the TOD District and Corridor are to:

- Use land efficiently;
- Provide a diversity of housing types;
- Provide a complementary mix of housing, service, and civic uses;
- Encourage transit, walking and bicycling;
- Retain and enhance environmentally sensitive areas; and
- Provide open space.

LOCATION

The affected properties are located in the central and northwest portions of the Central Point UGB as shown in Figure 1 and described in the background section of this application, beginning on page 9. The proposal involves two areas:

1. **TOD District** located in the northwest portion of the Central Point UGB; and
2. **TOD Corridor** located along Rogue Valley Highway 99 within the current city limit.



City of Central Point
Vicinity Map
 October 6, 2000
 2000 Feet

Legend

- | | | | | | |
|---|-----------|-------|----------|--------------------|--------------|
| ★ | City Hall | - - - | UGB | [Stippled Box] | City Limit |
| ⊙ | School | — | Streets | [Thick Border Box] | TOD District |
| 📖 | Library | — | Railroad | [Thin Border Box] | TOD Corridor |
| | | — | Creek | | Taxlots |

Figure 1

PROPOSAL DESCRIPTION

INTRODUCTION

In August 1999, the Rogue Valley Council of Governments (RVCOG) completed a Transit Oriented Development and Transit Corridor Development Strategies report of the Rogue Valley Transit District. The purpose of the project was to create amended land use strategies to develop land more efficiently and promote transit use in a number of communities, including Central Point. Model land use ordinances and design guidelines were an important result of the project.

The project recommended that eight "TOD Districts" should be established in selected locations in the Rogue Valley. One of these TOD Districts is proposed for the northwest portion of the City of Central Point. It is proposed to feature a mix of medium and high-density residential uses, commercial services, civic uses, and parks and open space. A key element for the district includes accommodations for future transit service coupled with design features to encourage walking and bicycling.

To further enhance transit service in the Rogue Valley, "Transit Corridors" were also recommended to help support transit service along major transit routes, such as Highway 99. The same mix of land uses for the districts is recommended for the corridors. However, it is recognized that the corridors are more fully developed, and that change to transit should be accomplished over time, and on a voluntary basis by property owners.

The proposed amendments to the Comprehensive Plan and Zoning Code text and maps are intended to promote TOD design for the district and corridor areas in the city that are based upon the model RVCOG code and design guidelines. The amendments are summarized in the following pages. The complete text can be found in the exhibits as noted below.

Comprehensive Plan Amendments

The proposed Comprehensive Plan amendments include a revised Comprehensive Plan Map that shows the location of the TOD District, the TOD Corridor, and a brief section of new text that introduces the TOD design concept. Please refer to the proposed Comprehensive Plan Map in Figure 2 and the draft plan text in Exhibit A – Central Point Comprehensive Plan Amendments.

Zoning Code Amendments

Land Use Designations and Procedures

The proposed Zoning Code amendments include new code sections containing requirements and standards for the new zoning designations for the TOD District and new procedural requirements for major development applications within it. A summary of the zoning designations changes is provided below. Please refer to the proposed Zoning Map in Figure 3 and the draft Zoning Code sections in Exhibit B – Zoning Code Amendments for the complete version of the proposed amendments.

Definitions for new or unfamiliar terminology used in the proposed TOD Zoning Code and Design Standards can also be found in Exhibit B.

Design Standards

Proper design and orientation of development becomes increasingly important as densities increase and different uses are closer together. In addition, much of the success to alternative transportation modes, such as walking and transit, relies on creating environments which are pleasant and convenient for people to use. Building design, setbacks, orientation, landscaping, etc. all play a part in providing these pedestrian-friendly environments. Design Standards in Exhibit C are also proposed to be part of the Zoning Code amendments.

The TOD design standards address:

- Circulation and Access Standards for streets, public access, and pedestrian and bicycle circulation;
- Site Design Standards for retaining important on-site features, compatibility with existing structures, parking, landscaping, lighting, signs, and service areas;
- Common Open Space Design Standards for location, size, and design; and
- Building Design Standards regarding density transition, adjacent landscaping, architecture, and other design techniques to enhance compatibility between different uses within the development.

The nature of the amendments varies between the TOD District, proposed for the largely unincorporated area in the northwest corner of the UGB, and the TOD Corridor, located along Rogue Valley Highway 99. Therefore, the description of the amendments is presented in separate subsections below.

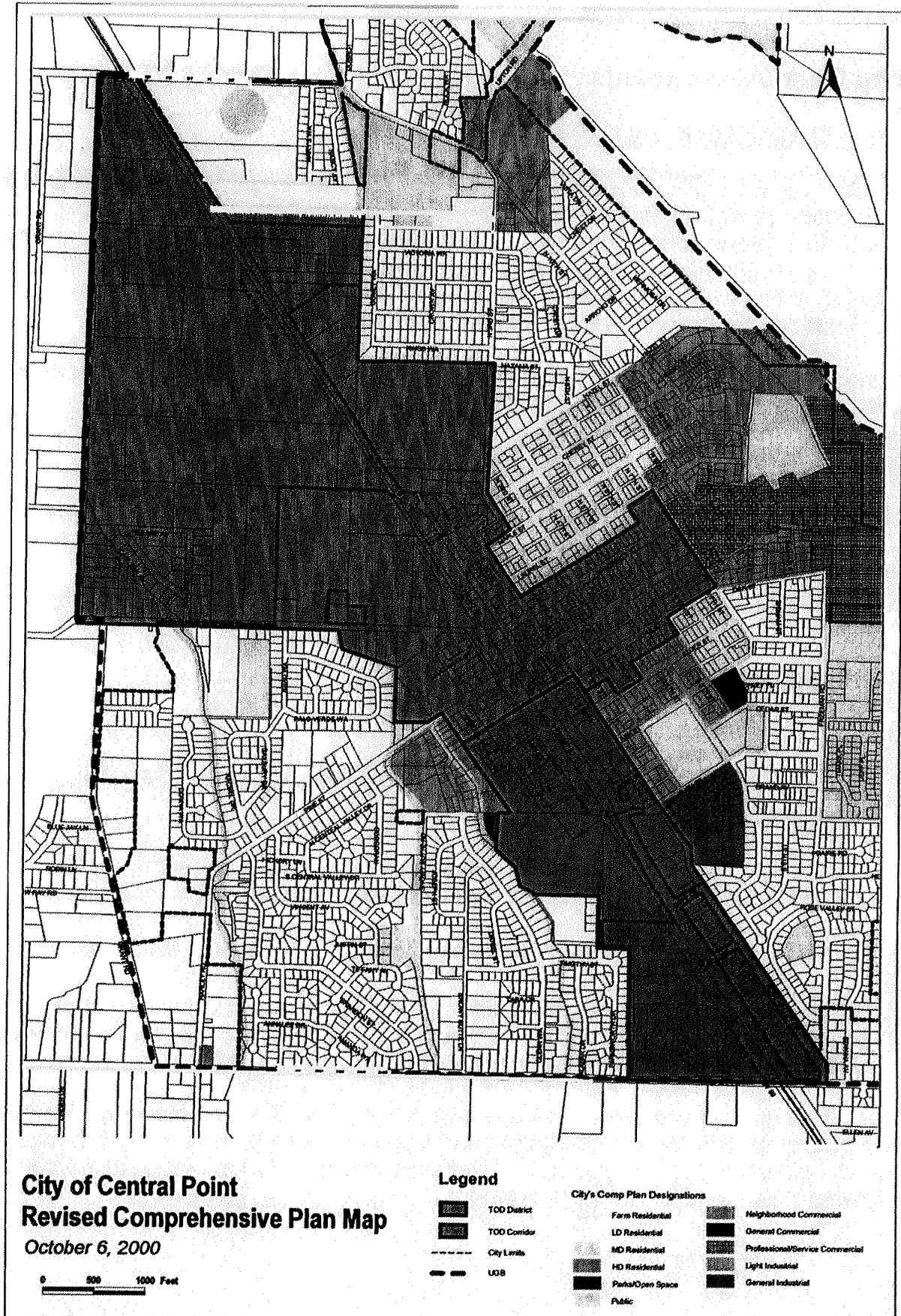


Figure 2

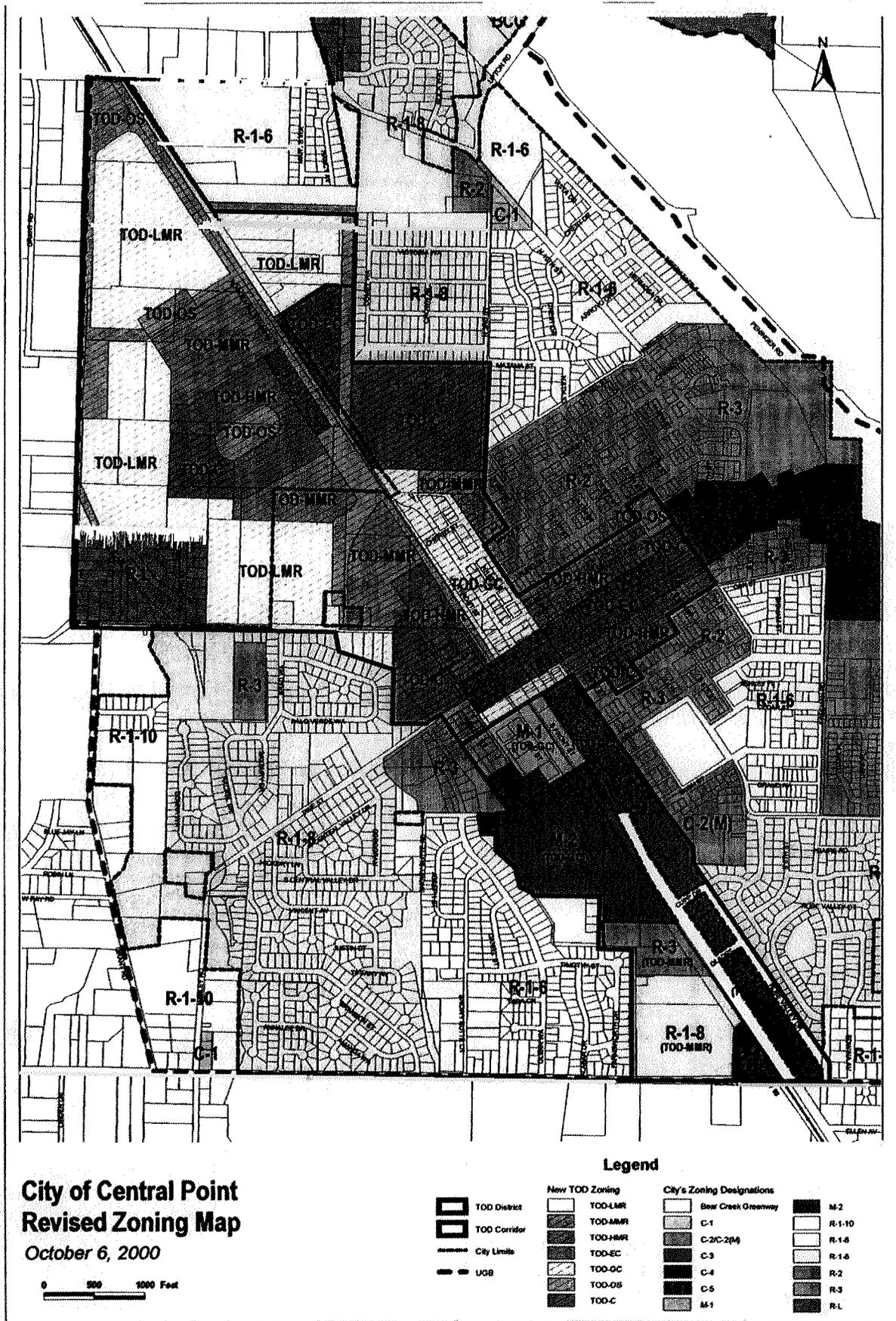


Figure 3

TOD DISTRICT

Development Concept

The concept for the proposed development is a Transit Oriented Development (TOD). A TOD is a mixed-use development comprised of residential, commercial, civic, and recreational land uses designed in a way that increases ridership on transit systems, provides a pedestrian oriented environment, provides a diversity of housing types, improves public infrastructure investment, enhances property value, and provides an identifiable sense of community and a better quality of life. A system of pedestrian and bicycle friendly streets and pathways are intended to link uses within the development, provide a network of connections to a bus transit hub near the center of the site, and connect with the community of Central Point. The residential zones will allow a combination of single-family detached housing, town homes, condominiums, apartment buildings, apartments over ground floor commercial and office space, and a senior center. The commercial and office space are planned to provide employment opportunities and services such as retail sales and service, professional offices, and daycare to the residents of Central Point.

The parks and open spaces are planned to be an integral part of the TOD District. All residents of the TOD will be able to walk or ride a bicycle to a park or open space within one-quarter mile of their residence. The parks and open spaces are intended to provide opportunities for passive and active recreation and to protect and enhance natural resources and habitat.

The new TOD District designation is intended to compliment existing land uses within the District. TOD-LMR zoning is proposed east of Hwy 99 and north of Crater High. TOD-MMR, TOD-EC, and TOD-GC are proposed south of Crater High and compliment the proposed TOD zoning west of Hwy 99. This concentration of uses is intended to strengthen and anchor the western end Central Point's CBD.

Land Use Designation Summary

The proposed Comprehensive Plan and Zoning Map designations for the TOD District are:

- Residential (TOD)

This category would include three residential designations with densities ranging from 6 to 30+ units per acre.

TOD-LMR - Low Mix Residential Zone

TOD-MMR - Medium Mix Residential Zone

TOD-HMR - High Mix Residential/Commercial Zone

- Employment (TOD) – Comprehensive Plan

Two commercial designations are proposed which will be compatible with and supportive of the transit-oriented district.

TOD-EC – Employment Commercial Zone
 TOD-GC – General Commercial Zone

- Civic (TOD) – Comprehensive Plan

TOD-C Zone will apply to civic uses such as government offices, schools, and community centers are the primary uses intended in this district.

- Open Space (TOD) – Comprehensive Plan

TOD-OS Zone is intended to provide a variety of outdoor and recreation amenities.

Table 1
Land Use Summary – TOD District

Zone Designation (TOD)	Acreage	Density Units/Acre
<u>Residential</u>		
LMR	129	6 - 12
MMR	53	16 - 32
HMR	53	30+
<u>Employment</u>		
EC	37	N/A
GC	27	N/A
<u>Civic</u>		
C	56	N/A
<u>Open Space</u>		
OS	60	N/A

Residential TOD

TOD-LMR - Low Mix Residential

Location

The TOD-LMR designation is proposed to be located in the north, west, and southwest portions of the TOD District (Figure 3). The lower density in these areas is intended to

provide a suitable transition between the district and the low density residential uses outside of the district.

Land Uses and Building Types

The TOD-LMR designation will allow single-family detached dwellings, single-family dwellings with 0-foot setbacks, and lower density multiple family dwellings. Commercial or industrial uses are not allowed in this zone.

Density

The required density range will be 6 to 12 units per acre.

TOD-MMR - Medium Mix Residential

Location

The TOD-MMR designation is proposed to be located between the LMR and the higher density/intensity uses in the center of the TOD District (Figure 3). The moderate density in these areas is intended to continue the transition from lower density residential uses on the perimeter of the TOD District to the more densely developed center of the district.

Land Uses and Building Types

The TOD-MMR designation will allow single-family dwellings with 0-foot setbacks, and a full range of multiple family dwellings. Commercial or industrial uses are not allowed in this zone.

Density

The required density range will be 16 to 32 units per acre.

TOD-HMR - High Mix Residential/Commercial

Location

The TOD-HMR designation is proposed to be located in the center of the TOD District, along Haskell Road, and in the Central Business District on a section of Manzanita and Oak Street (Figure 3).

Land Uses and Building Types

The only residential uses in the TOD-HMR designation will be a range of multiple family dwellings. Because of the higher residential densities, support activities, such as retail sales and service, professional offices, and daycare are permitted in addition to multiple family residences.

Density

The required density will be a minimum of 30 units per acre.

Employment (TOD)

TOD-EC – Employment Commercial

Location

The TOD-EC designation is proposed to be located on the east and west side of Rogue Valley Highway 99 and north of Crater Higher School and on Pine Street from Haskell Road to North 6th Street (Figure 3). These designations primarily reflect existing development and uses. Having employment, retail, and service activities with convenient transit availability is an important element of the TOD.

Land Uses and Building Types

Commercial uses are the primary permitted activities. Multiple family uses are also permitted above the ground floor, and civic and open space uses may also be allowed. Industrial activities are not permitted.

Density

There are no minimum density or commercial floor area requirements.

TOD-GC – General Commercial

Location

The TOD-GC designation is proposed to be located on the east side of Rogue Valley Highway 99 north of Pine Street (Figure 3). Similar to the EC designation, the GC designation primarily reflects existing development and uses. Convenient transit access is an important characteristic of this area.

Land Uses and Building Types

The emphasis of this designations shifts from the commercial/residential focus of the EC designation to one, which includes industrial activities and excludes residential and civic uses.

Density

There are no minimum density or commercial/industrial floor area requirements.

Civic (TOD)

Location

The TOD-C designation is proposed to be located in the center of the TOD District, the Crater High School property, and the Mae Richardson Elementary School property. The TOD-C designation is also located in the vicinity of Pine Street between North 6th and 7th and along Oak Street between 2nd and 3rd (Figure 3).

Land Uses and Building Types

The intent of this designation is to provide necessary civic uses for the community, such as schools, post offices, public offices, and similar uses. The uses allowed are proposed to be compatible with the residential neighborhoods that generally surround them. Institutions, such as colleges and hospitals, which can have a wide range of potential impacts, are subject to conditional use review.

Open Space (TOD)

Location

The TOD-OS designation is proposed to be located along Griffin and Jackson Creeks as well as the north-central portion of the TOD District. TOD-OS is also located in downtown Central Point between Laurel and Manzanita Streets and North 6th and North 7th Streets (Figure 3).

Land Uses and Building Types

The intent of this designation is to provide necessary open space for the community and protection of environmentally sensitive areas. The uses allowed are proposed to be compatible with and complement the residential neighborhoods that generally surround them. Only park and open space uses are permitted.

TOD CORRIDOR

Development Concept

The TOD Corridor Zoning designation is intended to promote efficient land development and the increased use of transit as proposed in the 1999 Transit Oriented Design and Transit Corridor Development Strategies for the Rogue Valley Transportation District Report. In the context of the Rogue Valley region, the Central Point TOD Corridor will be one of several bus transit corridors which form links to a network of destinations. The increased densities along these corridors provides the ridership needed to commit funds to increase service frequency making bus transit a more viable means of transportation. In addition to the TOD District, the corridor is another important link in what is envisioned to be a region-wide system to increase reliance on public transit and decrease use of the automobile.

The TOD Corridor stretches from Pine Street to Beall Lane and include properties on both sides of Hwy 99. Hwy 99 is a proposed future transit/bus route.

The TOD Corridor overlay design standards work in tandem with the overlay zoning. The design standards address issues such as circulation, building design, site design, and open spaces. The intent is to create pedestrian oriented development areas that provide opportunities to use multiple forms of transit and have convenient access to quality open spaces.

Land Use Designation Summary

The TOD Corridor includes the TOD-GC, TOD-EC, and TOD-MMR designations described earlier under the TOD District information. These uses include medium density and multifamily housing, commercial, and industrial uses. The Corridor is not proposed to have the TOD Civic or Open Space designations. The existing zoning designations and the corresponding optional TOD Corridor zoning districts are listed in Table 2 and shown in Figure 3. *The major difference from the TOD District is that the existing Comprehensive Plan and Zoning designations in the TOD Corridor are proposed to remain and the new TOD designations represent optional standards that may be applied in lieu of the existing requirements.* The decision of which set of standards to use rests with the property owners.

The TOD Corridor zoning designations will generally allow property owners to develop their properties more intensively and with greater options, including mixing uses such as commercial and residential. The potential for greater densities and mixed uses can create a more viable neighborhood based on a variety of housing types and commercial or industrial activities.

**Table 2
Land Use Summary – TOD Corridor**

Existing Comprehensive Plan and Zoning Designations	Optional TOD Corridor Comprehensive Plan and Zoning Designations
Residential	
R-1-8 – Residential, Single Family District (8,000 sq. ft. min. lot size)	TOD-MMR – Medium Mix Residential
R-2 – Residential, Two Family District (6,000 sq. ft. min. lot size)	TOD-LMR – Medium Mix Residential
R-3 – Residential, Multiple Family District (6,000 sq. ft. min. lot size)	TOD-MMR – Medium Mix Residential
Commercial	
C-2 – Commercial - Professional	TOD-HMR High Mix Residential
C-3 – Downtown Business District	TOD-EC Employment Commercial
C-4 – Tourist and Office Professional District	TOD-EC – Employment Commercial
C-5 – Thoroughfare Commercial District	TOD-GC – General Commercial
Industrial	
M-1 – Industrial District	TOD-GC – General Commercial
M-2 – Industrial General District	TOD-GC – General Commercial

ANNEXATION PETITION

The undersigned hereby request and consent to the annexation to the City of Central Point, Oregon, of the real property contiguous thereto described in Exhibit "A" attached hereto and by this reference made a part of the within petition.

By their signature hereto, the undersigned certify that they are either "owners" of land in the territory proposed to be annexed as described in Exhibit "A", or are "electors" registered in the territory proposed to be annexed as described in Exhibit "A".

This petition, containing the request and consent to said annexation, must be filed with the Central Point City council on or before the date of the public hearing to be held upon the proposed annexation pursuant to ORS 222.120.

"Owner" is defined by ORS 222.120 as meaning the legal owner of record or, where there is a recorded land contract which is in force, the purchaser thereunder. If there is multiple ownership in a parcel of land, each consenting owner shall be counted as a fraction of the same extent as the interest of the owner in the land bears in relation to the interest of the other owners, and the same fraction shall be applied to the parcel's land mass for purposes of the consent petition. If a corporation owns land in a territory proposed to be annexed, the corporation shall be considered to be the individual owner of that land.

"Elector" is defined in said statute as an individual qualified to vote under Article II, Section 2 of the Oregon Constitution, which in turn requires that the individual be 18 years of age or older, a resident of the area in question, and registered to vote as required by applicable state law. Furthermore, ORS 222.270(2) requires that electors petitioning for annexation be registered in the territory proposed to be annexed.

Name/Address	Elector or Property Owner	Signature	Date
Bob Fellows Construction LLC 2950 Phillips Wy Central Point OR 97502	Property Owner	<i>Bob Fellows</i>	4-27-17



THIS SPACE RESERVE

I, Kathleen S. Beckett, County Clerk for Jackson County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.
Kathleen S. Beckett - County Clerk

After recording return to:
BOB FELLOWS CONSTRUCTION, LLC, AN
OREGON LIMITED LIABILITY COMPANY
2950 PHILLIPS
Central Point, OR 97502

Until a change is requested all
tax statements shall be sent to
The following address:

BOB FELLOWS CONSTRUCTION, LLC, AN
OREGON LIMITED LIABILITY COMPANY
2950 PHILLIPS
Central Point, OR 97502

Escrow No. AP0764707

5511

STATUTORY WARRANTY DEED

LOLA V. ALBRIGHT, Grantor(s) hereby convey and warrant to BOB FELLOWS CONSTRUCTION, LLC, AN OREGON LIMITED LIABILITY COMPANY, Grantee(s) the following described real property in the County of JACKSON and State of Oregon, free of encumbrances except as specifically set forth herein:

Commencing at the Northeast corner of Lot K of Snowy Butte Orchards, Jackson County, Oregon, according to the official plat thereof, now of record, which said point is on the Southwesterly right of way line of the Southern Pacific Railroad; thence run South 35°08' East along said right of way line 528.68 feet to a 1" iron pin for the true point of beginning; thence North 89°27' West 300.77 feet; thence South 0°01' West 222.24 feet, more or less, to the South boundary line of said lot; thence South 89°58' East 454.04 feet, more or less, to the Southwesterly right of way line of the Southern Pacific Railroad; thence North 35°08' West 264.58 feet along said right of way line to the true point of beginning.

(Map No. 372W11C, Tax Lot 8400, Account No. 1-017632-8, Code 6-28)

The above-described property is free of encumbrances except all those items of record, if any, as of the date of this deed and those shown below, if any:

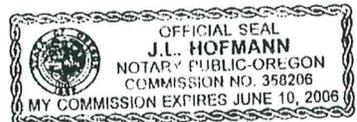
Subject to the 2004-05 real property taxes, a lien not yet due and payable

The true and actual consideration for this conveyance is [REDACTED]

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

Dated this 30th day of June, 2004

Lola V. Albright
LOLA V. ALBRIGHT



State of Oregon
County of JACKSON

This instrument was acknowledged before me on June 30, 2004 by Lola V. Albright.

J.L. Hofmann
(Notary Public for Oregon)

My commission expires 6-10-06



763998-5 EXHIBIT "A"
page 2 of 3

Jackson County Official Records 2005-072911
R-WD
Cnt=1 Stn=4 SHAWBJ 12/01/2005 09:00:00 AM
\$10.00 \$5.00 \$11.00 Total:\$26.00



THIS SPACE RESERVED
Kathleen S. Beckett, County Clerk for Jackson County, Oregon,
certify that the instrument identified herein was recorded in the Clerk
records.
Kathleen S. Beckett - County Clerk

After recording return to:
BOB FELLOWS CONSTRUCTION, LLC, an
Oregon Limited Liability Company
2950 Phillips Way
Central Point, OR 97502

Until a change is requested all
tax statements shall be sent to
The following address:

BOB FELLOWS CONSTRUCTION, LLC, an
Oregon Limited Liability Company
2950 Phillips Way
Central Point, OR 97502

Escrow No. AP0763998
Title No. 0763998

9:00

STATUTORY WARRANTY DEED

WALTER H. FROHREICH AND LEORA V. FROHREICH, TRUSTEES OR THEIR
SUCCESSORS IN TRUST UNDER THE FROHREICH LOVING TRUST DATED JANUARY 4,
1996, AND ANY AMENDMENTS THERETO, Grantor(s) hereby convey and warrant to BOB FELLOWS
CONSTRUCTION, LLC, an Oregon Limited Liability Company, Grantee(s) the following described real
property in the County of JACKSON and State of Oregon free of encumbrances except as specifically set forth herein:

SEE EXHIBIT A WHICH IS MADE A PART HEREOF BY THIS REFERENCE

The above-described property is free of encumbrances except all those items of record, if any, as of the date of this deed and
those shown below, if any:

The true and actual consideration for this conveyance is PURSUANT TO AN IRC 1031 TAX DEFERRED
EXCHANGE ON BEHALF OF GRANTOR/GRANTEE.

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN
VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING
THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE
APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO
DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS
30.930.

Dated this 30th day of November 2005

WALTER H. FROHREICH AND LEORA V. FROHREICH, TRUSTEES OR THEIR SUCCESSORS IN TRUST UNDER
THE FROHREICH LOVING TRUST DATED JANUARY 4, 1996, AND ANY AMENDMENTS THERETO

BY: Walter H. Frohreich Trustee
WALTER H. FROHREICH, TRUSTEE

BY: Leora V. Frohreich Trustee
LEORA V. FROHREICH, TRUSTEE



State of Oregon
County of JACKSON

This instrument was acknowledged before me on Nov. 30, 2005 by WALTER H. FROHREICH AND LEORA V.
FROHREICH, TRUSTEES OF THE FROHREICH LOVING TRUST DATED JANUARY 4, 1996,.

J. L. Hofmann
(Notary Public for Oregon)

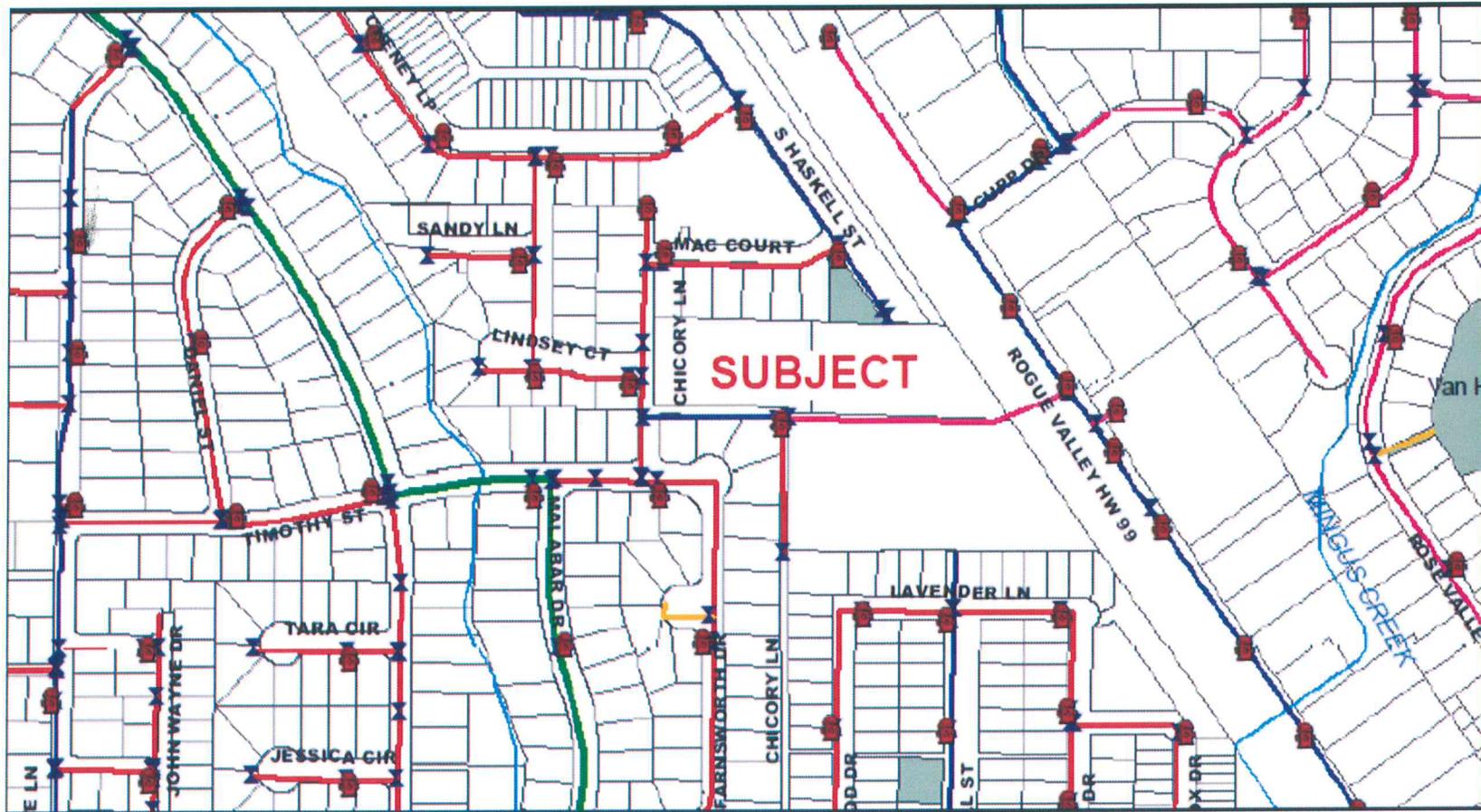
My commission expires 6-10-06

EXHIBIT "A"
page 3 of 3

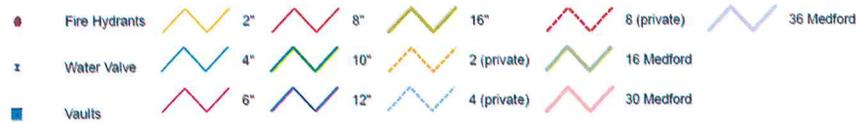
Commencing at the Northeast corner of Lot "K" of Snowy Butte Orchards, Jackson County, Oregon, according to the official plat thereof, now of record, which said point is on the Southwesterly right-of-way line of the Southern Pacific Railroad; thence run South 35°08' East along said right-of-way line 528.68 to a 1" iron pin; thence North 89°27' West 300.77 feet for the true point of beginning; thence North 89°27' West 358.83 feet more or less to the Westerly boundary line of said Lot "K"; thence South 0°01' West 222.24 feet, more or less, to the Southwesterly corner of said Lot "K"; thence South 89°58' East 357.85 feet to a point which bears North 89°58' West 454.04 feet from the Southeast corner of said Lot; thence North 0°01' East 222.24 feet, more or less to the point of beginning.

(Map No. 372W11C, Tax Lot 8300, Account No. 1-017631-0, Code 6-2)

Central Point Waterlines, Valves and FH's



Waterlines (Inches)



ArcGIS Web Map



April 25, 2017

RVSS_recordmaps

Other

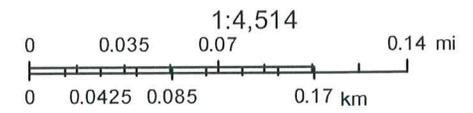
RVSS_Service_Boundary



Manholes



Sewer Lines



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

Web AppBuilder for ArcGIS



- Sample_Plots
- 12 ft w  Study Area
- 3 ft n  Wetland
- 6ft e
- pp2
- pp3



CSA Planning, Ltd.

Wetlands Study Schott & Associates

Fellows
37-2W-11C-8400



1 inch = 100 feet

May 3, 2017

CSA Planning

Public Utility Analysis - 37S 2W 11C Tax Lots 3470 & 3428

Per your request, I have prepared an analysis of the availability of public underground utilities necessary to provide service to the development of the referenced tax lot in Central Point,

Domestic Water System

The property is basically surrounded by existing water lines and the installation of a looped water system supplying domestic water and fire protection will not be difficult.

Storm Drainage

Providing adequate storm drainage will be somewhat more challenging, from a design standpoint, since the property is generally lower than surrounding properties.

A 12" storm drain has been stubbed into the property on the west side from Lindsey Court. The site will need to be filled in order to utilize this 12" storm drain and the storm drain may need to be removed and replaced with a larger sized pipe.

Sanitary Sewer System

The sanitary sewer system in Central Point is owned and maintained by RVSS. An existing system in the Lindsey Ct, Chicory Lane area is available for connection and extension to the east to provide service to the referenced parcels.

Summary

Any design challenges can be overcome through a combination of site grading and pipe upsizing and serving the property with adequate municipal storm drainage and other public utilities is feasible.


John E. Jensen, P.E.

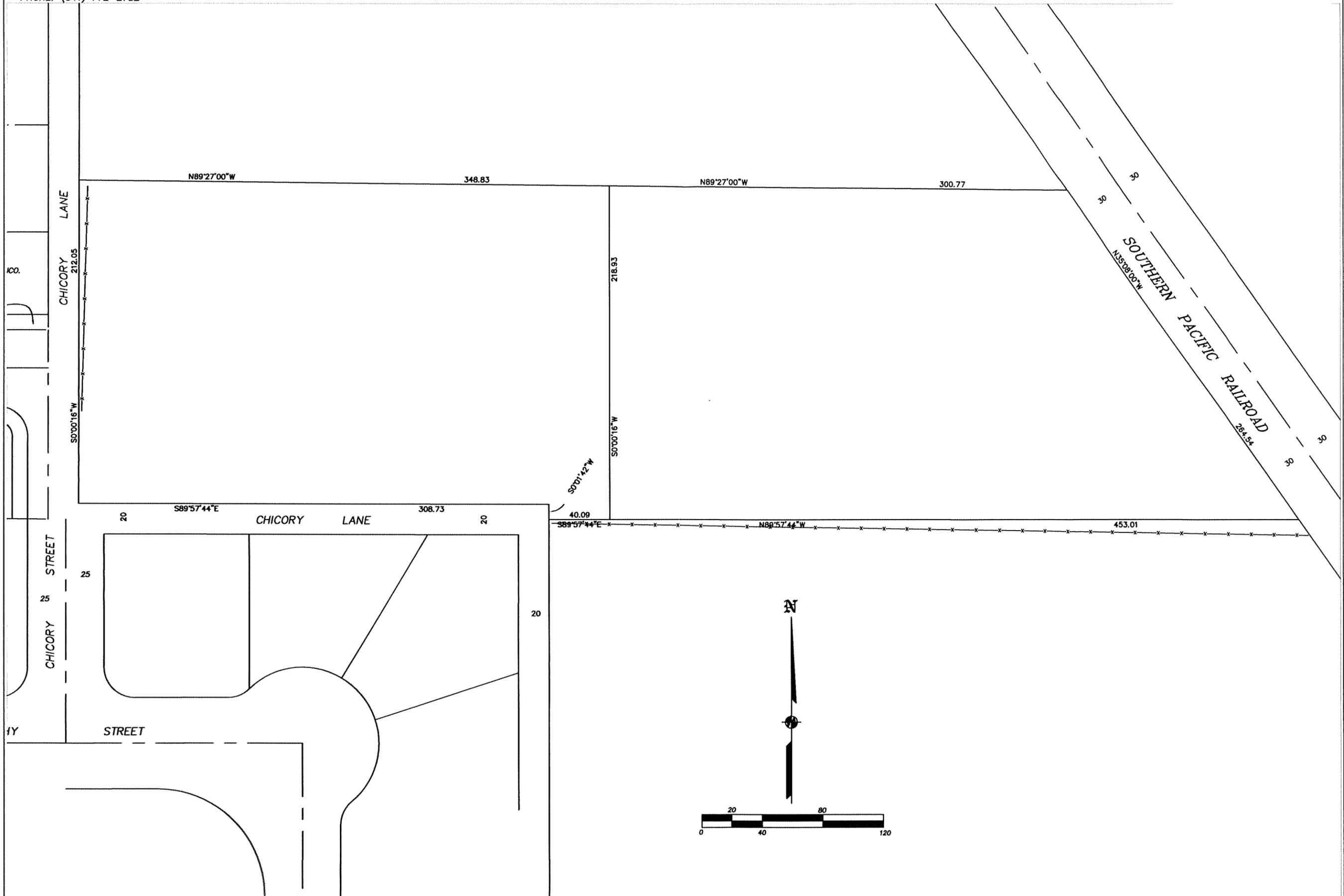
PREPARED BY:
L.J. FRIAR & ASSOCIATES, P.C.
CONSULTING LAND SURVEYORS
816 WEST EIGHTH STREET
MEDFORD, OREGON 97501
PHONE: (541) 772-2782

PREPARED FOR:
BOB FELLOWS
2950 PHILLIPS WAY
CENTRAL POINT, OR 97502

MAP OF SURVEY

Located in the S.W. 1/4 of Section 11,
T.37S., R.2W., W.M. City of Central Point
Jackson County, Oregon

EXHIBIT 12



LEGAL DESCRIPTION
372W11C, Tax Lot 8400

Jackson County Official Records 2004-038981
R-WD
Cnt=1 Stn=10 CUTTING 07/08/2004 02:30:00 PM
\$5.00 \$5.00 \$11.00 Total:\$21.00



THIS SPACE RESERVE

I, Kathleen S. Beckett, County Clerk for Jackson County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.
Kathleen S. Beckett - County Clerk

After recording return to:
BOB FELLOWS CONSTRUCTION, LLC, AN
OREGON LIMITED LIABILITY COMPANY
2950 PHILLIPS
Central Point, OR 97502

Until a change is requested all
tax statements shall be sent to
The following address:

BOB FELLOWS CONSTRUCTION, LLC, AN
OREGON LIMITED LIABILITY COMPANY
2950 PHILLIPS
Central Point, OR 97502

Escrow No. AP0764707

5511

STATUTORY WARRANTY DEED

LOLA V. ALBRIGHT, Grantor(s) hereby convey and warrant to **BOB FELLOWS CONSTRUCTION, LLC, AN OREGON LIMITED LIABILITY COMPANY**, Grantee(s) the following described real property in the County of **JACKSON** and State of Oregon, free of encumbrances except as specifically set forth herein:

Commencing at the Northeast corner of Lot K of Snowy Butte Orchards, Jackson County, Oregon, according to the official plat thereof, now of record, which said point is on the Southwesterly right of way line of the Southern Pacific Railroad; thence run South 35°08' East along said right of way line 528.68 feet to a 1" iron pin for the true point of beginning; thence North 89°27' West 300.77 feet; thence South 0°01' West 222.24 feet, more or less, to the South boundary line of said lot; thence South 89°58' East 454.04 feet, more or less, to the Southwesterly right of way line of the Southern Pacific Railroad; thence North 35°08' West 264.58 feet along said right of way line to the true point of beginning.

(Map No. 372W11C, Tax Lot 8400, Account No. 1-017632-8, Code 6-28)

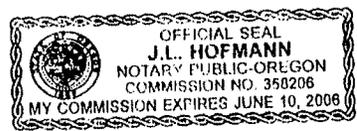
The above-described property is free of encumbrances except all those items of record, if any, as of the date of this deed and those shown below, if any:
Subject to the 2004-05 real property taxes, a lien not yet due and payable

The true and actual consideration for this conveyance is [REDACTED]

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

Dated this 30th day of June, 2004

Lola V. Albright
LOLA V. ALBRIGHT



State of Oregon
County of JACKSON

This instrument was acknowledged before me on June 30, 2004 by Lola V. Albright.

J.L. Hofmann
(Notary Public for Oregon)

My commission expires 6-10-06

LEGAL DESCRIPTION
372W11C, Tax Lot 8300

Jackson County Official Records **2005-072911**
R-WD
Cnt=1 Stn=4 SHAWBJ 12/01/2005 09:00:00 AM
\$10.00 \$5.00 \$11.00 Total: \$26.00

Amērititle
Part Of The JELD-WEN Family



THIS SPACE RESERVED
Kathleen S. Beckett, County Clerk for Jackson County, Oregon,
certify that the instrument identified herein was recorded in the Clerk
records. Kathleen S. Beckett - County Clerk

After recording return to:
BOB FELLOWS CONSTRUCTION, LLC, an
Oregon Limited Liability Company
2950 Phillips Way
Central Point, OR 97502

Until a change is requested all
tax statements shall be sent to
The following address:

BOB FELLOWS CONSTRUCTION, LLC, an
Oregon Limited Liability Company
2950 Phillips Way
Central Point, OR 97502

Escrow No. AP0763998
Title No. 0763998

9:00

STATUTORY WARRANTY DEED

WALTER H. FROHREICH AND LEORA V. FROHREICH, TRUSTEES OR THEIR SUCCESSORS IN TRUST UNDER THE FROHREICH LOVING TRUST DATED JANUARY 4, 1996, AND ANY AMENDMENTS THERETO, Grantor(s) hereby convey and warrant to **BOB FELLOWS CONSTRUCTION, LLC, an Oregon Limited Liability Company**, Grantee(s) the following described real property in the County of **JACKSON** and State of Oregon free of encumbrances except as specifically set forth herein:

SEE EXHIBIT A WHICH IS MADE A PART HEREOF BY THIS REFERENCE

The above-described property is free of encumbrances except all those items of record, if any, as of the date of this deed and those shown below, if any:

The true and actual consideration for this conveyance is **PURSUANT TO AN IRC 1031 TAX DEFERRED EXCHANGE ON BEHALF OF GRANTOR/GRANTEE.**

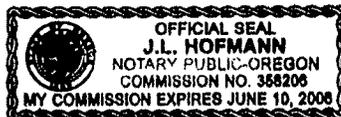
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Dated this 30th day of November, 2005

WALTER H. FROHREICH AND LEORA V. FROHREICH, TRUSTEES OR THEIR SUCCESSORS IN TRUST UNDER THE FROHREICH LOVING TRUST DATED JANUARY 4, 1996, AND ANY AMENDMENTS THERETO

BY: Walter H. Frohreich Trustee
WALTER H. FROHREICH, TRUSTEE

BY: Leora V. Frohreich Trustee
LEORA V. FROHREICH, TRUSTEE



State of Oregon
County of JACKSON

This instrument was acknowledged before me on Nov. 30, 2005 by WALTER H. FROHREICH AND LEORA V. FROHREICH, TRUSTEES OF THE FROHREICH LOVING TRUST DATED JANUARY 4, 1996,.

J. L. Hofmann
(Notary Public for Oregon)

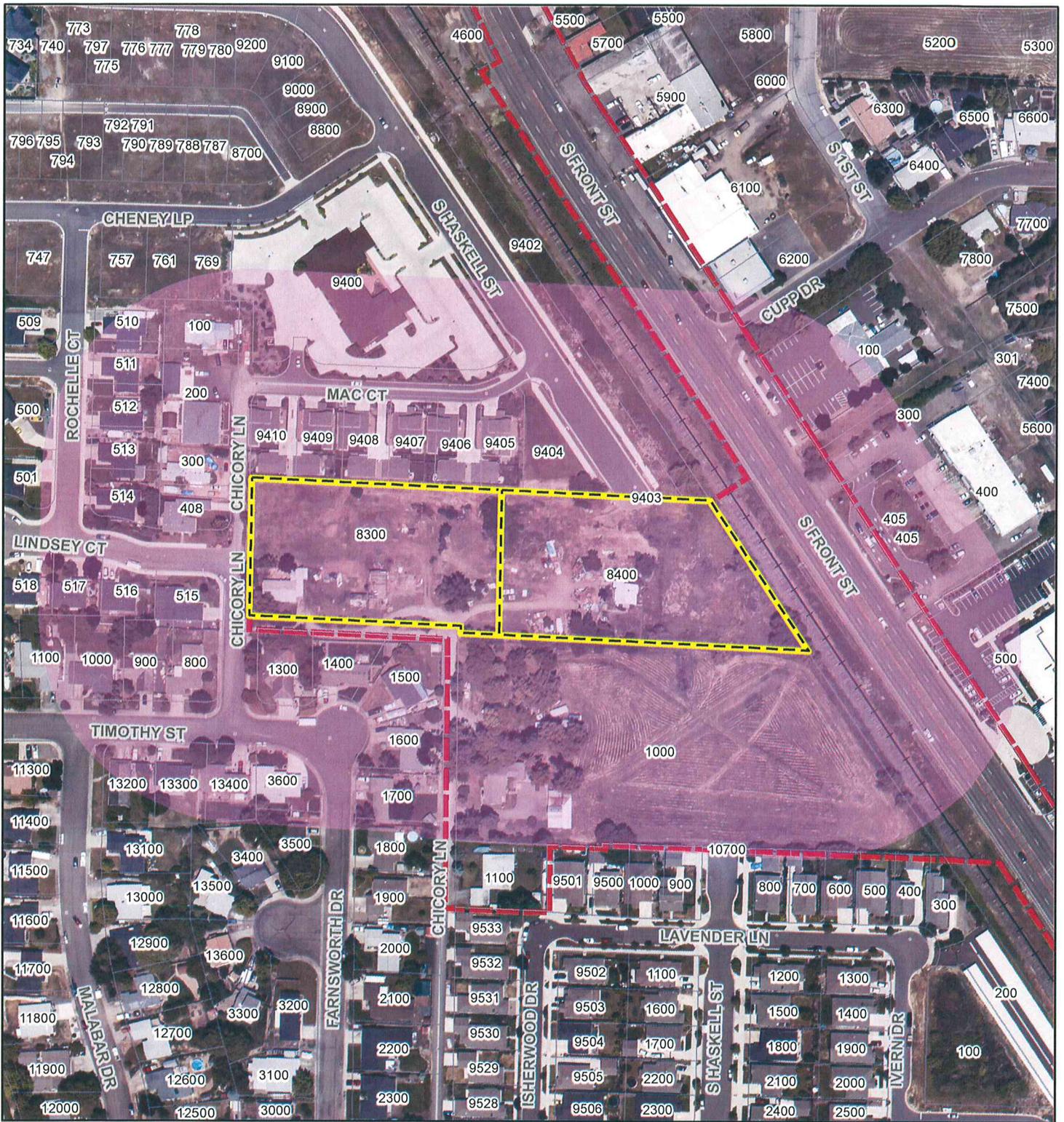
My commission expires 6-10-06

EXHIBIT 'A'

Commencing at the Northeast corner of Lot "K" of Snowy Butte Orchards, Jackson County, Oregon, according to the official plat thereof, now of record, which said point is on the Southwesterly right-of-way line of the Southern Pacific Railroad; thence run South 35°08' East along said right-of-way line 528.68 to a 1" iron pin; thence North 89°27' West 300.77 feet for the true point of beginning; thence North 89°27' West 358.83 feet more or less to the Westerly boundary line of said Lot "K"; thence South 0°01' West 222.24 feet, more or less, to the Southwesterly corner of said Lot "K"; thence South 89°58' East 357.85 feet to a point which bears North 89°58' West 454.04 feet from the Southeast corner of said Lot; thence North 0°01' East 222.24 feet, more or less to the point of beginning.

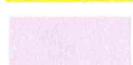
(Map No. 372W11C, Tax Lot 8300, Account No. 1-017631-0, Code 6-2)

2

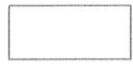


Subject Lots

2012 Aerial



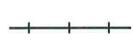
300-Foot Buffer



Tax Lots



City Limits



Railroad

300-Foot Radius Map

Annexation / Zone Change
 Bob Fellows Construction, LLC
 37-2W-11C tax lots 8300 & 8400



CSA Planning, Ltd.

200 100 0 200 Feet





CSA Planning, Ltd
 4497 Brownridge, Suite 101
 Medford, OR 97504
 Telephone 541.779.0569
 Fax 541.779.0114
 Jay@CSAplanning.net

July 6, 2017

City of Central Point
 140 S. 3rd Street
 Central Point, OR 97502

RE: **Files Annex-17001, CPA-17002, and ZC-17001**

Dear Mr. Humphrey:

CSA Planning is in receipt of your letter dated May 19, 2017. That letter raised three issues concerning the above captioned land use applications (items 2 & 3 in the letter essentially concern the same matter). This letter addresses these issues as follows:

1. **Pre-Application Issue:** The Pre-Application meeting was held on June 28, 2017. Attendees were Tom Humphrey, Matt Samitore, Don Burt, Molly Bradley, Bob Fellows, Bev Thruston and Jay Harland.
2. **Traffic Impact Analysis Issue:** Applicant has engaged Southern Oregon Traffic Engineering to provide evidence from a traffic engineer that can be labelled "TIA". The Transportation Impact Analysis is submitted under cover of this letter.
3. **Committed Residential Density Issue:** The City's May 17th letter requests the Applicant provide additional findings that address the Regional Plan Element Section 4.1.5¹. At the June 28 meeting, this issue was discussed in some depth. At the meeting, the City agreed to provide the Applicant with draft calculation methodologies relating to density commitments in Section 4.1.5 and housing construction historical data. The same was provided by email in the form of the below text and tables:

The below table is the latest inventory of vacant residential acreage within the urban area. The table includes the current minimum net density for each zoning district and adjusts that number by a factor of 1.25 to get gross. The 1.25 is based on the State's safe harbor 25% figure for right-of-way. The table also takes into consideration the Fellows adjustments (last two columns) in the LMR (3.64+) and MMR (3.64-) districts. As you can see the change in the average gross density remains well above the 6.9 figure.

**Average Gross Density Calculation
 City of Central Point**

Zoning District	Min. Net Density	Min. Gr. Density ¹	Gross Vacant Acres in Urban Area	% Distribution	Build-Out DU Yield	Fellows Adjusted Gr. Acres	Fellows Adjusted Build-Out DU Yield
RL	1	1.25	4.25	3%	5	4.25	5
R-1-6	4	5	10.88	8%	54	10.88	54
R-1-8	3	3.75	3.86	3%	14	3.86	14
R-1-10	2	2.5	3.13	2%	8	3.13	8
R-2	6	7.5	37.99	27%	285	37.99	285
R-3	14	17.5	3.52	3%	62	3.52	62
LMR	6	7.5	15.44	11%	116	19.08	143
MMR	14	17.5	46.21	33%	809	42.57	745
HMR	30	37.5	13.50	10%	506	13.50	506
			138.79	100%	1,859	138.79	1,823
			Average Gr. Density		13.40		13.13

¹ Min. Net Density adjusted by 1.25 for ROW

Source: City of Central Point Buildable Lands Inventory



City of Central Point
Housing Construction by Housing Type and Zoning, City Limits 1980-2016

Zoning	1980 Dwelling Units								Total Housing Units	% of Total
	SFR Detached	SFR Attached	Duplex	Triplex	MFR	Mobile Home	Mobile Home Park	Care Facility		
	R-L	30	-	-	-	-	-	-		
R-1-10	71	-	-	-	-	-	-	-	71	2%
R-1-8	896	-	-	-	-	2	-	-	898	21%
R-1-6	1,145	-	-	-	-	3	-	-	1,148	27%
R-2	426	4	68	-	-	-	-	-	498	12%
R-3	334	-	171	12	222	65	221	-	1,025	24%
LMR	370	4	12	-	-	-	-	-	386	9%
MMR	113	12	2	-	75	-	-	15	217	5%
HMR	-	16	-	-	10	-	-	-	26	1%
Dwelling Units	3,385	36	253	12	307	70	221	15	4,299	
Percentage of Total	78.7%	0.8%	5.9%	0.3%	7.1%	1.6%	5.1%	0.3%		100%

4. **Committed Residential Density Supplemental Findings:** Based upon the above information provided by the City, the Applicant herewith provides the following supplemental findings related to this issue:

- a. The Applicant seeks the LMR zoning because the market demand is for single-family dwellings as has been the case over the last 37 years. Over 78 percent of the houses constructed during that period have been detached single family dwellings. The Applicant/Owner seeks to construct single family dwellings on the site as the predominant housing type consistent with historical the market demands in Central Point. The LMR designation will allow this to occur.

Moreover, when the housing type market data in the second table is compared to the land supply data in first table, it appears that Central Point is considerably overweight with respect to land in the multi-family designations. The MMR, HMR and R-3 zones comprise 45.5% of the total vacant land supply when just over 20% of total housing, by type constructed is multi-family. This is born-out by an estimated build-out under the *minimum* densities of over 13 units to the gross acre.

This condition makes a strong case that many other properties, in addition to the Fellows property, should be re-designated to a lower density residential designation to better balance RPS density commitments with the City’s Goal 10 Housing obligations.

- b. With respect to the density requirements at Regional Plan Element Section 4.1.5, the Applicant’s position is that the language and context of Section 4.1.5 concerns City-wide density commitments. As such, plan amendments such as the one proposed here relate only to the effect the individual change is projected to have on the City-wide density obligations. According to the math in the above table, the City’s currently planned densities exceed the minimum density requirement in RPS by almost double (an additional 6.5 units to the acre) and the proposed amendment would still result in the City having a planned minimum density that would be approximately 6.23 units to the acre *above* the minimum requirement.

5. **Site Density Effects If Draft Gross Density Standards of LMR Are Adopted:** Notwithstanding Applicant’s position in 4(b) above that Regional Plan Element Section 4.1.5 concerns the City as a whole and that the proposed change has a nominal effect on the City’s ability to meet those density commitments, the Applicant would like to work with the City on advancing its density objectives.



The Applicant has done some more specific design work for the site, see the attached design concept. The Applicant envisions a project that can deliver 21 dwelling units. Applicant is willing to stipulate to a condition of the zone change that would require delivery of at least 21 units on the site.

The design work for the site results in approximately 2.16 net developable acres for residential development. Because of all the infrastructure requirements for this particular site, the net-to-gross factor for this site is approximately 1.68. This is 35% more than the assumption in the City's calculations above. The City's proposed net-to-gross factor of 1.25 would typically be associated with a site of approximately 2.7 gross acres where the site yields 2.16 net developable acres, as follows:

$$2.16 \text{ (net acres)} \times 1.25 \text{ (net - to - gross factor)} = 2.7 \text{ (gross acreage assumption)}$$

If the site were 2.7 acres then the minimum density requirement above of 7.5 units to the gross acre contemplated by the City in its draft calculations would be satisfied with the stipulated 21 dwelling units:

$$2.7 \text{ (gross acres)} \times 7.5 \text{ (gross density contemplated)} = 20.25 \text{ dwelling units}$$

In this instance, 0.80 additional acres on a small project is being devoted to the delivery of key infrastructure by working with Public Works on the Haskell Street improvements. This needed connection will eventually benefit the entire City and this will in turn support the City's goals to comply with Goal 10 and implement its TSP. We believe the minimal effect on the City's overall density objectives should be weighed in favor of moving this key infrastructure connection forward in a collaborative manner with the property owner.

The Applicant believes the stipulated minimum supply of 21 dwelling units represents an appropriate balance between market demand for single-family homes, attainment of the draft minimum density standards being developed by staff to implement Regional Plan Element Section 4.1.5 and compliance with the current density regulations in the LMR District which would allow for as few as 13 dwelling units.

Very Truly Yours,

CSA Planning, Ltd.

Jay Harland
Principal

¹ Applicant Reserves the right for his attorney to argue this provision is inapplicable to the subject application under the applicable case law, i.e. *Bennett vs. The City of Dallas*, and subsequent cases.

PLANNING COMMISSION RESOLUTION NO. 846

**A RESOLUTION FORWARDING A FAVORABLE RECOMMENDATION TO
THE CITY COUNCIL TO APPROVE THE REZONING OF 3428 AND 3470
CHICORY LANE FROM TOD-MMR/R-3 TO TOD-LMR/R-2**

**Applicant: Bob Fellows Construction, LLC;
Agent: CSA Planning, Ltd.**

**(37S 2W 11C, Tax Lots 8300 & 8400)
File No. ZC-17001**

WHEREAS, the Comprehensive Plan Land Use Map designates 3428 and 3470 Chicory Lane as TOD Corridor; and

WHEREAS, the proposed Zone Map amendment from TOD-MMR/R-3 to TOD-LMR/R-2 zoning designation on property located at 3428 and 3470 Chicory Lane constitutes a minor amendment per CPMC 17.10.300(B); and ,

WHEREAS, on September 5, 2017, at a duly noticed public hearing, the Central Point Planning Commission considered the Application, at which time it reviewed the Staff Report and heard testimony and comments on the minor Zone Change Application; and,

WHEREAS, the Planning Commission’s consideration of the application is based on the standards and criteria applicable to Minor Zone Map Amendments per Section 17.10.400, and the findings of fact and conclusions of law incorporated herein (Exhibit “A”); and,

WHEREAS, As evidenced in the findings of fact and conclusions of law (Exhibit “A”), the proposed zone map amendment is consistent with applicable standards and criteria in the Central Point Municipal Code, including the statewide Planning Goals (where applicable), the Comprehensive Plan, and Statewide Transportation Planning Rule.

NOW, THEREFORE, BE IT RESOLVED, that the City of Central Point Planning Commission, by this Resolution No. 846, does hereby recommend that the City Council approve the Zone Change from TOD-MMR/R-3 to TOD-LMR/R-2. This decision is based on the findings of fact and conclusions of law as set forth in Exhibit “A”, and attached hereto by reference and incorporated herein.

PASSED by the Planning Commission and signed by me in authentication of its passage this 5th day of September, 2017.

Planning Commission Chair

ATTEST:

City Representative

Approved this ____ day of September, 2017.

Planning Commission Chair