City of Sutherlin
Planning Commission Meeting
Tuesday, April 21, 2020
7:00 p.m. – Sutherlin Civic Auditorium
Agenda

Pledge of Allegiance

Introduction of Media

Approval of Minutes

February 18, 2020 – Regular Meeting

Approval of Findings of Fact and Decision

1. **BEN CLAPA,** request for a Zone Map Change from (M-1) Light Industrial to (MU) Mixed Use on a 13.07 acre property. **PLANNING DEPARTMENT FILE NO. 19-S015**

Legislative Public Hearing(s)

1. **TRANSPORTATION SYSTEM PLAN (TSP) MASTER PLAN**, request for a legislative amendment to the Sutherlin Comprehensive Plan and an amendment to the Sutherlin Development Code to be consistent with the 2020 TSP. **PLANNING DEPARTMENT FILE NO. 20-S003.**

Quasi-Judicial Hearing(s)

1. **COOPER CREEK ESTATES LLC,** request for a Comprehensive Plan Map Amendment from Low Density Hillside to Medium Density, Zone Map Change from (RH) Residential Hillside to (R-2) Medium Density Residential together with a Land Partition on a 1.31 acre property located on South Side Road and inside the City of Sutherlin. The subject property is described as Tax Lot(s) 3400 and 3500 in Section 21BA, T25S, R5W, W.M.; Property I.D. No(s). R131991 and R131992. **PLANNING DEPARTMENT FILE NO. 20-S002.**

Monthly Activity Report(s)

Public Comment

Commission Comments

Adjournment

CITY OF SUTHERLIN
PLANNING COMMISSION MEETING
CIVIC AUDITORIUM – 7:00 PM
TUESDAY, FEBRUARY 18, 2020

COMMISSION MEMBERS PRESENT: William Lee, Richard Price, Adam Sarnoski, Collin Frazier, Sam Robinison and Norm Davidson

COMMISSION MEMBERS EXCUSED: Elainna Swanson

COMMISSION MEMBERS ABSENT:

CITY STAFF: Kristi Gilbert, Community Development Supervisor and Jamie Chartier, City Planner

AUDIENCE: Chad Mast

Meeting called to order at 7:00 pm by Chair Lee.

APPROVAL OF MINUTES

A motion made by Commissioner Robinson to approve the minutes of the January 21, 2020 Planning Commission meeting; second made by Commissioner Frazier.

In favor: Commissioners Sarnoski, Frazier, Robinson, Price, Davidson and Chair Lee
Opposed: None
Excused: None
Motion carried unanimously

APPROVAL OF FINDINGS OF FACT(S)

1. **NICK ALLISON**, request for a Comprehensive Plan Map Amendment from Medium Density to High Density and Zone Map Change from (R-2) Medium Density Residential to (R-3) Multi-family Residential, along with a 20-Lot Subdivision on a 1.71 acre property. **PLANNING DEPARTMENT FILE NO. 19-S016**

A motion was made by Commissioner Price to approve the Findings of Fact for NICK ALLISON, request for a Comprehensive Plan Amendment from Medium Density to High Density, Zone Map Change from (R-2) Medium Density Residential to (R-3) Multi-family Residential on a 1.71 acre property (File No. 19-S016) presented at the January 21, 2020 Planning Commission meeting; motion seconded by Commissioner Davidson.
In favor: Commissioners Sarnoski, Price, Frazier, Davidson, Robinson and Chair Lee
Opposed: None
Motion carried unanimously

2. **MID OREGON BUILDERS,** request for a Major Amendment to Lot 68 of Fairway Estates at Umpqua Golf Resort PUD (PUD-2007-03-16) to the required exterior side (15’ to 13’9”) and front (15’ to 11’8”) setbacks. **PLANNING DEPARTMENT FILE NO. 19-S018**

A motion was made by Commissioner Price to approve the Findings of Fact for MID OREGON BUILDERS, request for a Major Modification to Lot 68 of Fairway Estates at Umpqua Golf Resort PUD (PUD-2007-03-16) to the required exterior side (15' to 13'9") and front (15' to 11'8") setbacks (File No. 19-S018) presented at the January 21, 2020 Planning Commission meeting; motion seconded by Commissioner Frazier.
In favor: Commissioners Sarnoski, Price, Frazier, Robinson, Davidson and Chair Lee
Opposed: None
Motion carried unanimously

QUASI-JUDICIAL PUBLIC HEARING(s)

1. **BENJAMIN CLAPA,** request for a Zone Map Change from (M-1) Light Industrial to (MU) Mixed Use on a 13.07 acre property. **PLANNING DEPARTMENT FILE NO. 19-S015**

Chair Lee opened the hearing, with the disclosure (legal) statement; all persons testifying shall be deemed parties to appeal the application and must provide full name and mailing address if they wish to be notified of the decision, continuances, appeals, or procedural actions required by the Code. The Sutherlin Development Code specifies applicable criteria to be relied upon in making a decision.

Chair Lee asked the Commission if there were any conflicts of interest or personal bias; Commissioner Robinson declared he could potentially have ex parte conflict. Lee asked the audience if there were any challenges of impartiality of any person(s) on the Commission. Hearing none, Lee asked for the Staff Report.

Jamie Chartier, City Planner, entered Staff Exhibits 1-11, along with the Staff Report and stipulated to the record.

APPLICANT'S TESTIMONY

Chad Mast, representative for the applicant/titleholder, concurred with the Staff Report submitted.

TESTIMONY IN FAVOR

No testimony in favor.

TESTIMONY IN OPPOSITION

No testimony in opposition.

RECEIVE NEUTRAL

No neutral testimony present.

APPLICANT'S REBUTTAL

No rebuttal was necessary.

With no further testimony, Chair Lee closed the public hearing portion for this application. Commissioner Robinson stated he is pleased to see this happening and will be good for the community.

A motion was made by Commissioner Robinson to approve of the Zone Map Change from (M-1) Light Industrial to (MU) Mixed Use per staff's recommendation of Action Alternative No. 1, with the condition of approval; Commissioner Davidson seconds the motion.

In favor: Commissioners Price, Frazier, Robinson, Sarnoski, Davidson and Chair Lee
Opposed: None
Motion carried unanimously

COMMISSION COMMENTS – Commissioner Robinson asked about the construction at the Truss Company property. Staff stated they got a worksheet approval to replace the building damaged in last year's snow storm.

ADJOURNMENT - With no further business the meeting was adjourned at 7:15 pm.

Respectfully submitted,

_____
Jamie Chartier, City Planner

APPROVED BY COMMISSION ON THE _____ DAY OF _____, 2020.

_____
William Lee, Commission Chair

BEFORE THE PLANNING COMMISSION OF THE CITY OF SUTHERLIN

IN THE MATTER of a request for a Zone Map Change for a parcel located at 210 Crestview Street and identified by the Douglas County, Tax Lot(s) 1800 & 1898 in Section 19B and Tax Lot(s) 100 & 500 in Section 19BC all in T25S, R5W, W.M., Property ID No's R22048, R22064, R47105 & R47098 Property owner: Benjamin Clapa	]]]]]]]	**FINDINGS OF FACT AND DECISION** Applicant: Benjamin Clapa Subject: Zone Change File No.: 19-S015

PROCEDURAL FINDINGS OF FACT

1. The Zone Map Change application was filed with the City on November 18, 2019, and deemed complete on December 3, 2019.

2. Pursuant to Sections 4.2.150.D.4 and 4.2.140.C of the Sutherlin Development Code, notice of the public hearing was given by publication in the *News Review* on January 7, 2020, which was at least fourteen (14) days prior to the date of the public hearing.

3. Notice of a Public Hearing on an application for the Zone Map Change before the Planning Commission was given in accordance with Sections 4.2.140.C. Notice was sent to affected property owners of record within 100 feet of the subject property, service providers, and governmental agencies on December 11, 2019. Applicant requested a continuance on January 7, 2020, a memo was sent out to all applicable parties on January 7, 2020 noting the hearing change to February 18, 2020. Four written comments were received after the mailing of the Staff Report.

    a. Micah Horowitz, Senior Transportation Planner with Oregon Department of Transportation (ODOT), provided comments regarding the proposal, a condition of approval was added to note development exceeds 70 PM peak hour trips, then a full Traffic Impact Analysis is required. This shall be reviewed and approved by ODOT.
    b. Bobbie Jo Srikureja, Brenda A. Robinson and Michael Robinson, all adjacent property owner(s)/neighbors' all commented regarding a recent sanitary sewer line extension. These comments are noted, but do not hinder the approval criteria for this zone change application.

4. The Planning Commission held a public hearing on this matter on February 18, 2020.

5. At the public hearing on February 18, 2020, Planning Commissioner Sam Robinson declared a potential ex parte/conflict of interest. There were no other declarations of ex parte contact or other conflicts of interest made by the Planning Commission. No objections were raised and the Commission was qualified to hear the matter.

6. The Planning Commission declared the following as parties to the hearing:
    a. Chad Mast, representative for the applicant/titleholder
    b. Oregon Department of Transportation (ODOT), Micah Horowitz

7. Reference was made to the February 11, 2020 Staff Report, and findings of fact addressing conformance to the applicable criteria of the Statewide Planning Goals, the applicable goals and

policies of the Sutherlin Comprehensive Plan, and the applicable criteria of the Sutherlin Development Code.

8. Planning Staff presented the Staff Report dated February 11, 2020 and entered Staff Exhibits 1-11 and stipulated to the record.

9. The representative for the applicant and titleholder, Chad Mast, concurred with the Staff Report submitted.

10. The Planning Commission provided opportunity to receive clarifying questions and oral testimony from persons in favor and in opposition to the application. No persons were present.

11. The Planning Commission provided opportunity to receive clarifying questions and oral testimony in rebuttal to the application. No testimony was given.

12. The Planning Commission closed the public portion of the hearing and commenced discussion on the application.

FINDINGS OF FACT RELATED TO DECISION

1. The Planning Commission expressed no objections to the proposed Zoning Map Change.

FINDINGS OF FACT

Finding No. 1. The Planning Commission finds the subject property is designated Light Industrial in the Sutherlin Comprehensive Plan and zoned Light Industrial (M-1) in the Sutherlin Development Code.

Finding No. 2. The Planning Commission adopts by reference the findings of the Staff Report dated February 11, 2020.

Finding No. 3. The Planning Commission finds, based upon the staff report, application materials and the oral testimony provided, that the requested Zoning Map Change from Light Industrial (M-1) to Mixed Use (MU) is consistent with the applicable Statewide Planning Goals, and that no exceptions to the goals were proposed.

Finding No. 4. The Planning Commission finds, based upon the staff report, application materials and the oral testimony provided, that the requested zoning map change is consistent with the applicable general goals and policies of the Sutherlin Comprehensive Plan and its implementing ordinances, including those related to Natural Features, Population, Air Water and Land Resource Quality, Natural Hazards, Recreational Needs, Economy, Housing, Public Facilities and Services, Transportation System, including Pedestrian and Bicycle Transportation, Energy Conservation and Land Use and Urbanization.

Finding No. 5. The Planning Commission finds, based upon the staff report, application materials and the oral testimony provided, that the proposed amendment is consistent with the applicable criteria of Section 4.8 [Zoning Amendments] of the Sutherlin Development Code. The applicant has demonstrated consistency with the Comprehensive Plan, including inventory documents and facility plans. The subject 13.07 acre property is located in an area of mixed residential, commercial and

industrial properties and development. Public facilities and services are available, and currently serve the subject property and its development.

Finding No. 6. The Planning Commission further finds that the applicant has demonstrated that the most intense uses and density that would be allowed outright in the proposed MU zone, considering the existing industrial development on the subject property and can be or are already served by the orderly extension of urban services, and that the proposed amendment is consistent with OAR 660-012-0060.

Finding No. 7. The Planning Commission finds that the proposed amendment from Light Industrial to Mixed Use is not the result of a mistake or inconsistency, but will be consistent with the existing pre-existing commercial and light industrial uses surrounding the subject property.

CONCLUSION

1. A motion was made by Commissioner Robinson to recommend approval with the condition and seconded by Commissioner Davidson to approve the requested Zoning Map Change from Light Industrial (M-1) to Mixed Use (MU) on the 13.07 acre property. The motion passed unanimously.

2. The Commission adopts the findings of the staff report in support of their decision.

NOW, THEREFORE, based upon the foregoing findings of fact and the oral testimony provided, the Sutherlin Planning Commission **APPROVES** the requested Zoning Map Change from Light Industrial (M-1) to Mixed Use (MU) on the 13.07 acre property located at 210 Crestview Street, subject to the following condition:

CONDITION:

1. Future development on the subject property shall not exceed 70 PM peak hour trips. As such, a full Traffic Impact Analysis shall be conducted by the property owner/developer at such time as the subject property exceeds the 70 PM peak hour trips and reviewed and approved by Oregon Department of Transportation (ODOT).

DATED THE _____ DAY OF _____, 2020.

_____

WILLIAM LEE, CHAIR

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Community Development
126 E. Central Avenue
Sutherlin, OR 97479
(541) 459-2856
Fax (541) 459-9363
www.ci.sutherlin.or.us

City of Sutherlin

March 10, 2020

STAFF REPORT

TO: Sutherlin Planning Commission

FROM: Kristi Gilbert, Community Development Supervisor

RE: **TRANSPORTATION SYSTEM PLAN (TSP) MASTER PLAN**, request for a legislative amendment to the Sutherlin Comprehensive Plan and an amendment to the Sutherlin Development Code to be consistent with the 2020 TSP. **PLANNING DEPARTMENT FILE NO. 20-S003.**

STAFF EXHIBITS

1. Notice of Public Hearing
2. DLCD Notice of Proposed Amendment
3. Routing Sheet
4. Copy of legal notice posted in the *News Review*
5. Staff Report with Responses Attached
6. Draft –Transportation System Plan – Volume 1
7. Technical Memorandum #7: Policy and Code Amendment Recommendations

INTRODUCTION

The Sutherlin transportation system plan (TSP) is a long-range plan that sets the vision for the city's transportation system, facilities, and services to meet state, regional, and local needs for the next 20 years. The purpose of the 2020 TSP update is to address growth in Sutherlin as well as address regulatory changes that have occurred in the region since 2005. The TSP addresses compliance with new or amended federal, state, and local plans, policies and regulations including the Oregon Transportation Plan (OTP), the state's Transportation Planning Rule (TPR), the Oregon Highway Plan (OHP), and presents the investments and priorities for the Pedestrian, Bicycle, Transit, Motor Vehicle, and other transportation systems.

On April 21, 2020, the Planning Commission will conduct a public hearing on the proposed legislative amendment. The Planning Commission will accept public testimony and provide recommendations on the legislative amendments, forwarding those recommendations to the

City Council for their consideration. The City Council is scheduled to conduct a public hearing on the proposed amendments at their meeting on Monday, May 11, 2020.

PROJECT BACKGROUND

The TSP serves as the transportation element of the Sutherlin Comprehensive Plan. The Comprehensive Plan guides the community's land use, conservation of natural resources, economic development, and public facility investment. It establishes roadway classifications and standards for mobility performance, access management, and streets designs. It also identifies multimodal improvements to address the city's transportation needs over the next 20 years.

Sutherlin's last TSP was prepared and adopted in 2005. Since then, Sutherlin has experienced steady residential growth in the west and southeast portions of the City while recent land use and UGB modifications were adopted that will potentially accommodate more significant levels of growth in areas with multi-modal infrastructure needs.

In 2009, an Interchange Area Management Plan (IAMP) plan was prepared for the Exit 136 interchange area. The IAMP is an ODOT Facility Plan adopted by the Oregon Transportation Commission (OTC) and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 interchange influence area. This plan, along with several other smaller transportation planning efforts needed to be comprehensively integrated into the larger transportation plan. To address these changes, a TSP update was prepared that focuses on the following modes: Pedestrian, Bicycle, Transit, Vehicle and other modes.

PROCESS

The TSP update process began with a review of local, regional, and statewide plans and policies that guide land use and transportation planning in the City. Goals, objectives, and evaluation criteria were then developed to guide the evaluation of existing and future transportation system conditions as well as the development of planned improvements. An inventory of the multimodal transportation system was then conducted to serve as the basis for the existing and future conditions analyses. The existing and future conditions analyses focused on identifying gaps and deficiencies in the multimodal transportation system based on current and forecast future performance. For each gap and deficiency, several solutions were evaluated to address the system needs. This process led to the development of a large number of plans, programs, and projects. The plans, programs, and projects were then prioritized using the project evaluation criteria and organized into different prioritized project lists.

The TSP Update was developed in close coordination with city staff along with key stakeholders and representatives from the community including the project advisory committee (PAC). The makeup of the PAC consisted of representatives from the City of Sutherlin Community Development Department, Douglas County Planning Department and Public Works Engineering Department, Oregon Department of Transportation (ODOT), Umpqua Public Transportation District (UPTD), Sutherlin School District, Sutherlin City Council, Sutherlin Planning Commission, Sutherlin Police Department, Sutherlin Fire Department, Oregon Department of Land Conservation and Development, Sutherlin Area Chamber of Commerce, Sutherlin Sanitary Service, Friends of Ford's Pond, and Cow Creek Tribe. The PAC provided technical guidance and coordination throughout the project, reviewed and provided feedback on technical memorandums, and attending community meetings and workshops.

Opportunities for public involvement were made available throughout the TSP update process. The opportunities consisted of a kick-off meeting and site visit, web-based communications about upcoming committee meetings and the project website. The project team met with the PAC five (5) times throughout the TSP update process and held two public open houses. Each PAC meeting was open to the general public. The goal of the public involvement process was to develop a TSP Update that addressed the gaps and deficiencies in the transportation system while meeting the needs of the community.

PROCEDURAL FINDINGS OF FACT

1. DLCD Notice of Proposed Amendment was submitted electronically to the Department of Land Conservation and Development on February 11, 2020, which was at least 35 days prior to the first evidentiary public hearing on April 21, 2020.

2. Pursuant to Sections 4.2.150.D.4 and 4.2.140.C, notice of the public hearing was given by publication in the News Review on March 3, 2020, which was at least fourteen (14) days prior to the date of the public hearing.

3. Notice of a Public Hearing for the Comprehensive Plan Amendment to update the 2005 Transportation System Plan and an amendment to the Sutherlin Development Code, before the Planning Commission was given in accordance with Sections 4.2.150.D.4 and 4.2.140.C. Notice was sent to service providers, and governmental agencies on February 24, 2020 and April 1, 2020, due to the COVID-19 cancellation. As of the writing of this staff report, two comments were received:

    a. Tom Guevara, Oregon Department of Transportation (ODOT) Region 3, submitted a letter finding that the 2020 TSP Update is consistent with the Oregon Transportation Plan and Statewide Modal and Topic Plan with minor text changes, based on the collaborative work between ODOT, City of Sutherlin and the consultants Kittelson & Associates. It also advises that ODOT's participation in the development of the TSP Update does not constitute a commitment to fund and/or construct projects on State facilities as outlined in the letter.

    b. Jevra Brown, Department of State Lands, Aquatic Resource Planner, submitted an email stating "*If you/The City have questions about planning around aquatic resources, please contact me, or continue to work with other DSL staff if you already are. Sutherlin has a Local Wetlands Inventory. Keep in mind that the age of the inventory indicates that the goal boundary accuracy was +/- 25 feet and boundaries may have changed in the intervening 19 years since the inventory was finalized. If the TSP includes areas outside of the LWI study area then use the updated SWI for those areas.*"

FINDINGS

1. The following Statewide Planning Goals have been considered by the City of Sutherlin in the formation of the language contained within this request:

    Citizen Involvement (Goal 1)
    Objective: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

Finding: This application complies with the citizen involvement and environmental justice processes, included in the City's acknowledged Comprehensive Plan and Development Code, which is consistent with Statewide Planning Goal 1. The Planning Commission and City Council will hold public hearings on the proposal prior to adopting the TSP and amendments to the Comprehensive Plan and Land Development Code. Notice of the proposal and hearings was published in the local newspaper on March 3, 2020. The proposal was mailed to the Department of Land Conservation and Development on February 11, 2020, in advance of the March 17, 2020 Planning Commission hearing.

As noted above, opportunities for public involvement and environmental justice were made available throughout the TSP update process. The opportunities consisted of a kick-off meeting and site visit, web-based communications about upcoming committee meetings and the project website. The project team met with the PAC five (5) times throughout the TSP update process and held two public open houses. Each PAC meeting was open to the general public. The goal of the public involvement process was to develop a TSP Update that addressed the gaps and deficiencies in the transportation system while meeting the needs of the community.

This application process complies with Title VI, stating that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity.

Land Use Planning (Goal 2)
Objective: 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.

Finding: Planning staff submitted electronic notice to the Department of Land Conservation and Development on February 11, 2020, which was at least 35 days prior to the first evidentiary public hearing on April 21, 2020. The proposal is to adopt the 2020 Transportation System Plan, and to amend the Comprehensive Plan and Development Code, consistent with the City's regulations regarding legislative land use decisions. Legislative decisions first require a Planning Commission recommendation to the City Council, which then makes a decision based on stated findings. The Planning Commission and City Council hearings are open to the public. The Planning Commission hearing is scheduled for April 21, 2020, and City Council hearing will be held on May 11, 2020. This action complies with Goal 2.

Economic Development (Goal 9)
Objective: To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

Finding: Multiple projects have been identified and prioritized in the financially constrained plan which, collectively, seek to improve intersections, roadways, sidewalks, and bicycle facilities near employment areas. Amendments to the Development Ordinance requires improvements with development that encourage low-cost alternative transportation, which has the potential to decrease traffic congestion on the city's streets.

Public Facilities and Services (Goal 11)

Objective: 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.

Finding: The TSP provides guidance for managing, operating, and improving the transportation system, a public facility providing multi-modal accessibility, through the year 2040. The TSP documents existing conditions and future needs for the City's transportation system. Proposed improvements and implementation measures have been tailored as the means to meet those future needs, primarily to improve safety and increase efficiency of existing roadways.

Proposed amendments to the Development Code include requirements for including a Transportation Impact Study (TIS) as part of a land use application. A TIS is intended to help City staff determine whether conditions are needed to protect and minimize impacts to, and preserve the intended function of transportation facilities within the City.

The TSP was guided by and developed to be consistent with current transportation goals and policies found in the Comprehensive Plan. In addition, the goals and policies are proposed to be updated to reflect the project goals and objectives.

Transportation (Goal 12)
Objective: To provide and encourage a safe, convenient and economic transportation system.

Finding: The TSP provides a comprehensive, long-term guide for City transportation improvement investments over a 20-year period. The TSP's multi-modal, network-wide approach, prioritizes projects which benefit driving, bicycling, walking, and transit use. Multiple projects would improve connectivity, safety, and mobility for drivers within the City. More numerous are projects that benefit non-motorized modes, including sidewalk and crossing projects to create seamless connections for pedestrians throughout the City and biking projects for creating an integrated network of bicycle lanes and marked on-street routes. Transit projects are identified that would enhance the quality and convenience for transit passengers.

In addition, transportation-related amendments to the Comprehensive Plan and Development Code will increase the City's ability to implement the TSP. Amendments to the Comprehensive Plan include goals and policies that will guide future land-use decisions, and which reflect the project goals and objectives, which were collaboratively developed through the TSP update process. Amendments to the Development Code provide additional standards to promote pedestrian and bicycle circulation, requirements for traffic impact studies, and ensure future amendments to the Comprehensive Plan, Development Code, or Zoning Map are consistent with the function and classification of roadways in the TSP.

Statewide Planning Goals 3-8, 10, and 13-19 are not applicable to this application.

2. The following Statutes, Rules, Comprehensive Plan Provisions and Implementing Ordinances have been considered by the City of Sutherlin in the formation of the language contained within this request:

OAR 660 Division 12 – Transportation Planning Rule (TPR):

The purpose of the TPR is to "implement Statewide Planning Goal 12 (Transportation) and promote the development of safe, convenient, and economic transportation systems that are designed to reduce reliance on the automobile so that the air pollution, traffic, and other livability problems face by urban areas in other parts of the country might be avoided." A major purpose of the TPR is to promote more careful coordination of land use and transportation planning, to ensure that planned land uses are supported by and consistent with planned transportation facilities and improvements.

660-012-0005 through 660-012-0055
These sections of the TPR contain policies for preparing and implementing a transportation system plan.

Finding: The 2020 TSP includes sections on existing conditions, future conditions, roadway classifications and corresponding standards, recommended improvements by mode, and a general funding plan as required by Section 660-012-0020 of the TPR. The TSP is a collection of current inventory, forecasts, past and current project ideas, decisions, and standards, which were developed collaboratively among various public agencies, the community, an advisory committee, and the project management team which consisted of City staff, ODOT, and consultants.

Updated transportation standards and development regulations are proposed to ensure future development or redevelopment of property is consistent with the TSP. Standards and regulations include functional classifications with associated street design and access spacing standards.

Elements of the TSP are implemented in the requirements of Sutherlin's Development Code. The code regulates land uses and development within City limits and implements the long-range vision of the Comprehensive Plan, of which the TSP is part. Proposed amendments to the Development Code are intended to protect the design and function of the transportation network, modify parking standards to include walkways and promote walking, and increase coordination among agencies (see full text of proposed amendments to the Development Code). Amendments are proposed in the following sections:

- Section 3.2.110 – Vehicular Access and Circulation
- Section 3.2.120 – Pedestrian Access and Circulation
- Section 3.4.120 – Vehicle Parking Standards
- Section 3.5.110 – Transportation Standards
- Section 4.2.140 – Type III Procedure
- Section 4.2.150 – Type IV Procedure
- Section 4.2.160 – General Provisions

Goals and Policies from the Sutherlin Comprehensive Plan

Finding: The 2020 Sutherlin TSP is intended to be adopted as the transportation element of the Sutherlin Comprehensive Plan. Transportation Goals and Policies within the Comprehensive Plan are proposed to be replaced entirely with the recommended Goals and Policies. The recommended amendments reflect issues identified through the TSP update and the need for consistency between the TSP and Comprehensive Plan. The City's existing transportation policies were adopted in the 2005 TSP. New language is principally based on

the draft TSP, however existing policies relevant to the TSP and City have been incorporated into the proposed language. Proposed policies also support related modifications to the Sutherlin Development Code.

Sutherlin Development Code – Section 4.11 AMENDMENTS TO THE SUTHERLIN DEVELOPMENT CODE

Section 4.11.110(C) APPROVAL PROCEDURES

C. Approval Criteria. The planning commission's recommendation and the city council's decision shall be based on the following approval criteria.

1. For a proposed amendment to the city's development code, the proposed amendment is consistent with applicable provisions of the comprehensive plan, including inventory documents and facility plans incorporated therein.

2. For a proposed amendment to a land use plan's text or map:

a. The proposed amendment is consistent with applicable statewide planning goals as adopted by the Land Conservation and Development Commission

Finding: The Planning Commission's recommendations and the City Council's decisions are based on applicable statewide planning goals and guidelines, federal and state statutes and rules, Comprehensive Plan policies, and provisions of the Sutherlin Development Code, as detailed in the findings.

The 2020 Sutherlin TSP is consistent with the remainder of the comprehensive plan, including inventory documents and facility plans incorporated therein.

RECOMMENDATION

Staff recommends approval of the draft adoption of the 2020 *Sutherlin Transportation System Plan (TSP)*. The reasons and rationale described within this report support the approval and adoption of the proposed Transportation System Plan and the Comprehensive Plan Text Amendments and Development Code Text Amendments.

Based on the information within the draft TSP and proposed amendments; applicable statutes, rules, comprehensive plan provisions and implementing ordinances, staff recommends that the Planning Commission recommend approval to the Sutherlin City Council to adopt the 2020 Sutherlin Transportation System Plan and proposed amendments to the Sutherlin Comprehensive Plan and Sutherlin Development Code, as supported therein.

DECISION OPTIONS

Based on the findings, the City Staff Report and the testimony and evidence provided during the public hearing, the Planning Commission can move to either:

1. Close the public hearing and, after deliberating on the matter, pass a motion to **recommend** to the City Council **approval** of the request for a legislative amendment to the Sutherlin Comprehensive Plan and an amendment to the Sutherlin Development Code to be consistent with the 2020 TSP; or

2. Close the public hearing and, after deliberating on the matter, pass a motion to **recommend** to the City Council approval of the request for a legislative amendment to the Sutherlin Comprehensive Plan and an amendment to the Sutherlin Development Code to be consistent with the 2020 TSP with suggested changes; or

3. Pass a motion to **continue the public hearing** to a specified date and time, or to close the public hearing and to leave the record open to a specified date and time for submittal of additional evidence and rebuttal; or

4. Close the public hearing and, after deliberating on the matter, pass a motion to **recommend denial** of the request for a legislative amendment to the Sutherlin Comprehensive Plan and an amendment to the Sutherlin Development Code to be consistent with the 2020 TSP on the grounds that the proposal does not satisfy the applicable approval criteria.

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DRAFT TRANSPORTATION SYSTEM PLAN

Date:	February 11, 2020
To:	Kristi Gilbert, Jamie Chartier, Brian Elliott, City of Sutherlin Thomas Guevara, Oregon Department of Transportation
From:	Matt Hughart, AICP, Nick Gross, and Caitlin Mildner, Kittelson & Associates, Inc.
Project:	Sutherlin Transportation System Plan (TSP) Update
Subject:	Draft – Transportation System Plan – Volume I

Project #: 22498

Note: This is a temporary Cover Page created for the purposes of distributing this draft of the Sutherlin Transportation System Plan. A formal Cover Page will be developed following internal review and refinement of the draft.

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SUTHERLIN TRANSPORTATION SYSTEM PLAN

DRAFT, January 2020

City of Sutherlin
126 E. Central Avenue
Sutherlin, Oregon 97479

Production and Technical Support Provided by:
Kittelson & Associates, Inc.
851 SW 6th Avenue, Suite 600
Portland, Oregon 97204

Angelo Planning Group
921 SW Washington Street, #468
Portland, Oregon 97205

This project is partially funded by a grant from the Transportation and Growth Management ("TGM") Program, a joint program of the Oregon Department of Transportation and Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Fixing America's Surface Transportation Act (FAST Act), Federal Transit Administration, and State of Oregon funds.

The inclusion of an improvement in this Transportation System Plan does not represent a commitment by the City of Sutherlin or Oregon Department of Transportation to fund, allow, or construct the project. Projects on the State of Oregon highway system that are contained in the TSP Update are not considered "planned" projects until they are programmed into the STIP. As such, projects in the TSP Update that are located on state highways cannot be considered for future development or land use actions until they are programmed into the STIP, or ODOT provides a written statement that a project is "reasonably likely" to be funded in the STIP. State highway projects that are programmed to be constructed may have to be altered or cancelled at a later time to meet changing budgets or unanticipated conditions such as environmental constraints. The contents of this document do not necessarily reflect views or policies of the State of Oregon.

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ACKNOWLEDGEMENTS

The development of the Sutherlin Transportation System Plan (TSP) was guided by the Project Management Team (PMT) and a volunteer Project Advisory Committee (PAC). The City of Sutherlin would like to thank each of these individuals who devoted their time, expertise, and local insight into the development of the plan.

PROJECT MANAGEMENT TEAM

City of Sutherlin

- Kristi Gilbert, Community Development Supervisor
- Jamie Chartier, City Planner
- Brian Elliott, Community Development Director
- Aaron Swan, Public Works Director

Oregon Transportation of Transportation

- Thomas Guevara, Jr., Contract Manager

PROJECT ADVISORY COMMITTEE (PAC)

- Wendy Fennell
- Tom Boggs
- Richard Price
- Kurt Sorenson
- Mike Lane
- Joshua Shaklee
- Joshua Heacock
- Cheryl Cheas
- Josh LeBomard
- Tami Trowbridge
- Grant Fahey
- Jim Houseman

CONSULTANT TEAM

Kittelson & Associates, Inc.

- Matt Hughart, AICP
- Nick Gross
- Caitlin Mildner

Angelo Planning group

- Clinton "CJ" Doxsee
- Darci Rudzinski, AICP

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EXECUTIVE SUMMARY

The Sutherlin transportation system plan (TSP) is a long-range plan that sets the vision for the city's transportation system, facilities, and services to meet state, regional, and local needs for the next 20 years. The purpose of the 2020 TSP update is to address growth in Sutherlin as well as address regulatory changes that have occurred in the region since 2005. The TSP addresses compliance with new or amended federal, state, and local plans, policies, and regulations including the Oregon Transportation Plan (OTP), the state's Transportation Planning Rule (TPR), the Oregon Highway Plan (OHP), and presents the investments and priorities for the Pedestrian, Bicycle, Transit, Motor Vehicle, and other transportation systems.

TSP ORGANIZATION

The Sutherlin TSP is comprised of the main TSP summary document (Volume I, this document) and a volume of supporting technical appendices and other supporting documentation (Volume II). Volume I is organized in the following major sections:

- Section 1 – TSP Development Process
- Section 2 – Transportation Goals and Objectives
- Section 3 – Transportation Improvement Projects Overview
- Section 4 – Pedestrian System
- Section 5 – Bicycle System
- Section 6 – Transit System
- Section 7 – Motor Vehicle System
- Section 8 – Other Travel Modes
- Section 9 – Funding and Implementation

PLANNED TRANSPORTATION IMPROVEMENTS

Planned transportation improvements were developed with a focus on creating a balanced system capable of providing travel options for a wide variety of needs and users. The list of recommended projects was prioritized using guidance provided by the project goals and objectives and with input from technical experts, Sutherlin planning staff, City Engineer of Record, community stakeholders, and interested citizens.

Transportation improvement projects were developed for all of the major travel modes within Sutherlin. The project list is composed of three main project categories:

- Financially Constrained Projects - The highest priority projects that could potentially be constructed with anticipated funding over the next 20 years.
- Tier 2 Projects – Projects that have measurable transportation value, but due to funding constraints, are unable to be included in the Financially Constrained list. Should new or additional funding sources become available, the Tier 2 projects will warrant consideration for implementation.
- Tier 3 (Aspirational Projects) – Projects that would provide local or regional circulation value, but have project costs that significantly exceed known funding capabilities, have major implementation questions, or require further engineering evaluation beyond the planning depths of a typical TSP.

Table 1 and **Figure 1** summarize the improvement details for the highest priority (Financially Constrained) projects including improvement type, location, description, planning level cost estimate, and potential funding source. All other Tier 2 and Tier 3 (Aspirational Projects) are summarized in the individual modal plans of the TSP.

Table 1: Financially Constrained Project List				
Project ID	**Improvement Type**	**Location**	**Project Cost (2020 $)[3]**	**Funding Source[5]**
T1	New Transit Routes	Western Sutherlin (Preliminary Route Shown)	$25,000	City/UPTD
	Explore opportunities to provide new transit service in Western Sutherlin through collaboration with Douglas County Transportation District. This project should be coupled with T2.			
T2	Transit Stop Enhancements	Existing Transit Stops/Location Varies	$200,000	City/UPTD
	Improve station amenities by adding benches, signage, lighting, garbage cans, and transit maps. Project cost assumes amenities upgrades at all eight (8) existing transit stops.			
T3	New Transit Stops	Western Sutherlin	$25,000	City/UPTD
	Explore opportunities to provide new transit stops in Western Sutherlin through collaboration with Douglas County Transportation District. New transit stop locations should be based on future identified transit routes. This project should be coupled with project **T1**.			
SC1	Street Connectivity	Duke Avenue	$880,000	City
	Extend Duke Avenue east to create a new connection between Hawthorne Street and Taylor Street.			
SC2	Street Connectivity	Fourth Avenue Extension	$1,035,000	City
	Extend Fourth Avenue to the west connecting to W Sixth Avenue.			
SC3	Street Connectivity	Robinson Street Extension	$830,000	State/City
	Extend Robinson Street to the west and south to connect to Myrtle Street.			
R1	Segment Enhancement	W Sixth Avenue	$2,930,000	City
	Widen and reconstruct roadway from N Comstock to N State Street to meet Collector Street typical cross section.			
R2	Segment Enhancement	E Fourth Avenue – West	$2,170,000	City
	Reconstruct the E Fourth Street to a full Collector Standard from N State Street to Mardonna Way			
R3	Segment Enhancement	Mardonna Way	$360,000	City
	Reconstruct Mardonna Way from E Fourth Avenue to Central Avenue to meet Collector Street typical cross section.			

Table 1: Financially Constrained Project List				
Project ID	**Improvement Type**	**Location**	**Project Cost (2020 $)[3]**	**Funding Source[5]**
R4	Segment Enhancement	Waite Street[2]	$2,700,000	City
	Widen and reconstruct roadway between Central Avenue and South Side Road to meet Collector standards.			
R5	Intersection Improvement	OR138W/Park Hill Lane	Total: $500,000 City Match: ($167,000)	City
	Install interim traffic signal at the OR138W/Park Hill Lane intersection until full Exit 136 IAMP improvements are implemented.			
R6	Intersection Improvement	OR138W/Dakota Street	Total: $500,000 City Match: ($167,000)	City
	Install traffic signal at the OR138W/Dakota Street intersection as envisioned in the larger Exit 136 IAMP.			
R7	Segment Enhancement	OR138W	Total: $1,400,000 City Match: $5,680,000	City
	Improve OR138W from Comstock Road to Dakota Street to a Major Arterial standard.			
SC1	Street Connectivity	Duke Avenue	$880,000	City
	Extend Duke Avenue east to create a new connection between Hawthorne Street and Taylor Street			
SC2	Street Connectivity	Fourth Avenue Extension	$1,035,000	City
	Extend Fourth Avenue to the west connecting to W Sixth Avenue.			
SC3	Street Connectivity	Robinson Street	$830,000	City
	Extend Myrtle Street to the north and east to connect to N Comstock Road, perpendicular to Robinson Street			
S1	Signing and Striping	S Calapooia Street/Exit 135 Connector	$25,000	City
	Install "Yield" signage and striping on the southbound right-turn lane.			

[1] The installation of an enhanced crossing must be supported by an engineering investigation and evaluated to determine the appropriate level of crosswalk enhancement for the specific location.
[2] Project identified in current City's Capital Improvement Plan.
[3] Project Costs are Planning Level Cost Estimates that do not include costs for Right-of-Way acquisitions and/or environmental mitigation. Future project design will need to estimate these additional project costs.

Note. Funding Sources: City = City of Sutherlin; UPTD = Umpqua Public Transportation District; State = Oregon Department of Transportation.

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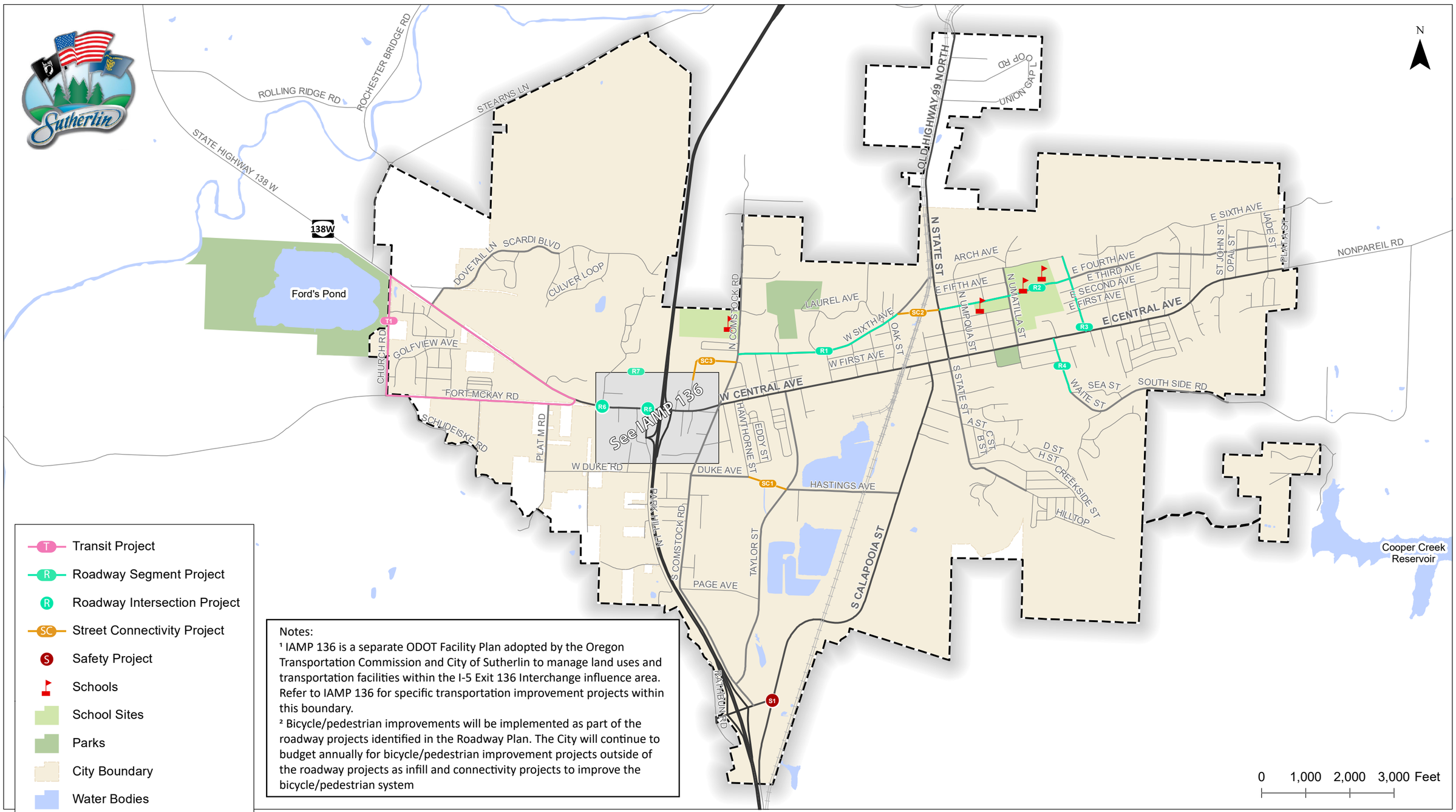

- Transit Project
- Roadway Segment Project
- Roadway Intersection Project
- Street Connectivity Project
- Safety Project
- Schools
- School Sites
- Parks
- City Boundary
- Water Bodies
- IAMP 136 Boundary[1]
- Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary.
[2] Bicycle/pedestrian improvements will be implemented as part of the roadway projects identified in the Roadway Plan. The City will continue to budget annually for bicycle/pedestrian improvement projects outside of the roadway projects as infill and connectivity projects to improve the bicycle/pedestrian system

Financially Constrained Project Map
Sutherlin, Oregon

Figure **1**

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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OVERVIEW OF SUTHERLIN IN 2020

The City of Sutherlin, incorporated in 1911, is located in central Douglas County, and is home to a population of approximately 8,235[1] people. The City's median age is 44.8 years, and nearly a quarter of the population 65 years of age or older. Sutherlin covers a total area of just over six square miles and is arranged generally east to west along OR 138 W (Elkton-Sutherlin Highway) and Central Avenue. The City is located approximately 14 miles north of the City of Roseburg.

Sutherlin is located in a valley between the Cascade Mountains and the Coast Range, with an average elevation of 518 feet above sea level. Sutherlin has a mild climate that is ideal for forestry and agriculture. The city's climate and rich nature and wildlife supply attract tourists interested in nature, hunting, and fishing. The city's commercial district is concentrated along West Central Avenue, an east-west roadway that bisects the city.

Sutherlin straddles Interstate 5 (I-5), and interchanges 135 and 136 are within the city limits. Traveling to and from Sutherlin is most commonly achieved along I-5, Oregon (OR) 138W, or OR 99. OR 138 W (Elkton-Sutherlin Highway) travels east-west and connects to the western edge of the city limits whereas I-5 and OR 99 travel north-south through the heart of the city.

Figure 2 illustrates the study area for the TSP update.

Sutherlin's local street network is bisected by OR 138 W (Elkton-Sutherlin Highway) / W Central Avenue. Commercial development predominately exists along W Central Avenue. Sutherlin's residential areas are found north and south of OR 138 W (Elkton-Sutherlin Highway) / W Central Avenue. East-west travel within Sutherlin is somewhat limited and constrained to OR 138 W (Elkton-Sutherlin Highway) / W Central Avenue. This roadway serves east-west connectivity across the I-5 barrier. Additionally, hilly terrain limits east-west connectivity options through Sutherlin. North-south travel within Sutherlin utilizes OR 99 and Comstock Road, connecting Sutherlin to its northern neighboring city of Oakland.

[1] Portland State University Estimate, December 2019.

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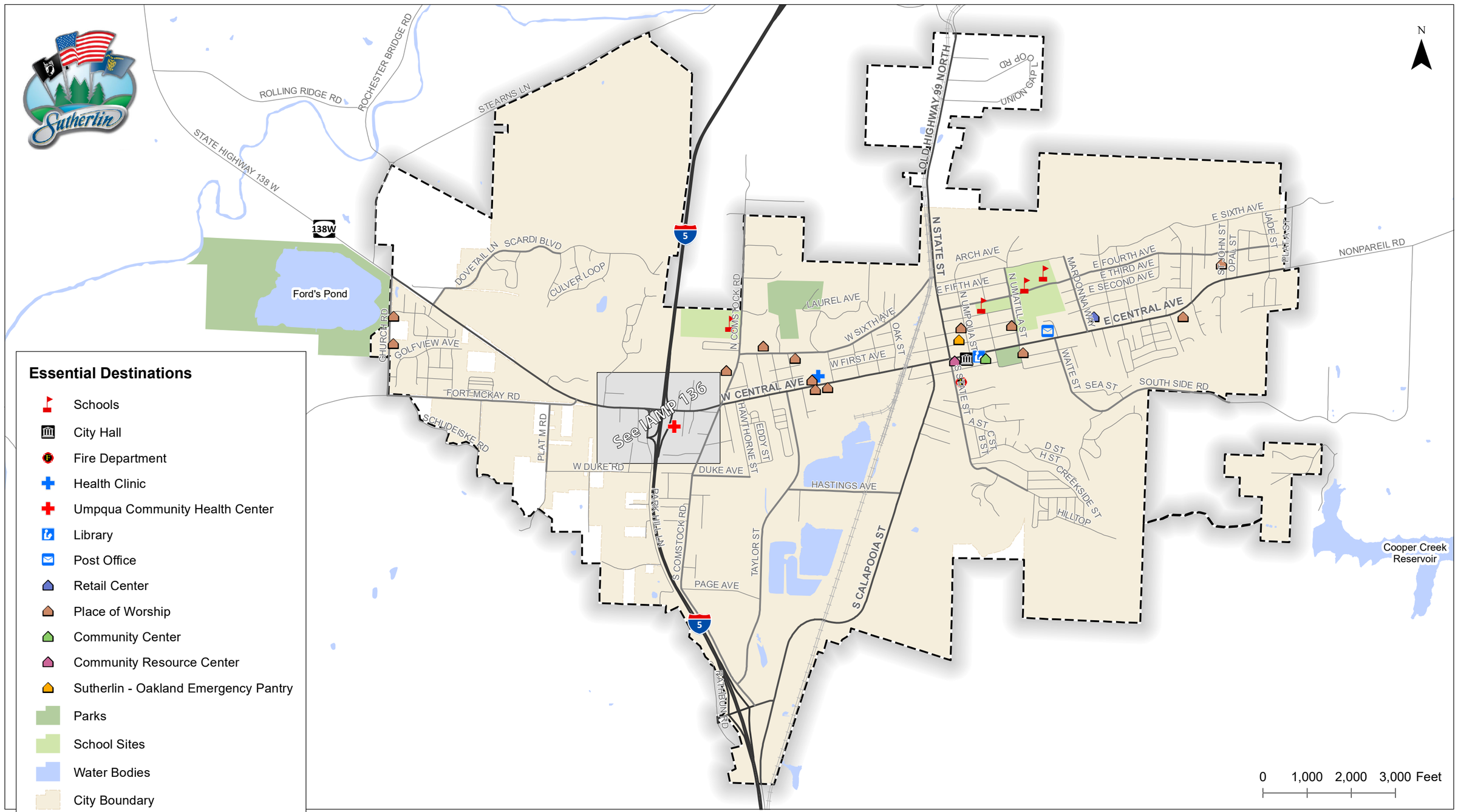

Essential Destinations

- Schools
- City Hall
- Fire Department
- Health Clinic
- Umpqua Community Health Center
- Library
- Post Office
- Retail Center
- Place of Worship
- Community Center
- Community Resource Center
- Sutherlin - Oakland Emergency Pantry
- Parks
- School Sites
- Water Bodies
- City Boundary
- IAMP 136 Boundary
- Urban Growth Boundary

Study Area
Sutherlin, Oregon

Figure
2

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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KEY DESTINATIONS & ACTIVITY CENTERS

Key destinations and activity centers are locations of daily needs and services that the residents of Sutherlin rely on. Accessing these locations should be achievable and convenient through the multimodal options of walking, biking, taking transit, and driving. Below is a list of the types of key destinations and activities centers defined through collaboration with the PAC and community within Sutherlin.

- Retail Center
- Place(s) of Worship
- Sutherlin – Oakland Emergency Pantry
- Community Center
- Community Resource Center
- Fire Department
- Health Clinic
- Umpqua Community Health Center
- City Hall
- Library
- Post Office

DEMOGRAPHICS

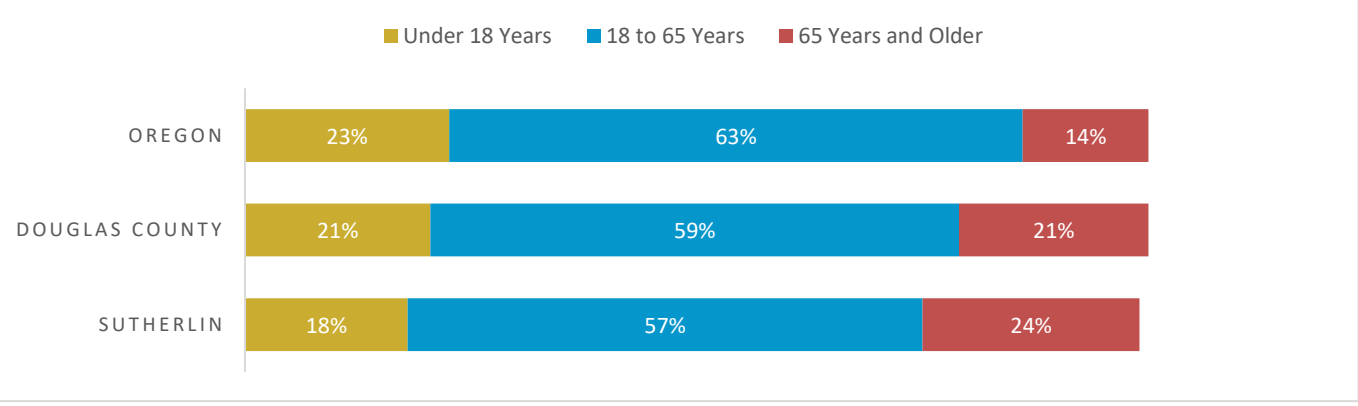
Understanding Sutherlin's demographics have a significant influence on the needs of the transportation system. Where people live, work, and play all contribute to the unique needs of Sutherlin's transportation system. How people move throughout Sutherlin is influenced by age, employment and dependent on socioeconomics. Federal law requires agencies undertaking federal projects to identify low-income and minority populations, assess whether high and adverse human health or environmental impacts would result from plan alternatives, and ensure participation of low-income and minority populations in the transportation decision making process.

Sutherlin's population is approximately 8,235[2] residents. The majority of these residents work outside the City. Approximately 2,546 residents of Sutherlin work outside the City and 1,302 employees live outside Sutherlin but work within its city limits. Only 507 residents of Sutherlin reported living and working within the city limits[3].

Age

Age is an important attribute in planning for a transportation system that meets the needs of all users. Elderly residents are less likely to drive and may be more dependent on public transit, whereas most elementary and middle school children are dependent on walking, biking, and other forms of active transportation. **Exhibit 1** summarizes Sutherlin's age distribution as it related to Douglas County and State averages.

Exhibit 1: Elderly and Youth Population, City of Sutherlin, 2010 Decennial Census

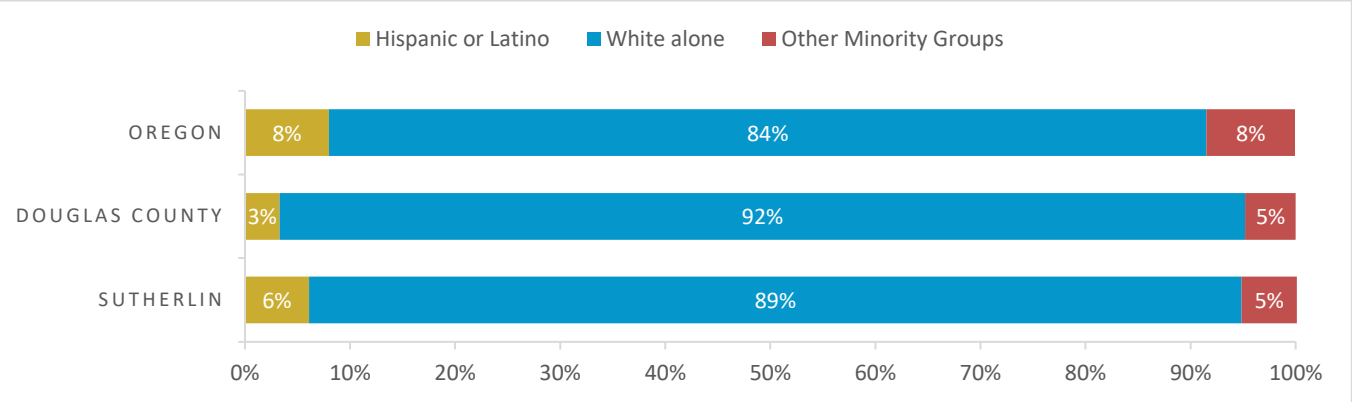


[2] Portland State University Estimate, December 2019
[3] According to 2017 Census on the Map Employment Statistics

Minority Population

Overall, Sutherlin's portion of minority population is lower compared to the State – 11 percent compared to over 16 percent. However, compared to the County, Sutherlin has a relatively high share of minority populations, particularly among Hispanic and American Indian groups. **Exhibit 2** provide a summary of minority populations for the State of Oregon, Douglas County, and the City of Sutherlin. There are multiple areas with high concentrations of minority groups. Among the areas with a minority population greater than 50 percent, only the location S State Street has a high total population of people within the Census Block. Other notable areas with high concentrations of minorities are located near the schools on E Fourth Avenue, near the intersection of N Comstock Avenue and W Sixth Avenue, and in the Dawn Rey Mobile Park located off W Central Avenue.

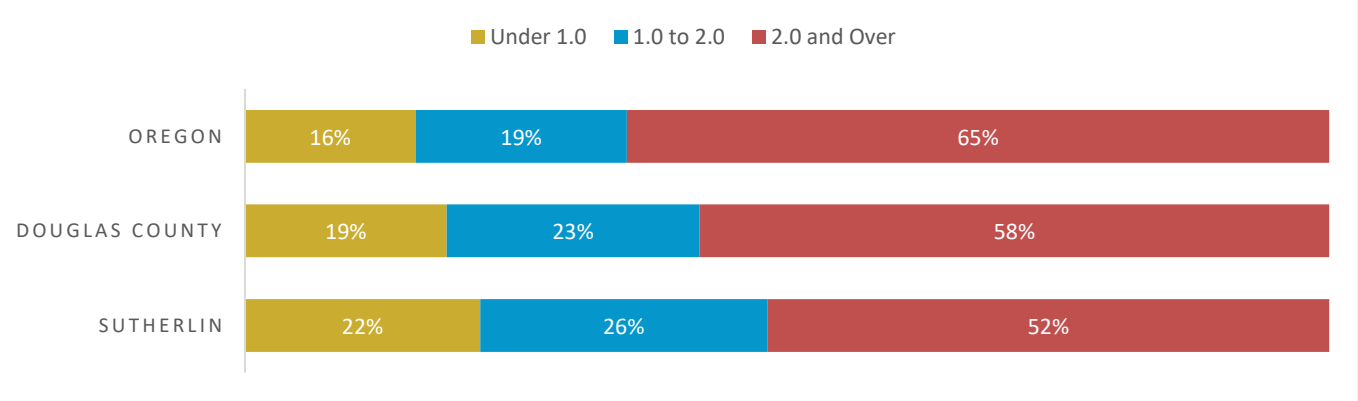
Exhibit 2: Race/Ethnicity, City of Sutherlin, 2010 Decennial Census



Low-Income Population

Poverty statistics shown in **Exhibit 3** are derived from American Community Survey 5-year data samples. Almost half of the population of Sutherlin – 48 percent – earn an income that is less than two-times the Federal Poverty Level (FPL)[4]. The percentage of Sutherlin's population earning less than two-times the FPL is higher compared to Douglas County (42 percent) and the state (35 percent). The largest concentration of low-income population is generally located in the southern portion of the city, between Central Avenue and the southern UGB. Only a portion of this area is zoned for residential, which limits the possible locations of low-income populations to areas closer to Central Avenue and S Comstock Road, or in the Timber Valley SKP Park located off S State Street. A portion of the low-income population is also located in the northern-most part of the city.

Exhibit 3: Ratio of Income to Poverty, City of Sutherlin, 2015 5-Year American Community Survey



[4] Many researchers consider the FPL to be too low to accurately represent income levels necessary for self-sufficiency; thus, using two-times the FPL may be a more accurate measure of income sufficiency.

TSP DEVELOPMENT PROCESS

WHAT IS THE SUTHERLIN TSP?

A TSP is the long-term vision for transportation system investments. A TSP establishes the framework for all modes of travel: pedestrian, bicycle, transit, vehicle, freight, air, water, rail, and pipeline.

The Sutherlin TSP serves as an opportunity to build upon the community's values and highlight what makes Sutherlin a great place to live, work, and play. The Sutherlin TSP contains goals, objectives, projects, and implementation guidelines needed to provide mobility for all users, now and in the future. The TSP examines the existing transportation system conditions and forecasts transportation system needs over the next 20 years based on growth in the city and surrounding communities. Elements of the TSP can be implemented by agencies (city, state, or federal) as well as private developers.

WHY UPDATE THE CURRENT TSP?

Sutherlin's last TSP was prepared and adopted in 2005. Since then, Sutherlin has experienced steady residential growth in the west and southeast portions of the City while recent land use and UGB modifications were adopted that will potentially accommodate more significant levels of growth in areas with multi-modal infrastructure needs. In 2009, an Interchange Area Management Plan (IAMP) plan was prepared for the Exit 136 interchange area. The IAMP is an ODOT Facility Plan adopted by the Oregon Transportation Commission (OTC) and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 interchange influence area. This plan, along with several other smaller transportation planning efforts needed to be comprehensively integrated into the larger transportation plan. To address these changes, a TSP update was prepared that focuses on the following modes:

The TSP serves as the transportation element of the Sutherlin Comprehensive Plan. The Comprehensive Plan guides the community's land use, conservation of natural resources, economic development, and public facility investment.

TSP UPDATE PROCESS

The TSP update process began with a review of local, regional, and statewide plans and policies that guide land use and transportation planning in the City. Goals, objectives, and evaluation criteria were then developed to guide the evaluation of existing and future transportation system conditions as well as the development of planned improvements. An inventory of the multimodal transportation system was then conducted to serve as the basis for the existing and future conditions analyses. The existing and future conditions analyses focused on identifying gaps and deficiencies in the multimodal transportation system based on current and forecast future performance. For each gap and deficiency, several solutions were evaluated to address the system needs. This process led to the development of a large number of plans, programs, and projects. The plans, programs, and projects were then prioritized using the project evaluation criteria and organized into different prioritized project lists.

PROJECT ADVISORY COMMITTEE

The TSP Update was developed in close coordination with city staff along with key stakeholders and representatives from the community including the project advisory committee (PAC). The makeup of the PAC consisted of representatives from the City of Sutherlin Community Development Department, Douglas County Planning Department and Public Works Engineering Department, Oregon Department of Transportation (ODOT), Umpqua Public Transportation District (UPTD), Sutherlin School District, Sutherlin City Council, Sutherlin Planning Commission, Sutherlin Police Department, Sutherlin Fire Department, Oregon Department of Land Conservation and Development, Sutherlin Area Chamber of Commerce, Sutherlin Sanitary Service, Friends of Ford's Pond, and Cow Creek Tribe. The PAC provided technical guidance and coordination throughout the project, reviewed and provided feedback on technical memorandums, and attending community meetings and workshops.

PUBLIC INVOLVEMENT SUMMARY

Opportunities for public involvement were made available throughout the TSP update process. The opportunities consisted of a kick-off meeting and site visit, web-based communications about upcoming committee meetings and the project website (https://www.ci.sutherlin.or.us/news_detail_T3_R228.php). The project team met with the PAC five (5) times throughout the TSP update process and held two public open houses. Each PAC meeting was open to the general public. The goal of the public involvement process was to develop a TSP Update that addressed the gaps and deficiencies in the transportation system while meeting the needs of the community.

TRANSPORTATION GOALS AND OBJECTIVES

The project team in collaboration with the PAC developed goals and objectives for the TSP update to help guide the review and documentation of existing and future transportation system needs, the development and evaluation of potential solutions to address the needs, and the selection and prioritization of preferred solutions for inclusion in the TSP update. The goals and objectives also inform recommendations for policy language that will serve as guidance for future land use decision making, such as approval criteria related to zone change and comprehensive plan amendments.

The goals and objectives for the Sutherlin TSP update are based on an evaluation of the existing goals and policies in the 2005 Sutherlin TSP and 1990 Comprehensive Plan. The updated goals provide direction for where the City would like to go, while the updated objectives provide a more detailed breakdown of the goals with specific outcomes the City desires to achieve. In order to ensure compliance with the Transportation Planning Rule (TPR) and other state, regional, and local planning requirements, the goals and objectives presented below tend to favor improvements in active transportation facilities and services over capacity improvements. It is assumed that adoption of the TSP update will result in changes to the 1990 – 1991 Comprehensive Plan, including an update to the goals and policies related to transportation.

Goal 1: Safety

Provide a transportation system that enhances the safety and security of all transportation modes.

- Promote transportation safety through a comprehensive program of engineering, education, and enforcement.
- Address existing and potential future safety issues by identifying high crash locations and develop strategies to address those issues.
- Designate safe routes from residential areas to schools and identify transportation improvements needed to ensure the safety of Sutherlin's school children.
- Develop a safe, complete, attractive, efficient, and accessible system of pedestrian ways, bicycle ways and personal electric vehicle ways, including bike lanes, shared roadways, multi-use paths, and sidewalks.
- Use the Transportation System Plan as the legal basis and policy foundation for decisions involving transportation issues.

Goal 2: Mobility and Efficiency

Provide a balanced and efficient transportation system for all members of the community through effective transportation and land use planning.

- Reduce reliance on single occupancy vehicles by improving the quality of walking, biking, transit, and electric vehicle facilities. Identify strategies appropriate to the City of Sutherlin to help reduce vehicle miles traveled.
- Integrate transportation and land use into development ordinances to increase opportunities for multi-purposes trips.
- Manage projected travel demand consistent with community, land use, environmental, economic and livability goals.
- Manage the transportation system for adequate and efficient operations.

Goal 3: Health and Livability

Provide a transportation system that enhances the health and livability of local residents by promoting active modes of transportation.

- Enhance the livability of the Sutherlin Community through proper location and design of transportation facilities including multi-use paths to balance the needs of human use and enjoyment with resource conservation in areas identified in the Parks Master Plan and Comprehensive Plan.
- Design roadways to enhance livability by ensuring that aesthetics and landscaping are an integral part of Sutherlin's transportation system.
- Construct multi-use paths where they can be developed with satisfactory design components that address safety, security, maintainability, and acceptable uses.

Goal 4: Connectivity and Accessibility

Develop a comprehensive, multimodal transportation system that connects all members of the Sutherlin area to community destinations.

- Provide connectivity to each area of the City for convenient multi-modal access. Ensure pedestrian, bicycle, transit, and vehicle access to schools, parks, employment and recreational areas, and the Sutherlin core city area by identifying and developing improvements that address connectivity needs.
- Make better use of the southern interchange by connecting an east-west route to the southern interchange on both sides of Interstate-5.
- Identify opportunities to improve east-west travel for all modes of transportation across I-5.
- Balance the needed street function for all travel modes with adjacent land uses through the use of context-sensitive street and streetscape design techniques.
- Develop neighborhood and local connections to provide adequate circulation into and out of neighborhoods.
- Ensure that adequate access for emergency services vehicles is provided throughout the City.

Goal 5: Coordination and Integration

Ensure the local transportation system is integrated with County and State transportation systems and objectives, and with other related aspects of the community in Sutherlin, including land use planning, natural resource protection, housing, and economic development.

- Meet federal and state safety compliance standards for operation, construction, and maintenance of the rail system.
- Encourage the Central Oregon and Pacific Railroad to install railroad crossing arms with indicator lights at all railroad crossings.
- Provide safe routing of hazardous materials consistent with federal guidelines and provide for public involvement in the process.
- Engage community members and organizations in the development and design of the transportation facilities identified in the TSP.
- Work with regional and local public transportation providers to identify opportunities to expand public transportation service within the City and to surrounding communities. Encourage intercity public transportation connections for long-range public transportation. Enhance public volunteer transit system.
- Maintain access management standards for streets consistent with City, County, and State requirements to reduce conflicts between vehicles and trucks, and between vehicles, bicycles, and pedestrians. Develop access management strategies for all roadway classifications.

Goal 6: Strategic Economic Investment

Facilitate the provision of a multi-modal transport system for the efficient, safe, and competitive movement of goods and services to, from, and within the Sutherlin area.

- Construct all transportation facilities to meet the requirements of the Americans with Disabilities Act.
- Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics, and the integrity of the system as a whole.
- Promote accessibility to transport modes that fulfill the needs of freight shippers.
- Strive to balance the needs of moving freight with community livability and land use decision making.
- Promote the appropriate location of freight routes and regional pipeline systems to enhance security, local service, and efficiency.
- Manage on-street parking by providing an appropriate supply and design of off-street parking facilities to promote economic vitality, neighborhood livability, efficient use of urban space, and reduced reliance on single occupancy motor vehicles.

Goal 7: Funding

Maintain a stable, flexible financial system for funding transportation improvements by working cooperatively with Federal, State, Regional, and Local governments.

- Develop a long-rang financial strategy to make needed improvements to the transportation system.
- Regularly update the City's System Development Charges, including adjusting inflation rates.
- Coordinate with all affected governmental units in the area (Douglas County, Oregon Department of Transportation, and Umpqua Public Transportation District).
- Secure adequate funding to support regional transportation, growth management, and air quality policies.
- Maintain a current capital improvement program (CIP).

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TRANSPORTATION IMPROVEMENT PROJECTS OVERVIEW

Recommended solutions were developed to be consistent with the project vision and goals and to focus on creating a balanced system able to provide travel options for a wide variety of needs and users. The list of recommended projects was prioritized using guidance provided by the project goals and objectives and with input from technical experts, Sutherlin planning staff , City Engineer of Record, community stakeholders, and interested citizens.

Transportation improvement projects were developed for all of the major travel modes within Sutherlin. The project lists are composed of three main categories:

- Financially Constrained Projects - The highest priority projects that could potentially be constructed with anticipated funding over the next 20 years.
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- Tier 3 (Aspirational Projects) – Projects that would provide local or regional circulation value, but have project costs that significantly exceed known funding capabilities, have major implementation questions, or require further engineering evaluation beyond the capabilities of a TSP.

It is recognized that the City of Sutherlin is not obligated to implement the Financially Constrained projects first. Priorities may change over time and unexpected opportunities may arise to fund particular projects. The purpose of the Financially Constrained project list is to establish reasonable expectations for the level of improvements that may occur and give preliminary direction on where funds should be allocated.

PEDESTRIAN SYSTEM

The pedestrian system in Sutherlin consists of sidewalks, multi-use paths, marked and unmarked, signalized and unsignalized pedestrian crossings. These facilities provide residents the ability to access local retail/commercial centers, recreational areas, and other land uses by foot. A safe, convenient, and continuous network of pedestrian facilities is essential to establishing a vibrant and healthy community while supporting the local economy.

PEDESTRIAN FACILITIES

Pedestrian facilities are the elements of the transportation system that enable people to walk safely and efficiently between neighborhoods, retail centers, employment areas, and transit stops. These include facilities for pedestrian movement along key roadways (e.g. sidewalks, multi-use paths, and off-street trails) and for safe roadway crossings (e.g. crosswalks, crossing beacons, pedestrian refuge islands). Each facility plays an important role in developing a comprehensive pedestrian system.

This section summarizes the pedestrian facilities that were determined to best address gaps and deficiencies in the pedestrian system and future needs. As indicated below, the most common overall need is to provide a safe and interconnected pedestrian system that encourages people to walk, especially for trips less than one-half mile in length.

Sidewalks

Sidewalks are the fundamental building blocks of the pedestrian system. They enable people to walk comfortably, conveniently, and safely from place to place. They also provide an important means of mobility for people with disabilities, families with strollers, and others who may not be able to travel on an unimproved roadside surface. Sidewalks are usually 6 to 8-feet wide and constructed from concrete. They are also frequently separated from the roadway by a curb, landscaping, and/or on-street parking. Sidewalks are widely used in urban and suburban settings. Ideally, sidewalks could be provided along both sides of the roadway; however, some areas with physical or right-of-way constraints may require that sidewalk be located on only one side. The pedestrian plan includes a significant number of projects that involve filling in the gaps and installing new sidewalks.

Multi-use Paths

Multi-use paths are paved, bi-directional, trails that can serve both pedestrians and bicyclists. Multi-use paths and trails can be constructed adjacent to roadways where the topography, right-of-way, or other issues don't allow for the construction of sidewalks and bicycle facilities. A minimum width of 10 feet is recommended for low-pedestrian/bicycle-traffic contexts; 12 to 14 feet should be considered in areas with moderate to high levels of bicycle and pedestrian traffic. Multi-use paths can be used to create longer-distance links within and between communities and provide regional connections. They play an integral role in recreation, commuting, and accessibility due to their appeal to users of all ages and skill levels.

Enhanced Pedestrian Crossings

Pedestrian crossing facilities enable pedestrians to safely and efficiently cross streets and other transportation facilities. Planning for appropriate pedestrian crossings requires the community to balance vehicular needs with providing crossing locations at desired routes for people walking. Enhanced pedestrian crossing treatments include:

- Median refuge islands
- High visibility pavement markings and signs
- Rapid rectangular flashing beacons (RRFB)
- Pedestrian Hybrid Beacons (HAWK)
- Curb extensions
- Pedestrian signals
- Pedestrian countdown heads
- Leading Pedestrian interval

The pedestrian plan includes several projects that involve enhancing pedestrian crossings. Many of the treatments listed above can be applied together at one crossing location to further alert drivers of the presence of pedestrians in the roadway.

Safe Routes to School

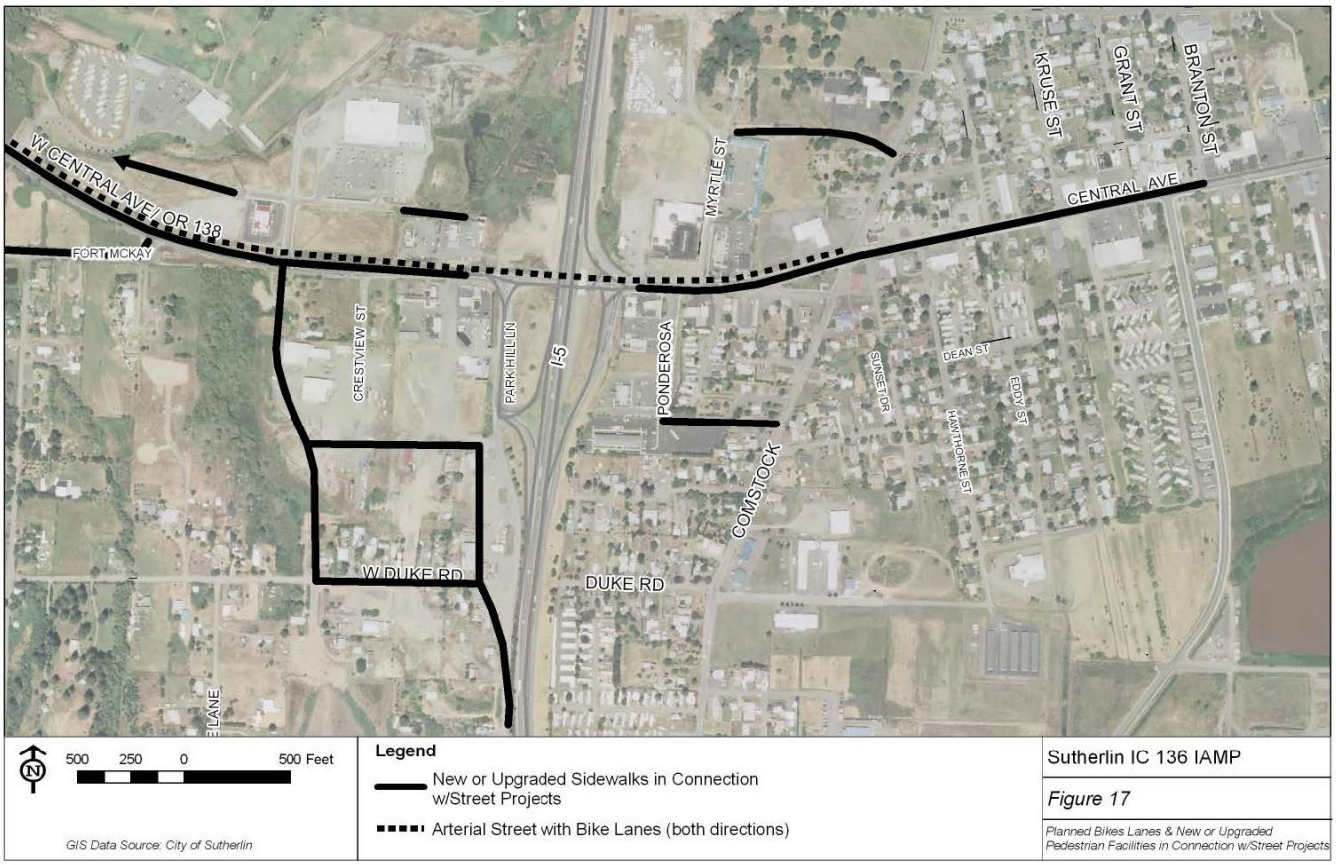
Safe Routes to School (SRTS) programs are intended to encourage children to walk, roll, and bicycle to school; to make walking, rolling[5], and bicycling to school safe and more appealing; and to facilitate the planning, development and implementation of projects that will improve safety near schools. Projects identified within a one-mile radius of schools are eligible for funding opportunities through the ODOT Safe Routes to School Infrastructure Program. Within the context of the TSP, new sidewalk, sidewalk infill, and enhanced crossing projects have been identified within each of the modal plans to improve multi-modal access to schools.

[5] Rolling includes any means of transportation that involves wheels including wheelchairs, scooters, skateboards, Onewheel, RipStik, Segway, or Two-wheeled Smartboard

EXIT 136 IAMP MULTIMODAL IMPROVEMENTS

As described previously, an Interchange Area Management Plan (IAMP) plan was prepared for the Exit 136 interchange area in 2009. While the document primarily focuses on geometric and operational improvements to the existing interchange to increase vehicular capacity and efficiency, the IAMP also identified several pedestrian and bicycle improvements along OR 138W (Elkton – Sutherlin Highway) within the study boundary. **Exhibit 4** illustrates the location of pedestrian and bicycle improvements identified as part of the Exit 136 IAMP.

Exhibit 4: Exit 136 IAMP Pedestrian and Bicycle Improvements



As illustrated in **Exhibit 4**, new or upgraded sidewalks in connection with street projects are identified along OR 138W (Elkton – Sutherlin Highway), W Central Avenue, Hospitality Way, W Duke Road, Myrtle Street, and future street connections in the southwest quadrant of the interchange area.

The TSP does not identify pedestrian and bicycle improvement projects located within the IAMP study area boundary. Instead, the TSP relies on and concurs with the identified IAMP pedestrian and bicycle improvements for consistency purposes between the two documents.

PEDESTRIAN PLAN

Table 2 identifies Sutherlin's Pedestrian Plan projects. Projects summarized in **Table 2** are intended to support active walking options in Sutherlin. Projects are organized by improvement type, location, project cost (2020 $), priority, and primary funding source. The priorities shown in are based on the project evaluation criteria and reflect input from the project team and the general public. The cost estimates are based on average unit costs for roadway improvements. The cost estimates do not include the cost of right-of-way. **Figure 3** illustrates the location of the pedestrian plan projects.

*Pedestrian improvements will be implemented as part of the roadway projects identified in the Roadway Plan. The City will continue to budget annually for Pedestrian improvement projects outside of the roadway projects as infill and connectivity projects to improve the pedestrian system including but not limited to the projects identified in **Table 2**.*

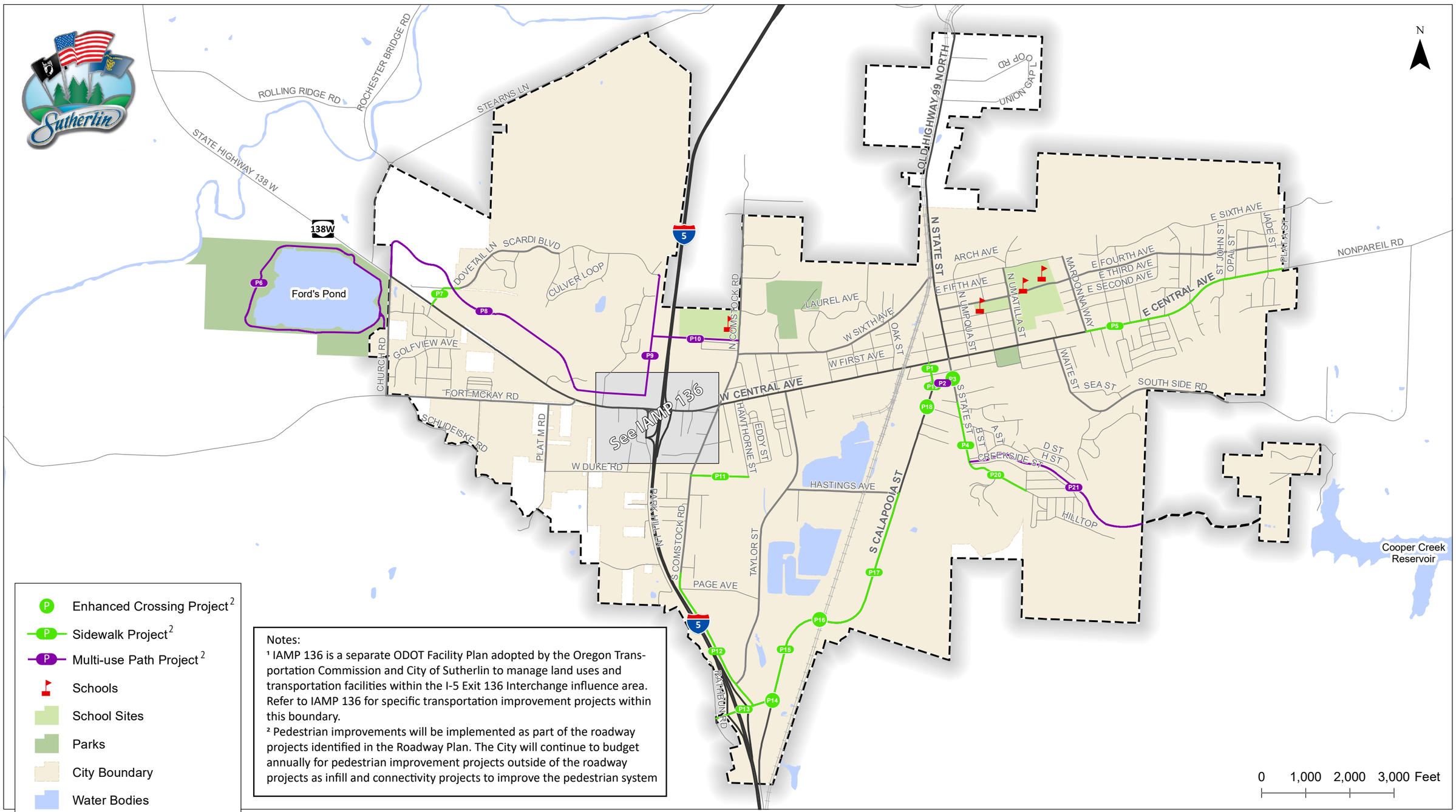
Table 2: Pedestrian Plan Improvement Projects

Project ID	Improvement Type	Location	Project Cost (2020 $)[3]	Priority	Primary Funding Source[3]
P1	Sidewalk	S Calapooia Street	$55,000	Tier 2	City
	Install sidewalks on both sides of the roadway from W Central Avenue to W Everett Avenue.				
P2	Multi-Use Path	Red Rock Trail Extension	$35,000	Tier 2	City
	Extend the Red Rock Trail west to connect to S Calapooia Street, parallel to the Sutherlin Creek.				
P3	Enhanced Crossing[1]	S State Street/Red Rocks Trail	$30,000	Tier 2	City
	Install enhanced pedestrian crossing at S State Street/Red Rock Trail extension. This project should be coupled with project P4.				
P4	Sidewalk	S State Street	$180,000	Tier 2	City/ Private Development
	Fill in sidewalk gaps along the west side of State Street between Azalea Court and D Street.				
P5	Sidewalk	Central Avenue	$545,000	Tier 2	City/ Private Development
	Install sidewalks and fill in sidewalk gaps between Mardonna Way and eastern city limits on both sides of the roadway.				
P6	Multi-use Path	Ford's Pond	N/A	Tier 2	City
	Develop a new multi-use path around Ford's Pond consistent with Ford's Pond Master Plan				
P7	Sidewalk	Dovetail Lane	$325,000	Tier 2	City
	Install sidewalks on both sides of the roadway between OR 138 W (Elkton-Sutherlin Highway) and Eagle Loop Road				
P8	Multi-use Path	OR 138 W (Elkton-Sutherlin Highway)[2]	$570,000	Tier 3/ Aspirational	City
	Develop a new multi-use path connecting OR 138 W (Elkton-Sutherlin Highway)/Church Street intersection, Dovetail Lane, Clover Leaf Loop Road				
P9	Multi-use Path	Scardi Boulevard	$210,000	Tier3/ Aspirational	City
	Develop a new multi-use path connecting the east end of Scardi Lane with the P8 multi use path				

Table 2: Pedestrian Plan Improvement Projects					
Project ID	**Improvement Type**	**Location**	**Project Cost (2020 $)[3]**	**Priority**	**Primary Funding Source[3]**
P10	Multi-use Path	I-5 Underpass	>$5M	Tier3/ Aspirational	City
	Develop a new multi-use path and I-5 underpass connecting the west side of I-5 to N Comstock Road				
P11	Sidewalk	E Duke Avenue	$325,000	Tier 2	City
	Install sidewalks on both sides of the roadway from S Comstock Road to eastern roadway terminus (extended as part of the Duke Avenue extension project)				
P12	Sidewalk	S Comstock Road	$410,000	Tier 2	City/County
	Install sidewalks on east side of the roadway from Page Avenue to135 Connector				
P13	Sidewalk	Exit 135 Connector[2]	$1,100,000	Tier 2	City/County
	Install sidewalks on both sides of the road from S Comstock Road to S Calapooia Street (OR 99)				
P14	Enhanced Crossing[1]	S Calapooia Street/ Exit 135 Connector	$30,000	Tier 2	City/County
	Install enhanced pedestrian crossing at S Calapooia Street/Exit 135 Connector to provide connection to existing transit stop.				
P15	Sidewalk	S Calapooia Street	$635,000	Tier 2	City/County
	Install sidewalks on east side of the roadway between railroad crossing and 135 Connector				
P16	Enhanced Crossing[1]	S Calapooia Street/ Railroad Crossing	$30,000	Tier 2	City/County
	Install enhanced pedestrian crossing at S Calapooia Street/near Railroad Crossing to provide connection to existing transit stop.				
P17	Sidewalk	S Calapooia Street	$775,000	Tier 2	City/County/ Private Development
	Fill in sidewalk gaps on the west side of the roadway between Hasting Avenue and railroad crossing				
P18	Enhanced Crossing[1]	S Calapooia Street/Valentine Street	$95,000	Tier 2	City
	Install enhanced pedestrian crossing at S Calapooia Street/Valentine Street to provide connection to existing transit stop.				
P19	Sidewalk	S Calapooia Street	$15,000	Tier 2	City/County
	Install sidewalks on east side of the roadway from W Everett Avenue to Sutherlin Creek Bridge				
P20	Sidewalk	S State Street	$200,000	Tier 2	City
	Install sidewalks on the south side of State Street from D Street to southern terminus of S State Street				
P21	Multi-use Path	Cooper Creek	$235,000	Tier 2	City
	Develop a new multi-use path connecting State Street to Cooper Creek Reservoir along the Cooper Creek alignment				

[1] The installation of an enhanced crossing must be supported by an engineering investigation and evaluated to determine the appropriate level of crosswalk enhancement for the specific location.
[2] Project will require coordination with ODOT and approval from the State and Region 3 Traffic Engineer
[3] Project Costs are Planning Level Cost Estimates that do not include costs for Right-of-Way acquisitions and/or environmental mitigation. Future project design will need to estimate these additional project costs.

Note: Funding Sources: City = City of Sutherlin; State = Oregon Department of Transportation; County = Douglas County



- Enhanced Crossing Project[2]
- Sidewalk Project[2]
- Multi-use Path Project[2]
- Schools
- School Sites
- Parks
- City Boundary
- Water Bodies
- IAMP 136 Boundary[1]
- Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary.
[2] Pedestrian improvements will be implemented as part of the roadway projects identified in the Roadway Plan. The City will continue to budget annually for pedestrian improvement projects outside of the roadway projects as infill and connectivity projects to improve the pedestrian system

Pedestrian Plan Projects
Sutherlin, Oregon

Figure **3**

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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BICYCLE SYSTEM

The bicycle system within Sutherlin consist of shared-roadways, shoulder bikeways, and on-street bike lanes. These facilities provide local residents with the ability to access local retail/commercial centers, recreational areas, and other land uses within Sutherlin and neighboring areas by bicycle. A safe, convenient, and connected network of bicycle facilities is essential to establishing a vibrant and healthy community while supporting the local economy and providing transportation options to residents and visitors.

BICYCLE FACILITIES

Bicycle facilities are the elements of the transportation system that enable people to travel safely and efficiently by bicycle. These include facilities along key roadways (e.g. shared lane pavement markings, on-street bike lanes, and separated bike facilities) and facilities at key crossing locations (e.g., enhanced bike crossings). These also include end of trip facilities (e.g. secure bike parking, changing rooms, and showers at worksites); however, these facilities are typically addressed within the development code. Each facility plays an important role in developing a comprehensive bicycle system.

This section summarizes the bicycle facilities that were determined to best address gaps and deficiencies in the bicycle network and future needs. As indicated below, the most common overall need is to provide a safe and interconnected bicycle network that encourages people to bicycle.

On-Street Bicycle Lanes

On-street bike lanes are striped lanes including a bicycle stencil on the roadway dedicated for the exclusive use of cyclists. Bike lanes are typically placed at the outer edge of pavement (but to the inside of right-turn lanes and/or on-street parking). Bicycle lanes can improve safety and security of cyclists and (if comprehensive) can provide direct connections between origins and destinations. Bicycle lanes are most appropriate on collector and arterial roadways to provide a dedicated space for bicycling that is separate from the motor vehicle lane. ODOT standard width for a bicycle lane is six feet. The minimum width of a bicycle lane against a curb or adjacent parking lane is five feet. A bicycle lane may be as narrow as four feet, but only in very constrained situations.

Buffered Bike Lanes

Buffered bike lanes are enhanced versions of conventional on-street bike lanes that include an additional striped buffer of typically 2-3 feet between the bicycle lane and the vehicle travel lane and/or between the bicycle lane and the vehicle parking lane. They are typically located along streets that require a higher level of separation to improve the comfort of bicycling. Per the ODOT Highway Design Manual (HDM – Reference 1), Buffered Bike Lanes can be as narrow as 8 feet.

Separated Bike Lanes

Separated bike lanes (often called "cycle tracks") are bicycle lanes that are physically separated from motor vehicle traffic by a vertical element such as a planter, flexible post, parked car, or a mountable curb. One-way separated bike lanes are typically found on each side of the street, like conventional bike lanes, while two-way separated bike lanes are typically found on one side of the street.

Shoulder Bikeways

Shoulder bikeways are paved roadways that have striped shoulders wide enough for bicycle travel. ODOT recommends a six-foot paved shoulder to adequately provide for bicyclists, and a four-foot minimum width in constrained areas. Roadways with shoulders less than four feet are considered shared roadways. Shoulder bikeways are sometimes signed to alert motorists to expect bicycle travel along the roadway.

Shared Lane Pavement Markings and Signage

A shared roadway is one which a bicyclist and a motorist share the same travel lane. Shared lane pavement markings (often called "sharrows") are not a bicycle facility, but a wayfinding tool to navigate bicyclists along low-stress roadways with low vehicular volume and speeds. Sharrows may also be used to accommodate bicyclists on roadways where bike lanes are desirable but infeasible to construct. Sharrows indicate a shared roadway space for cyclists and motorists and are typically centered in the roadway or approximately four feet from the edge of the travel lane[6] and are recommended to be spaced approximately 50 to 250-feet apart dependent on the levels of traffic volume. Sharrows are suitable on roadways with relatively low travel speeds (≤30 mph) and low ADT (≤3,000 ADT); however, they may also be used to transition between discontinuous bicycle facilities. Sea Street is a shared roadway and provides shared-lane markings or "sharrows" throughout its entire length.

[6] If on-street parking is present, shared lane markings must be placed outside of the "door zone" or approximately 4' from the edge of the parking lane.

Enhanced Bicycle Crossings

Enhanced bicycle crossing facilities enable cyclists to safely cross streets, railroad tracks, and other transportation facilities. Planning for appropriate bicycle crossings requires the community to balance vehicular mobility needs with providing crossing locations along the desired routes of cyclists. Enhanced bicycle crossings include:

- Bike Boxes – designated space at an intersection that allows cyclists to wait in front of motor vehicles while waiting to turn or continue through the intersection.
- Two-Stage Left-turn Boxes – designated space at a signalized intersection outside of the travel lane that provides cyclists with a place to wait while making a two-stage left-turn.
- Pavement markings through intersections – pavement markings that extend a bike lane through an intersection.
- Bike Only Signals – A traffic signal that is dedicated for cyclists
- Bicycle Detection – Loop or intelligent transportation system (ITS) detection for bicycles

Wayfinding Signs

Wayfinding signs are physical signs or travel lane markings located along roadways or at intersections that direct bicyclists between destinations along low-stress and comfortable bicycle routes. Wayfinding signs help inexperienced and/or less confident cyclists overcome perceived barriers by identifying lower speed and lower volume routes that do not require a bicycle facility. They typically include distances and average walk/cycle times. Wayfinding signs are generally used on primary bicycle routes and multiuse paths.

Bicycle Parking

Secure bicycle parking is a vital component of a city's bicycle system and can be provided in a variety of sizes, shapes, and unique pieces of infrastructure that resemble the city's character. Bicycle parking can generally be categorized into two types: short-term and long-term.

- **Short-term bicycle parking** is designed to meet the needs of cyclists visiting businesses, institutions, and other destinations where visits typically last up to two hours. Short-term bicycle parking must be readily accessible, visible, and self-explanatory.
- **Long-term bicycle parking** places an emphasis on security, weather protection and is designed to meet the needs of cyclists who may leave their bicycle unattended for several hours or more. Long-term bicycle parking is typically located at residences or apartment buildings, workplaces, transit centers, and other routinely visited destinations.

BICYCLE/ROLLING PLAN

Table 3 identifies Sutherlin's Bicycle/Rolling Plan projects. Projects summarized in **Table 3** are intended to support active cycling and rolling options in Sutherlin. Projects are organized by improvement type, location, project cost (2020$), priority, and primary funding source. The priorities shown in are based on the project evaluation criteria and reflect input from the project team and the general public. The cost estimates are based on average unit costs for roadway improvements. The cost estimates do not include the cost of right-of-way. Right-of-way costs are included in the motor vehicle plan as applicable. **Figure 4** illustrates the location of the bicycle/rolling plan projects.

*Bicycle improvements will be implemented as part of the roadway projects identified in the Roadway Plan. The City will continue to budget annually for Bicycle improvement projects outside of the roadway projects as infill and connectivity projects to improve the bicycle system including but not limited to the projects identified in **Table 3**.*

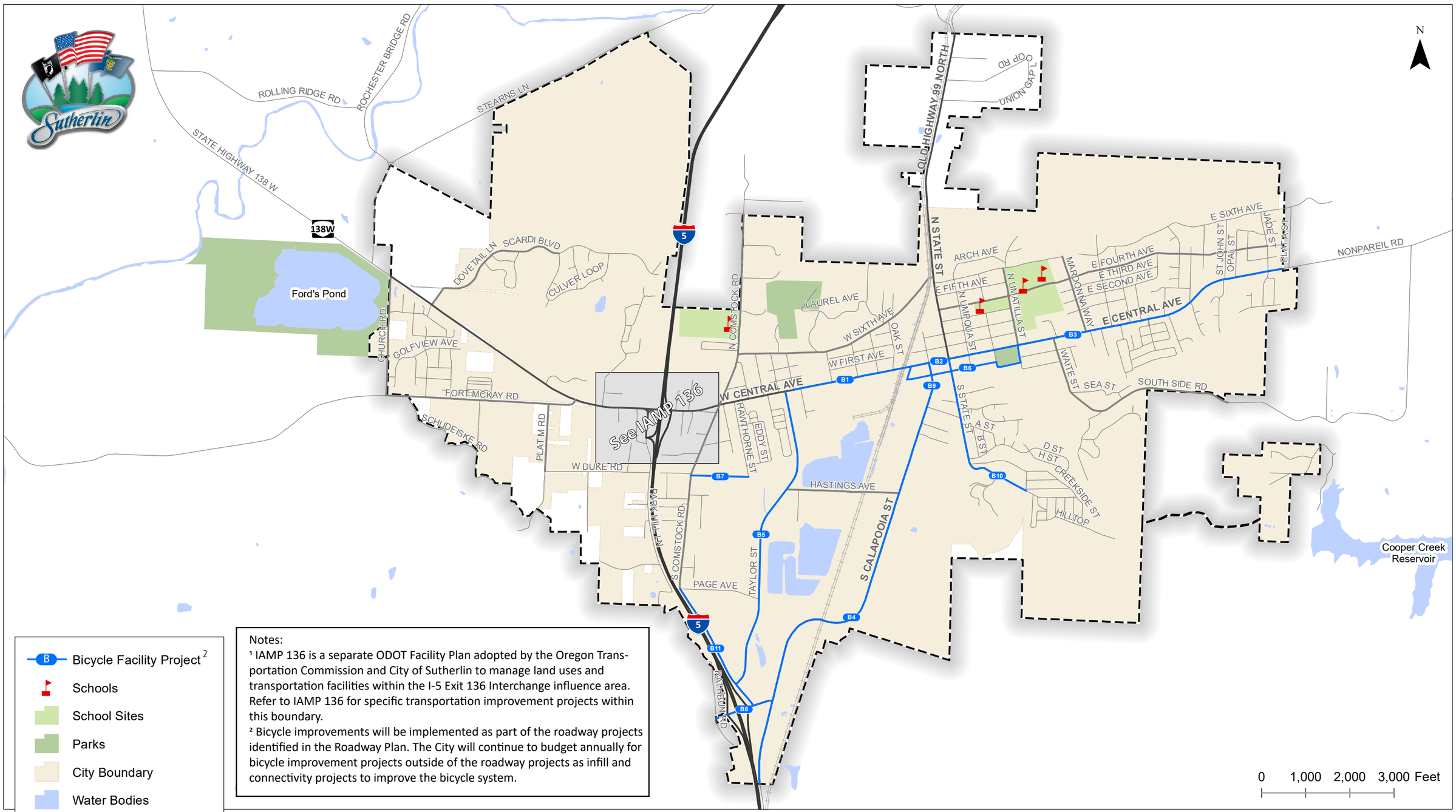
Table 3: Bicycle/Rolling Plan Improvement Projects

Project ID	Improvement Type	Location	Project Cost (2020 $)[2]	Priority	Primary Funding Source[2]
B1	Bike Lanes	Central Avenue	$30,000	Tier 2	City
	Install bike lane striping on both sides of the roadway from Branton Street to Front Street. *Note: Improvements along Central Avenue west of Branton Street are identified in the Exit 136 IAMP.*				
B2	Shared Lane Pavement Markings	Central Avenue	$35,000	Tier 2	City
	Install shared-lane pavement markings (sharrows) and signs on both sides of the roadway from Front Street to Umatilla Street.				
B3	Bike Lanes	Central Avenue	$45,000	Tier 2	City
	Install bike lanes on both sides of the road from Umatilla Street to eastern city limits.				
B4	Bike Lanes	S Calapooia Street	$15,000	Tier 2	City/County
	Stripe bike lane stencils on both sides of the roadway within existing shoulder from Valentine Street to 135 Connector.				
B5	Bike Lanes	Taylor Street	$50,000	Tier 2	City
	Install bike lane striping on both sides of the roadway from Central Avenue to S Comstock Road.				
B6	Shared Lane Pavement Markings	SW Front Street –Everett Avenue – Willamette Street– Dean Avenue	$15,000	Tier 2	City
	Install shared-lane pavement markings (sharrows) and signs on both sides of SW Front Street, Everett Avenue, Willamette Street, and Dean Avenue.				

Table 3: Bicycle/Rolling Plan Improvement Projects					
Project ID	**Improvement Type**	**Location**	**Project Cost (2020 $)[2]**	**Priority**	**Primary Funding Source[2]**
B7	Shared Lane Pavement Marking	Duke Avenue	$10,000	Tier 2	City
	Install shared lane pavement markings (sharrows) and signs on both sides of the road from S Comstock Road to east terminus,				
B8	Bike Lane	Exit 135 Connector[1]	$750,000	Tier 2	City
	Install bike lanes on both sides of the road from S Comstock Road to S Calapooia Street (OR 99).				
B9	Bike Lane	S Calapooia Street	$270,000	Tier 2	City
	Install bike lanes on both sides of the roadway from W Central Avenue to Valentine Street.				
B10	Shared Lane Pavement Marking	S State Street	$10,000	Tier 2	City
	Install shared-lane pavement markings (sharrows) and signs on both sides of the roadway from Central Avenue to southern terminus of S State Street.				
B11	Bike Lane	S Comstock Road	$835,000	Tier 2	City/County
	Install bike lanes on both sides of the roadway from Page Avenue to Exit 135 Connector				

[1] Project will require coordination with ODOT and approval from the State and Region 3 Traffic Engineer
[2] Project Costs are Planning Level Cost Estimates that do not include costs for Right-of-Way acquisitions and/or environmental mitigation. Future project design will need to estimate these additional project costs.

Note: Funding Sources: City = City of Sutherlin; State = Oregon Department of Transportation; County = Douglas County



B Bicycle Facility Project[2]
Schools
School Sites
Parks
City Boundary
Water Bodies
IAMP 136 Boundary[1]
Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary.
[2] Bicycle improvements will be implemented as part of the roadway projects identified in the Roadway Plan. The City will continue to budget annually for bicycle improvement projects outside of the roadway projects as infill and connectivity projects to improve the bicycle system.

Bicycle Plan Projects
Sutherlin, Oregon

Figure **4**

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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TRANSIT SYSTEM

Transit is the most commonly used form of public transport in North America[7]. Transit facilities provide residents and visitors accessibility to, from, and through the City of Sutherlin. Reliable transit service is a critical component of a multi-modal transportation system. Transit provides access that may be unattainable by foot, bicycle, or other non-vehicular mode. Safe and reliable transit service is essential for elderly populations, persons with disabilities, and populations without access to vehicles. Transit provides access to schools, jobs, stores, and other cities and towns.

The Umpqua Public Transportation District (UPTD) is currently developing a Transit Master Plan (TMP). The projects identified within **Table 4** are intended to support the implementation of the TMP and serve as a resource for the TMP to build from. Upon completion of the UPTD TMP, it is recommended that the Sutherlin TSP transit section be updated to reflect and incorporate the transit projects and recommendations identified within the UPTD TMP. Many projects that enhance transit accessibility and connectivity have been identified in the pedestrian plan including sidewalk and enhanced crossing projects.

TRANSIT FACILITIES

This section summarizes the solutions considered for implementation within the City of Sutherlin to address existing gaps, deficiencies, and future needs in the transit system.

Transit Stop Amenities

Transit stops are necessary components of a well-functioning transit system. Transit stop facilities vary in size, type, design, and cost. At a minimum, transit stops should include signage and a seating area. Larger transit facilities may include shelters or covered waiting areas. Transit stop amenities may have restrooms, ticket kiosks, garbage cans, benches, lighting, signage, maps, or bicycle parking. Seating facilities accommodate elderly populations and persons with disabilities and lighting creates a safe and comfortable environment for transit riders. Flag stops may be used in place of designated bus stops to allow passengers to be picked up and dropped off at any safe location upon request. Transit stop enhancements include:

- Establishing permanent stop locations by analyzing boarding and alighting on a stop-by-stop basis to determine demand
- Conducting community outreach to identify new permanent stop locations, in addition to flag stops
- Evaluating highly trafficked transit stops and consider installing shelters
- Adding signage and benches to mark permanent transit stop locations
- Adding transit maps to permanent stop locations to improve wayfinding and encourage new ridership
- Adding garbage cans and lighting to permanent transit stops
- Connecting sidewalks to transit stops

Quality of Service

Transit quality of service is the overall measured or perceived performance of transit service from the passenger's point of view. Transit quality of service focuses on two metrics: transit availability and transit comfort and convenience[8]. Additionally, transit quality of service is determined by frequency and on-time reliability, schedule speed and travel time, and transit stop amenities.

The following enhancements are suggested as recommendations for transit providers to optimize transit quality of service within the city of Sutherlin:

[7] Transit Capacity and Quality of Service Manual, Third Edition

[8] Transit Cooperative Research Program Report 30: Transit Scheduling

- Provide more reliable service
- Conduct ridership surveys to determine optimal service span
- Improve access by identifying high demand origins and destinations
- Consider providing mid-day and weekend transit service
- Short headways during peak hours

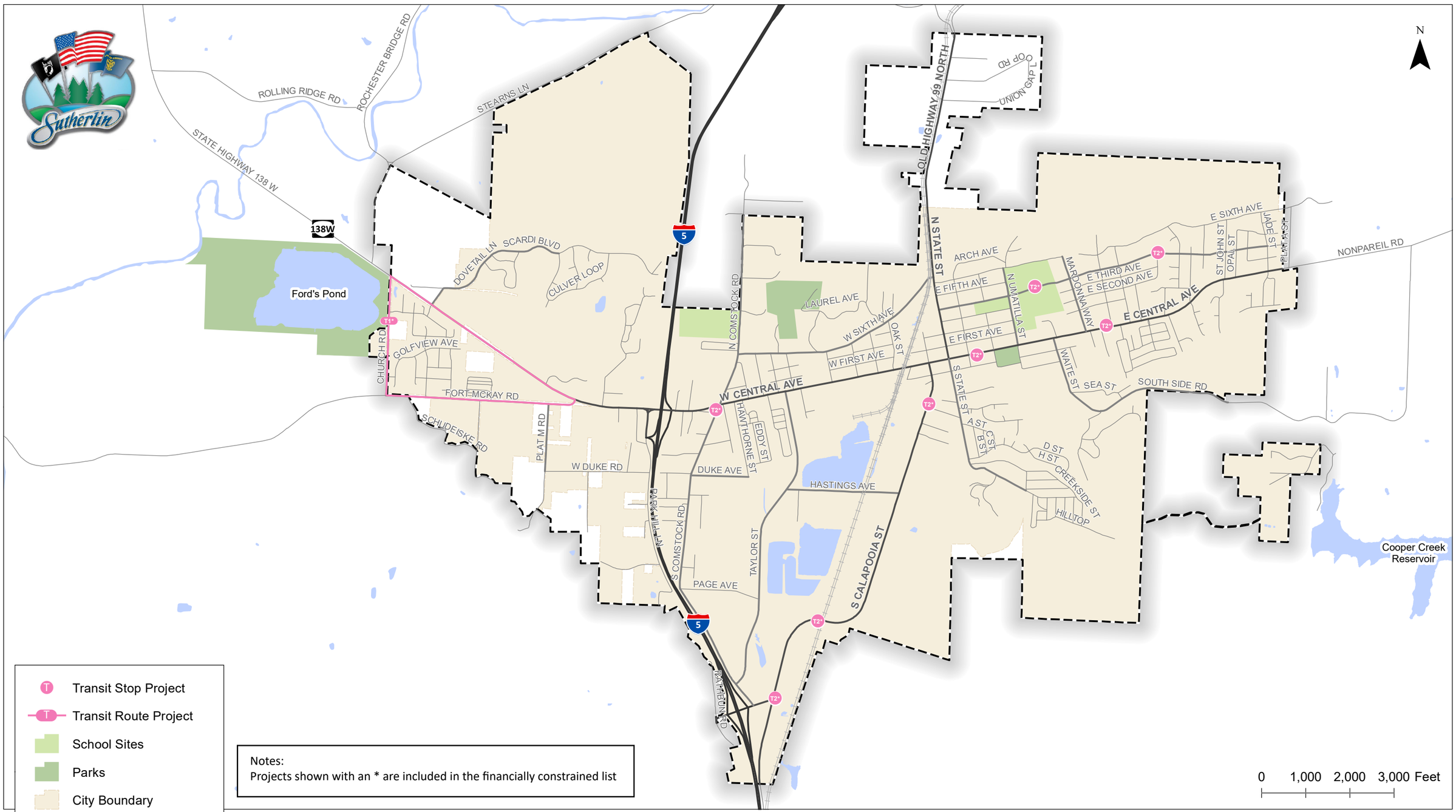
TRANSIT PLAN

Table 4 identifies Sutherlin's Transit Plan projects. UPTD is currently developing a Transit Master Plan that will assess additional transit system improvements and plans for future service in Sutherlin. Projects summarized in **Table 4** are intended to support the development and implementation of the UPTD Transit Master Plan. Projects are organized by improvement type, location, project cost (2020 $), priority, and primary funding source. The priorities shown in are based on the project evaluation criteria and reflect input from the project team and the general public. The cost estimates are based on average unit costs for roadway improvements. The cost estimates do not include the cost of right-of-way. **Figure 5** illustrates the location of the transit plan projects.

Table 4: Transit Plan Improvement Projects

Project ID	Improvement Type	Location	Project Cost (2020 $)[2]	Priority	Primary Funding Source[1]
T1	New Transit Routes	Western Sutherlin (Preliminary Route Shown)	$25,000	Financially Constrained	City/UPTD
	Explore opportunities to provide new transit services in Western Sutherlin through collaboration with UPTD. This project should be coupled with T3.				
T2	Stop Enhancements	Existing Transit Stops/Location Varies	$200,000	Financially Constrained	City/UPTD
	Improve station amenities by adding benches, signage, lighting, garbage cans, and transit maps. Project cost assumes amenities upgrades at all eight (8) existing transit stops.				
T3	New Transit Stops	Western Sutherlin	$25,000	Financially Constrained	City/UPTD
	Explore opportunities to provide new transit stops in Western Sutherlin. New transit stop locations should be based on future identified transit routes and coupled with project T1.				

[1] Funding Sources: City = City of Sutherlin; UPTD = Umpqua Public Transportation District
[2] Project Costs are Planning Level Cost Estimates that do not include costs for Right-of-Way acquisitions and/or environmental mitigation. Future project design will need to estimate these additional project costs.



Transit Plan Project
Sutherlin, Oregon

Figure **5**

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Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

MOTOR VEHICLE SYSTEM PLAN

The motor vehicle system in Sutherlin includes private streets, city streets, County roads, and state highways. These facilities provide residents with the ability to access retail, commercial, recreational, and other land uses within Sutherlin and neighborhood cities by vehicle.

The roadway network within Sutherlin is well establish in areas; however, east-west connectivity across I-5 is limited to OR 138 W (Elkton-Sutherlin Highway)/Central Avenue. Providing increased options and parallel routes for people driving will increase the efficiency of the transportation system as well as improve access and circulation for all travel modes. Several intersections have been identified as having operational issues, other have been identified as having safety issues, The Motor Vehicle System Plan includes projects to increase the efficiency of the transportation system through changes in the functional classification of the roadway, refinement of roadway standards and standard cross sections, improvements to the street system connectivity, and improvements to local street connectivity.

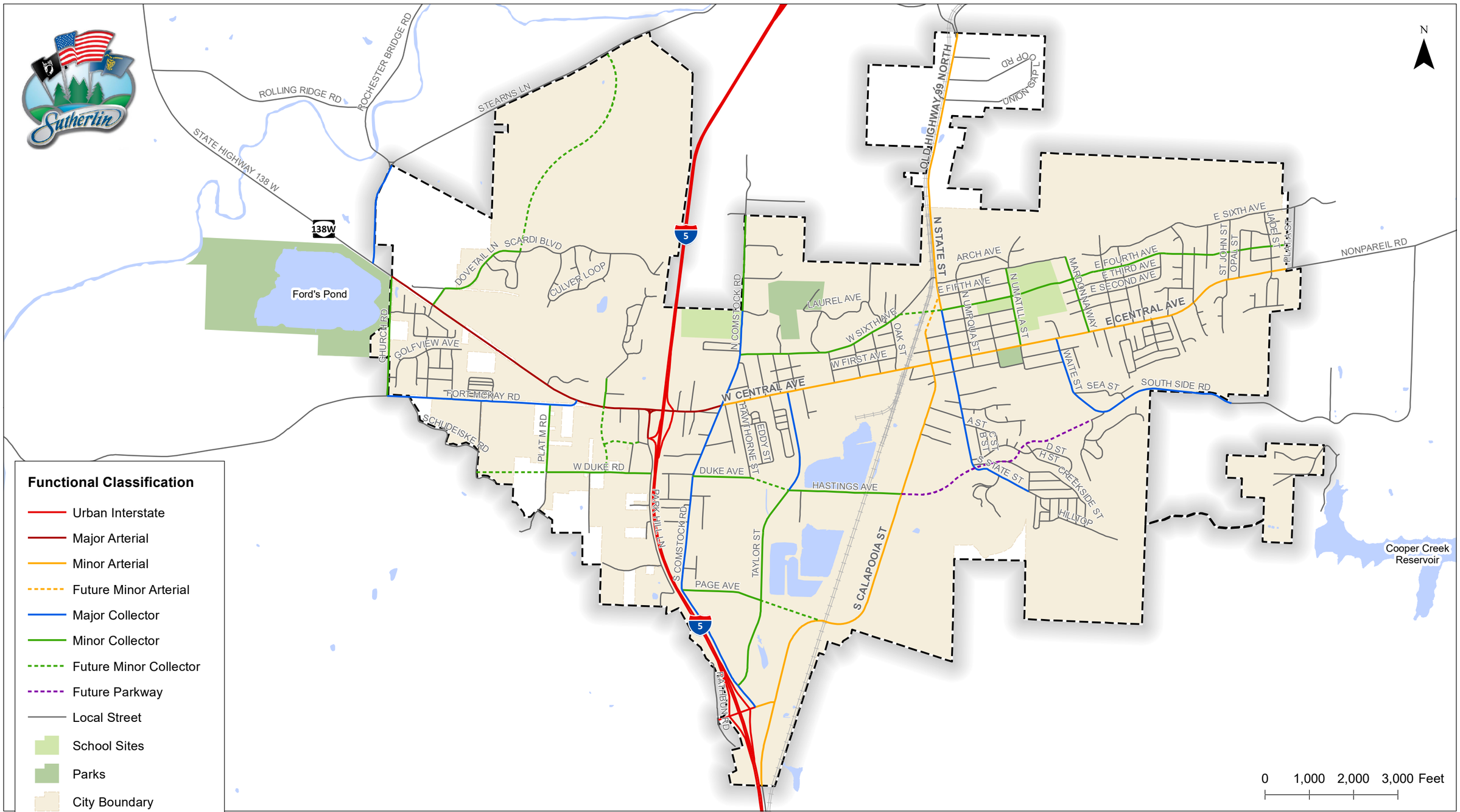
FUNCTIONAL CLASSIFICATION

Streets in Sutherlin are owned and maintained by three separate jurisdictions, including the City of Sutherlin, Douglas County, and the Oregon Department of Transportation (ODOT). Each jurisdiction is responsible for determining the street's functional classification, defining its major design and multimodal features, and approving construction and access permits. Coordination is required among jurisdictions to ensure that the streets are planned, operated, maintained, and improved to safely meet public needs. The Sutherlin classifies roadways into the following designations:

- ***Urban Interstate:*** The primary function of a principal highway is to provide a connection between communities, towns, and cities. It provides through traffic movement and distribution to lower-order facilities. Access is generally limited, as is on-street parking. Right-of-way width and pavement width are characteristics of the type of facility. The Principal Highway designation is reserved specifically for the ODOT owned/operated I-5 corridor.
- ***Major Arterial:*** The primary function of a major arterial is to provide regional through movement to vehicles and freight. These streets are generally characterized by a three to five lane cross section, and should accommodate pedestrian and bicycles movements. Major arterials have controlled access and no on-street parking. Bicycle lanes are required on major arterials even if they do not generate significant bicycle traffic. Sutherlin's major arterials are limited to state facilities and are subject to state standards and design practices.

- ***Minor Arterial:*** The primary function of a minor arterial is to provide through movement to traffic, distributing it to collector streets and principal highways, and providing limited land access. These streets are generally characterized by a three cross section, and should accommodate pedestrian and bicycles movements. Signalization should be provided at intersections with other arterials and collector streets, as warranted. Sutherlin's minor arterials are designed with large rights-of-way (60 to 80 feet wide) with pavement widths of at least 48 feet. Minor arterials have limited or controlled access to them and have little or no on-street parking. Oregon's Transportation Planning Rule requires bicycle lanes and sidewalks along minor arterials. Bicycle lanes are required on minor arterials even if they do not generate significant bicycle traffic.
- ***Major Collector:*** The primary function of a major collector is to move traffic between arterials and to provide access to adjacent uses. A major collector is generally characterized by a two or three lane cross section. Oregon's Transportation Planning Rule requires bicycle lanes and sidewalks along major collectors. Bicycle lanes are required on major collectors even if they do not generate significant bicycle traffic. Intersections with other collectors and arterials may be signalized, as warranted. Sutherlin's major collectors have a minimum right-of-way width of 52 feet with a minimum pavement width of 36 feet. Property access from collector streets should be discouraged.
- ***Minor Collector:*** The primary function of a minor collector is to move traffic between arterials and local streets, and to provide access to adjacent uses. Similar to a major collector, a minor collector is generally characterized by a two or three lane cross section. Intersections with other collectors and arterials may be signalized, as warranted. Sutherlin's major collectors have a minimum right-of-way width of 52 feet with a minimum pavement width of 36 feet. Property access from collector streets should be discouraged.
- ***Parkway:*** The primary function of the parkway is similar to the arterial function, which is to provide through movement to traffic, distributing it to Connectors and Urban Interstate, and providing limited land access. The parkway classification is generally characterized by a three- to five-lane cross section, and accommodates pedestrian and bicycles movements. Signalization or roundabouts should be provided at intersections with other Arterials and Collectors, as warranted and appropriate. The parkway is proposed to have limited or controlled access with a landscaped median/center left-turn lane at key intersections and accesses. Bicycle lanes and sidewalks/multi-use paths are proposed for the parkway along with landscaping and green bio-swales.
- ***Local Street:*** The function of local streets is to provide access to private dwellings and businesses. Local streets should focus on serving passenger cars, bicycles, and pedestrians. Oregon's Transportation Planning Rule requires bicycle lanes along most local roads. Generally, local streets have two lanes and can include parking on one or both sides. Transit and heavy truck traffic are generally discouraged from using local streets. The standard minimum right of way for local streets in Sutherlin is 48 feet with a minimum pavement width of 36 feet.

Figure 6 illustrates Sutherlin's functional Classification plan for all existing streets and future arterial and collector streets within the UGB. The alignment for future streets should be considered conceptual: the end points of the streets are fixed, but the alignments between intersections may vary depending on design requirements at the time the streets are constructed.



Functional Classification

- Urban Interstate
- Major Arterial
- Minor Arterial
- Future Minor Arterial
- Major Collector
- Minor Collector
- Future Minor Collector
- Future Parkway
- Local Street
- School Sites
- Parks
- City Boundary
- Water Bodies
- Urban Growth Boundary

Functional Classification Plan
Sutherlin, Oregon

Figure **6**

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Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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Functional Classification Comparison

Amongst the various Federal, State, County and City transportation planning efforts, functional classification assignments have been provided to roadways within Sutherlin. **Table 5** summarizes these classifications for all classified Collector and higher facilities within Sutherlin. The City and Federal Functional Classifications must be consistent as part of the TSP adoption. City classifications have been updated. In some insistences, the Federal Functional Classification must be updated to reflect the City classification based on the reality of the current roadway functionality i.e. Urban Local to Minor Collector. As such, the City of Sutherlin will work with ODOT to request Federal Functional Classification changes where inconsistent. In addition, the City of Sutherlin will work with Douglas County on future County TSP updates to request updates to the County classifications where inconsistent with Sutherlin classifications.

Table 5: Functional Classification Comparison[1]

Roadway	Federal Functional Classification	Oregon Highway Plan Classification	Douglas County Classification	Sutherlin Classification
Interstate-5	Urban Interstate	Interstate Highway	Interstate Highway	Urban Interstate
OR 138 W (Elkton-Sutherlin Highway)	Urban Minor Arterial	Regional Highway	Principal Highway	Major Arterial[2]
Park Hill Lane (OR 138 W to I-5 Southbound Off-ramp)	Urban Minor Arterial	-	-	Major Arterial[2]
Stearns Lane	Major Collector	-	Minor Collector	Major Collector
Fort McKay Road	Major Collector	-	Major Collector	Major Collector
Plat M Road	-	-	Local	Minor Collector[2]
Duke Avenue	-	-	Local	Minor Collector[2]
Church Road	-	-	-	Minor Collector[2]
Dove Tail Lane	-	-	-	Minor Collector[2]
Central Avenue	Minor Arterial	-	-	Minor Arterial
S Comstock Road	Major Collector	-	Minor Collector	Major Collector
N Comstock Road	Major Collector	-	-	Major Collector
Taylor Street	-	-	-	Major Collector[2]
S Calapooia Street	Minor Arterial	-	-	Minor Arterial
S State Street	Major Collector	-	-	Major Collector
N State Street	Minor Arterial	-	-	Minor Arterial
Waite Street	Major Collector	-	-	Major Collector
Mardonna Way	Major Collector	-	-	Minor Collector[2]
Sixth Avenue	Major Collector	-	-	Minor Collector[2]
Fourth Avenue	Major Collector	-	-	Minor Collector[2]
Hastings Avenue	-	-	-	Minor Collector[2]
South Side Road	Major Collector	-	-	Major Collector
Exit 135 Connector	Major Collector	-	-	Minor Arterial[2]
Page Avenue	-			Minor Collector[2]
Umatilla Street	-			Minor Collector[2]
Dakota Street	-			Minor Collector[2]

[1] Bold highlighting indicates jurisdictional ownership of the roadway.
[2] City will be requesting Federal Classifications to be updated for consistency purposes with Sutherlin Classifications.

OREGON DEPARTMENT OF TRANSPORTATION BLUEPRINT FOR URBAN DESIGN

On 12/15/2019, ODOT adopted the Blueprint for Urban Design (BUD) (see TSB 19-01(D). This document is a "bridging document" to the highway design manual, and is to be used when designing urban projects on the state system. It provides greater flexibility in urban design when confronted with constraints within the built environment.

The BUD applies to local, county, or state highway that is the crossroad between the interstate or freeway ramp terminals. When these ramp terminals connect to urban roadways, the crossroad between the ramp terminals is considered part of the urban network and not part of the interstate or freeway crossing it. The BUD further breaks down the urban functional classifications into Urban Contexts. When determining the context of a roadway section, roadway federal functional classification, state classification, adjacent land use, roadside context, roadway segment designation, traffic volume, and number of lanes is considered. Creating greater differentiation in contexts based on more specific parameters along a section of roadway that affect its use can provide flexibility. It also helps prioritize design elements to better address user and community needs, rather than a "one-size-fits-all" approach.

The BUD breaks down the state high facilities into six contexts, described in the table below. The six contexts include:

- Traditional Downtown/Central Business District
- Urban Mix
- Commercial Corridor
- Residential Corridor
- Suburban Fringe
- Rural Community

Urban Context	Target Speed (MPH)[4]	Travel Lanes[2]	Turn Lanes[1,2]	Shy Distance[1,3]	Median[1,2]	Bicycle Facility[1,2,5]	Sidewalk	Target Pedestrian Crossing Spacing Range (feet)[6]	On-street parking[1]
Traditional Downtown/ CBD	20-25	Start with minimum widths, wider by roadway characteristics	Minimize additional crossing width at intersections	Minimal	Optional, use as pedestrian crossing refuge	Start with separated bicycle facility	Ample space for sidewalk activity (e.g., sidewalk cafes, transit shelters)	250-550 (1-2 blocks)	Include on-street parking if possible
Urban Mix	25-30	Start with minimum widths, wider by roadway characteristics	Minimize additional crossing width at intersections	Minimal	Optional, use as pedestrian crossing refuge	Start with separated bicycle facility, consider roadway characteristics	Ample space for sidewalk activity (e.g., sidewalk cafes, transit shelters)	250-550 (1-2 blocks)	Consider on-street parking if space allows
Commercial Corridor	30-35	Start with minimum widths, wider by roadway characteristics	Balance crossing width and operations depending on desired use	Consider roadway characteristics, desired speeds	Typically used for safety/ operational management	Start with separated bicycle facility, consider roadway characteristics	Continuous and buffered sidewalks, with space for transit stations	500-1,000	Not Applicable
Residential Corridor	30-35	Start with minimum widths, wider by roadway characteristics	Balance crossing width and operations depending on desired use	Consider roadway characteristics, desired speeds	Optional, use as pedestrian crossing refuge	Start with separated bicycle facility, consider roadway characteristics	Continuous and buffered sidewalks	500-1,000	Generally Not Applicable, Consider roadway characteristics
Suburban Fringe	35-40	Start with minimum widths, wider by roadway characteristics	Balance crossing width and operations depending on desired use	Consider roadway characteristics, desired speeds	Optional, use as pedestrian crossing refuge	Start with separated bicycle facility, consider roadway characteristics	Continuous and buffered sidewalks	750-1,500	Not typical
Rural Community	25 - 35	Start with minimum widths, wider by roadway characteristics	Balance crossing width and operations depending on desired use	Consider roadway characteristics, desired speeds	Optional, use as pedestrian crossing refuge	Start with separated bicycle facility, consider roadway characteristics	Continuous and buffered sidewalks, sized for desired use	250-750	Consider on-street parking if space allows

ROADWAY CROSS SECTION STANDARDS

The Sutherlin Development Code Section 3.5.110 contains the proposed roadway cross section standards for the city that work together with the identified functional classification system shown in **Figure 6**.

ROADWAY PLAN

Roadway Segment Enhancement Plan

Table 6 identifies Sutherlin's Roadway Segment Enhancement Plan. Improvements are focused on existing roadways that are unimproved, are currently serving or projected to serve multi-modal travel demands, or are not meeting modern roadway design standards that could create safety and operational issues.

Table 6: Roadway Segment Enhancement Projects

Project ID	Improvement Type	Location	Project Cost (2020 $)[3]	Priority	Primary Funding Source[1]
R1	Segment Enhancement	W Sixth Avenue	$3,870,000	Financially Constrained	City
	Widen and reconstruct the roadway from N Comstock to N State Street to meet the multimodal Minor Collector street standards.				
R2	Segment Enhancement	E Fourth Avenue – East	$2,325,000	Financially Constrained	City
	Reconstruct E Fourth Street to meet the multimodal Minor Collector street standards from N State Street to Mardonna Way.				
R3	Segment Enhancement	Mardonna Way	$695,000	Financially Constrained	City
	Reconstruct Mardonna Way from E Fourth Avenue to Central Avenue to meet the multimodal Minor Collector street standards.				
R4	Segment Enhancement	Waite Street[2]	$2,700,000	Financially Constrained	City
	Currently on the City's Capital Improvement Plan, widen and reconstruct the roadway between Central Avenue and South Side Road to meet the multimodal Minor Collector street standards.				
R5	Intersection Improvement	OR138W/Park Hill Lane	Total: $500,000 City Match:$167,000	Financially Constrained	State/City
	Install interim traffic signal at the OR138W/Park Hill Lane intersection until full Exit 136 IAMP improvements are implemented.				
R6	Intersection Improvement	OR138W/Dakota Street	Total: $500,000 City Match:$167,000	Financially Constrained	State/City
	Install traffic signal at the OR138W/Dakota Street intersection as envisioned in the larger Exit 136 IAMP.				
R7	Segment Enhancement	OR 138 W (Elkton-Sutherlin Highway)	Total: $1,400,000 City Match:$568,000	Financially Constrained	State/City
	Improve OR138W from Comstock Road to Dakota Street to a Major Arterial standard.				
R8	Segment Enhancement	OR 138 W (Elkton-Sutherlin Highway)	$5,420,000	Tier3/ Aspirational	State/City/Private Development
	Widen and reconstruct the roadway between western city limits and Dakota Street to meet near-term, multimodal Major Arterial street standards.				
R9	Segment Enhancement	Fort McKay Road	$2,975,000	Tier 2	City/County/Private Development
	Widen and reconstruct the roadway between western city limits and OR 138 W (Elkton-Sutherlin Highway) to meet the multimodal Major Collector street standards.				

Table 6: Roadway Segment Enhancement Projects					
Project ID	**Improvement Type**	**Location**	**Project Cost (2020 $)[3]**	**Priority**	**Primary Funding Source[1]**
R10	Segment Enhancement	Plat M Road	$1,080,000	Tier 2	City/County/Private Development
	Widen and reconstruct the roadway between For McKay Road and W Duke Road to meet the multimodal Minor Collector street standards.				
R11	Segment Enhancement	W Duke Road	$1,655,000	Tier 2	City/County/ Private Development
	Widen and reconstruct the roadway between Park Hill Lane and Plat M Road to meet the multimodal Minor Collector street standards.				
R12	Segment Enhancement	N Comstock Road	$1,215,000	Tier3/ Aspirational	City/County/Private Development
	Widen and reconstruct the roadway between Laurel Avenue to northern city limits to meet the multimodal Minor Collector street standards.				
R13	Segment Enhancement	N Calapooia Street	$2,050,000	Tier 2	City/Private Development
	Widen and reconstruct the roadway between Central Avenue and Second Avenue to meet the multimodal Minor Arterial street standards and extend the roadway to merge into N State Street at Fifth Avenue.				
R14	Segment Enhancement	N State Street	$3,100,000	Tier 2	City/Private Development
	Widen and reconstruct the roadway from Fifth Avenue to northern city limits to meet the multimodal Minor Arterial street standards.				
R15	Segment Enhancement	E Fourth Avenue - West	$2,470,000	Tier 2	City/Private Development
	Reconstruct E Fourth Street to meet the multimodal Minor Collector street standards from Mardonna Way to Jade Street.				
R16	Segment Enhancement	Church Road	$1,760,000	Tier 2	City/County/Private Development
	Reconstruct Church Street to meet the multimodal Minor Collector street standards from OR 138W to Fort McKay Road.				

Note: All improved or newly constructed roadways are expected to meet the minimum multimodal requirements as identified by the functional classification standard for pedestrian and bicycle accommodations.
[1] Funding Sources: City = City of Sutherlin; State = Oregon Department of Transportation; County = Douglas County.
[2] Project identified in current City's Capital Improvement Plan.
[3] Project Costs are Planning Level Cost Estimates that do not include costs for Right-of-Way acquisitions and/or environmental mitigation. Future project design will need to estimate these additional project costs.

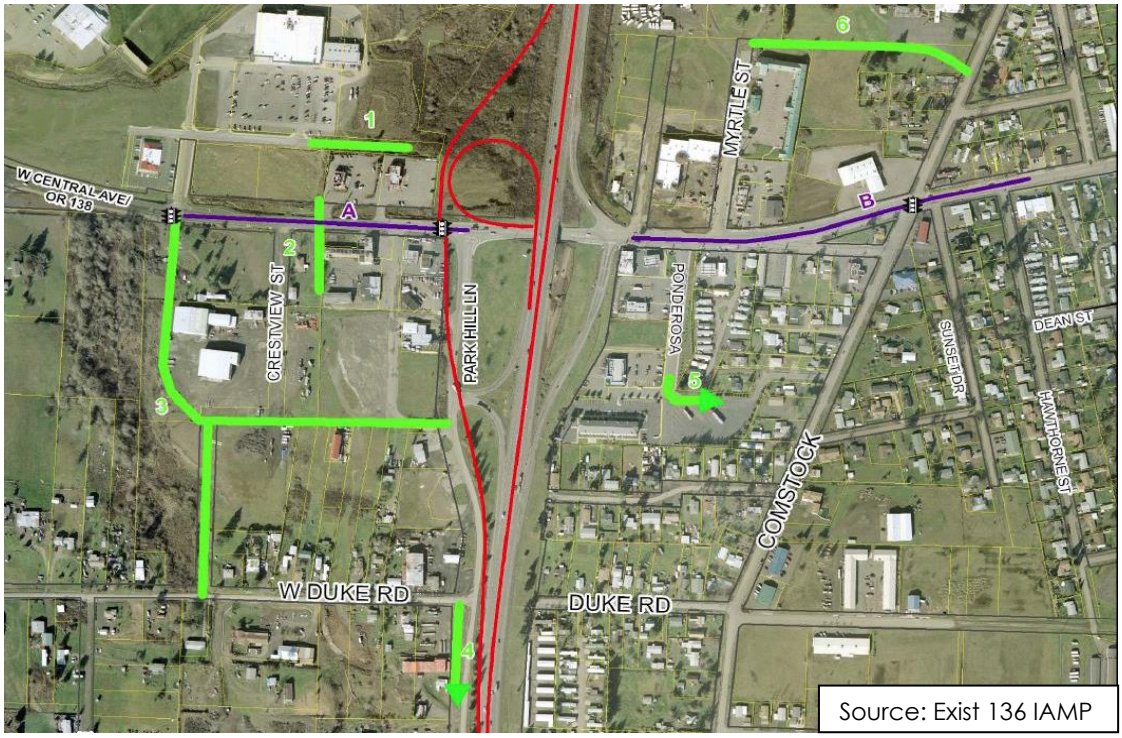
Exit 136 Interchange Area Improvement Plan

An interchange area improvement plan (IAMP) was adopted in April 2009 for Exit 136 to protect the near- and long-term function of the interchange and identify improvements needed to support long-term growth in Sutherlin. Through this analysis, the Exit 136 IAMP identified a preferred interchange design plan, access management plan, and local street connectivity plan to address long range growth and circulation needs. These projects are conceptually illustrated in **Exhibit 5**. The Exit 136 IAMP identified improvements at the following intersections.

- OR 138 W (Elkton-Sutherlin Highway)/Dakota Street
- OR 138 W (Elkton-Sutherlin Highway)/Park Hill Lane
- OR 138 W (Elkton-Sutherlin Highway)/I-5 Northbound Ramp Terminal
- OR 138 W (Elkton-Sutherlin Highway)/Ponderosa Drive
- OR 138 W (Elkton-Sutherlin Highway)/Comstock Road (east)

Refer to the Exit 136 IAMP for detailed information. **Figure 7** illustrates the location of the roadway plan projects.

Exhibit 5: Exit 136 IAMP Preferred Alternative

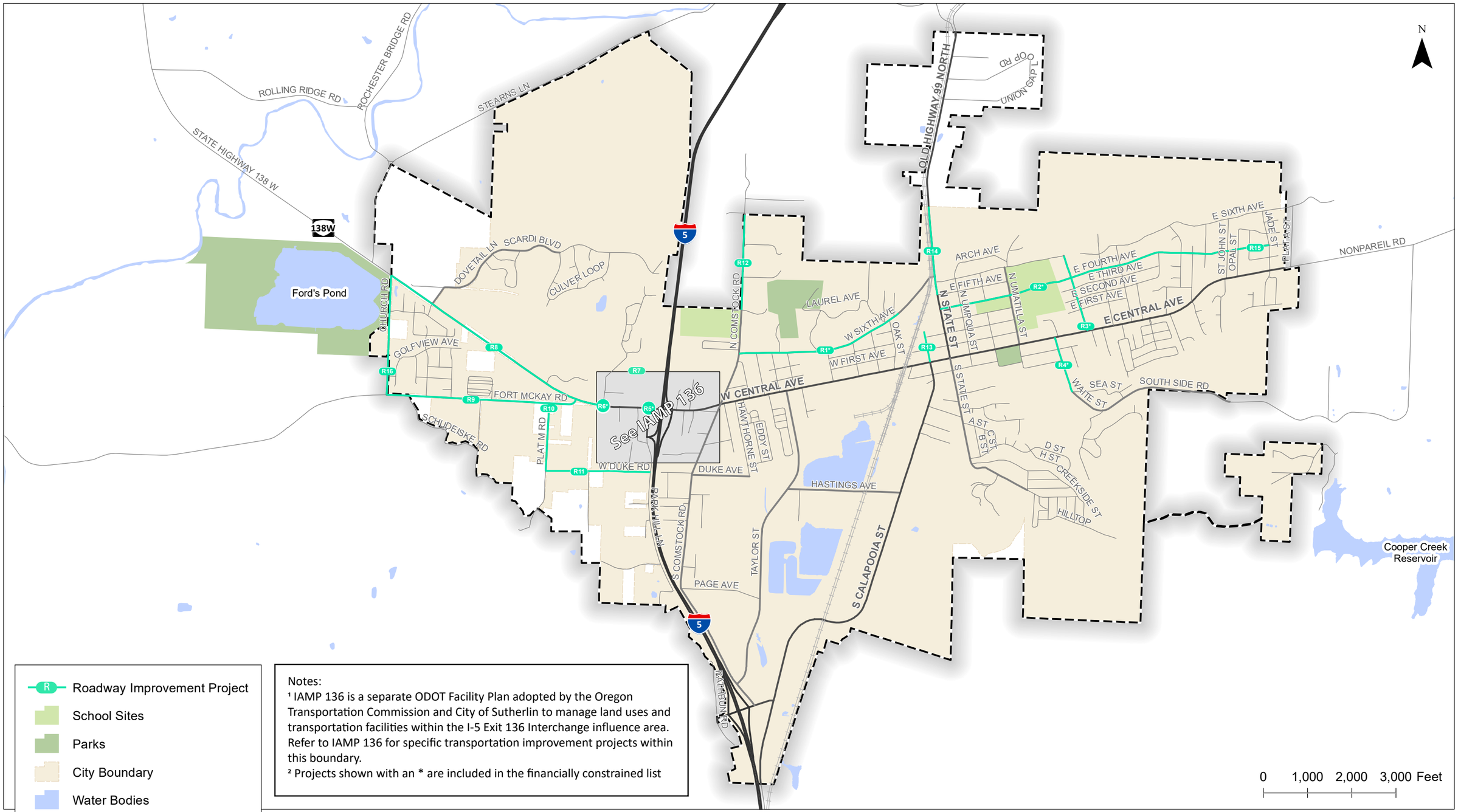


Source: Exist 136 IAMP

Legend:

1. Extend Clover Leaf Loop to east along the back of the parcel that fronts OR 138 W (Elkton-Sutherlin Highway).
2. Create new intermediate access (either local street or shared driveway) serving multiple parcels north and south of OR 138 W (Elkton-Sutherlin Highway). Initially, this is expected to be a full-movement intersection, but may be restricted to right-in, right-out when traffic volumes increase causing operational or safety problems.
3. Extend Dakota Street south to connect with W Duke Road. This new street will substitute for Park Hill Lane that must be abandoned in connection with the preferred interchange improvement project.
4. Develop new collector street (Park Hill Lane) south of W Duke Road.
5. Develop a local street connection from Ponderosa Drive to Comstock Road.
6. Develop new local street to provide alternative access between Myrtle Street and Comstock Road north of W Central Avenue.

A & B. Implement access management along OR 138 W (Elkton-Sutherlin Highway), east and west of the interchange.



- R — Roadway Improvement Project
- School Sites
- Parks
- City Boundary
- Water Bodies
- IAMP 136 Boundary [1]
- Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary.
[2] Projects shown with an * are included in the financially constrained list

Roadway Plan Projects
Sutherlin, Oregon

Figure **7**

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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Street Connectivity Plan

The future street system needs to balance the benefits of providing a well-connected linear grid system with the challenges associated with existing development patterns, railroad, topography, and environmentally sensitive areas. Incremental improvements to the street system can be planned carefully to provide route choices for people walking, biking, and driving while accounting for potential neighborhood impacts. In addition, the quality of the transportation system can be improved by making connectivity improvements to the pedestrian and bicycle system separate from street connectivity. Future roadway connections should occur as development occurs or as funding become available.

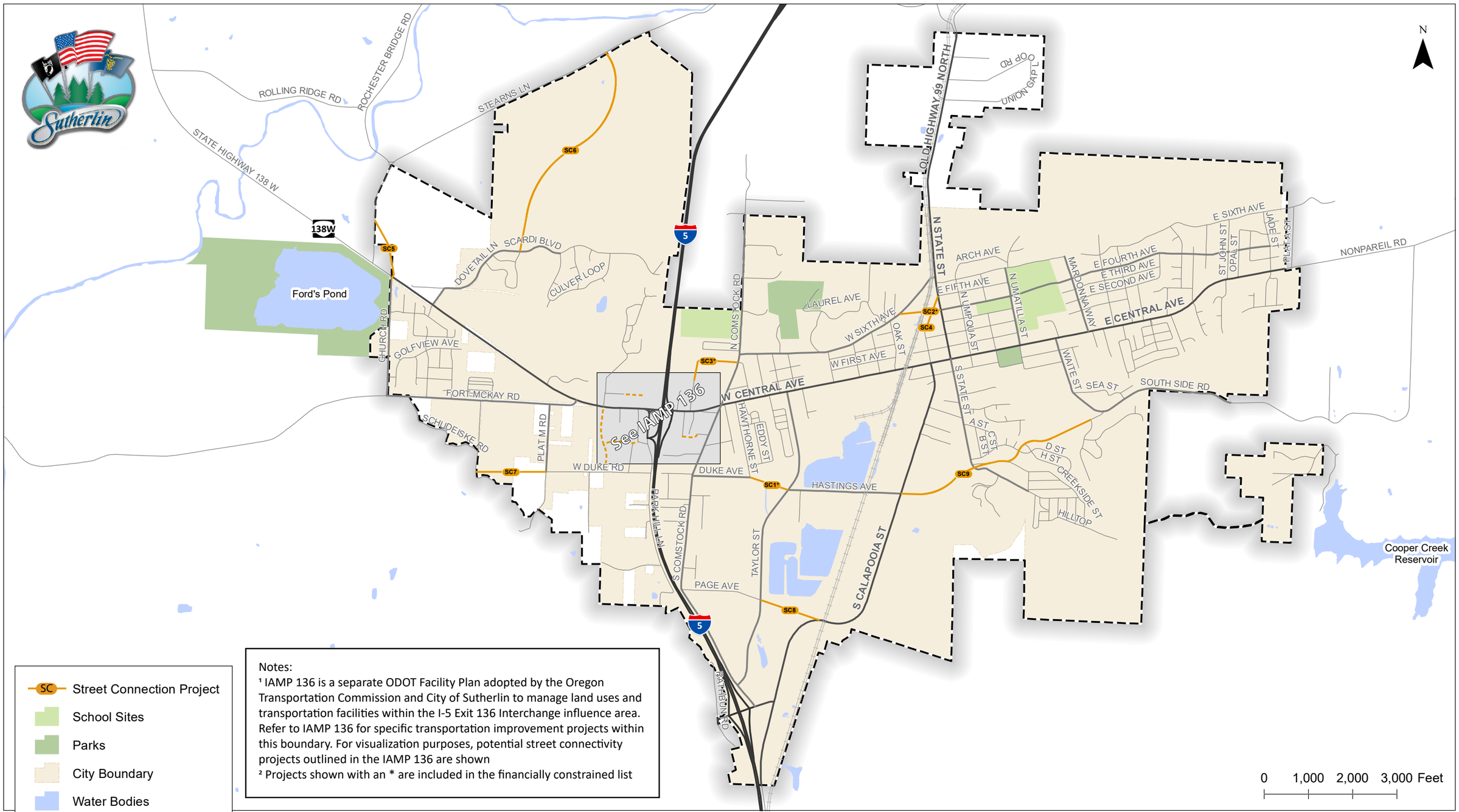
As described in Technical Memorandum #5: Transportation System Alternatives Analysis, a new Exit 136 interchange configuration and several local circulation improvements were evaluated to improve new local and regional street connections. The following section identifies additional Collector and Local Street connections that can further support street system connectivity within Sutherlin.

Figure 8 illustrates the location of Street Connectivity projects. **Table 7** summarizes the connections and identifies their priority based on the project evaluation criteria and input received through the TSP update process. Rough order of magnitude cost is provided for each project; however, in some cases future development may be responsible for implementation.

Local Street Connectivity Plan

The local street system in Sutherlin is a combination of traditional grid patterns north of Central Avenue, piecemeal development constrained by natural features and topography south of Central Avenue, and more traditional suburban layouts in western Sutherlin. However, in each of these areas, there are opportunities for new local streets, that if built, could improve access and circulation for all travel modes.

Figure 9 illustrates the general location of the local street connections that could be achieved as part of future residential development and redevelopment. Roadway alignments for each connection are not provided as they are anticipated to be determined as part of future development. Costs are not provided for these projects as they are anticipated to be constructed by future development.



SC Street Connection Project
School Sites
Parks
City Boundary
Water Bodies
IAMP 136 Boundary[1]
Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary. For visualization purposes, potential street connectivity projects outlined in the IAMP 136 are shown
[2] Projects shown with an * are included in the financially constrained list

Street Connectivity Plan Projects
Sutherlin, Oregon

Figure **8**

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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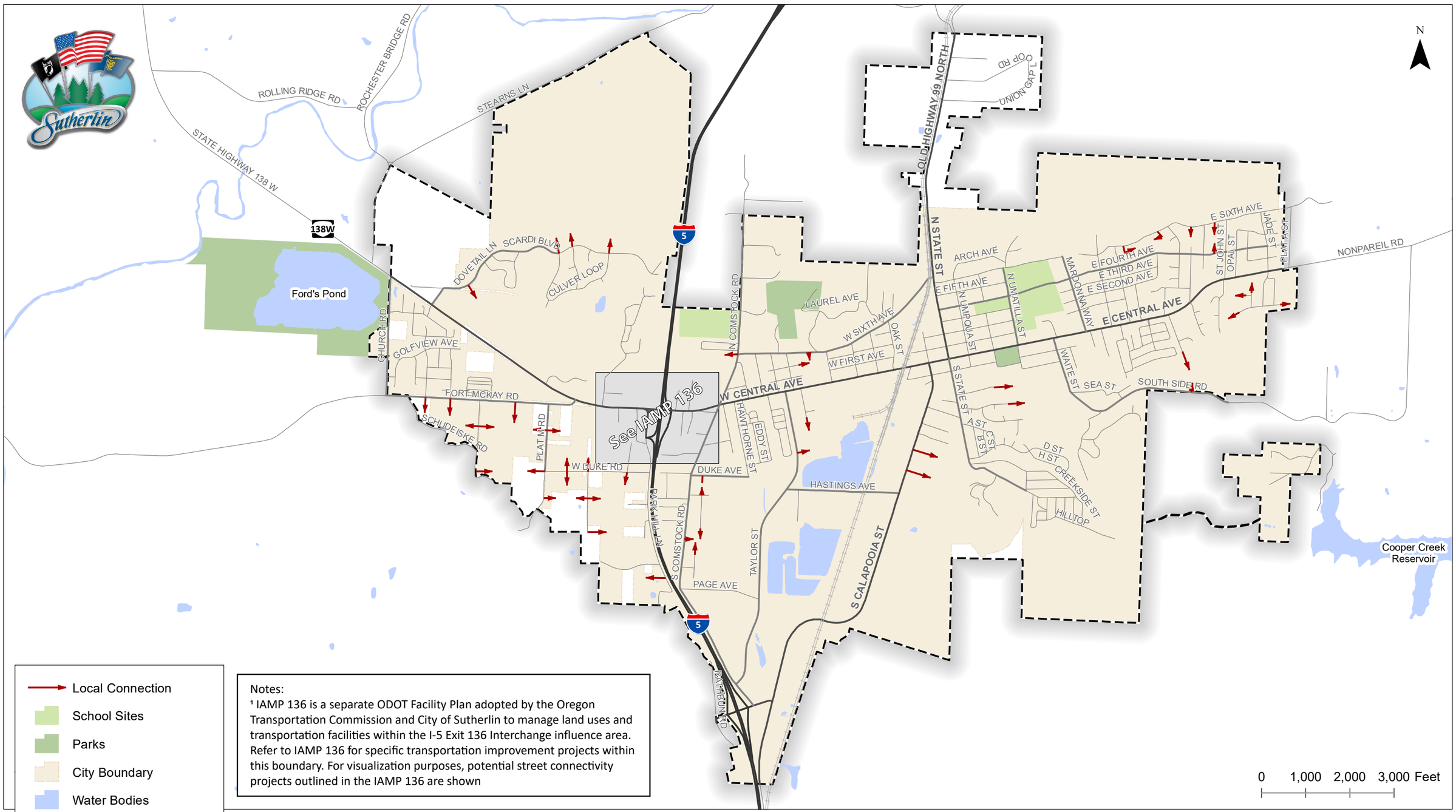
Table 7: Street Connectivity Projects					
Project ID	**Improvement Type**	**Location**	**Project Cost (2020 $)[3]**	**Priority**	**Primary Funding Source[2]**
SC1	Street Connectivity	Duke Avenue	$880,000	Financially Constrained	City
	Extend Duke Avenue east to create a new connection between Hawthorne Street and Taylor Street.				
SC2	Street Connectivity	Fourth Avenue Extension	$1,035,000	Financially Constrained	City/Private Development
	Extend Fourth Avenue to the west connecting to W Sixth Avenue.				
SC3	Street Connectivity	Robinson Street	$830,000	Financially Constrained	City/Private Development
	Extend Robinson Street to the west and south to connect to Myrtle Street.				
SC4	Street Connectivity	N Calapooia Street	$1,450,000	Tier3/ Aspirational	City/Private Development
	Extend N Calapooia Street north to connect to N State Street.				
SC5	Street Connectivity	Stearns Lane	$1,245,000	Tier 2	City/Private Development
	Realign Stearns Lane to intersect OR 138W (Elkton-Sutherlin Highway) across from realigned Church Road (eliminate skewed intersection angles)				
SC6	Street Connectivity	Dovetail Lane	$5,175,000	Tier 2	Private Development
	Extend Dovetail lane to the north to connect to Stearns Lane.				
SC7	Street Connectivity	W Duke Road	$1,555,000	Tier 2	City/Private Development
	Extend W Duke Road west to connect to Schudeiske Road.				
SC8	Street Connectivity	Page Avenue	$1,410,000	Tier 2	City/Private Development
	Extend Page Avenue west to create a new a connection between Taylor Street and S Calapooia Street.				
SC9	Street Connectivity	Southside Road[1]	$4,865,000	Tier3/ Aspirational	City/Private Development
	Extend Hastings Avenue east to create a new connection between S Calapooia Street and Waite Street.				

[1] This alternative is identified as part of the current 2005 TSP
[2] Funding Sources: City = City of Sutherlin
[3] Project Costs are Planning Level Cost Estimates that do not include costs for Right-of-Way acquisitions and/or environmental mitigation. Future project design will need to estimate these additional project costs.



- Local Connection
- School Sites
- Parks
- City Boundary
- Water Bodies
- IAMP Boundary[1]
- Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary. For visualization purposes, potential street connectivity projects outlined in the IAMP 136 are shown

Local Street Connectivity Plan
Sutherlin, Oregon

Figure **9**

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

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Vehicular Safety Plans

Roadway Segments

There are a variety of potential safety solutions that can be applied within Sutherlin to address systemic crashes that occur along roadway segments, such as head-on collisions, sideswipes, and run off the road crashes as well as general speeding and other driver behaviors.

- Enhanced signs and pavement markings for curves (with and without flashing beacons)
- Rumble strips (e.g. centerline, shoulder line, and edge line)
- Tree/vegetation removal
- Traffic calming
- Enhanced enforcement
- Road diet

Intersections

There are a variety of potential safety solutions that can be applied within Sutherlin to address systemic crashes that occur at intersections, such as angled crashes, turning movement crashes, rear-end crashes, and crashes that involve other travel modes (pedestrian, and bicycles).

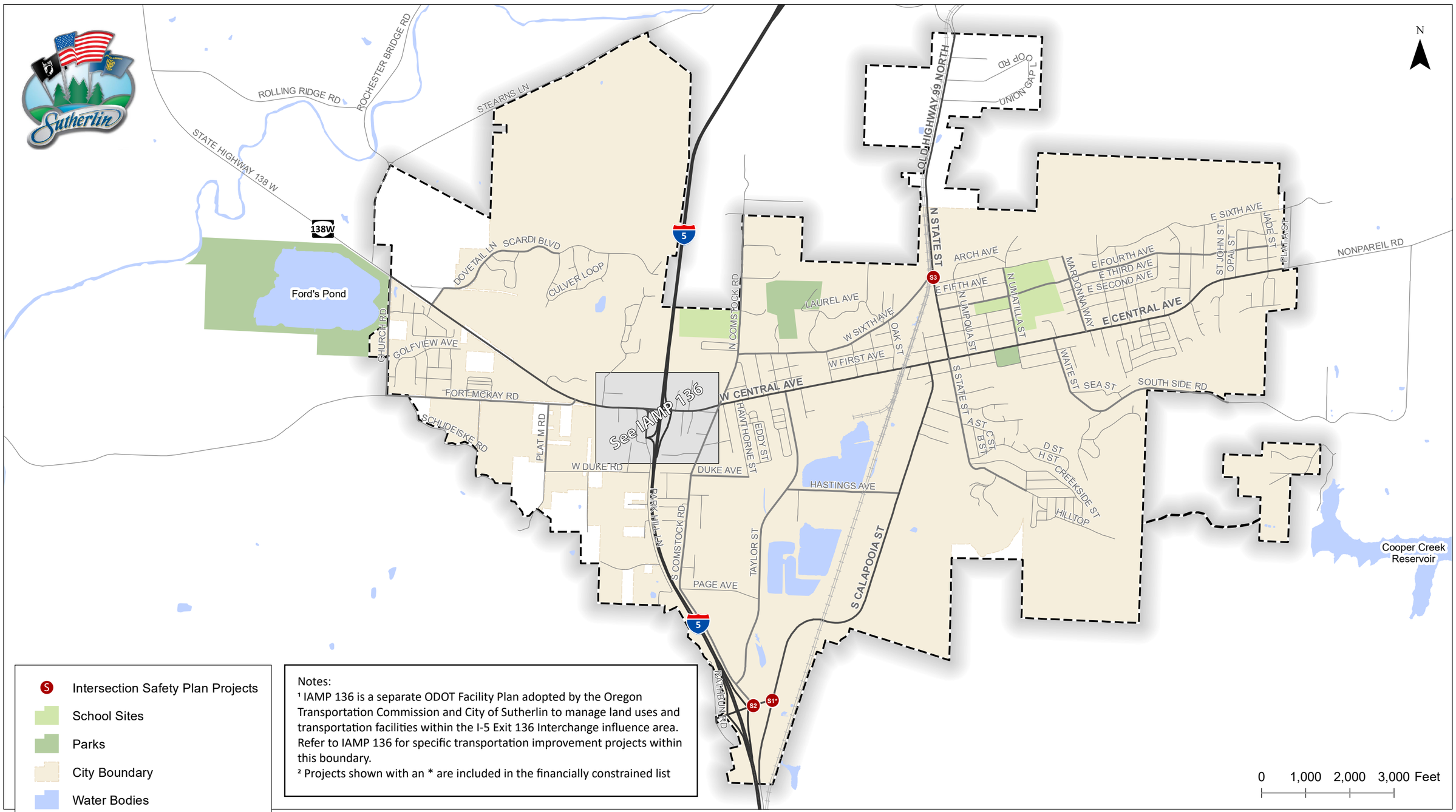
- Enhanced signs and pavement markings (e.g. stop signs, warning signs, and/or beacons)
- Application of traffic control devices (signs, markings, and signals)
- Signal improvements (e.g. signal timing, signal phasing)
- Left-turn phasing (e.g. permitted, protected, permitted-protected)
- Enhanced enforcement
- Pedestrian and bicycle improvements (see below)
- Intersection lighting
- Traffic calming
- Roundabout installation

Table 8 summarizes the safety improvements.

Table 8: Safety Plan Alternatives

Project ID	Improvement Type	Project Cost (2020 $)[3]	Priority	Primary Funding Source[2]
S1	S Calapooia Street/Exit 135 Connector	$25,000	Financially Constrained	County/State/City
	Install "Yield" signage and striping on the southbound right-turn lane.			
S2[1]	S Comstock Road/Exit 135 Connector	$100,000	Tier 3/Aspirational	County/State/ Private Development/ City/
	Limit future intersection access to right-in/right-out movements through installation of a raised median.			
S3	S Calapooia Street/Exit 135 Connector	Cost included with project SC2	Tier 3/Aspirational	City
	Install "Yield" signage and striping on the southbound right-turn lane			

[1] Access management on State Facilities will need to meet ODOT Access Management Standards and Notifications requirements.
[2] Funding Sources: City = City of Sutherlin; State = ODOT; County = Douglas County
[3] Project Costs are Planning Level Cost Estimates that do not include costs for Right-of-Way acquisitions and/or environmental mitigation. Future project design will need to estimate these additional project costs.



- Intersection Safety Plan Projects
- School Sites
- Parks
- City Boundary
- Water Bodies
- IAMP Boundary [1]
- Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary.
[2] Projects shown with an * are included in the financially constrained list

Safety Plan Projects
Sutherlin, Oregon

Figure **10**

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Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

FREIGHT, RAIL, PIPELINE, AND AIR SYSTEM

Freight and rail systems in Sutherlin serve to transport goods to, from, and through the City. The following section summarizes the existing freight and rail facilities within the City of Sutherlin.

FREIGHT FACILITIES

ODOT's Motor Carrier Transportation Division (MCTD) routes, ORS 366.215 routes, and City of Sutherlin freight routes identified in the current TSP were reviewed to identify potential issues with freight truck movements. The MCTD routes are identified as state freight routes according to the *MCTD Mobility Map*, and these routes experience the highest percentage of heavy vehicle traffic within the State. As a result, they need to be able to accommodate efficient freight truck movement.

MCTD Freight Routes

Highways that are "unrestricted to standard freight truck traffic but are either weight or width restricted" include:

- OR 138 W (Elkton-Sutherlin Highway) – this three-lane highway does not allow freight vehicles over 14'6" in height for continuous movement, and it has weight restrictions on freight vehicles.

ORS 366.215 Freight Routes

Oregon law prohibits permanent reductions in vehicle carrying capacity on ORS 366.215 freight routes. The Oregon Transportation Commission may grant exceptions if freight movement is not unreasonably impeded. Treatments that may reduce the vehicle carrying capacity include raised pedestrian islands, bulb-outs, new signs or signals over the roadway, and raised medians/curbs. OR 138 W (Elkton-Sutherlin Highway) and I-5 are ORS 366.215 Freight Routes.

City Freight Routes

The City does not have a freight route policy in place that provides standards for restrictions to designated freight routes.

Based on the traffic data collected along OR 138 W (Elkton-Sutherlin Highway), heavy vehicle percentages range from approximately three to 12 percent during the weekday PM peak hour. Given the operations along OR 138 W (Elkton-Sutherlin Highway) meet the respective mobility targets as discussed in the Current Transportation System Operations sections, no current issues related to congestion have been identified.

FREIGHT PLAN

Motor Carrier Transportation Division (MCTD) Freight Routes

ODOT's MCTD identifies OR 138 W (Elkton-Sutherlin Highway) as a Blue Route between the western city limits and I-5 and W Central Avenue as an Orange Route between I-5 and Comstock Road. According to the ODOT's Freight Mobility Map (Reference 5), the following definitions are provided for each respective freight route designation.

- Blue Routes: Routes that are **unrestricted to standard freight truck traffic** but are either **weight or width restricted** for Non-Divisible and/or Heavy Haul loads.
- Orange Routes: **Generally unrestricted freight and oversize/overweight routes**. The most heavily used truck routes in the state.

No changes are likely necessary to the MCTD freight routes as part of the TSP Update.

ORS 366.215 Freight Routes

OR 138 W (Elkton-Sutherlin Highway) is classified as an ORS 366.215 Freight Route. Under this classification, Oregon law prohibits permanent reductions in vehicle carrying capacity. Exceptions are allowed if safety or access considerations require the reduction. An exception may be granted by the Oregon Transportation Commission (OTC) if it is in the best interest of the state and freight movement is not unreasonably impeded. Examples of features that may reduce the vehicle carrying capacity of a highway are:

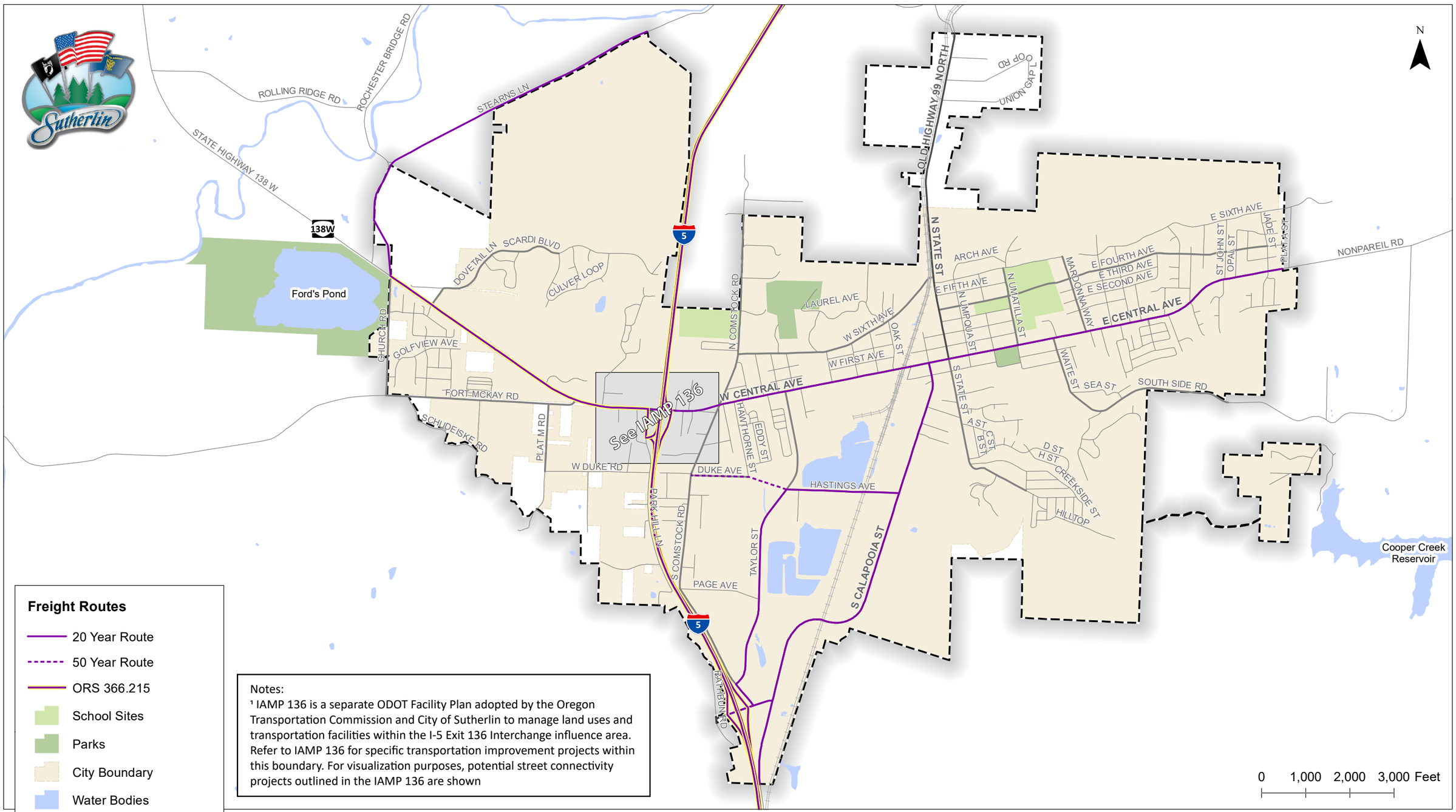
- Raised pedestrian islands
- Bulb-outs
- New sign or signal structures over the roadway
- Raised medians/curbs and traffic separators

City of Sutherlin Freight Routes

The Freight Plan designated freight routes are summarized in **Table 9** and illustrated in **Figure 11**.

Table 9: Designated Freight Routes

Roadway	From	To	Route Type/Change
N Calapooia Street	Central Avenue	N State Street	Freight Route (as part of R13/SC4 in **Figure 11**)
OR 138 W (Elkton-Sutherlin Highway)	Western City Limits	Park Hill Road	ORS 366.215
Park Hill Road	OR 138 W (Elkton-Sutherlin Highway)	SB Off-Ramp	ORS 366.215
Interstate 5 Exit 135 and Exit 136	Ramp Terminals		ORS 366.215
Central Avenue	Northbound I-5 Ramp	Eastern City Limits	20-Year Route
Taylor Street	Hasting Avenue	S Comstock Road	20-Year Route
S Comstock Road	Taylor Street	135 Connector	20-Year Route
S Calapooia Street	W Central Avenue	Southern City Limits	20-Year Route
Hasting Avenue	Taylor Street	S Calapooia Street	20-Year Route
Duke Avenue	S Comstock Road	Taylor Street	50-Year Route



Freight Routes

- 20 Year Route
- 50 Year Route
- ORS 366.215
- School Sites
- Parks
- City Boundary
- Water Bodies
- IAMP 136 Boundary [1]
- Urban Growth Boundary

Notes:
[1] IAMP 136 is a separate ODOT Facility Plan adopted by the Oregon Transportation Commission and City of Sutherlin to manage land uses and transportation facilities within the I-5 Exit 136 Interchange influence area. Refer to IAMP 136 for specific transportation improvement projects within this boundary. For visualization purposes, potential street connectivity projects outlined in the IAMP 136 are shown

Freight Route Plan
Sutherlin, Oregon

Figure **11**

H:\22\22498 - Sutherlin TSP Update\gis\TSP\11_Freight Route Plan.mxd - ngross - 12:32 PM 2/11/2020

Coordinate System: NAD 1983 StatePlane Oregon South FIPS 3602 Feet Intl

RAIL FACILITIES

According to the City's current TSP, the rail freight portion of commodities accounts for approximately five to ten percent of the estimated 25 million tons annually moved through the I-5 corridor. If the railroad were not available to carry commodities, there would likely be an impact on state freight routes in southern Oregon, particularly along the I-5 corridor.

Railroad Crossings

Four railroad crossings exist within Sutherlin. These crossings are presented in **Table 10** along with the type of crossing and type of crossing protection devices. Within Sutherlin approximately three trains pass through the City limits per day. During this time, east-west mobility is limited due to the train cars bisecting W Central Avenue.

Table 10:Existing Railroad Grade Crossings

Roadway	Railroad Crossed	Type of Crossing	Warning Devices
S Calapooia Street	Central Oregon Pacific	At-grade	Gates
Hasting Avenue	Central Oregon Pacific	At-grade	Gates
Central Avenue	Central Oregon Pacific	At-grade	Gates
Sixth Avenue	Central Oregon Pacific	At-grade	Stop-Sign

The railroad crossing at W Central Avenue is just west of S Calapooia Street near downtown Sutherlin. W Central Avenue is the most heavily trafficked road in the City. When trains block the road, long vehicle queues can form, and there is no alternative route for traffic or emergency vehicles to pass. Traffic along Hastings Avenue and Sixth Avenue is relatively low resulting less significant abruptions of traffic comparatively to Central Avenue. The railroad crossing on S Calapooia Street can significantly disrupt traffic that runs between I-5 Exit 135 and downtown Sutherlin.

Passenger Rail

Passenger rail service is not provided within Sutherlin. The closest intercity passenger rail service is provided in Eugene which lies on the major north-south rail line connecting California with destinations to the north such as the Portland metro region, Washington, and British Columbia.

Automatic Gates/Lighting

Automatic gates serve as barriers across the roadway when a train is approaching or occupying the crossing. Gates are typically highly reflective to enhance visibility during darkness. As a train approaches an at-grade crossing, the automatic gates are activated in advance of the train (no more than three seconds) after the signal lights start to operate. Automatic gates/flashing lights can be equipped as overhead signals or active traffic control devices (at-grade).

Advance Warning Signage

Advance signage can be provided to indicate an at-grade railroad crossing approach. Signage must comply with the Manual on Uniform Traffic Control Devices (MUTCD).

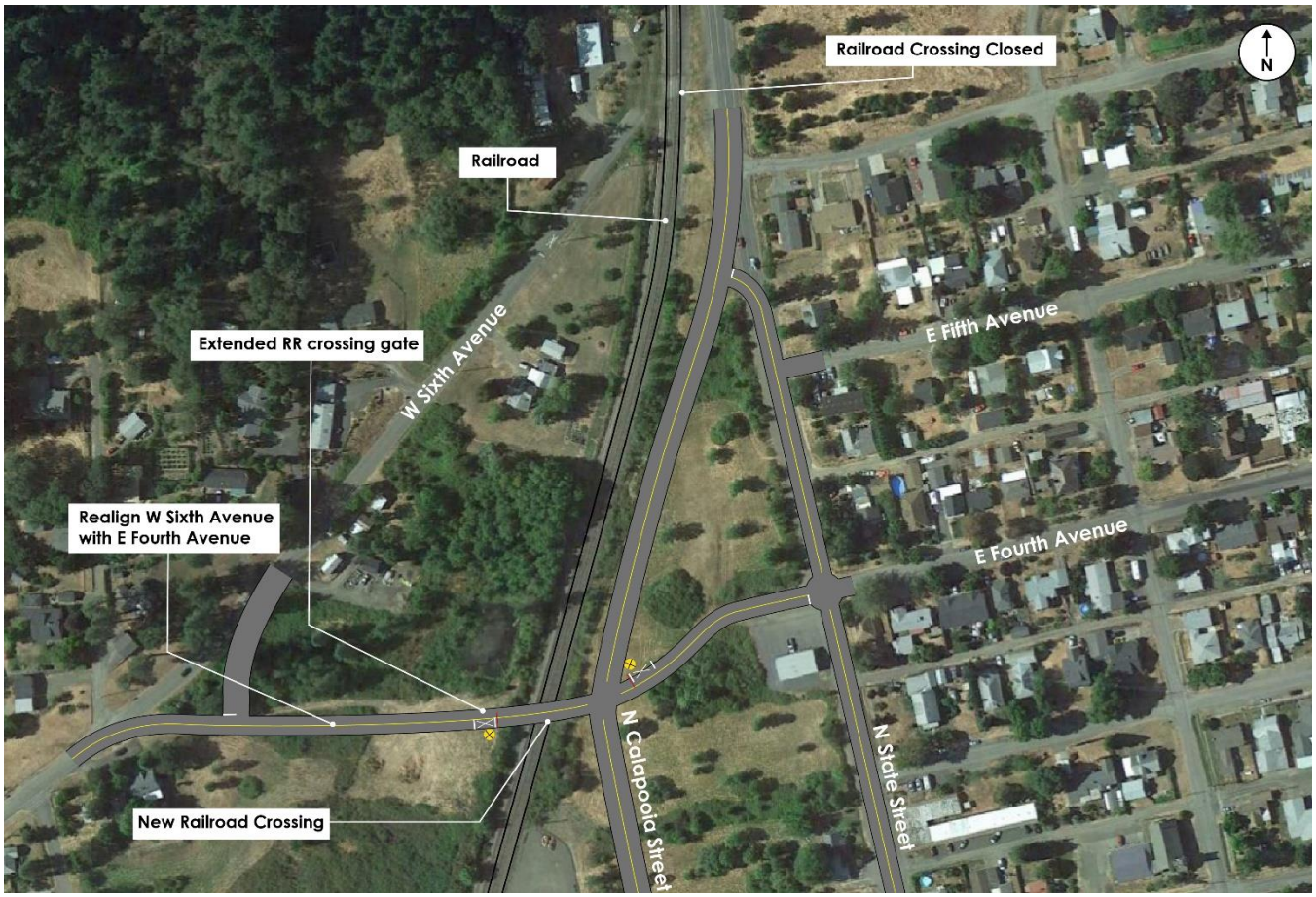
RAIL PLAN

Relocation of Sixth Avenue Railroad Crossing to New Fourth Avenue Alignment

As documented in Technical Memorandum #3: Current Transportation Operations, the N State Street/Sixth Avenue intersections is the only existing at-grade railroad crossing that does not provide gates or lighting. Rather than upgrade this crossing, an opportunity exists to realign W Sixth Avenue with E Fourth Avenue as previously documented in Project SC8 on **Figure 8**. In order to seek a potential new railroad crossing along the realigned Sixth Avenue to Fourth Avenue corridor, the existing W Sixth Avenue crossing would need to be closed.

In order to add or propose changes to an existing railroad crossing, coordination with ODOT rail must occur. When there is a formal interest to add a new crossing, or to modify or close an existing one, a review process initiated by the interested applicant must be submitted to ODOT Rail & Public Transit Division who will then work with the applicants and affected railroads and road authorities. As required by statue[9], ODOT must also examine opportunities to eliminate at-grade crossings, focusing on crossings that are redundant or have the greatest potential for conflicts between rains and other modes. **Exhibit 6** illustrates a planning-level concept diagram of the Sixth Avenue to Fourth Avenue realignment and new railroad crossing.

Exhibit 6: Fourth Avenue/ N State Street Rail Plan Alternative

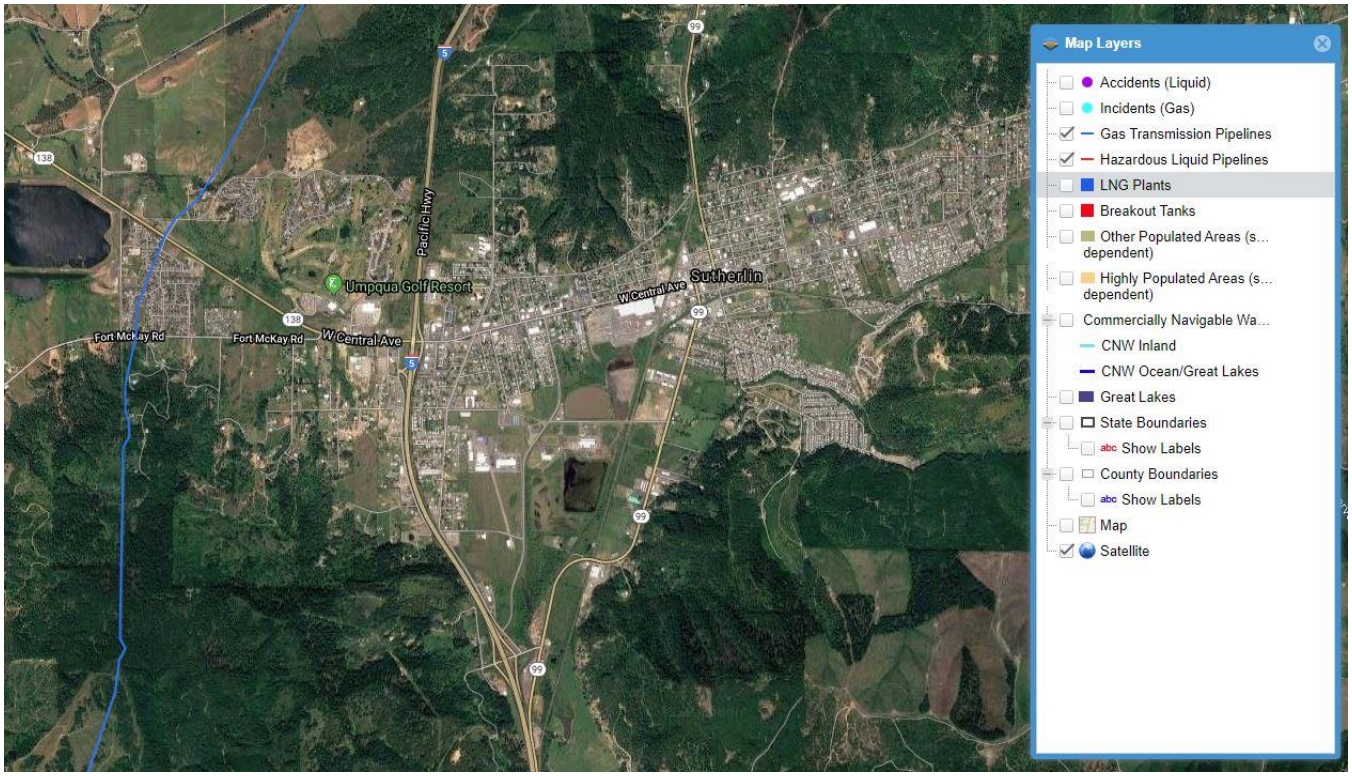


[9] ORS 824.202 requires ODOT to eliminate at-grade crossings wherever possible.

PIPELINE FACILITIES

Northwest Pipeline LLC operates a major natural gas pipeline located in western Sutherlin. Exhibit 7 illustrates the location of the Gas Transmission Pipeline.

Exhibit 7: Gas Transmission Pipeline



According to the National Pipeline Mapping System (NPMS) Public Viewer, the natural gas pipeline in Sutherlin is located on the Eugene/Grants Pass System and identified as Pipeline ID 2443. The pipeline is 34.66 miles in length and is currently Active (filled).[10]

AIR FACILITIES

There are no public or private airports located within Sutherlin. The closest public airport is the Roseburg Regional Airport located approximately 12 miles south of Sutherlin. No air projects or programs were identified as part of the TSP.

[10] https://pvnpms.phmsa.dot.gov/PublicViewer/

FUNDING AND IMPLEMENTATION

FUNDING PROGRAMS AND REVENUE

Funding Forecast

The City of Sutherlin has historically relied upon different revenue sources to fund transportation-related maintenance and make capital improvements. These revenue sources include taxes, inter-governmental sources, and miscellaneous funds such as system development changes.

- State Gas Tax - State gas taxes are comprised of proceeds from excise taxes imposed by the State and Federal government to generate revenue for transportation funding. The proceeds from these taxes are distributed to Oregon counties and cities in accordance with Oregon Revised Statute (ORS) 366.764, by county registered vehicle number, and ORS 366.805, by city population. The Oregon Constitution states that revenue from the state gas tax is to be used for the construction, reconstruction, improvement, maintenance, operation and use of public highways, roads, streets, and roadside rest areas.
- Inter-Governmental Sources - Inter-Governmental Sources in Sutherlin has historically included grant funds and special agreements.
- Miscellaneous - Miscellaneous revenue includes various funds received throughout the year from system development charges (SDC) and unanticipated activities including land sales and cost sharing of special projects.

Revenue estimates from each of the historical revenue sources were combined and projected out over the next 5, 10, and 22-year period to determine the total revenue that is estimated through 2040. **Table 11** provides a summary of the potential future funding through 2040.

Table 11: Future Transportation Funding Projections

Revenue Source	5-Year Forecast FY 2018-19 to FY 2022-2023	10-Year Forecast FY 2023-2024 to FY 2027-2028	22-Year Forecast FY 2028-2029 to 2039-2040
State Gas Tax	$2,400,000	$5,400,000	$15,200,000
Inter-Governmental Sources	$850,000	$1,700,000	$3,700,000
Miscellaneous	$660,000	$1,300,000	$3,000,000
Total	**$3,910,000**	**$8,400,000**	**$21,900,000**

Expenditure Forecast

The City organizes historical expenditures into three main categories, including Materials & Services, Maintenance, and Transfers.

- Materials & Services – Materials and Services consists of items that need to be purchased and one-time expenses including small equipment, tools and supplies, personnel training, insurance, and more.
- Maintenance – Maintenance expenditures are primarily used for general street and storm drainage maintenance; striping, filling potholes, clearing storm drains, fixing storm drains, small paving projects, and dust control.
- Transfers - Transfers have consisted primarily for the estimated labor and material costs to the General Fund for administration purposes and to the Public Works fund for street related services i.e., construction crews.

Table 12: Future Transportation Expenditure Projections			
Expenditure Source	**5-Year Forecast FY 2018-19 to FY 2022-2023**	**10-Year Forecast FY 2023-2024 to FY 2027-2028**	**22-Year Forecast FY 2028-2029 to 2039-2040**
Materials & Services	$450,000	$910,000	$2,000,000
Maintenance	$180,000	$360,000	$800,000
Transfers	$1,270,000	$2,540,000	$5,600,000
Total	**$1,900,000**	**$3,810,000**	**$8,400,000**

As shown in **Table 11** and **Table 12**, the projected funding from now through FY 2039-40 is approximately $21,900,000 and the projected expenditures are approximately $8,400,000. Based on these projections, the City is expected to have approximately $13,500,000 through the year 2040. The City should continue to identify other potential revenue sources to fund transportation projects including projects identified in the TSP update.

PLANNED TRANSPORTATION SYSTEM COST SUMMARY

Table 13 provides a summary of the full cost of the financially constrained and planned transportation system projects. As shown, the full cost of the planned system is approximately $65M over the 20-year period.

Table 13: Planned Transportation System Cost Summary				
Project Type	**High Priority / Financially Constrained Projects**	**Tier 2 / Unfunded Projects**	**Tier 3 / Aspirational Projects**	**Total**
Pedestrian	$1,555,000	$9,545,000	$780,000	11,880,000
Bicycle/Rolling	$190,000	$8,985,000	$0	9,175,000
Transit	$250,000	$0	$0	250,000
Street Connectivity	$2,745,000	$10,835,000	$4,865,000	18,445,000
Roadway Enhancement	$8,160,000	$12,585,000	$3,340,000	24,085,000
Safety	$25,000	$350,000	$0	375,000
Total	**12,925,000**	**$42,300,000**	**$8,985,000**	**$64,210,000**

POTENTIAL FUNDING SOURCES

The projected transportation funding analysis shows that the City of Sutherlin will have a limited source of funds that can solely be dedicated to transportation-related capital improvement projects over the next twenty years. As such, Sutherlin will need to seek additional funds via transportation improvement grants, partnerships with regional and state agencies, and other funding sources to help implement future transportation-related improvements.

Table 14 identifies a list of potential Grant sources and Partnering Opportunities to consider during the course of the 20-year planning horizon.

Table 14: Potential Grant Sources and Partnering Opportunities

Funding Source	Description	Potential Facility Benefit
Fixing America's Surface Transportation (FAST) Act	FAST Act funds surface transportation programs, including, but not limited to, federal-aid highways	• Roadway facilities
Surface Transportation Block Grant (STBG)	STBG funds are flexible funding sources for jurisdictions and are eligible to be used for non-motorized transportation projects	• Bicycle, pedestrian, and transit facilities
Highway Safety Improvement Program (HSIP)	HSIP is a core Federal-aid program with the purpose of achieving a significant reduction in traffic facilities and serious injuries on all public roads	• Safety
All Roads Transportation Safety (ARTS)	The ARTS is intended to address safety needs on all public roads in Oregon	• Safety
Connect Oregon	Connect Oregon is an initiative to invest in air, rail, marine, and bicycle and pedestrian infrastructure to ensure Oregon's transportation system is strong, diverse, and efficient	• Non-motorized
The Statewide Transportation Improvement Program (STIP)	The STIP is ODOT's four-year transportation capital improvement program	• Roadway, pedestrian, bicycle, and trail facilities
House Bill (HB) 2017 Transportation Investments	House Bill (HB) 2017 affects drivers, bicyclists, and payroll employees by increasing the gas tax, weight-mile tax, and other transportation-related fees	• Roadway, pedestrian, bicycle, transit, and trail facilities
Safe Routes to School (SRTS) Infrastructure Program	ODOT's Safe Routes to School (SRTS) infrastructure program is focused on providing grants to make is safer for children to walk and bike to school	• Pedestrian and bicycle facilities

Table 15 identifies a list of potential new funding sources for Sutherlin to consider in an effort to increase funds for additional capital improvement projects.

Table 15: Potential New Funding Sources for Future Consideration

Funding Source	Description	Potential Facility Benefit
Economic Improvement Districts (EIDs)	Economic Improvement Districts collect assessments or fees on businesses in order to fund improvements that benefit businesses and improve customer access within the district	• Roadway, pedestrian, and bicycle facilities
Local Improvement Districts (LIDs)	LIDs are most often used to construct projects such as streets, sidewalks, or bikeways	• Roadway, pedestrian, and bicycle facilities
Local Fuel Tax	A local tax assessed on fuel purchased within the jurisdiction that has assessed the tax	• Roadway facilities
Urban Renewal Districts/Tax Increment Financing	Urban Renewal Districts are separate taxing districts created to remove blight within a district	• Roadway, pedestrian, bicycle, transit, and trail facilities
Local Bond Measures	Local bond measures, or levies, are usually initiated by voter-approved general obligation bonds for specific projects	• Roadway facilities
Street Utility Fees/Road Maintenance Fee	Flat fee charged to each property, on the number of trips a particular land use generates, or some combination of both	• Roadway facilities
User Fees	Fees tied to the annual registration of a vehicle to pay for improvements, expansion, and maintenance to the street system	• Roadway facilities
Development Exactions	Infrastructure improvements conditioned on new development to offset the transportation infrastructure impacts of new development.	• Roadway, pedestrian, bicycle, transit, and trail facilities
Parking District Assessments	Taxes applied to businesses/property owners in areas where special parking districts are established. The funds generated by the taxes would go to the operation and maintenance of the parking district. Useful in areas where parking is a premium.	• On-street parking

Table 15: Potential New Funding Sources for Future Consideration		
Funding Source	**Description**	**Potential Facility Benefit**
Parking-in-lieu Fees	Special fees assessed on development that chooses to not provide on-site parking for the development.	• Roadway, pedestrian, bicycle, transit, and trail facilities
Public/Private Partnerships	Public transportation infrastructure that is paid for by private sector in exchange for the revenue generated by that infrastructure. Examples could include car charging stations, car share facilities, bike lockers, and public parking lots.	• Public parking lots, bike locker/storage facilities, car charging stations.
Streets District	Special taxing districts (separate from the City of Sutherlin) that are formed to help improve or maintain specific roadways within the district.	• Local streets (surface improvements, sidewalks, bicycle lanes)

IMPLEMENTATION

The Transportation Planning Rule (TPR), as codified in the Oregon Administrative Rules (OAR 660-012-0045, requires that local jurisdictions identify and adopt land use regulation and code amendments needed to implement the TSP. Recommended land use regulations and code amendments are provided in Volume III.

MEMORANDUM

DATE	February 7, 2020
TO	Matt Hughart & Nick Gross, Kittelson and Associates, Inc. (KAI)
FROM	Darci Rudzinski & Clinton "CJ" Doxsee, APG
RE	**Technical Memorandum #7: Policy and Code Amendment Recommendations**
CC	File

GENERAL POLICY AND CODE RECOMMENDATIONS

General Description of the Action

This memorandum outlines an approach for amending the Sutherlin Comprehensive Plan and the Sutherlin Development Code (SDC) to ensure consistency with and implement the 2020 Sutherlin Transportation System Plan (TSP) and relevant provisions of the Oregon Transportation Planning Rule (OAR 660 Division 12, known as the "TPR").

Sutherlin Comprehensive Plan Actions

Recommended policy amendments reflect issues identified through the TSP update and the need for consistency between the TSP and Comprehensive Plan. Recommendations from the adopted 2005 TSP were not amended into the Comprehensive Plan document, nor were adopted Comprehensive Plan policies modified to reflect the TSP. The current TSP update planning process provides an opportunity to ensure that the policy language in the Comprehensive Plan and the TSP is consistent and to clarify the role each document serves in providing guidance for transportation planning in the city.

Sutherlin Development Code Actions

The TPR requires each local government to amend its land use regulations to implement the TSP and to adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors and sites for their identified functions." These requirements are achieved through a variety of measures, including access control standards, robust pedestrian and bicycle circulation and connectivity provisions, standards to protect future road operations, and expanded notice requirements and coordinated review procedures for land use applications.

The consultant team evaluated the SDC and found it to be largely in compliance with TPR requirements. The recommended amendments are intended to ensure the requirements are consistent with the updated TSP, provide clarity, and enhance consistency with TPR requirements.

Likely Implementing Agencies and Other Involved Parties

The City of Sutherlin, with support from the Oregon Department of Transportation (ODOT), will be responsible for implementing the recommended modifications. The recommended modifications identify two City documents: the Sutherlin Comprehensive Plan and the SDC. Chapter 4 – Development Applications and Review Procedures in the City's SDC identifies the type of land use application and review procedure by which modifications to approved plans and the SDC can be made.

Administrative or Legislative Actions Likely Required

The SDC determines the review procedure that applies to Comprehensive Plan and SDC amendments; amendments are reviewed through a Type IV procedure, subject to the provisions and approval criteria in Section 4.11 (see SDC Table 4.2.110). Type IV review procedures are quasi-judicial, with publicly noticed hearings before the Planning Commission and City Council. Amendments are considered initially by the Planning Commission and forwarded with a recommendation to City Council, the final decision-making body. Both bodies provide public notice and a hearing.

Potential Effectiveness

The recommended modifications to the Comprehensive Plan goals and policies are intended to provide sufficient guidance to ensure that future land use decisions and actions are consistent with the planned transportation system, thereby protecting the function of existing roadways and promoting a multi-modal system.

The recommended modifications to the SDC implement the provisions of the TSP update. Consistent with the TSP update, the recommended modifications are intended to integrate comprehensive land use planning with transportation needs and to promote multi-modal systems and make it more convenient for people to walk, bicycle, use transit, and drive less as development occurs.

Potential Impediments

Pursuant to Chapter 4 of the SDC, the recommended amendments to the Comprehensive Plan and the SDC are subject to a Type IV review. A Type IV review procedure requires a minimum of two hearings – one before the Planning Commission and one before the City Council – and also prescribes public notice requirements for each hearing.

Public hearings and public notice enable the City and the public to reasonably review applications and participate in the local decision-making process in a timely and effective way. It is possible that

areas of disagreement may arise as the proposed amendments, including adoption of the updated TSP, are reviewed as part of the public hearing process. Disagreements that the Planning Commission or City Council are not able to resolve may result in schedule delays and/or necessitate additional modifications to policy or code amendments. However, the risk for delays or additional modifications is low as a result of the City's public outreach and Public Advisory Committee involvement over the course of the project.

SPECIFIC POLICY AND CODE RECOMMENDATIONS

The City's TSP is the transportation element of the Sutherlin Comprehensive Plan. Upon adoption, the updated TSP's transportation policies will provide a framework for future land use and transportation decisions. To ensure that the text of the Comprehensive Plan is consistent with the updated TSP, policy language should be updated to reflect new transportation policy. In addition, the TSP project scope of work identifies topic areas where specific policy and code recommendations are to be reviewed as part of this Technical Memorandum. These topic areas are listed in Table 1 along with corresponding recommendations.

Table 1 provides a summary of recommendations identified in this memorandum. The full text of proposed Comprehensive Plan amendments are included in Attachment A; Attachment B includes proposed modifications to the SDC.

Table 1: Recommendation Summary

Policy and Code Amendment Topic Areas	**Recommended Amendments**	**Document/ Section**
Comprehensive Plan policies	Update the Public Facilities Goals and Policies to be consistent with the TSP goals and objectives.	Amend the Public Facilities Element in the Comprehensive Plan
Proposed Amendments to IAMP 136	No amendments to the IAMP are recommended as part of the TSP update process.	
Access Management	Modify vehicle access and circulation provisions in the SDC to clarify existing standards, provide flexibility, and ensure consistency with the TSP.	SDC Amendments: • 3.2.110.D • 3.2.110.E SDC Additions: • 3.2.110.I.4 • 3.2.110.S TPR -0045(2)(a)
Standards to Protect Future Operations of Roads, Transit, and Freight Movements	Add new section with traffic impact study provisions to provide additional clarification on when a TIS is required; propose TIS approval criteria and TIS conditions of approval.	SDC Addition: • 3.5.110.Z TPR -0045(2)(b)

Policy and Code Amendment Topic Areas	Recommended Amendments	Document/ Section
Regulations Supporting Safe and Convenient Bicycle and Pedestrian Facilities	Update street design standards and cross-sectional standards to be consistent with the TSP update.	SDC Amendments: • 3.5.110.F TPR -0045(3)(b)
A Process for Agency Notification and Coordinated Review of Land Use Divisions Affecting Transportation Facilities	Update public notice requirements for Type III and Type IV Planning Hearing to include affected public agencies.	SDC Amendments: • 4.2.140.C • 4.2.150.D TPR -0045(1)(c) & (2)(f)
Regulations that Support Amendments to Land Use Designations, Densities, and Design Standards are Compatible with Function, Capacity, and Level of Service of Transportation Facilities	No amendments to the zoning map amendment approval criteria are recommended as part of this TSP update process. Add TIS approval criteria that ensure proposed zone changes and plan amendments are supported by the planned transportation system and that the City has the authority apply conditions of approval related to needed transportation mitigation.	SDC Addition • 3.5.110.Z TPR -0045(2)(g) & -0060
Regulations Supporting Safe and Convenient Access to Transit Facilities	Include requirements for development proposals that are within a certain distance from an existing or proposed transit stop.	SDC Addition • 3.2.120.A.5 TPR -0045(3)(b)
Definition of "Applicant" that Allows Agency to Obtain a Land Use Permit Without the Land Owner's Consent or Participation	Expand the who may initiate land use applications to include public agencies or private entities that have statutory rights of eminent domain for projects they have the authority to construct.	SDC Amendments: • 4.2.160.C

The following sections provides a summary of recommended modifications as they relate to each topic in Table 1.

Comprehensive Plan Amendments

The recommended Comprehensive Plan goal and policy language is intended to be consistent with updated TSP goals and objectives. The proposed goal and policy language is consistent with the recommendations that were first explored with City staff and advisory committees as part of *Technical Memorandum #1: Goals, Plan and Policy Review, Funding Forecast* and are intended to reflect the outcomes of the TSP update process. More broadly, the proposed policies are intended to provide sufficient guidance to ensure that future land use decisions and actions are consistent with the planned transportation system, thereby protecting the function of existing roadways and promoting a multi-modal system.

IAMP 136

The Interchange 136 Interchange Area Management Plan (IAMP) was adopted by the City and approved by the Oregon Transportation Commission (OTC) as an amendment to the Oregon Highway Plan (OHP) in 2009. It functions as a refinement plan to the City's TSP and helps to guide

future land use and transportation decisions within the interchange influence area. The IAMP identified a preferred interchange configuration that addresses existing and anticipated deficiencies. The preferred interchange configuration is similar to a standard diamond but includes a supplemental loop ramp that provides movements for westbound traffic to southbound I-5. It also includes specific local street system projects to enhance connectivity in the vicinity of the interchange.

Recommendation: No amendments to the IAMP are proposed as part of the TSP update process. The preferred interchange configuration and access management plan have been incorporated into the TSP update. See the TSP draft for additional information.

Access Management

Access and circulation is regulated in Section 3.2 of the SDC. Specifically, Subsection 3.2.110 addresses vehicular access and circulation for all public roads, streets, and alleys within the City and to all properties abutting them. The regulations manage access through maintaining an adequate "level of service" ("LOS") and functional classification of roadways.

The City currently has a robust set of access management provisions that regulate vehicular access onto public roadways. Existing provisions include access permit requirements, traffic impact study requirements, access standards and options, number and spacing of accesses standards, and more. The existing provisions are generally in conformance with TPR regulations.

Recommendation. This memorandum recommends minor modifications to the vehicle access and circulation provisions in the SDC. The recommended modifications are intended to clarify existing standards, provide flexibility for the City and applicants under specific circumstances, and to implement and be consistent with the updated TSP.

Standards to Protect Future Operations of Roads, Transit, and Freight Movements

The SDC states in Section 3.2.110.D "The city or other agency with access jurisdiction may require a traffic study prepared by a traffic engineer to determine access, circulation and other transportation requirements including identification of projects needed to implement the Transportation System Plan or other projects needed to mitigate for traffic impacts resulting from development…" Similarly, Section 3.2.110.E allows the City to apply conditions of approval for access permits to mitigate impacts from development. Together, these provisions ensure that the operation of the street and highway system will operate safely and efficiently as development occurs.

The SDC also includes provisions to ensure zoning map amendments are consistent with the TPR. The approval criterion in Section 4.8.110.C states that "Demonstration that the most intense uses and density that would be allowed… can be served through the orderly extension of urban facilities and services, including demonstrating consistency with OAR 660-012-0060."

Recommendation: This memorandum recommends additional traffic impact study provisions be added to Section 3.5.110 (Transportation Standards) that will provide additional clarification on

when a TIS is required, TIS approval criteria, and TIS conditions of approval. The additional study provision would be added as a new subsection in 3.5.110.

Regulations Supporting Safe and Convenient Bicycle and Pedestrian Facilities

Access and circulation is regulated in Section 3.2 of the SDC. Specifically, Subsection 3.2.120 regulates pedestrian (and bicycle) access and circulation in new developments. It states that "safe, direct and convenient pedestrian circulation, all developments, except single family detached housing…, shall provide a continuous pedestrian and/or multi-use pathway system." The regulations provide on-site and street connectivity standards as well as design and construction standards.

Bicycle parking is regulated in in Section 3.4 of the SDC. Specifically, Subsection 3.4.130 regulates bicycle parking requirements for all uses that are subject to site plan review. It requires bicycle parking for any use with greater than ten vehicle parking spaces as well as prescribed minimum requirements for multi-family development, schools, colleges/trade schools, and for all uses within the Downtown Commercial (C-1) zone.

Bicycle facilities within the City's public right-of-way are regulated in Section 3.5 of the SDC. Specifically, Subsection 3.5.110 provides transportation related standards, including bike lane design standards for streets and pathways and cross-sectional standards for roadway based on street classification.

Recommendation: This memorandum recommends updating the street design standards and cross-sectional standards to be consistent with street standards identified in the TSP update.

A Process for Agency Notification and Coordinated Review of Land Use Divisions Affecting Transportation Facilities

Section 4.2 establishes procedures to allow the City, affected agencies, and the public to review and participate in the local decision-making process. Part of those provisions include public notice requirements for Type II, III, and IV review procedures. It also includes provisions that consolidate review of multiple land use applications under the highest applicable review procedure.

Recommendation: This memorandum recommends updating public notice requirements for Type III Planning Commission hearings to include governmental agencies or utilities who may be affected by a land use decision. Similarly, this this memorandum recommends a similar update for Type IV Planning Commission hearings to include utilities.[1]

[1] Note, public notice requirements for Type IV Planning Commission hearings already list affected governmental agencies as an agency that should receive notice.

Regulations that Support Amendments to Land Use Designations, Densities, and Design Standards are Compatible with Function, Capacity, and Level of Service of Transportation Facilities

The SDC includes provisions to ensure zoning map amendments are consistent with the TPR. The approval criterion in Section 4.8.110.C states that "Demonstration that the most intense uses and density that would be allowed… can be served through the orderly extension of urban facilities and services, including demonstrating consistency with OAR 660-012-0060."

Recommendation: No amendments to the zoning map amendment approval criteria are recommended as part of the TSP update process. Add TIS approval criteria that ensure proposed zone changes and plan amendments are supported by the planned transportation system and that the City has the authority apply conditions of approval related to needed transportation mitigation.

Regulations Supporting Safe and Convenient Access to Transit Facilities

The existing transit service in Sutherlin is provided by the UTrans Blueline. UTrans is currently developing a Transit Master Plan that will potentially provide additional transit system improvements in the City. The TSP's Transit element identifies transit amenity and service improvements for the City. Although the City does not have the authority to improve transit service, it can coordinate with UTrans and ensure that future development is supportive of transit through the land use approval process.

Recommendation: Include development requirements that support transit for proposals that are within a certain distance from an existing or proposed transit stop.

Definition of "Applicant" that Allows Agency to Obtain a Land Use Permit Without the Land Owner's Consent or Participation

City Council, Planning Commission, the planning director, or property owners or their agents are authorized to initiate land use applications (SDC 4.2.160.C). The challenge for agencies like the Oregon Department of Transportation (ODOT), which has responsibility to plan for state transportation facilities and has the power of eminent domain, is one of timing. ODOT may not yet be the owner of the property where the improvement is planned at which time land use approval is needed, as property acquisition often happens very late in the project timeline. Allowing agencies with eminent domain powers (e.g., ODOT) to initiate land use applications would simplify and facilitate project approval and development.

Recommendation: Expand the who may initiate land use applications to include public agencies or private entities that have statutory rights of eminent domain for projects they have the authority to construct.

ATTACHMENT A: GOALS AND OBJECTIVES

The following Sutherlin Comprehensive Plan modifications implement the recommendation in Table 1 of the Implementing Ordinances memorandum. Recommended changes are in an adoption-ready format; text that is recommended to be added is shown as **underlined and bold**, and text recommended to be removed is shown in ~~strikeout~~.

PUBLIC FACILITIES ELEMENT

The services required for a community to function properly are called public facilities. This broad title includes such systems as water, sewer, transportation, drainage, solid waste, emergency services, parks and recreation, as well as other public facilities. As a community grows, these services must necessarily expand. The policies in this element are designed to provide for needed service expansion in an orderly manner. Oregon law ORS 197.712(2)(e) requires public facility plans for storm sewer, sanitary sewer, water, and transportation systems for land uses shown in the Comprehensive Plan. This law applies to areas with populations over 2500 within urban growth boundaries.

In addition, Oregon Administrative Rule (OAR) 660, Division 11, requires that public facilities plans list proposed public facility projects and map their locations and provide policies or an urban growth management agreement that designates the provider of each service. Also, the rule specifies that the Public Facility Plan provide an inventory and general assessment of the public facilities, rough cost estimates of each project, an estimate of when the project will be needed, and a discussion of existing funding mechanisms.

The updated Public Facilities Plan for Sutherlin prepared in 1990 includes the elements required by Oregon law and administrative rules. To prevent duplication, the Sutherlin Public Facilities Plan is the document of reference for both general and specific aspects of Sutherlin' s public facility systems. However, the goals and policies of the Public Facilities Plan are retained in this element. Both documents work to outline Sutherlin's community aims.

ENERGY CONSERVATION

Energy conservation is not directly addressed in the Public Facilities Plan. But despite the -fact that the city has control over only a few activities that relate to energy use and conservation, these few areas are significant.

Included among the energy-conserving policies the city has adopted are planning for alternative transportation methods by resolving to study a bike route system and requiring sidewalks in new developments. The city encourages zero lot line zoning to increase structure density and heat retention. Infilling of vacant lots is encouraged to keep distances to the city’s commercial areas as short as possible. The city requires new requires new construction to meet state standards for weatherization and energy conservation. And waste recycling is encouraged as the city coordinates

with Douglas County solid waste management policies. Energy conservation policies are found on page 41, below.

PUBLIC FACILITIES -- GOALS AND POLICIES

A. GOAL: TO PROVIDE EFFICIENT PUBLIC FACILITIES AND SERVICES IN AN ORDERLY, PLANNED MANNER SO AS TO MEET THE NEEDS OF SUTHERLIN'S RESIDENTS AND BUSINESSES.

POLICIES:

[No modifications to Goal A policies]

B~~-1~~. GOAL **~~- SAFETY~~**: ~~TO PROVIDE AND ENCOURAGE A SAFE, CONVENIENT, AESTHETIC, AND ECONOMICAL TRANSPORTATION SYSTEM.~~ **TO PROVIDE A TRANSPORTATION SYSTEM THAT ENHANCES SAFETY AND SECURITY OF ALL TRANSPORTATION MODES.**

POLICIES:

~~1. Encourage the expansion of the street improvement program and also coordinate the program with the future street plan, and thus ensure that those streets that have been designated to carry high volumes of traffic (arterials and collectors) are in satisfactory and safe condition.~~

~~2. Support the development of an additional east-west limited access arterial thoroughfare.~~

~~3. Actively assist the State Highway Department in u~ grading U.S. Highway 99 to a four lane road and removing the jogs in the highway at Central Avenue and south of town in the vicinity of the Pacific Railroad tracks.~~

~~4. Require the installation of street lights in new developments.~~

~~5. Encourage the Southern Pacific Railroad to put up railroad crossing arms at railroad crossings and to use indicator lights on high traffic streets.~~

~~6. Develop a street systems plan which identifies the function of each street in the community.~~

~~7. Future streets and major improvements to existing streets shall satisfy the following applicable developmental criteria:~~

	~~Local~~	~~Collector~~	~~Arterial~~
~~Minimum Right-of-Way~~	~~56 ft.~~	~~60 ft.~~	~~102 ft.~~
~~Minimum Pavement Width~~	~~36 ft.~~	~~40 ft.~~	~~70-82 ft.~~

~~8. Discourage direct residential access onto existing and future arterials, in particular Central Avenue west of Sherwood Street.~~

~~9. Develop a system of sidewalks in the existing core city with emphasis on linking the community's major activity nodes.~~

~~10. The city shall coordinate with the county to plan and develop an area bikeway.~~

~~11. The city shall encourage the development of alternative modes of transportation to the automobile.~~

~~12. The city shall require sidewalks in all new subdivisions.~~

~~13. The city shall work with the Oregon Department of Transportation and Douglas County to improve the city' s transportation system to a level consistent with the goals and policies of the Comprehensive Plan and the Public Facilities Plan.~~

~~14. The city shall require new development to install appropriate and pleasing landscaping along arterial streets.~~

B-1.1 Promote transportation safety through a comprehensive program of engineering, education, and enforcement.

B-1.2 Address existing and potential future safety issues by identifying high crash locations and develop strategies to address those issues.

B-1.3 Designate safe routes from residential areas to schools and identify transportation improvements needed to ensure the safety of Sutherlin's school children.

B-1.4 Develop a safe, complete, attractive, efficient, and accessible system of pedestrian ways, bicycle ways and personal electric vehicle ways, including bike lanes, shared roadways, multi-use paths, and sidewalks.

B-2 GOAL – MOBILITY AND EFFICIENCY: TO PROVIDE A BALANCED AND EFFICIENT TRANSPORTATION SYSTEM FOR ALL MEMBERS OF THE COMMUNITY THROUGH EFFECTIVE TRANSPORTATION AND LAND USE PLANNING

POLICIES:

B-2.1 Reduce reliance on single occupancy vehicles by improving the quality of walking, biking, transit, and electric vehicle facilities. Identify strategies appropriate to the City of Sutherlin to help reduce vehicle miles traveled.

B-2.2 Integrate transportation and land use into development ordinances to increase opportunities for multi-purposes trips.

B-2.3 Manage projected travel demand consistent with community, land use, environmental, economic and livability goals.

B-2.4 Manage the transportation system for adequate and efficient operations.

B-3 GOAL – HEALTH AND LIVABILITY: PROVIDE A TRANSPORTATION SYSTEM THAT ENHANCES THE HEALTH AND LIVABILITY OF LOCAL RESIDENTIS BY PROMOTING ACTIVE MODES OF TRANSPORTATION

POLICIES

B-3.1 Enhance the livability of the Sutherlin Community through proper location and design of transportation facilities including multi-use paths to balance the needs of human use and enjoyment with resource conservation in areas identified in the Parks Master Plan and Comprehensive Plan.

B-3.2 Design roadways to enhance livability by ensuring that aesthetics and landscaping are an integral part of Sutherlin's transportation system.

B-3.3 Construct multi-use paths where they can be developed with satisfactory design components that address safety, security, maintainability, and acceptable uses.

B-4 GOAL – CONNECTIVITY AND ACCESSIBILITY: DEVELOP A COMPREHENSIVE, MULTIMODAL TRANSPORTATION SYSTEM THAT CONNECTS ALL MEMBERS OF THE SUTHERLIN AREA TO COMMUNITY DESTINATION.

POLICIES

B-4.1 Provide connectivity to each area of the City for convenient multi-modal access. Ensure pedestrian, bicycle, transit, and vehicle access to schools, parks, employment and recreational areas, and the Sutherlin core city area by identifying and developing improvements that address connectivity needs.

B-4.2 Make better use of the southern interchange by connecting an east-west route to the southern interchange on both sides of Interstate-5.

B-4.3 Identify opportunities to improve east-west travel for all modes of transportation across I-5.

B-4.4 Balance the needed street function for all travel modes with adjacent land uses through the use of context-sensitive street and streetscape design techniques.

B-4.5 Develop neighborhood and local connections to provide adequate circulation into and out of neighborhoods.

B-4.6 Ensure that adequate access for emergency services vehicles is provided throughout the City.

B-5 GOAL – COORDINATION AND INTEGRATION: ENSURE THE LOCAL TRANSPORTAION SYSTEM IS INTEGRATED WITH COUNTY AND STATE TRANSPORTATION SYSTEMS AND OBJECTIVES, AND WITH OTHER RELATED

ASPECTS OF THE COMMUNITY IN SUTHERLIN, INCLUDING LAND USE PLANNING, NATURAL RESOURCE PROTECTION, HOUSING, AND ECONOMIC DEVELOPMENT.

POLICIES

B-5.1 Meet federal and state safety compliance standards for operation, construction, and maintenance of the rail system.

B-5.2 Provide safe routing of hazardous materials consistent with federal guidelines and provide for public involvement in the process.

B-5.3 Engage community members and organizations in the development and design of the transportation facilities identified in the TSP.

B-5.4 Work with regional and local public transportation providers to identify opportunities to expand public transportation service within the City and to surrounding communities. Encourage intercity public transportation connections for long-range public transportation. Enhance public volunteer transit system.

B-5.5 Maintain access management standards for streets consistent with City, County, and State requirements to reduce conflicts between vehicles and trucks, and between vehicles, bicycles, and pedestrians. Develop access management strategies for Central Avenue.

B-6 GOAL – STRATEGIC ECONOMIC INVESTMENT: FACILITATE THE PROVISION OF A MULTI-MODAL TRANSPORTAT SYSTEM FOR THE EFFICIENT, SAFE, AND COMPETITIVE MOVEMENT OF GOODS AND SERVICES TO, FROM, AND WITHIN THE SUTHERLIN AREA.

POLICIES

B-6.1 Construct all transportation facilities to meet the requirements of the Americans with Disabilities Act.

B-6.2 Provide satisfactory levels of maintenance to the transportation system in order to preserve user safety, facility aesthetics, and the integrity of the system as a whole.

B-6.3 Promote accessibility to transport modes that fulfill the needs of freight shippers.

B-6.4 Strive to balance the needs of moving freight with community livability and land use decision making.

B-6.5 Promote the appropriate location of freight routes and regional pipeline systems to enhance security, local service, and efficiency.

B-6.6 Manage on-street parking by providing an appropriate supply and design of off-street parking facilities to promote economic vitality, neighborhood livability, efficient use of urban space, and reduced reliance on single occupancy motor vehicles.

C. TO CONSERVE ENERGY RESOURCES AND ENCOURAGE UTILIZATION OF RENEWABLE ENERGY RESOURCES.

[No modifications to Goal C policies]

ATTACHMENT B: SUTHERLIN DEVELOPMENT CODE AMENDMENTS

The following Sutherlin Development Ordinance modifications correspond to recommendations in Table 1 of the memorandum. Recommended changes are in an adoption-ready format; text that is recommended to be added is shown as **underlined and bold**, and text recommended to be removed is shown in ~~strikeout~~.

Section 3.2 ACCESS AND CIRCULATION

…

3.2.110 Vehicular Access and Circulation.

A. Intent and Purpose.

1. The intent of this section is to manage vehicle access to development through a connected street system with shared driveways, where practicable, and circulation systems that allow multiple transportation modes and technology, while preserving the flow of traffic in terms of safety, roadway capacity, and efficiency. Access shall be managed to maintain an adequate "level of service" and to maintain the "functional classification" of roadways [See **2020** Transportation System Plan ~~adopted November 2006 and amended in April 2009~~]. Major roadways, including highways, arterials, and collectors, serve as the primary system for moving people and goods. "Access management" is a primary concern on these roads. Local streets and alleys provide access to individual properties. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function. This section balances the right of reasonable access to private property with the right of the public to safe and efficient travel.

B. Applicability. This section applies to all public roads, streets, and alleys within the city and to all properties abutting them.

C. Access Permit Required. Access to a public street requires an access permit in accordance with the following procedures:

1. Permits for access to City streets shall be subject to review and approval by city staff based on the standards contained in this section, and the provisions of section 3.5, Infrastructure Standards. Access permit applications are available at Sutherlin City Hall.

2. Permits for access to state highways shall be subject to review and approval by Oregon Department of Transportation (ODOT) except when ODOT has delegated this responsibility to the city. The city will coordinate with ODOT on such permits as necessary.

3. Permits for access to county highways shall be subject to review and approval by Douglas County. The city will coordinate with the county on such permits as necessary.

D. Traffic **Impact** Study Requirements. The city or other agency with access jurisdiction may require a traffic **impact** study prepared by a traffic engineer to determine access, circulation and other transportation requirements including identification of projects needed to implement the Transportation System Plan or other projects needed to mitigate for traffic impacts resulting from development that exceeds assumptions from the Transportation System Plan. (See also, section 3.5, Infrastructure.)

E. Conditions of Approval. The city or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, **limit direction of travel at an approach,** and/or other mitigation as a condition of granting an access permit, to ensure the safe, functional, and efficient operation of the street and highway system.

…

I. Access Spacing. Driveway accesses shall be separated from other driveways and street intersections in accordance with the following standards and procedures:

1. Local Streets. A minimum of twenty-five (25) feet separation (as measured from the sides of the driveway/street) shall be required on local streets (i.e., streets not designated as collectors or arterials.

2. Arterial and Collector Streets. Access spacing on collector and arterial streets, and at controlled intersections (i.e., with four-way stop sign or traffic signal) shall be determined based on the policies and standards contained in the city's transportation system plan.

3. Special Provisions for All Streets. Direct street access may be restricted for some land use types. For example, access consolidation, shared access, and/or access separation greater than that specified by Subsections 1-2, may be required by the city, county or ODOT for the purpose of protecting the function, safety and operation of the street for all users. Where no other alternatives exist, the permitting agency may allow construction of an access connection along the property line farthest from an intersection. In such cases, directional connections (i.e., right in/out, right in only, or right out only) may be required.

4. Where the spacing standards limit the number or location of connections to a street or highway, the city engineer may require a driveway to extend to one of more edges of a parcel and be designed to allow for future extension and inter-parcel circulation as adjacent properties develop. The city engineer may also require the owner(s) of the subject site to record an access easement for future joint use of the approach and driveway as the adjacent property(ies) develop(s).

…

Q. Flag Lots. Flag lots may be created where the configuration of a parcel does not allow for standard width lots. A flag pole access drive may serve no more than ~~two (2)~~ **three (3)** dwelling units, including accessory dwellings and dwellings on individual lots. A drive serving more than one lot shall conform to the standards in subsections 1-4 below:

Figure 3.2.110(Q) – Flag Lot (Typical)

1. Driveway and Lane Width and Lot Frontage. The minimum width of all shared drives and lanes shall be twenty (20) feet of pavement with a minimum lot frontage width of twenty-five (25) feet wide throughout the driveway;

2. Easement. Where more than one (1) lot is to receive access from a flag pole drive, the owner shall record an easement granting access to all lots that are to receive access. The easement shall be so indicated on the preliminary plat;

3. Maximum Drive Lane Length. The maximum drive lane length is subject to requirements of the uniform fire code, but shall not exceed one hundred fifty (150) feet without an emergency turnaround approved by the city; and

4. Area Calculation. The flag pole portion of a lot shall not be counted for the purpose of meeting lot area requirements or determining setbacks.

…

3.2.120 Pedestrian Access and Circulation

A. Pedestrian Access and Circulation. To ensure safe, direct and convenient pedestrian circulation, all developments, except single family detached housing (i.e., on individual lots), shall provide a continuous pedestrian and/or multi-use pathway system. (Pathways only provide for pedestrian circulation. Multi-use pathways accommodate pedestrians and bicycles, and may also be designed to accommodate personal electronic vehicles such as golf carts or scooters.) The system of pathways shall be designed based on the standards in subsections 1-3, below:

…

5. Improvements at Transit Stops. Proposed development that is adjacent to or includes an existing or planned transit stop is required to plan for access to the transit stop and, where determined necessary in consultation with the transit agency, provide for transit improvements. Requirements apply where the subject parcel(s) or portions thereof are within 200 feet of a transit stop. Where consistent with an approved transportation or transit plan, development requirements and improvements may include the following:

a. Intersection or mid-block traffic management improvements (e.g. traffic lighting or similar protected pedestrian crossing improvement) to allow for pedestrian crossings at transit stops.

b. Building placement within twenty (20) feet of the transit stop, a transit street or an intersection street, or a pedestrian plaza at the stop or a street intersection.

c. Transit passenger landing pad accessible to disabled persons, constructed to transit agency standards.

d. An easement or dedication for a passenger shelter and an underground utility connection to a transit stop if requested by the transit agency.

Section 3.4 VEHICLE AND BICYCLE PARKING

…

3.4.120 Vehicle Parking Standards

A. Minimum Off-Street Vehicle Parking. The minimum number of required off-street vehicle parking spaces (i.e., parking that is located in parking lots and garages and not in the street right-of-way) shall be determined based on the standards in Table 3.4.120.A, except that there is no minimum number of off-street parking spaces required in the downtown commercial (C-1) zone. The number of required off-street vehicle parking spaces shall be determined in accordance with the following standards. Off-street parking spaces may include spaces in garages, carports, parking lots, and/or driveways if vehicles are not parked in a vehicle travel lane (including emergency or fire access lanes), public right-of-way, pathway or landscape. Credit is allowed for "on-street parking", as provided below in 3.4.120 B. **Exceptions and reductions to off-street parking are provided in 3.4.120.D.**

…

D. Exceptions and Reductions to Off-street Parking. Applicants may reduce vehicle parking minimum requirements below the minimum off-street parking standards required in Table 3.4.120.A as provided below:

1. Commercial Uses within the downtown commercial zone (C-1): Allow up to a 30 percent reduction to the standard to the standard number of automobile spaces;

2. Site has a bus stop with transit service located adjacent to it, and the site's frontage is improved with a bus stop waiting shelter, consistent with the standards of the applicable transit service provider: Allow up to a 20 percent reduction to the standard number of automobile parking spaces;

3. Site has dedicated parking spaces for carpool or vanpool vehicles: Allow up to a 10 percent reduction to the standard number of automobile parking spaces;

4. Site has dedicated parking spaces for motorcycles, scooters, or electric carts: Allow reductions to the standard dimensions for parking spaces;

5. Site has more than the minimum number of required bicycle parking spaces: Allow up to a 5 percent reduction to the number of automobile parking spaces.

~~D.~~**E.** Maximum Number of Parking Spaces. The number of parking spaces provided by any particular use in ground surface parking lots shall not exceed the required minimum number of spaces provided by this section by more than thirty (30) percent. Spaces provided on-street, or within the building footprint of structures, such as in rooftop parking, or under- structure parking, or in multi-level parking above or below surface lots, may not apply towards the maximum number of allowable spaces. Parking spaces provided through "shared parking" also do not apply toward the maximum number.

[Renumber Subsections D through F. No other modifications to these subsections are recommended.]

…

Section 3.5 INFRASTRUCTURE STANDARDS

…

3.5.110 Transportation Standards

…

F. Minimum Rights-of-Way and Street Sections. Street rights-of-way and improvements shall be the widths in Table 3.5.110. A variance shall be required in conformance with section ~~5.2.110~~ **5.2.120** to vary the standards in Table 3.5.110. Where a range of width is indicated, the width shall be determined by the decision-making authority based upon the following factors:

…

~~Table 3.5.110F – Street Pathway Design Standards~~

[Note, replace or update Table 3.5.110F to be consistent with updated TSP.]

~~Figure -1. Two-Lane Arterial – Parking Both Sides~~

~~Figure -2. Three-Lane Arterial~~

~~Figure -3. Five-Lane Arterial~~

~~Figure -4. Parkway~~

~~Figure -5. Three-Lane Collector – Parking Both Sides~~

~~Figure -6. Commercial / Industrial Collector – Parking Both Sides~~

~~Figure -7. Commercial / Industrial Collector – Parking One Side~~

~~Figure -8. Commercial / Mixed-Use Collector – Parking Both Sides~~

~~Figure 9. Residential Collector~~

~~Figure 10. Local Residential Street – Parking One Side~~

~~Figure 11. Local Residential Street – Parking Both Sides~~

[Note, replace or update Figures 1 through 11 to be consistent with updated TSP.]

…

Z. Traffic Impact Studies. The following provisions establish when a proposal must be reviewed for potential transportation impacts; when a Traffic Impact Study (TIS) must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; the required contents of a TIS; and who is qualified to prepare the analysis.

1. When a Transportation Impact Study (TIS) is Required. The City or other road authority with jurisdiction may require a TIS as part of an application for development, a change in use, or a change in access. A TIS shall be required where a change of use or a development would involve one or more of the following:

a. A change in zoning or a plan amendment designation;

b. Operational or safety concerns documented in writing by a road authority;

c. An increase in site traffic volume generation by 300 Average Daily Trips (ADT) or more;

d. An increase in peak hour volume of a particular movement to and from a street or highway by 20 percent or more;

e. The development is expected to impact intersections that are currently operating at the upper limits of the acceptable range of level of service during the PM peak operating hour.

f. The development is expected to significantly impact adjacent roadways and intersections that have previously been identified as high crash locations or areas that contain a high concentration of pedestrians or bicyclists such as school zones.

g. An increase in the use of adjacent streets by vehicles exceeding the 20,000-pound gross vehicle weights by 10 vehicles or more per day;

h. Existing or proposed approaches or access connections that do not meet minimum spacing or sight distance requirements or are located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, creating a safety hazard; or

i. A TIS required by ODOT pursuant to OAR 734-051.

2. TIS Preparation. The TIS shall be prepared by a professional engineer with competence in traffic engineering, licensed in the State of Oregon. If the TIS identifies level of service conditions less than the minimum standard established in the Transportation System Plan, improvements and funding strategies mitigating the problem shall be considered concurrent with the development proposal.

3. Approval Criteria. The TIS shall be reviewed according to the following criteria:

a. The analysis complies with the content requirements set forth by the City and/or other road authorities as appropriate;

b. The study demonstrates that adequate transportation facilities exist to serve the proposed land use action or identifies mitigation measures that resolve identified traffic safety problems in a manner that is satisfactory to the road authority;

c. For affected City facilities, the study demonstrates that the project meets mobility and other applicable performance standards established in the SDC and TSP, and includes identification of multi-modal solutions used to meet these standards, as needed; and

d. Proposed design and construction of transportation improvements are in accordance with the design standards and the access spacing standards specified in the SDC and TSP.

4. Conditions of Approval.

a. The City may deny, approve, or approve a proposal with conditions necessary to meet operational and safety standards; provide the necessary right-of-way for planned improvements; and require construction of improvements to ensure consistency with the future planned transportation system.

b. Construction of off-site improvements, including those related to bicycle and pedestrian facilities, may be required to mitigate impacts resulting from development that relate to capacity deficiencies and public safety; and/or to upgrade or construct public facilities to City standards.

c. Where the existing transportation system is shown to be impacted by the proposed use, improvements such as paving; curbing; installation of or contribution to traffic signals; and/or construction of sidewalks, bikeways, access ways, paths, or streets that serve the proposed use may be required.

d. Improvements required as a condition of development approval, when not voluntarily provided by the applicant, shall be roughly proportional to the

impact of the development on transportation facilities. Findings in the development approval shall indicate how the required improvements directly relate to and are roughly proportional to the impact of development.

…

Section 4.1 ADMINISTRATION OF LAND USE AND DEVELOPMENT PERMITS

4.1.110 Exclusions from Land Use Review. The following activities are permitted outright in each zone, subject to the applicable provisions of the subject zone, and are excluded from the requirement of obtaining a land use permit. Exclusion from the permit requirement does not exempt the activity from otherwise complying with applicable standards, conditions, and other provisions of this code.

A. Operation, maintenance, and repair of existing transportation facilities identified in the Transportation System Plan;

B. Dedication of right-of-way, authorization of construction, and construction of transportation facilities and improvements, where the improvements are planned improvements identified in the Transportation System Plan or are otherwise consistent with clear and objective dimensional standards; and

C. Changes in transit service.

Section 4.2 TYPES OF APPLICATIONS AND REVIEW PROCEDURES

..

4.2.140 Type III Procedure.

…

C. Notice of Planning Commission Hearing.

1. Notice. The city shall give notice of the planning commission in the following manner:

a. At least twenty (20) days before the hearing date, notice shall be mailed to:

(1) The applicant and all owners of record of the property which is the subject of the application;

(2) All property owners of record within one hundred (100) feet of the site;

(3) For Type II appeals, the appellant and persons who provided testimony during the planning director's proceedings; ~~and~~

(4) Any governmental agency or public utility (e.g. state or county agencies such ODOT or public utility companies such as electric,

water, or wastewater) whose property, services, or facilities may be affected by the decision; and

~~(4)~~**(5)** For a zoning district change affecting a manufactured home or mobile home park, all mailing addresses within the park, in accordance with ORS 227.175(8).

b. At least fourteen (14) days before the first hearing, notice of the hearing shall be printed in a newspaper of general circulation in the city.

4.2.150 Type IV Procedure.

…

D. Notice of Planning Commission Hearing.

1. Required Hearings. A minimum of two hearings, one before the planning commission and one before the city council, are required for all Type IV applications, except annexations. Annexations only require one hearing by the city council.

2. Notice. Except as provided in subsection D.4. of this section, the city shall give notice of the planning commission public hearing in the following manner:

a. At least twenty (20) days before the date of the planning commission's hearing, a notice shall be mailed to:

(1) The applicant and/or titleholder;

(2) Any affected governmental agency **or public utility (e.g. state or county agencies such ODOT or public utility companies such as electric, water, or wastewater) whose property, services, or facilities may be affected by the decision**;

(3) For a zone change affecting a manufactured home or mobile home park, all mailing addresses within the park, in accordance with ORS 227.175.

b. At least fourteen (14) days before the scheduled planning commission public hearing date, notice shall be published in a newspaper of general circulation in the city;

c. The city shall mail a notice of the proposed comprehensive plan amendment to the Department of Land Conservation and Development (DLCD) at least thirty-five (35) days before the first public hearing at which public testimony or new evidence will be received; and

d. Notifications for annexation shall follow the provisions in ORS 222.

4.2.160 General Provisions.

…

C. Applications.

1. Initiation of Applications:

a. Applications may be initiated by:

(1) Order of city council;

(2) Resolution of the planning commission;

(3) The planning director; ~~or~~

(4) A record owner of the property that is the subject of the application (person(s) whose name is on the most recently recorded deed), or contract purchaser with written permission from the record owner~~.~~**; or**

(5) Public agencies that have statutory rights of eminent domain for projects they have the authority to construct.

Oregon
Kate Brown, Governor

Department of Transportation
Region 3
3500 NW Stewart Parkway
Roseburg, OR 97470
Phone: (541) 957-3692/Fax: (541) 672-6148

Kristi Gilbert, Community Development Supervisor
City of Sutherlin
126 E. Central Avenue
Sutherlin, OR 97479

3/4/2020

Re: CITY OF SUTHERLIN – 2020 TRANSPORTATION SYSTEM PLAN UPDATE

Kristi
Ms. Gilbert:

The Oregon Department of Transportation (ODOT) has worked in collaboration with the City of Sutherlin and the consultant, Kittelson & Associates, throughout the 2020 Transportation System Plan (TSP) Update. ODOT finds that the City of Sutherlin's 2020 Draft TSP Update is consistent with the Oregon Transportation Plan and Statewide Modal and Topic Plan with minor text changes (See Attachment).

The City is advised that ODOT's participation in the development of the TSP Update does not constitute a commitment to fund and/or construct projects on State facilities stated as follows:

- The State Transportation Improvement Program (STIP) is ODOT's capital improvement program and funding mechanism for State and Federally-funded projects. STIP funds are distributed statewide over five (5) funding programs: (1) Fix-It; (2) Enhance; (3) Safety; (4) Non-Highway; and (5) Local Government. Each funding program area has its own criteria and process for prioritizing projects. It is not possible for ODOT to forecast if and when State or Federal funds may become available for projects identified in the TSP Update;

- Any project along a State facility will require review and approval by ODOT, and may require Region or State Traffic Engineer approval. Final design of any project on a State facility identified in the TSP Update is subject to ODOT design and operational standards, and engineering approval; and

- The Transportation Planning Rule (TPR), OAR 660-012-060 establishes procedures for amendments to a comprehensive plan or land use regulation (including a zoning map). It identifies which planned improvements local agencies can rely on and/or assume to be in place when a land use amendment significantly affects transportation facilities. While the TPR does not require a TSP itself to be financially constrained, it does require that funding for projects identified in a TSP must be "reasonably likely" to mitigate traffic impacts. ODOT's recognition of any project on State facilities identified in the TSP Update does not constitute a "reasonably likely" determination for State funding.

Please enter this letter into the public record and send me a copy of the City's Ordinance and Findings adopting the 2020 TSP Update.

Sincerely,

Thomas Guevara Jr.

THOMAS GUEVARA JR.
Senior Transportation Planner

Attachment A

The Federal Highway Administration (FHWA) adopted design requirements found in 23CFR625 and 49CFR37.9 that apply to projects on the National Highway System (NHS), including routes added to the NHS by the Moving Ahead for Progress in the 21st Century Act (MAP-21). The jurisdictional transfer agreement for Central Avenue between ODOT and the City required that Central Avenue remain an NHS Route.

Please add the NHS Route designation to Central Avenue on TSP Table 9 – Designated Freight Routes and Figure 11 – Freight Route Plan. Any future projects on this route will need to apply NHS design standards.

The Freight Plan designated freight routes are summarized in **Table 9** and illustrated in **Figure 11**.

Table 9: Designated Freight Routes

Roadway	From	To	Route Type/Change
N Calapooia Street	Central Avenue	N State Street	Freight Route (as part of R13/SC4 in **Figure 11**)
OR 138 W (Elkton-Sutherlin Highway)	Western City Limits	Park Hill Road	ORS 366.215
Park Hill Road	OR 138 W (Elkton-Sutherlin Highway)	SB Off-Ramp	ORS 366.215
Interstate 5 Exit 135 and Exit 136	Ramp Terminals		ORS 366.215
Central Avenue	Northbound I-5 Ramp	Eastern City Limits	20-Year Route - NHS
Taylor Street	Hasting Avenue	S Comstock Road	20-Year Route
S Comstock Road	Taylor Street	135 Connector	20-Year Route
S Calapooia Street	W Central Avenue	Southern City Limits	20-Year Route
Hasting Avenue	Taylor Street	S Calapooia Street	20-Year Route
Duke Avenue	S Comstock Road	Taylor Street	50-Year Route

Kristi Gilbert

From: BROWN Jevra <jevra.brown@state.or.us>
Sent: Monday, April 13, 2020 8:59 AM
To: Kristi Gilbert
Subject: RE Sutherlin transportation system master plan

Hi Kristi,

DSL received the notice about Sutherlin's upcoming comp plan and development code amendment public hearing wrt the TSP. If you/The City have questions about planning around aquatic resources, please contact me, or continue to work with other DSL staff if you already are. Sutherlin has a Local Wetlands Inventory. Keep in mind that the age of the inventory indicates that the goal boundary accuracy was +/- 25 feet and boundaries may have changed in the intervening 19 years since the inventory was finalized. If the TSP includes areas outside of the LWI study area then use the updated SWI for those areas. See the link in my signature block.

Best of luck with this project!

Stay home, stay healthy,

Jevra Brown, Aquatic Resource Planner
Planning and Policy Unit, Aquatic Resource Management Program
Department of State Lands
775 Summer St. NE Suite 100, Salem, Oregon, 97301

The Department of State Lands is taking precautions to help prevent the spread of COVID-19.
I am currently teleworking with access to email, the office phone is forwarded to my cell phone.
I'm looking forward to conversing with you! ☺

Office (M-W) 503-986-5297; **cell** (Th-F) 503-580-3172; fax 503-378-4844
jevra.brown@dsl.state.or.us

Have you heard about the Statewide Wetlands Inventory update? Learn More!
http://www.oregon.gov/DSL/pages/index.aspx

City of Sutherlin

Community Development
126 E. Central Avenue
Sutherlin, OR 97479
(541) 459-2856
Fax (541) 459-9363
www.ci.sutherlin.or.us

April 14, 2020

STAFF REPORT

TO: Sutherlin Planning Commission

FROM: Jamie Chartier, City Planner

RE: **COOPER CREEK ESTATES LLC,** request for a Comprehensive Plan Map Amendment from Low Density Hillside to Medium Density, Zone Map Change from (RH) Residential Hillside to (R-2) Medium Density Residential together with a Land Partition on a 1.31 acre property located on South Side Road and inside the City of Sutherlin. The subject property is described as Tax Lot(s) 3400 and 3500 in Section 21BA, T25S, R5W, W.M.; Property I.D. No(s). R131991 and R131992. **PLANNING DEPARTMENT FILE NO. 20-S002.**

INTRODUCTION

The applicant, Cooper Creek Estates LLC, is requesting a Comprehensive Plan Map Amendment from Low Density Hillside to Medium Density, Zone Map Change from (RH) Residential Hillside to (R-2) Medium Density Residential together with a Land Partition on a 1.31 acre property.

The subject property is located on South Side Road and inside the city limits. The subject property is described as Tax Lot(s) 3400 and 3500 in Section 21BA, T25S, R5W, W.M., Property I.D. No(s). R131991 and R131992. There are no structures currently located on the property.

The subject property is designated Low Density Hillside by the Sutherlin Comprehensive Plan and is zoned (RH) Residential Hillside by the Sutherlin Development Code. It is located in an area of residentially developed properties.

During the public hearing on April 21, 2020, the Planning Commission will accept public testimony and make a decision on the application after the public hearing. As part of the hearing, the Planning Commission will review the applicant's request for compliance with the Statewide Planning Goals and the general goals and policies of the Sutherlin Comprehensive Plan and the applicable criteria of the Sutherlin Development Code and adopt Findings of Fact.

After the public hearing, the Planning Commission must make a written recommendation and forward it to the City Council in the form of a Findings of Fact and Decision document, which justifies its decision and recommendation. The Council will consider the Commission's recommendation, hold a public hearing, and make a decision to grant, amend or deny the request.

PROCEDURAL FINDINGS OF FACT

1. The Comprehensive Plan Map Amendment and Zone Map Change applications were filed with the City on January 10, 2020, and were deemed complete on January 27, 2020.

2. DLCD Notice of Proposed Amendment was submitted electronically to the Department of Land Conservation and Development on March 5, 2020, which was at least 35 days prior to the first evidentiary public hearing on April 21, 2020.

3. Pursuant to Sections 4.2.150.D.4 and 4.2.140.C, notice of the public hearing was given by publication in the News Review on April 7, 2020, which was at least fourteen (14) days prior to the date of the public hearing.

4. Notice of a Public Hearing on an application for the Comprehensive Plan Map Amendment, Zone Map Change and Land Partition before the Planning Commission was given in accordance with Sections 4.2.150.D.4 and 4.2.140.C. Notice was sent to affected property owners of record within 100 feet of the subject property, service providers, and governmental agencies on March 25, 2020.
   a. Brian Elliott, City of Sutherlin Community Development Director, commented on the request stating, *"Consideration needs to be taken into driveway location onto South Side Road, along with the location with the intersection of Waite Street and South Side Road."*

   b. Micah Horowitz, ODOT Region 3, Senior Transportation Planner, commented on the request stating, "*The proposed rezone of the 1.31 proposed rezone from RH to R-2 should not affect ODOT facilities. Thanks for keeping us in the loop."*

   c. Douglas and Amanda Burt, adjacent property owners commented as follows:

      We are currently opposing the Plan Amendment, Zone Change and Land Partition of 750-780 South Side Road.

      We believe this will cause several issues with the south side road traffic, possible accidents and noise. We are currently concerned with the stability of our hill and of the impact the digging may have on our property and the potential to cause a slide of our property. We would request a full copy of the geological survey before any construction is started. We are also concerned that the construction of the multiple housing units may affect our property value in a negative way, also increasing our home insurance cost due to the hazard of the ground being compromised.
      - The neighbor's concerns are duly noted. South Side Road is classified as a collector street and is addressed within the staff report. A primary function of a collector street is to move traffic between arterials and local streets. The Sutherlin Municipal Code, Chapter 8.16 outlines nuisance requirements within the city limits. Staff is recommending to the Planning Commission that a condition be added that a geotechnical impact statement to be complete with all site development, excavation and grading. The applicant has provided a completed steep slope evaluation and geotechnical design report, this is available for you to receive a copy of. Land Division and development requirements are further addressed in this staff report.

   d. Dr Sheila Strauch and Matthew Strauch, adjacent property owners commented as follows:

We live within the 100-foot zone of the proposed zone map change File No. 20-S002 and thus qualify as an affected party.

We see changing the zone from low density to medium would be a negative for our area. From looking at the plans supplied, these would be smaller duplex two-story homes. It would be safe to assume that these homes would be targeted towards a lower income demographic. Thus, affecting our property values as well as bringing less then savory people to our otherwise quiet neighborhood. We understand that Cooper Creek Estates could start building a single home there now and that is within their rights. However, the building of multiple residential homes, as well as all the ground work involved, would create4 a lot of noise pollution. We love the greenbelt that not only separates us, but also welcomes the local wildlife to us. Living on top of the hill we also have to be concerned about the structural integrity of the hill and how it may be compromised by work below us. A geological survey would have to be completed. If there is any work to be done on that hill, we would want a copy of said survey. Some of us in this area have had problems obtaining surveys and have had a large amount of ground shift, causing problems.

Due to the current Covid-19 outbreak and social distancing requirements we will not be able to appear at the hearing. We would also like to be notified if there will either be a rescheduling or a way online to at least hear it. We would advise against using "Zoom" platform as it has recently been shown to have many security flaws and has resulted in multiple hacking instances.

- The neighbor's concerns are duly noted. Currently the property owner has two (2) separate lots-of-record, meaning that both tax lots are able to be developed with the current (RH) Residential Hillside zoning. Sutherlin Municipal Code, Section 8.16 addresses noise (nuisances), in residential districts the erecting (which includes excavation, demolition, alteration or repair) of any premises is permitted between the hours of seven a.m. and six p.m. The applicant has provided a steep slope evaluation and geotechnical design report as part of their application. Staff is recommending a condition remain that a geotechnical impact statement to be completed with all site development, excavation and grading. Land Division and development requirements are addressed further within the staff report.
- The Planning Commission Meeting will be held on April 21, 2020 (7:00 pm) will be a teleconference style meeting with staff facilitating. The City has taken steps to utilize current technology to make meetings available to the public without increasing the risk of exposure. To maintain compliance with both state rulings and Oregon public meeting laws, a limited number of staff and city officials will be present.

e. At the time of the mailing of this staff report, no written comments or remonstrance have been received.

5. Present Situation: The subject property is currently undeveloped.

6. Plan Designation: Low Density Hillside. The applicant is requesting a plan map amendment to the Medium Density Residential plan designation.

7. Zone Designation: Residential Hillside (RH). The applicant is requesting a zone map amendment to the Medium Density Residential (R-2) zoning designation.

8. Public Water: The subject property has access to public water from the City of Sutherlin within the right-of-way of South Side Road.

9. Sanitary Sewer: The subject property has access to sanitary sewer from the City of Sutherlin within the right-of-way of South Side Road.

10. Transportation System: The subject 1.31 acre property is located on the south side of South Side Road, just east of its intersection with Waite Street. South Side Road is currently designated as collector street in the Transportation System Plan.

11. Overlay: The subject property does not have any identified overlays.

Finding: The procedural findings noted above are adequate to support the Planning Commission's recommendation on the requested Comprehensive Plan Map Amendment, Zone Map Change and Land Partition**.**

APPLICABLE CRITERIA & FINDINGS

The City staff finds the *applicant has provided a thorough set of findings in response* to the approval criteria for the proposed Plan Amendment and Zone Change to demonstrate that the request is consistent with the Statewide Planning Goals and the Sutherlin Comprehensive Plan and implementing ordinances. In order to avoid duplication and unnecessary time and expense, the *staff has not provided a separate staff analysis and findings pertaining to the Plan Amendment and Zone Change applications.* The Land Partition findings are addressed as follows within this staff report.

~ PLAN AMENDMENT & ZONE CHANGE FINDINGS ATTACHED ~

Based on staff review of the findings attached; a geologic impact statement is required for all site development, excavation and grading within the existing zone. Staff will be recommended as a condition of approval for the proposed medium density residential (R-2) zone.

LAND PARTITION ON R131991 ONLY:

RESIDENTIAL DISTRICTS (PROPOSED R-2 ZONE)

1. Residential Zone District, Medium Density Residential, R-2 Zone (Section 2.2.100):

    a. The 0.89 acre subject property is undeveloped. The property owner intends to divide the parcel into three parcels; all will access onto South Side Road as depicted on the preliminary plan.

2. Residential Development Standards (Section 2.2.120): The Residential zoning districts fall into four categories: RH, R-1, R-2, and R-3, as denoted in SDC Section 2.2.120, and includes minimum lot area and dimensions, as well as minimum setbacks and maximum lot coverage.

    a. For the R-2 zone, the minimum lot area is 6,000 sq. ft. for a single family non-attached lot, with a minimum lot width at frontage 40 feet for a standard lot and 20 feet for a flag lot, and a minimum lot depth of 90 feet where there is no alley right-of-way. The maximum lot coverage for development is 60 percent.

FINDINGS:

a. The City finds that each proposed parcel will meet the minimum lot area, lot width & lot depth of the R-2 zone. No flag lots are being created as part of this land partition. As proposed,

i. Parcel 1 will be 0.27 ± acres, and is currently vacant of structures.

ii. Parcel 2 will be 0.31 ± acres and is currently vacant of structures.

iii. Parcel 3 will be 0.29 ± acres and is currently vacant of structures.

b. At the time of a new building proposal for each parcel, compliance with the setbacks and lot coverage standards of the R-2 zone will be required.

DESIGN STANDARDS

3. **Design Standards (Section 3.1)**
   a. 3.2.100 Vehicular Access and Circulation
   b. 3.5.100 Infrastructure Standards

4. The access to proposed parcels will be directly onto South Side Road; South Side Road is designated as a collector road within the City's Transportation System Plan (TSP), under joint jurisdiction of Douglas County and the City of Sutherlin.

Section 3.2 Vehicle Access and Circulation

Applicability. *All development in the city must comply with the provisions of chapter 3, Design Standards. Development projects requiring land division, conditional use permit, and/or site design review approval require detailed findings demonstrating compliance with each section of chapter 3, as applicable. For smaller, less complex projects, fewer code provisions may apply and detailed findings may not be required where no discretionary land use or development permit decision is made.*

FINDING: The City finds that the following standards apply to the subject partition. Each proposed parcel will have direct access onto South Side Road. All will be required to comply with City standards. Development on the subject property(s) will require compliance with Section 3.2.

3.2.110 Vehicular Access and Circulation. This section is intended to manage vehicle access to development through a connected street system with shared driveways, where practicable, and circulation systems that allow multiple transportation modes and technology, while preserving the flow of traffic in terms of safety, roadway capacity, and efficiency. This section applies to all public roads, streets, and alleys within the city and to all properties abutting them.

C. Access Permit Required. *Access to a public street requires an access permit in accordance with the following procedures:*

1. Permits for access to City streets shall be subject to review and approval by city staff based on the standards contained in this section, and the provisions

of section 3.5, Infrastructure Standards. Access permit applications are available at Sutherlin City Hall.

2. *Permits for access to state highways shall be subject to review and approval by Oregon Department of Transportation (ODOT) except when ODOT has delegated this responsibility to the city. The city will coordinate with ODOT on such permits as necessary.*

3. *Permits for access to county highways shall be subject to review and approval by Douglas County. The city will coordinate with the county on such permits as necessary.*

FINDING: The proposed parcels have access onto South Side Road, which is an existing street identified in the Sutherlin TSP as a collector road. As a condition of approval, the applicant/property owners will be required to obtain access permit(s) from the City of Sutherlin for the proposed access locations.

D. Traffic Study Requirements. *The city or other agency with access jurisdiction may require a traffic study prepared by a traffic engineer to determine access, circulation and other transportation requirements. (See also, section 3.5, Infrastructure.)*

FINDING: A traffic study is not required with this application since there will only be minor traffic impact on area streets with the proposed land partition. The Sutherlin TSP factored in a new population growth including some infill of existing lots.

E. Conditions of Approval. *The city or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe, functional, and efficient operation of the street and highway system.*

FINDING: The proposed parcels are not expected to be closing any existing curb cuts. Three access locations are proposed, all will have direct access onto South Side Road. South Side Road is a collector road within the Sutherlin TSP requiring driveways have a minimum spacing of 250' separation. As a condition of approval, the applicant/property owner(s) will be required to obtain an access permit(s) from the city of Sutherlin for the proposed access locations.

F. Backing Movement. *Vehicle access to and from off-street parking areas, except for access to and from residential developments with one (1) or two (2) dwellings, shall not involve backing onto a public street.*

FINDING: The proposed lots are for residential development; therefore, the back-up access restrictions, as described in the above standard, are not required.

G. Access Standards and Options. *When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the following methods (a minimum of ten (10) feet per lane is required). These methods are "options" to the developer/subdivider, unless one method is specifically required by the city as a condition of approval.*

1. Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.

2. Option 2. Access is from a private street or driveway developed to city standards and connected to an adjoining property that has direct access to a public street (i.e., "shared driveway"). A joint maintenance agreement and reciprocal access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive. The city may approve a private street under this option by a planned unit development (PUD), provided that public funds shall not be used to construct or maintain a private road, street, or drive. The city may require a public access easement as needed for emergency response access or refuse access.

3. Option 3. Access is from a public street adjacent to the development parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access if the site abuts an arterial or collector street. Street accesses shall comply with the access spacing standards in subsection I, below.

4. Subdivisions Fronting Onto an Arterial Street. Subdivision lots fronting onto an arterial street shall not receive access onto the arterial street, except when alternate access (i.e., alleys or secondary streets) cannot be provided due to topographic or other physical constraints. In such cases, the city may require that access be provided by consolidating driveways for clusters of two (2) or more lots or for multiple buildings on a lot (e.g., includes flag lots and mid-block lanes).

5. Double-Frontage Lots. When a lot has frontage onto two (2) or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street. A second access may be permitted only as necessary to accommodate projected traffic volumes. Except for corner lots, the creation of new double-frontage lots shall be prohibited in the residential district, unless topographic or physical constraints require the formation of such lots. When a fence or wall is built adjacent to the street in this case, a landscape buffer with trees and/or shrubs and ground cover not less than ten (10) feet wide shall be provided between the fence/wall and the sidewalk or street; maintenance shall be assured by the owner (i.e., through homeowner's association, etc.).

6. Important Cross-References to Other Code Sections. Section 3.6 requires that buildings be placed at or near the front property line in some zones, and driveways and parking areas be oriented to the side or rear yard for multiple family and commercial uses. Section 3.5.110 contains private street standards.

FINDING: Future residential development of duplex unit(s) or single family dwellings on the proposed parcels will be required to have off-street parking in accordance with residential standards. South Side Road is classified as a collector road that does not prohibit new access, but controlled access is preferred. The proposed access will be required to locate a driveway that meets the driveway separation standard of 250 feet from another driveway.

H. New Street. *The City may require the dedication of public right-of-way and construction of a street (e.g., frontage road, alley or other street) when access cannot otherwise be provided from an existing street, in conformance with city standards. The city*

considers the development impact in considering whether a new street is needed. See also Section 3.5 Infrastructure Standards.

FINDING: The Sutherlin TSP designates South Side Road as a collector road within an existing 80 foot right-of-way. No new streets or additional improvements are required to the street at this time.

I. Access Spacing. *Driveway accesses shall be separated from other driveways and street intersections in accordance with the following standards and procedures:*

1. Local Streets. A minimum of twenty-five (25) feet separation (as measured from the sides of the driveway/street) shall be required on local streets (i.e., streets not designated as collectors or arterials).
2. Arterial and Collector Streets. Access spacing on collector and arterial streets, and at controlled intersections (i.e., with four-way stop sign or traffic signal) shall be determined based on the policies and standards contained in the city's transportation system plan.
3. Special Provisions for All Streets. Direct street access may be restricted for some land use types. For example, access consolidation, shared access, and/or access separation greater than that specified by Subsections 1-2, may be required by the city, county or ODOT for the purpose of protecting the function, safety and operation of the street for all users. Where no other alternatives exist, the permitting agency may allow construction of an access connection along the property line farthest from an intersection. In such cases, directional connections (i.e., right in/out, right in only, or right out only) may be required.

FINDING: The proposed parcels will each have a driveway access onto South Side Road. The Sutherlin Development Code requires that driveway access separation widths comply with the Sutherlin TSP. Therefore, as described above, the future driveway access onto South Side Road must be separated from another driveway by 250 feet.

J. Number of Access Points. *For single-family (detached and attached), two (2) family, and three (3) family housing types, one (1) street access point is permitted per lot; except that two (2) access points may be permitted for two (2) family and three (3) family housing on corner lots (i.e., no more than one (1) access per street), subject to the access spacing standards in subsection I, above. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with section K, below, in order to maintain the required access spacing, and minimize the number of access points.*

FINDING: The City finds that proposed parcels will be allowed to access onto the public street, subject to the minimum 250 foot driveway access separation width. The Development Code requires that driveway access separation widths comply with the Sutherlin TSP.

K. Shared Driveways. *The number of driveways intersecting a public street shall be minimized by the use of shared driveways on adjoining lots where feasible. The city may require shared driveways as a condition of land division or site plan review, as applicable, for traffic safety and access management purposes in accordance with the following standards:*

1. Shared driveways and frontage streets may be required to consolidate access onto a collector or arterial street. When shared driveways or frontage streets are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway or street temporarily ends at the property line, but may be extended in the future as the adjacent parcel develops. "Developable" means that a parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).

2. Access easements and joint maintenance agreements (i.e., for the benefit of affected properties) shall be recorded for all shared driveways, including any pathways and landscaping along such driveways, at the time of final plat approval (section 4.4) or as a condition of site development approval (Section 4.3).

FINDING: If a driveway is shared it must comply with the above standards.

L. Street Connectivity and Formation of Blocks Required. *In order to promote efficient vehicular and pedestrian circulation throughout the city, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:*

1. Block Length and Perimeter. The maximum block length and perimeter, measured along the property/right-of-way line, shall not exceed:

a. Residential Zoning. Six hundred (600) feet length and one thousand eight hundred (1,800) feet perimeter unless the previous adjacent layout or topographical conditions justify a variation;

b. C-1 Zoning. Four hundred (400) feet length and one thousand four hundred (1,400) feet perimeter;

c. C-3 Zoning. Six hundred (600) feet length only.

d. Industrial Zoning. No Standard.

Figure 3.2.110L Street Connectivity and Formation of Blocks

2. Exception. Exceptions to standards in subsection L1 may be granted when blocks are divided by one or more pathway(s), in conformance with the provisions of section 3.2.120.A. Pathways shall be located to minimize out-of-direction travel by pedestrians and may be designed to accommodate bicycles.

FINDING: This standard does not apply to the proposed land division since the subject parcel is 0.89 acre and is not large enough to create a block or area-wide pedestrian circulation.

M. Driveway Openings. *Driveway openings shall be the minimum width necessary to provide the required number of vehicle travel lanes (ten (10) feet for each travel lane). The following standards (i.e., as measured where the front property line meets the sidewalk or right-of-way) are required to provide adequate site access, minimize surface water runoff, and avoid conflicts between vehicles and pedestrians:*

1. Single family, two (2) family, and three (3) family uses shall have a minimum driveway width of ten (10) feet, and a maximum width of twenty-four (24) feet, except that one (1) recreational vehicle pad driveway may be provided in addition to the standard driveway for lots containing more than seven thousand (7,000) square feet of area….

FINDNG: All parcels shall meet the standards listed above along with parking area standards in section 3.4 of the Sutherlin Development Code. These dimensions are required to be illustrated at the time of a building permit. No flag lots are being created with this request.

N. Fire Access and Parking Area Turn-Arounds. *A fire equipment access drive shall be provided for any portion of an exterior wall of the first story of a building that is located more than one hundred fifty (150) feet from an existing public street or approved fire equipment access drive. Parking areas shall provide adequate aisles or turn-around areas for service and delivery vehicles so that all vehicles may enter the street in a forward manner.*

FINDING: The Sutherlin Fire Department has been notified and had no comments or concerns on this request. If a driveway will be longer than 150 feet, the future residential development will require installation of a fire access turn-around meeting the City standards, this turn-around must be depicted on the face of the plat. The nearest fire hydrant is located on the north side of South Side Road at the intersection with Waite Street, within the required 400 feet per the Oregon Uniform Fire Code and Municipal Code.

O. Vertical Clearances. *Driveways, private streets, aisles, turn-around areas and ramps shall have a minimum vertical clearance of thirteen (13) feet six (6) inches for their entire length and width.*

FINDING: This standard is not applicable.

P. Vision Clearance. *No signs, structures or vegetation in excess of three (3) feet in height shall be placed in "vision clearance areas", as shown in figure 3.2.110P. The minimum required vision clearance area may be increased by the city upon finding that more sight distance is required (i.e., due to traffic speeds, roadway alignment, etc.).*

FINDING: This standard is not applicable since new signs or structures are not proposed.

Q. Flag Lots. *Flag lots may be created where the configuration of a parcel does not allow for standard width lots. A flag pole access drive may serve no more than two (2) dwelling units, including accessory dwellings and dwellings on individual lots. A drive serving more than one lot shall conform to the standards in subsections 1-4 below:*

1. Driveway and Lane width of all shared drives and lanes shall be twenty (20) feet of pavement with a minimum lot frontage width of twenty-five (25) feet wide throughout the driveway;
2. Easement. Where more than one (1) lot is to receive access from a flag pole drive, the owner shall record an easement granting access to all lots that are to receive access. The easement shall be so indicated on the preliminary plat;
3. Maximum Drive Lane Length. The maximum drive lane length is subject to requirements of the uniform fire code, but shall not exceed one hundred fifty (150) feet without an emergency turnaround approved by the city; and
4. Area Calculation. The flag pole portion of a lot shall not be counted for the purpose of meeting lot area requirements or determining setbacks.

FINDING: No flag lots are proposed with this application.

R. Construction. *The following standards shall apply to all driveways and private streets:*

1. Surface Options. Driveways, parking areas, aisles, and turn-arounds shall be paved with asphalt, concrete or comparable surfacing; alternatively, a durable non-paving material such as pavers, or other materials approved by the city may be used to reduce surface water runoff and protect water quality.

2. Surface Water Management. When a paved surface is used, all driveways, parking areas, aisles and turn-arounds shall have on-site collection or infiltration of surface waters to minimize sheet flow of such waters onto public rights-of-way and abutting property. Surface water facilities shall be constructed in conformance with city standards.

3. Driveway Aprons. When driveway approaches or "aprons" are required to connect driveways to the public right-of-way, they shall be constructed to city standards and paved with concrete surfacing. See subsection M, above.

FINDING: Driveways to any future development on the proposed parcels will be required to meet the requirements of the surface and storm water management improvements of this section and be constructed to City Standards. The design for construction of the improvements will have to be coordinated with City Public Works and be engineered.

5. **INFRASTRUCTURE STANDARDS**

SECTION 3.5.100 Purpose and Applicability.

A. Purpose. *This section provides planning and design standards for transportation, sewer, water, and storm drainage infrastructure.*

B. When Standards Apply. *All development shall be served with adequate infrastructure including transportation, sewer, water, and storm drainage, in conformance with this section and consistent with the City's engineering design criteria.*

C. Standard Specifications. *The City of Sutherlin general engineering requirements and standard specifications for street, storm drain, sewer, and waterline construction are incorporated in this code by reference.*

D. Conditions of Development Approval. *No development may occur unless required public infrastructure is in place or guaranteed, in conformance with the provisions of this code. Improvements required as a condition of development approval, when not voluntarily accepted by the applicant, shall be roughly proportional to the impact of development. Findings in the development approval shall indicate how the required improvements are roughly proportional to the impact.*

FINDING: City sanitary sewer and water service have existing lines in South Side Road; all utilities and infrastructure will have to be extended and/or installed per City standards and specifications. The design for the installation of the utilities and storm drainage will have to be coordinated and approved by the City Public Works and comply with Section 3.5 of the SDC.

SECTION 3.5.110: Transportation Standards.

A. Purpose. *The purpose of this section is to implement the Transportation System Plan and protect the City's investment in the public street system. Upon dedication of streets to the public, the City accepts maintenance responsibility for the street. Failure to meet City standards may place an undue maintenance burden on the public, which may be only marginally benefited by the street improvement. Variances to street standards must be evaluated in this context.*

B. Development Standards. *No development shall occur unless the development has frontage onto or approved access from a public street, in conformance with the provisions of section 3.2, Access and Circulation, and the applicable development standards of Section 3.5.110.B are met.*

FINDING: The City finds the proposed parcels created by this land partition will have direct access onto South Side Road. No additional development standards are required at this time to construct new streets. In addition, no private streets are proposed as a part of this partition request. If a future street is to be constructed, it must be developed to City Standards before being dedicated to the City.

C. Creation of Rights-of-Way for Streets and Related Purposes. *Streets shall be created through the approval and recording of a final subdivision or partition plat, or quit claim deed, provided that the street is deemed essential by the city for the purpose of implementing the comprehensive plan / transportation system plan, and the deeded right-of-way conforms to the standards of this code. All deeds of dedication shall be in a form prescribed by the city and shall name "the public," as grantee.*

FINDING: The City finds that no new streets are being created by the subject land partition. South Side Road has an existing 80 foot right-of-way where the subject property accesses it, as part of planning file number SUB-2004-07-06, the additional 20' of right-of-way was dedicated (Vol. 22, PG 52 A/B). The City finds that additional dedication of right-of-way from the subject property's frontage adjoining South Side Road is not required.

D. Creation of Access Easements. *Access easements are only allowed with a private street or drive meeting city standards for one single family unit. Access easements are discouraged in all residential districts, unless they are an integral part of a PUD, or required by the city for access management reasons (i.e., shared driveways along arterial streets). The city may approve an access easement established by deed when the easement is necessary to provide for access and circulation in conformance with section 3.2.110 (K), Access and Circulation. Access easements shall be created and maintained in accordance with the uniform fire code, section 10.207, and shall be shown and described on any final subdivision or partition plat that requires them.*

FINDING: No access easements are proposed with this application. The property owner/developer shall maintain and conform to the above standards if in the future create an access easement.

E. Street Location, Width and Grade*. Except as noted below, the location, width and grade of all streets shall conform to the transportation system plan, as applicable; and an approved street plan or subdivision plat. Street location, width and grade shall be determined in relation to existing and planned streets, topographic conditions, public convenience and safety, and in appropriate relation to the proposed use of the land to be served by such streets:*

1. Street grades shall be approved by the city, in accordance with the design standards in subsection N, below; and

2. Where the location of a street is not shown in an existing street plan (see subsection H), the location of streets in a development shall either:

a. Provide for the continuation and connection of existing streets in the surrounding areas, conforming to the street standards of this section; or

b. Conform to a street plan adopted by the city council, if it is impractical to connect with existing street patterns because of particular topographical or other existing conditions of the land. Such a plan shall be based on the type of land use to be served, the volume of traffic, the capacity of adjoining streets and the need for public convenience and safety.

FINDING: The City finds that partial street improvements or right-of-way dedications along the parcel frontages are impractical at this time; and therefore, are not required with this request. However, in the event that a local improvement district is formed in the future to upgrade South Side Road with improvements to meet full city street standards, the property owner/developer is required to participate in the improvements as provided for in the local improvement district provisions of the City. The required waiver to participate in such an improvement district will be a condition of approval. As the lots are developed they will be required to meet the design standards of Chapter 3.

F. Minimum Rights-of-Way and Street Sections. *Street rights-of-way and improvements shall be the widths in Table 3.5.110. A variance shall be required in conformance with section 5.2.110 to vary the standards in Table 3.5.110. Where a range of width is indicated, the width shall be determined by the decision-making authority based upon the following factors:*

1. Street classification in the comprehensive plan/transportation system plan;
2. Anticipated traffic generation;
3. On-street parking needs;
4. Sidewalk and bikeway requirements based on anticipated level of use;
5. Requirements for placement of utilities;
6. Street lighting;
7. Minimize drainage, slope, and wetland impacts;
8. Street tree location, as provided for in section 3.3;
9. Protection of significant vegetation, as provided for in section 3.3;
10. Safety and comfort for motorists, bicyclists, and pedestrians;
11. Street furnishings (e.g., benches, lighting, bus shelters, etc.), when provided;
12. Access needs for emergency vehicles; and
13. Transition between different street widths (i.e., existing streets and new streets), as applicable.
(See Table 3.5.110F Street and Parkway Design Standards)

FINDING: South Side Road has an existing 80 foot right-of-way where the subject property access; the street right-of-way range for a collector residential street is 58' to 62'. Planning File SUB-2004-07-06 required dedication of an additional 20' of road right-of-way, with the additional 20', the total right-of-way is 80' where it fronts the subject property. South Side Road is unimproved with no existing curbs or sidewalks, under the joint jurisdiction of Douglas County and the City of Sutherlin. The property owner/developer will be required to participate in a local improvement district to upgrade South Side Road, if said district is formed in the future.

H. Future Street Plan and Extension of Streets.

1. The City shall require the submittal of a future street plan in conjunction with an application for a subdivision or partition when the subject request could affect development of the city's future street system. The purpose of the future street plan is to facilitate orderly development of an interconnected street system, provide greater certainty to the city and neighboring property owners, and allow for future growth in conformance with the

comprehensive plan and transportation system plan. The plan shall show the pattern of existing and proposed future streets from the boundaries of the proposed land division and shall include other parcels within six hundred (600) feet surrounding and adjacent to the proposed land division. The street plan is not binding; rather it is intended to show potential future street extensions with future development

2. Streets shall be extended to the boundary lines of the parcel or tract to be developed, when the city determines that the extension is necessary to give street access to, or permit a satisfactory future division of, adjoining land. Developers are encouraged to also install conduits for other utilities in coordination with those utilities. The point where the streets temporarily end shall conform to a-c, below:

a. These extended streets or street stubs to adjoining properties are not considered to be cul-de-sacs since they are intended to continue as through streets when the adjoining property is developed.

b. A reflective barricade (e.g., fence, bollards, or similar vehicle barrier) shall be constructed at the end of the street by the partitioner or subdivider and shall not be removed until authorized by the city or other applicable agency with jurisdiction over the street. The cost of the barricade shall be included in the street construction cost.

c. Temporary turnarounds (e.g., hammerhead or bulb-shaped configuration) shall be constructed for stub streets over one hundred (150) feet in length.

FINDING: No streets are planned to be constructed as part of this application. Any future streets must conform to the above standards.

I. Street Alignment and Connections.

1. Staggering of streets making "T" intersections at collectors and arterials shall not be designed so that jogs of less than three hundred (300) feet on such streets are created, as measured from the centerline of the intersecting streets.

2. Spacing between local street intersections shall have a minimum separation of one hundred twenty-five (125) feet, except where more closely spaced intersections are designed to provide an open space, pocket park, common area or similar neighborhood amenity. This standard applies to four-way and three-way (off-set) intersections.

3. All local and collector streets that abut or stub to a development site shall be extended within the site to provide through circulation unless prevented by environmental or topographical constraints, existing development patterns or compliance with other standards in this Code. This exception applies when it is not possible to redesign or reconfigure the street pattern to provide required extensions. Land is considered topographically constrained if the slope is greater than fifteen (15) percent for a distance of two hundred fifty (250) feet or more. In the case of environmental or topographical constraints, the mere presence of a constraint is not sufficient to show that a street connection is not possible. The applicant must show why the environmental or topographic constraint precludes some reasonable street connection.

4. Proposed streets or street extensions shall be located to provide direct access to existing or planned commercial services and other neighborhood facilities, such as schools, shopping areas and parks.

5. In order to promote efficient vehicular and pedestrian circulation throughout the city, the design of subdivisions and alignment of new streets shall conform to the following standards in chapter 3.2, Access and Circulation. The maximum block length shall not exceed:

a. Residential districts – Six hundred (600) feet;

Exceptions to the standards in a-b may be granted when an access way is provided at or near mid-block, in conformance with the provisions of section 3.2.120A.

FINDING: The City finds that no new streets, subdivisions or developments are proposed with this partition request, therefore this criterion is not applicable. If the applicant/developer proposes a new street, it must comply with the street alignment and connection standards.

K. Intersection Angles. *Streets shall be laid out so as to intersect at an angle as near to a right angle as practicable, except where topography requires a lesser angle or where a reduced angle is necessary to provide an open space, pocket park, common area or similar neighborhood amenity. In addition, the following standards shall apply:*

1. Streets shall have at least twenty-five (25) feet of tangent adjacent to the right-of-way intersection unless topography requires a lesser distance;

2. Intersections which are not at right angles shall have a minimum corner radius of twenty (20) feet along the right-of-way lines of the acute angle; and

3. Right-of-way lines at intersection with arterial streets shall have a corner radius of not less than twenty (20) feet.

FINDING: This section is not applicable because no new street sections are planned to be built. If a street is to be constructed in the future, it must comply with the standards above.

L. Existing Rights-of-Way. *Whenever existing rights-of-way adjacent to or within a tract are of less than standard width, additional rights-of-way shall be provided at the time of partition, subdivision, or development, subject to the provision of section 3.5.100D.*

FINDING: The city has found that no additional right-of-way is required to be dedicated for South Side Road, as discussed in this report.

M. Cul-de-sacs. *A dead-end street shall be no more than four hundred (400) feet long, and shall only be used when open space (e.g., street ends at park or greenway), environmental, or topographical constraints; existing development patterns; or compliance with other standards in this code preclude street extension and through circulation. Such dead-end-street shall conform to all of the following standards:*

1. The city may require a dead-end or cul-de-sac street to stub to the outer property line of the development when future street extension may be possible through redevelopment of an adjacent property (e.g., existing development on adjacent property could redevelop and allow extension in foreseeable future).

2. All cul-de-sacs exceeding one hundred fifty (150) feet shall terminate with a circular or hammer-head turnaround. Circular turnarounds shall have a radius of no less forty (40) feet (i.e., from center to edge of pavement); except that turnarounds may be larger when they contain a landscaped island or parking bay in their center. When an island or parking bay is provided, there shall be a fire apparatus lane of twenty (20) feet in width; and

3. The length of the cul-de-sac shall be measured along the centerline of the roadway from the near side of the intersecting street to the farthest point of the cul-de-sac.

FINDING: A cul-de-sac or dead end street is not proposed or applicable with this request.

N. Grades and Curves. *Grades shall not exceed ten (10) percent on arterials, twelve (12) percent on collector streets, or twelve (12) percent on any other street (except that local or residential access streets may have segments with grades up to 15% for distances of no greater than 250 feet) when approved by the city engineer, and:*

1. Curb radii shall not be less than seven hundred (700) feet on arterials, five hundred (500) feet on major collectors, three hundred fifty (350) feet on minor collectors, or one hundred (100) feet on other streets; and

2. Streets intersecting with a minor collector or greater functional classification street, or streets intended to be posted with a stop sign or signalization shall provide a landing averaging five percent or less. Landings are that portion of the street within twenty (20) feet of the edge of the intersecting street at full improvement.

FINDING: This section is not applicable to this request.

O. Curbs, Curb Cuts, Ramps, and Driveway Approaches. *Concrete curbs, curb cuts, wheelchair and bicycle ramps, and driveway approaches shall be constructed in accordance with standards specified in section 3.2 Access and Circulation.*

FINDING: Construction and/or development on the proposed parcels will be required to comply with the applicable standards outlined in Section 3.2.

P. Street Names. *No street name shall be used that duplicates or could be confused with the names of existing streets in the vicinity of the city, except for extensions of existing streets. Street names, signs and numbers shall conform to the established pattern in the surrounding area, except as requested by emergency service providers. Street names shall conform to section 12.24, as amended, of the Sutherlin Municipal Code.*

FINDING: This section is not applicable because no new streets proposed that need to be named.

Q. Filed Street Survey and Survey Monuments Required. *Upon completion of a street improvement and prior to acceptance by the city, it shall be the responsibility of the developer's registered professional land surveyor to provide certification to the city that all boundary and interior monuments shall be reestablished and protected and required street survey(s) have been filed.*

FINDING: This section is not applicable as no street improvements, including acceptance by the City, are required with this request.

R. Street Signs. *The city, county or county with jurisdiction shall install all signs for traffic control and street names. The cost of signs required for new development shall be the responsibility of the developer. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required.*

FINDING: No new street signs are required as part of this land partition.

S. Mail Boxes. *Plans for mail boxes to be used shall be approved by the United States Postal Service.*

FINDING: This section is not applicable for this request. Future development will require compliance, as outlined above.

T. Street Light Standards. *Street lights shall be installed in accordance with city standards.*

FINDING: This section is not applicable to this request. No new street improvements are proposed with this partition.

U. Street Cross-Sections. *The final lift of asphalt or concrete pavement shall be placed on all new constructed public roadways prior to final city acceptance of the roadway.*

1. *Sub-base and leveling course shall be of select crushed rock;*
2. *Surface material shall be of Class C or B asphaltic concrete;*
3. *The final lift shall be Class C asphaltic concrete as defined by A.P.W.A. standard specifications; and*
4. *No lift shall be less than one and one half (1 ½) inches in thickness.*

FINDING: This section is not applicable because there are no new streets are proposed.

6. **SECTION 3.5.140 STORM DRAINAGE**

A. General Provisions. *The city shall issue a development permit only where adequate provisions for storm water and flood water runoff have been made.*

B. Accommodation of Upstream Drainage. *Culverts and other drainage facilities shall be large enough to accommodate potential runoff from the entire upstream drainage area, whether inside or outside the development, in conformance with the city's storm drainage master plan. Such facilities shall be subject to review and approval by the city engineer.*

C. Effect on Downstream Drainage. *The effect on downstream drainage shall be evaluated in all project proposals, and all projects shall conform to the storm drainage master plan. Where it is anticipated by the city that the additional runoff resulting from the development will overload an existing drainage facility, the city shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with city standards.*

D. Easements. *Where a development is traversed by a watercourse, drainage way, channel or stream, there shall be provided a storm water easement or drainage right-of-way provided for conveyance of storm water. The easement shall be subject to review and approval by the city engineer and shall include at a minimum the watercourse and such further width as will be adequate for conveyance and maintenance.*

E. Certification of No Impact to Neighboring Property. *Developers shall submit a stamped certification by a licensed engineer stating that the rate of storm water drainage during and after development will not increase as a result of the proposed development. The certification shall further state that the developer will adhere to all applicable storm drainage, grading, erosion, and sediment control requirements. The city may impose conditions of approval and/or require submittal of engineered plans that demonstrate there will be no impact to neighboring properties*

FINDINGS: Storm drainage must be evaluated as part of this development, including the effect on downstream drainage and the need for drainage easements/right-of-way for the conveyance of storm water. The conditions of approval require the property owner/developer to submit a stamped certification by a

licensed engineer stating that the rate storm water drainage during and after development will not increase as a result of the proposed development, as outlined above.

7. **SECTION 3.5.160 EASEMENTS**

Easements. *Easements for sewers, storm drainage and water quality facilities, water mains, electric lines or other public utilities shall be dedicated on a final plat, or provided for in the deed restrictions. See also, section 4.3 Development Review and Site Plan Review, and chapter 4.4 Land Divisions and Lot Line Adjustments. The developer or applicant shall make arrangements with the city, the applicable district and each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development. The city's standard minimum width for public main line utility easements shall be fifteen (15) feet unless otherwise specified by the utility company, applicable district, or city engineer.*

FINDING: The conditions of approval require that any necessary easements for public utilities, as outlined above, be dedicated on the final plat or provided for in the deed restrictions.

8. **SECTION 3.5.170 CONSTRUCTION PLAN APPROVAL AND ASSURANCES**

Construction Plan Approval and Assurances. *No public improvements, including sanitary sewers, storm sewers, streets, sidewalks, curbs, lighting, parks, or other requirements shall be undertaken except after the plans have been approved by the city, permit fee paid, and permit issued. The permit fee shall be set by city council. The city may require the developer or subdivider to provide bonding or other performance guarantees to ensure completion of required public improvements. See also, section 4.3 Development Review and Site Plan Review, and section 4.4 Land Divisions and Lot Line Adjustments.*

FINDING: The conditions of approval require that construction plan approval for the public improvements be undertaken as outlined above.

9. **SECTION 3.5.180 INSTALLATION**

A. ***Conformance Required.*** *Improvements installed by the developer either as a requirement of these regulations or at his/her own option, shall conform to the requirements of this chapter, approved construction plans, and to improvement standards and specifications adopted by the city.*

B. ***Adopted Installation Standards.*** *The city's general engineering requirements and standard specifications and the Oregon Chapter A.P.W.A. standard specifications shall be a part of the city's adopted installation standard(s). Where conflict occurs, the A.P.W.A standards shall prevail. Other standards may also be required upon recommendation of the city engineer.*

C. ***Commencement.*** *Work shall not begin until the city has been notified in advance.*

D. ***Resumption.*** *If work is discontinued for more than one (1) month, it shall not be resumed until the city is notified.*

E. ***Engineer's Certification and As-Built Plans.*** *A registered civil engineer (or as appropriate) licensed in Oregon shall provide written certification in a form required by the city that all improvements, workmanship and materials are in accord with current and standard engineering and construction practices, conform to approved plans and conditions of approval, and are of high grade, prior to city acceptance of the public improvements, or any portion thereof, for operation and maintenance. The developer's engineer shall also*

provide two (2) set(s) of "as-built" plans, in conformance with the city engineer's specifications, for permanent filing with the city.

F. ***City Inspection.*** *Improvements shall be constructed under the inspection and to the satisfaction of the city. The city may require minor changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest. Modifications requested by the developer shall be subject to review and approval under section 4.7, Modifications to Approved Plans and Conditions of Approval. Any monuments that are disturbed before all improvements are completed by the subdivider shall be replaced prior to final acceptance of the improvements.*

FINDING: The conditions of approval require that improvements installed by the developer either as a requirement of these regulations or at his/her own option, shall conform to the requirements of Chapter 3 of the SDC, approved construction plans, and to improvement standards and specifications adopted by the city, as specified above.

10. **APPROVAL CRITERIA – TENTATIVE PLAN**

SECTION 4.4.140 Approval Criteria - Tentative Plan. The city shall approve, approve with conditions or deny a tentative plan based on the following approval criteria:

A. *The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;*

FINDING: The City finds this criterion is not applicable because a subdivision is not proposed and partitions are not named.

B. *The proposed streets, roads, sidewalks, bicycle lanes, pathways, utilities, and surface water management facilities are laid out so as to uniformly transition to such facilities in existing or approved subdivisions and partitions on adjoining property as to width, general direction and in all other respects.*

FINDING: The City finds that South Side Road is a collector road, under the jurisdiction of Douglas County and the City of Sutherlin, which has not been fully improved to City standards. The City finds that a waiver of remonstrance for a possible future Local Improvement District (LID) to finance any improvements to South Side Road is required as a condition of approval.

C. *Lot Size and Residential Density. The subdivision meets the lot size and residential density standards required by the zoning district (chapter 2)*

FINDING: The City finds the R-2 residential lot size standards have been met as discussed earlier in this report.

D. *When dividing a tract into large lots or parcels (i.e. greater than two times or 200 percent the minimum lot size allowed in the underlying zoning district, the lots parcels are of such size, shape and orientation as to facilitate future re-division in accordance with the requirements of the zoning district and this code.*

FINDING: This section is not applicable to this request.

E. *Block and lot standards. All proposed blocks (i.e., one (1) or more lots bound by*

public streets), lots and parcels conform to the specific requirements below:

1. *All lots and blocks shall comply with the lot area, setback, and dimensional requirements of the applicable zoning district (chapter 2), and the standards of section 3.2 Access and Circulation, and the flag lot standards of section 3.2.110 (Q), if applicable.*
2. *Setbacks shall be as required by the applicable zoning district (chapter 2).*
3. *Every lot shall conform to the standards of section 3.2, Access and Circulation.*
4. *The applicant may be required to install landscaping, walls, fences, or other screening as a condition of subdivision approval. See also, chapter 2 Zoning Districts, and section 3.3, Landscaping, Street Trees, Fences and Walls.*
5. *In conformance with the uniform fire code, a twenty (20) foot width fire apparatus access drive shall be provided to serve all portions of a building that are located more than one hundred fifty (150) feet from a public right-of-way or approved access drive. See also, section 3.2 Access and Circulation.*
6. *Where a common private drive is to be provided to serve more than one lot, a reciprocal easement which will ensure access and maintenance rights shall be recorded with the approved subdivision or partition plat and the county clerk's reference number shown on the face of the plat.*

FINDING: The City finds the proposal complies with the R-2 zone development standards as described earlier in this report and must conform to the development standards of Section 4.4.140(E) listed above. The parcels will have direct access onto South Side Road.

E. Minimize Flood Damage. *All subdivisions and partitions shall be designed based on the need to minimize the risk of flood damage. No new building lots shall be created entirely within a floodway. All new lots shall be buildable without requiring development within the floodway. Development in a one hundred (100) year flood plain shall comply with federal emergency management agency requirements, including filling to elevate structures above the base flood elevation. The applicant shall be responsible for obtaining such approvals from the appropriate agency before city approval of the final plat.*

FINDING: The City finds the property is not located in a designated flood plain.

F. Determination of Base Flood Elevation. *Where a development site consists of ten (10) or more lots, or is located in or near areas prone to inundation, and the base flood elevation has not been provided or is not available from another authoritative source, it shall be prepared by a qualified professional, as determined by the Director.*

FINDING: The City finds that the subject site is not within a floodplain as indicated on the FEMA maps dated February 17, 2010.

G. Need for Adequate Utilities. *All lots created through land division shall have adequate public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to prevent or minimize flood damage to the extent practicable.*

FINDING: The City finds public and private utilities can be made available to the proposed parcels with.

H. Need for Adequate Drainage. *All subdivision and partition proposals shall have adequate surface water drainage provided to reduce exposure to flood damage. Water quality or quantity control improvements may be required.*

FINDING: The City finds this criterion is not applicable until such time as a development is proposed on each parcel and provisions for drainage are determined.

I. Floodplain, Park, and Open Space Dedications*. Where land filling and/or development is allowed within or adjacent to the one hundred (100) year flood plain outside the zero-foot rise flood plain, and the comprehensive plan designates the subject flood plain for park, open space, or trail use, the City may require the dedication of sufficient open land area for a greenway adjoining or within the flood plain. When practicable, this area shall include portions at a suitable elevation for the construction of a pedestrian/bicycle pathway within the flood plain in accordance with the city's adopted trails plan or pedestrian and bikeway plans, as applicable. The city shall evaluate individual development proposals and determine whether the dedication of land is justified based on the development's impact to the park and/or trail system, consistent with section 3.5, and section 3.5.100.D in particular.*

FINDING: The City finds the Sutherlin Comprehensive Plan does not designate the property as flood plain or a future park or open space development.

K. ***Phased Development.*** *The city may approve a time schedule for developing a subdivision in phases, but in no case shall the actual construction time period (i.e., for required public improvements, utilities, streets) for any partition or subdivision phase be greater than two (2) years without reapplying for a tentative plan approval. The criteria for approving a phased land division proposal are:*

1. Public facilities shall be constructed in conjunction with or prior to each phase;

2. The development and occupancy of any phase dependent on the use of temporary public facilities shall require city receipt of bonding or other assurances to cover the cost of required permanent public improvements, in accordance with Section 4.4.180. A temporary public facility is any facility not constructed to the applicable city standard;

3. The phased development shall not result in requiring the city or a third party (e.g., owners of lots) to construct public facilities that were required as part of the approved development proposal.

FINDING: The City finds a development phasing plan is not applicable to the partition. The applicant will have two years to finalize the proposed partition plan, as stated in the conditions of approval.

L. ***Lot Size Averaging.*** *The city may allow residential lots or parcels less than the minimum lot size under the applicable zoning district for projects that provide common open space or active recreation land and facilities. Such open space shall provide public access easements containing paved trials. The lot or parcel sizes shall meet the following:*

1. The average area for all residential lots or parcels shall not be less than that allowed by the underlying zone; and

2. No lot or parcel created under this provision shall be less than eighty (80) percent of the minimum lot size allowed in the underlying zone.

For example, if the minimum lot size is seven thousand five hundred (7,500) square feet, the following three (3) parcels could be created as part of a single partition application: six thousand (6,000) square feet, seven thousand five hundred (7,500) square feet, and nine thousand (9,000) square feet.

FINDING: The City finds this criterion is not applicable because the partition is for a total of three parcels which exceed the minimum R-2 lot size; therefore, there is no reason for the applicant to request lot averaging.

M. ***Temporary Sales Office.*** *A temporary sales office in conjunction with a subdivision may be approved as set forth in section 4.10.100, Temporary Uses.*

FINDING: The City finds this criterion is not applicable since this is a land partition.

N. ***Conditions of Approval****. The city may attach such conditions as are necessary to carry out provisions of this code, and other applicable ordinances and regulations, and may require landscape screening between uses, or access reserve strips granted to the city for the purpose of controlling access to adjoining undeveloped properties. See also, section 3.5.100.D (Infrastructure).*

FINDING: The City finds there are conditions necessary to assure the land division is recorded in compliance with City requirements as stated in this report. The conditions are listed below in the decision.

Additional Criteria

11. **Site Analysis (Section 4.4.130B.7):** *Wetland and floodplain, including wetland areas, streams, wildlife habitat and other areas identified by the city or natural resource regulatory as requiring protection.*

FINDING: There are no known wetlands on the site. Any identified wetlands on the property will require coordination with the Oregon Department of State Lands to address any necessary mitigation of wetlands.

4.4.160 Final Plat Submission Requirements and Approval Criteria.

A. Submission Requirements. *Final plats shall be reviewed and approved by the city prior to recording with Douglas County. The applicant shall submit the final plat within two (2) years of the approval of the tentative plan as provided by section 4.4.120. Specific information about the format and size of the plat, number of copies and other detailed information can be obtained from the city. The city will not accept as complete an application for final plat until the tentative plan has been approved.*

B. Approval Criteria. *By means of a Type I procedure the director shall review the final plat and shall approve or deny the final plat based on findings regarding compliance with the following criteria:*

1. The final plat complies with the approved tentative plan, and all conditions of approval have been satisfied;

2. All public improvements required by the tentative plan have been installed and approved by the planning director. Alternatively, the developer has provided a performance guarantee in accordance with section 4.4.180;

3. The streets and roads for public use are dedicated without reservation or restriction other than revisionary rights upon vacation of any such street or road and easements for public utilities;

4. The streets and roads held for private use have been approved by the city as conforming to the tentative plan and, where applicable, the associated PUD;

5. The plat contains a dedication to the public of all public improvements, including but not limited to streets, public pathways and trails, access reserve strips, parks, and sewage disposal, storm drainage, and water supply systems;

6. The applicant has provided copies of all recorded homeowners association Codes, Covenants, and Restrictions (CC&R's), deed restrictions, private easements and agreements (e.g., for access, common areas, parking, etc.), and other recorded documents pertaining to common improvements recorded and referenced on the plat;

7. Water and sanitary sewer service is available to each and every lot, is provided; or bond, contract or other assurance has been provided by the subdivider to the city that such services will be installed in accordance with section 3.5, Infrastructure Standards, and the bond requirements of section 4.4.180. The amount of the bond, contract or other assurance by the subdivider shall be determined by a registered professional engineer, subject to review and approval by the city; and

8. The plat contains an affidavit by the surveyor who surveyed the land represented on the plat to the effect the land was correctly surveyed and marked with proper monuments as provided by ORS Chapter 92, and indicating the initial point of the survey, and giving the dimensions and kind of such monument, and its reference to some corner established by the U.S. Geological Survey or giving two or more permanent objects for identifying its location.

FINDING: The City finds the applicant shall meet final plat submission requirements and approval criteria in the Sutherlin Development Code, Section 4.4.160 listed above. The applicant shall conform to all applicable requirements of Section 3.5 Infrastructure Standards of the Sutherlin Development Code.

LAND PARTITION DECISION

Based on the Director's review of the material, exhibits received in evidence, and the above Findings of Fact, the requested Land Partition has been found to be in sufficient compliance with the applicable Comprehensive Plan and Sutherlin Development Code provisions to warrant tentative approval. This requested Land Partition is hereby **TENTATIVELY APPROVED**, subject to the following conditions:

1. The property owner/developer shall submit a final Land Partition Plat which substantially conforms to the approved preliminary Plan in all aspects except as specifically conditioned by the Community Development Director, as well as the general standards and survey plat requirements prescribed by the Sutherlin Development Code (SDC). Any alterations shall be reviewed by the Community Development Department.

2. The property owner(s) shall enter in a Waiver of Remonstrance Agreement with the City for the subject property agreeing to participate in a local improvement district to upgrade South Side Road to full street standards, if said district is formed in the future. The Waiver shall be recorded with Douglas County Clerk with the final partition plat. The necessary form can be obtained from the City. If said Waiver of Remonstrance Agreement has previously has been previously recorded, a copy of the recorded document must be provided to the City.

3. The property owner/developer shall obtain an access permit(s) from the City of Sutherlin for the existing and/or proposed access locations onto South Side Road.

4. The property owner/developer shall provide written verification from the City of Sutherlin that domestic water and sanitary sewer are/or will be available to serve Parcel 1, Parcel 2 and Parcel 3.

5. The property owner/developer shall clearly identify all public and private access, utility or storm water easements on the final plat, which must be in conformance with the minimum requirements of the City.

    a. If necessary, the Director of Public Works will identify any necessary utility easements needed on the final plat.

6. All utilities shall be designed per standards to be located underground, pursuant to Section 3.5.150 of the SDC.

7. Driveway(s) exceeding 150 feet in length require adequate fire equipment access and/or turn around area shall be provided per SDC Section 3.2.110.N Fire Access and Parking Area Turn-Arounds.

8. The property owner/developer shall provide a letter from the Director of Public Works certifying that all required improvements have been constructed to standards or an Improvement Agreement and Security as defined by the Sutherlin Development Code have been met.

9. Developer shall submit a stamped certification by a licensed engineer stating that the rate of storm water drainage during and after development will not increase as a result of the proposed development. The certification shall further state that the developer will adhere to all applicable storm drainage, grading, erosion, and sediment control requirements. The City may impose conditions of approval and/or require submittal of engineered plans that demonstrate there will be no impact to neighboring properties.

10. Land Partition is subject to City Council's approval of the submitted Plan Amendment and Zone Change applications.

11. The property owner/developer shall meet all requirements of final plat submission and approval criteria in Section 4.4.160 of the SDC. The final plat shall be filed within two (2) years of this approval, unless an extension is granted pursuant to Section 4.4.120 of the SDC.

12. An electronic copy (pdf) of the recorded final partition plat shall be submitted to the Sutherlin Community Development Department within 10 days after recording.

ADVISORY STATEMENTS

13. The property owner/developer shall comply with applicable local, county, state and federal regulations as applicable to the partition.

14. At the time of a building permit proposal on any of the new parcels, the permit shall indicate compliance with Development Code Section 2.2 R-2 building setbacks and lot coverage requirements; and the requirements of Development Code Section 3.2 Access and Circulation.

a. Where a street or driveway is to be paved, the building permit application shall include provisions for on-site storm water collection or infiltration in accordance with city specifications.
b. Sidewalks to be construction to City Standards.
c. Driveways must maintain a minimum of 250' separation per the Sutherlin TSP.

DECISION OPTIONS

Based on the Applicant's findings, the City Staff Report and the testimony and evidence provided during the public hearing, the Planning Commission can move to either:

1. Close the public hearing and, after deliberating on the matter, pass a motion to **recommend** to the City Council **approval** of the requested Comprehensive Plan Map, Zoning Map Amendments and Land Partition on the subject 1.31 acre property, subject to the following conditions:

PLAN AMENDMENT and ZONE CHANGE:

1. Geologic Impact Statement from a qualified geotechnical engineer or geological consultant meeting Section(s) 2.6.210 (RH Zone and slopes greater than 12% - Development Standards) and 2.6.220 (Site Development, Excavation, Grading – In all zones) of the Sutherlin Development Code must be submitted and attached to each Planning Clearance Worksheet.

LAND PARTITION:

1. The property owner/developer shall submit a final Land Partition Plat which substantially conforms to the approved preliminary Plan in all aspects except as specifically conditioned by the Community Development Director, as well as the general standards and survey plat requirements prescribed by the Sutherlin Development Code (SDC). Any alterations shall be reviewed by the Community Development Department.

2. The property owner(s) shall enter in a Waiver of Remonstrance Agreement with the City for the subject property agreeing to participate in a local improvement district to upgrade South Side Road to full street standards, if said district is formed in the future. The Waiver shall be recorded with Douglas County Clerk with the final partition plat. The necessary form can be obtained from the City. If said Waiver of Remonstrance Agreement has been previously recorded, a copy of the recorded document must be provided to the City.

3. The property owner/developer shall obtain an access permit(s) from the City of Sutherlin for the existing and/or proposed access locations onto South Side Road.

4. The property owner/developer shall provide written verification from the City of Sutherlin that domestic water and sanitary sewer are/or will be available to serve Parcel 1, Parcel 2 and Parcel 3.

5. The property owner/developer shall clearly identify all public and private access, utility or storm water easements on the final plat, which must be in conformance with the minimum requirements of the City.

    a. If necessary, the Director of Public Works will identify any necessary utility easements needed on the final plat.

6. All utilities shall be designed per standards to be located underground, pursuant to Section 3.5.150 of the SDC.

7. Driveway(s) exceeding 150 feet in length require adequate fire equipment access and/or turn around area shall be provided per SDC Section 3.2.110.N Fire Access and Parking Area Turn-Arounds.

8. The property owner/developer shall provide a letter from the Director of Public Works certifying that all required improvements have been constructed to standards or an Improvement Agreement and Security as defined by the Sutherlin Development Code have been met.

9. Developer shall submit a stamped certification by a licensed engineer stating that the rate of storm water drainage during and after development will not increase as a result of the proposed development. The certification shall further state that the developer will adhere to all applicable storm drainage, grading, erosion, and sediment control requirements. The City may impose conditions of approval and/or require submittal of engineered plans that demonstrate there will be no impact to neighboring properties.

10. Land Partition is subject to City Council's approval of the submitted Plan Amendment and Zone Change applications.

11. The property owner/developer shall meet all requirements of final plat submission and approval criteria in Section 4.4.160 of the SDC. The final plat shall be filed within two (2) years of this approval, unless an extension is granted pursuant to Section 4.4.120 of the SDC.

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13. The property owner/developer shall comply with applicable local, county, state and federal regulations as applicable to the partition.

14. At the time of a building permit proposal on any of the new parcels, the permit shall indicate compliance with Development Code Section 2.2 R-2 building setbacks and lot coverage requirements; and the driveway separation, surface improvement and storm water runoff requirements of Development Code Section 3.2 Access and Circulation.
    a. Where a street or driveway is to be paved, the building permit application shall include provisions for on-site storm water collection or infiltration in accordance with city specifications.
    b. Sidewalks to be constructed to city standards.
    c. Driveways must maintain a minimum of 250' separation per the Sutherlin TSP.

2. Close the public hearing and, after deliberating on the matter, pass a motion to **recommend** to the City Council **approval** of the requested Comprehensive Plan Map, Zoning Map amendments and Land Partition subject to **modifications or additional conditions**; or

3. Pass a motion to **continue the public hearing** to a specified date and time, or to close the public hearing and to leave the record open to a specified date and time for submittal of additional evidence and rebuttal; or

4. Close the public hearing and, after deliberating on the matter, pass a motion to **recommend denial** of the requested Comprehensive Plan Map, Zoning Map amendments and Land Partition on the grounds that the proposal does not satisfy the applicable approval criteria.

CONCLUSION

City Staff recommends that the Commission forward a recommendation for approval (option number 1) to the Sutherlin City Council of the requested Comprehensive Plan Map Amendment from Low Density Hillside to Medium Density, Zone Map Change from (RH) Residential Hillside to (R-2) Medium Density Residential and Land Partition on the subject 1.31 acre property.

STAFF EXHIBITS

1. Notice of Public Hearing
2. Property Owners within 100 Feet and Public Utility Agencies
3. DLCD Notice of Proposed Amendment
4. Copy of legal notice posted in the *News Review*
5. Staff Report with Responses Attached
6. Comprehensive Plan, Zone Change and Land Partition application(s) and attachments
7. Vicinity Map
8. Assessor Maps
9. Comprehensive Plan Map
10. Zoning Map
11. Aerial Photograph

N:\Planning\2020 Land Use\20-S002 COOPER CREEK ESTATES PA ZC LP\20-S002_Cooper Creek_PAZCLP_PC staff report only.docx

I. INTRODUCTION & BACKGROUND

This matter comes before the City of Sutherlin Planning Commission on application filed by Cooper Creek Estates LLC, herein referred to as Applicant, which is the owner of the subject property. The subject 1.31 acres property is two parcels created by Land Partition and subsequent boundary line adjustment and is located on South Side Road across from its intersection from Sea Street in the eastern portion of city of Sutherlin (See Figure 0 – Vicinity Map following this page) The subject property undeveloped and is identified in the Douglas County Assessor's records as Tax Lots 3400 and 3500, Section 21BA, Township 25S, Range 5W, W.M., Account Nos. R131991 and R131992. (See Attachment A - copy of legal description for the area proposed for amendment).

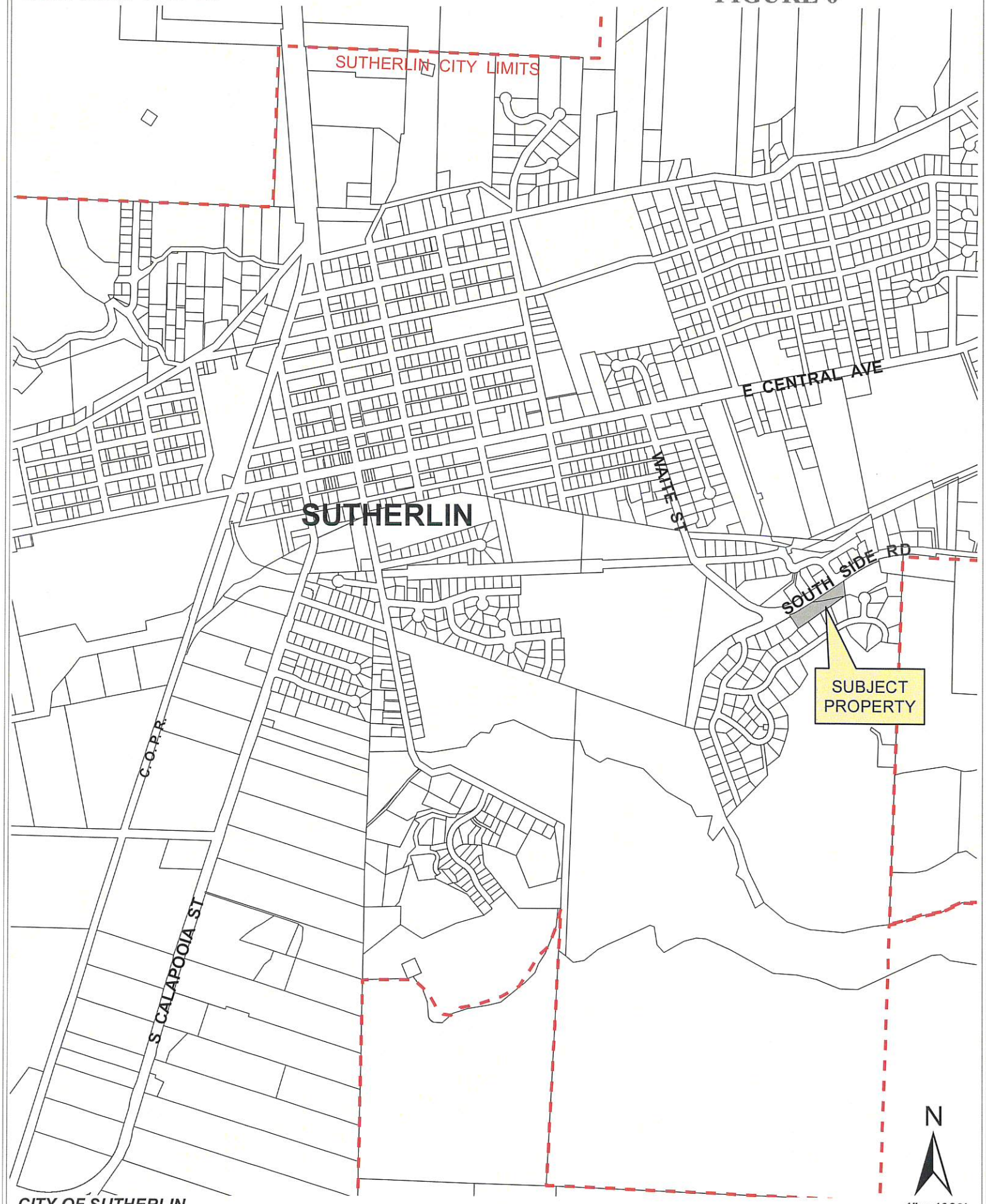
Applicant is proposing an amendment to the Sutherlin Urban Area Comprehensive Plan map designation from "Residential Hillside" to "Medium Density", together with a concurrent zone change from Residential Hillside (RH) to Medium Density Residential (R2), on the property described above.

Applicant intends to develop the ownership with multiple-family housing units under the proposed zoning. (See Figure 1 - development plan with circulation and topography) following this page. The proposed development will be similar in nature to other residential development in the area.

The subject property is in the eastern part of Sutherlin and is designated for residential hillside development by the City. It is located near the eastern edge of the city and is a mixed-use area comprised of -family units, a mobile home subdivision and multiple family uses surrounding the property. Properties to the north, and east are zoned and developed with larger single-family residences. The land immediately to the east is undeveloped. The land on the north side of Southside Road is a manufactured home subdivision.

VICINITY MAP
T25S R5W SEC 21

COOPER CREEK ESTATES LLC
FIGURE 0



CITY OF SUTHERLIN

A copy of the City of Sutherlin zoning map is included to generally identify the land uses and the area surrounding the subject property. (See Figure 2 – Zoning Map following this page)

A. Comprehensive Plan Amendment Criteria

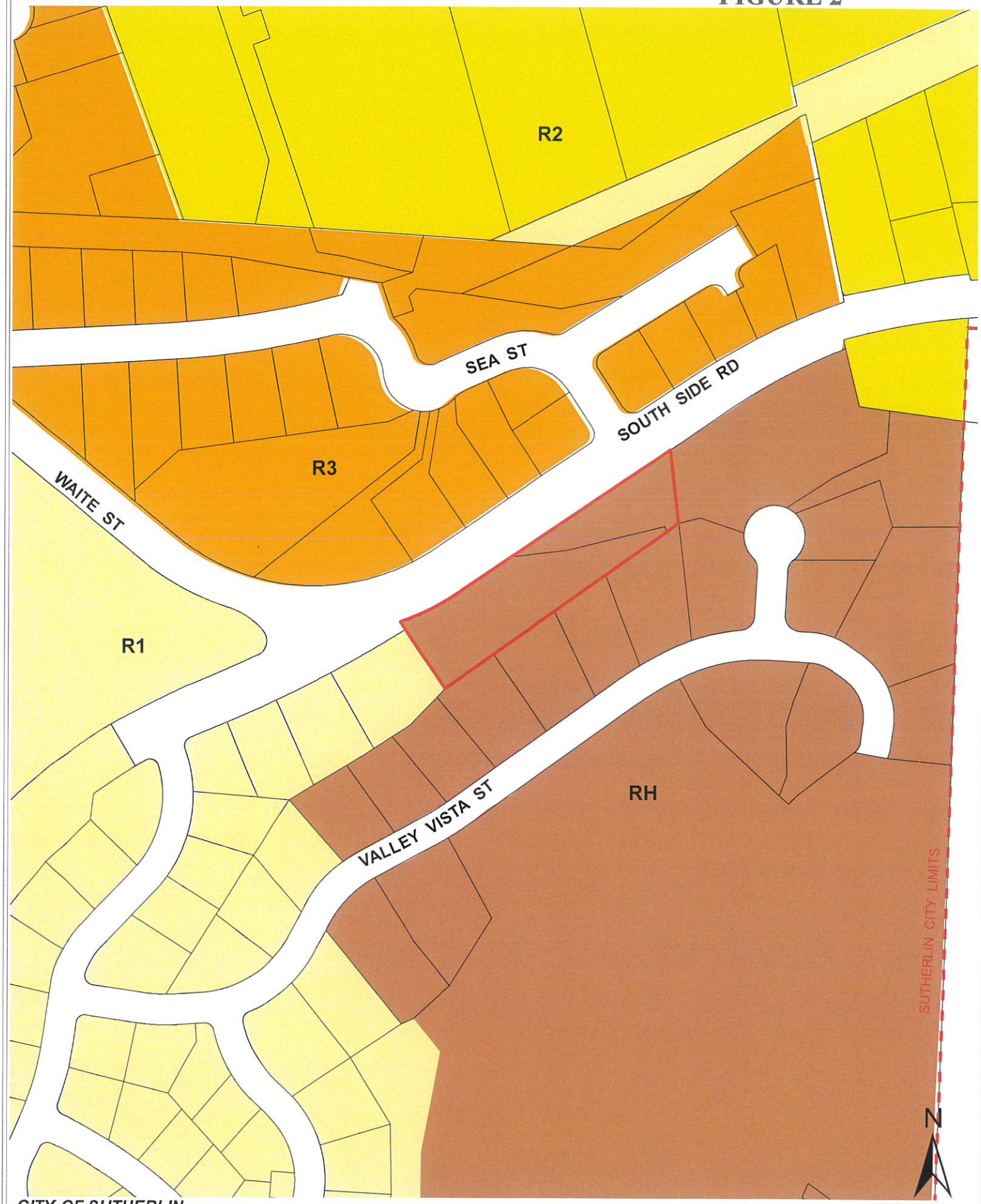
Proposed amendments to the Sutherlin Urban Area Comprehensive Plan are subject to review by the Sutherlin Planning Commission, and ultimately must be reviewed and approved by the Sutherlin City Council. After receiving and accepting Applicant's request for an amendment to the Comprehensive Plan, the City is required to give notice of the proposed amendment to the Oregon Department of Land Conservation and Development (DLCD) at least 35 days prior to the first scheduled public hearing on the matter. Any amendment of the Comprehensive Plan must be reviewed by DLCD to ensure that the proposed action meets the criteria established under the statewide planning goals and applicable administrative rules.

The specific procedures and criteria for reviewing a proposed Comprehensive Plan Amendment are set forth in the Sutherlin Urban Area Comprehensive Plan, the Sutherlin Municipal Code and the administrative rules that have been adopted by the Land Conservation and Development Commission (LCDC).

The Sutherlin Urban Area Comprehensive Plan, like other Comprehensive Plans, is generally understood to require that two basic standards, or criteria, be addressed prior to approving a proposed amendment to the Plan. Generally stated, these criteria require amendments to the Plan to be supported by Findings of Fact which demonstrate that the amendment is consistent with all applicable statewide planning goals adopted by LCDC; and, that the amendment is consistent with the written policies contained within the Comprehensive Plan document itself aloing withd supporting inventory documents and facility plans. If the City proposes to take an exception to any of the statewide planning goals, Findings of Fact showing why the exception is justified must also be adopted. In the following sections of this supplemental application document, Applicant proposes Findings of Fact which demonstrate that the proposed amendment is

ZONING MAP
T25S R5W SEC 21

COOPER CREEK ESTATES LLC
FIGURE 2



CITY OF SUTHERLIN

1" = 200'

consistent with all applicable Statewide Planning Goals. Consequently, no goal exceptions are proposed.

II. COMPLIANCE WITH THE STATEWIDE PLANNING GOALS

Plan Amendment Criteria No. 1 - Conformity with Statewide Planning Goals.

The Statewide Planning Goals have been acknowledged as being applicable to the City of Sutherlin Comprehensive Plan. A proposal to amend the Comprehensive Plan and Zone must comply with all applicable Statewide Planning Goals unless an exception to one or more of the goals is proposed. There is no exception being proposed as part of this application. The City of Sutherlin must make a finding that Applicant's proposal complies with each of the relevant goals. The following information regarding the Statewide Planning Goals shows how this request complies with them.

Goal No. 1 - Citizen Involvement

To ensure the opportunity for citizen involvement in all phases of the planning process.

The City of Sutherlin will provide written notice of the requested Comprehensive Plan Amendment and Zone Change to surrounding property owners within 100 feet of the subject property and will cause public notice of the request and public hearing to be published in the local newspaper at least ten days prior to the first evidentiary hearing. These various forms of individual and public notice assure that local citizens have an opportunity to become informed about, and participate in, the public hearing process. The requested Comprehensive Plan Amendment and Zone Change are being processed in a manner that assures full compliance with Statewide Goal No. 1.

Goal No. 2 - Land Use Planning

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

The City of Sutherlin has established policies and procedures which require a detailed evaluation of proposals to amend its Comprehensive Plan. Specific criteria and standards have been set forth against which Applicant's amendment request must be evaluated in light of relevant Findings of Fact. The City's ultimate decision in this matter will be based on the weight of those relevant Findings of Fact. The requested Comprehensive Plan Amendment and Zone Change is being evaluated in a manner that assures full compliance with Statewide Goal No. 2.

Goal No. 3 - Agricultural Lands

To preserve and maintain agricultural lands.

There has previously been a legislative determination by the City of Sutherlin via adoption of the Sutherlin Urban Area Comprehensive Plan that the subject property is not agricultural land. This finding is validated by the fact that the site is irrevocably committed to urban use because the site is within the Sutherlin city limits and Urban Growth Boundary and has been given an urban land use designation. The Statewide Agricultural Goal is not applicable to this proposed Comprehensive Plan Amendment and Zone Change.

Goal 4 - Forest Lands

To preserve forest lands for forest use.

There has previously been a legislative determination by the City of Sutherlin via adoption of the Comprehensive Plan that the subject property is not forest land. This finding is validated by the fact that the site is irrevocably committed to urban use, and by the fact that the site is within the Sutherlin city limits and Urban Growth Boundary with an urban land use designation. Statewide Goal No. 4 is not applicable to this proposed Plan amendment and zone change.

Goal No. 5 - Open Space, Scenic and Historic Areas, and Natural Resources

To conserve open space and protect natural and scenic resources.

Goal 5 addresses a variety of resources not specifically covered by other statewide planning goals and sets out a process requiring inventory and evaluation of potential resources. Steps in the process require that the level of significance of potential resources be determined, and if an identified resource appears to be significant, further evaluation is required. Such evaluation may lead to alternative courses of action, including fully protecting the identified resource.

Goal 5 addresses the following resources:

1. Open space.
2. Mineral and aggregate resources.
3. Energy resources.
4. Fish and wildlife areas and habitats.
5. Ecologically and scientifically significant resources.
6. Outstanding scenic views and sites.
7. Water areas, wetlands, watersheds and groundwater resources.
8. Wilderness areas.
9. Historic areas, sites, structures and objects.
10. Cultural areas.
11. Oregon recreational trails.
12. Wild and scenic waterways.

All of the lands within and surrounding the city limits and urban growth boundary, including the lands within the subject site, have previously been subjected to extensive surveys intended to inventory and evaluate all Goal 5 resources. These inventories, which are incorporated into the both Sutherlin Urban Area Comprehensive Plan and the Douglas County Comprehensive Plan, have previously received acknowledgment of compliance with Statewide Goal 5. The subject property has not been included in any inventory of needed open space or scenic areas as defined by Goal 5, nor has it been identified in the Comprehensive Plan as having any historic, cultural or natural resources which need to be preserved and/or protected. This previous determination has been reviewed and accepted by the Oregon Department of Fish and Wildlife with respect to potential fish and wildlife habitat on the site, as well as by other state agencies having jurisdiction

over other natural resources that might exist on the site. Nevertheless, Applicant has conducted an independent evaluation of the potential impact of the proposed Plan amendment on Goal 5 resources and propose the following findings:

A. Land Needed or Desirable for Open Space

The need or desirability of the subject site for use as open space land was adequately addressed prior to its original inclusion in the city. There was a legislation determination at that time that the property contains no special topographic, vegetative or other natural features which would make it needed or desirable for open space use.

B. Mineral and Aggregate Resources

No known mineral or aggregate resources have been identified on or in the vicinity of the subject site.

C. Energy Sources

Goal 5 energy resources refers to sites and resources for the generation of energy (i.e. natural gas, oil, coal, hydroelectric, geothermal, uranium, and solar). No known energy sources have been identified on or in the vicinity of the subject property. The property does have solar access, but no more so than most other land in the urban area.

D. Fish and Wildlife Areas and Habitat

The subject site is not located near any streams identified as a scenic, recreational and natural resource of the Sutherlin area by the Comprehensive Plan. There are no scenic, recreational or natural resources that require protection.

E. Ecologically and Scientifically Significant Natural Areas

No identified ecologically or scientifically significant natural areas are present on or in the vicinity of the subject site.

F. Outstanding Scenic Views and Sites

No identified scenic views or sites exist on the subject property. As noted under Open Space,

above, the site has so much in common with many other locations in the general area that its scenic value is not considered unique or significant. The property possesses no prominent topographic features or vegetation which would otherwise give it scenic significance.

G. Water Areas, Wetlands, Watersheds, and Groundwater Resources

The subject property contains no inventoried water areas, watersheds or identified groundwater resources that have been determined through the plan process to be needed and or protected for their resource values.

The U. S. Fish and Wildlife Service has completed mapping of wetlands in the City of Sutherlin under the National Wetlands Inventory (NWI) program. The NWI mapping indicates that there are no areas of mapped wetlands on the subject property. A copy of the NWI map is included in this document (Figure 3). The Federal Flood Insurance Rate Map for the area shows that the elevation of the property puts it outside any identified 100 year flood plain aare (see Goal 7 for discussion).

H. Wilderness Areas

The subject site is not within, adjacent to, or part of, a designated wilderness area.

I. Historic Areas, Sites, Structures, and Objects

There are no identified or inventoried historic structures or objects on, or adjacent to, the subject property.

J. Cultural Areas

There are no identified or inventoried archaeological or cultural resources on the subject site.

K. Potential and Approved Oregon Recreation Trails

There are no designated or planned recreational trails on or adjacent to the subject site.

L. Wild and Scenic Waterways

The site is not within any designated or planned wild and scenic waterway, nor has such a

U.S. Fish and Wildlife Service

National Wetlands Inventory

COOPER CREEK ESTATES LLC

FIGURE 3

December 30, 2019

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

designation been given to other lands or resources in the general vicinity of the subject property.

The subject property has not been included in any inventory of needed open space or scenic areas, nor has it been identified in the Comprehensive Plan as having any historic or cultural resources which need to be preserved and/or protected. Further, the property will be developed to protect any significant natural resources in accordance with the provisions of the Comprehensive Plan. Based on the foregoing findings, the requested Plan Amendment and Zone Change will not conflict with any identified Goal 5 resources.

Goal No. 6 - Air, Water and Land Resources Quality

To maintain and improve the quality of the air, water and land resources of the state.

Statewide Goal 6 requires that air, land and water resources of the state be maintained and improved by assuring that future development, in conjunction with existing development, does not violate applicable state and federal environmental quality standards, and does not exceed the carrying capacity of local air sheds, degrade land resources or threaten the availability of such resources. There has been a previous legislative determination by the City of Sutherlin that development of the subject property with urban uses will not result in degradation of air, water and land resources within the Sutherlin urban area or the state of Oregon. The subject property is situated in an area where the full range of urban services is available, including public water, public sewer and storm drainage systems (either above or in ground). Furthermore, the City of Sutherlin has sufficient regulatory measures in place so as to ensure that subsequent development of the site with urban uses will not result in deleterious or unanticipated impacts on the air, water and land resources of the urban area. The requested amendment is being evaluated in a manner that assures compliance with Statewide Goal No. 6.

Goal No. 7 - Areas Subject to Natural Disasters and Hazards

To protect life and property from natural disasters and hazards.

The subject property has not been identified in any inventory of areas which have the likely potential to be subjected to natural disasters and hazards. The elevation of the site puts it well above any identified flood plain and any danger of flooding. The property proposed for amendment is gently sloping on its northern portion increasing in slope to and through its south boundary. The land is similar in topography to adjoining and nearby properties that are already planned and zoned for the similar uses as contemplated by Applicant. Since the southern portion of the ownership is steeper in nature, Applicant retained the services of The Galli Group to complete a geo-technical analysis of the site to determine its suitability for the contemplated development. The reviewer states: *In our professional opinion the subject site meets requirements of the development for construction of homes and garages with associated driveways, walks and patios.* As stated, the site review found that the land is suitable for the proposed development subject to a number of development actions necessary at the time of construction (See Attachment B – Galli Group Report). Applicant also obtained a site drainage analysis to address concerns regarding off-site impacts of future site development. i.e. Engineering completed the required analysis and determined *All drains will be piped to swales or detention basins, located within the parcels...Stormwater will not discharge to adjacent properties.* (See Attachment E Site Drainage – i.e. Engineering Letter).

Also, the City of Sutherlin has adopted specific review and development standards for all properties within the city to ensure that their development and use does not pose a hazard to life and property. Any subsequent development of the subject property will be subject to such review and will be required to fully comply with all applicable development regulations. The requested amendment will not conflict with the purpose and intent of Statewide Goal No. 7.

Goal No. 8 - Recreational Needs

To satisfy the recreational needs of the citizens of the state.

There has been a previous legislative determination by the City of Sutherlin through its comprehensive planning process that the subject property is not needed for recreational facilities

or opportunities. Identified recreational needs have been provided for on other sites within the Sutherlin urban area. The proposed amendment will not conflict Statewide Goal No. 8.

Goal No. 9 - Economy of the State

To diversify and improve the economy of the state.

The Statewide Economic Development Goal is intended to be applied on an urban area-wide basis and requires that future economic growth be accommodated, in part, by ensuring that there is sufficient suitable land planned and zoned for commercial and industrial uses. Goal 9 specifically requires that local land use plans "*provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies.*"

Commercial and industrial zoning has been applied to lands containing existing commercial and industrial uses, as well as to an appropriate amount of undeveloped land that is intended to accommodate future commercial and industrial development within the Sutherlin urban area. The Sutherlin Urban Area Comprehensive Plan contains specific policies to ensure that opportunities for economic development are enhanced in the Sutherlin urban area. The subject property is already designated for residential uses and Applicant's request will not impact the current inventory of commercial or industrial lands in the city. The proposed Plan Amendment will not conflict with the Statewide Economic Development Goal.

Goal No. 10 - Housing

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

The primary purpose of Goal 10, within the context of amending the Comprehensive Plan, is to ensure that sufficient buildable land is available to allow for the full range of housing needs within the urban area and to avoid creating shortages of residential land which could artificially restrict market choices in housing type, price range or location. The subject property is currently

planned Residential Hillside and is zoned RH. The current plan designation for area proposed for amendment allows up to 3.63 dwelling units per acre under its current plan designation. Applicant is requesting the RM plan which provides for up to 14.52 dwelling units per acre. The proposed Plan Amendment and Zone Change, and subsequent development of the site with duplex or multiple family units will enhance the present inventory of developable residential land, and will, therefore, increase potential future opportunities to provide additional higher-density housing.

On the basis of the foregoing facts and analysis, the increase in the allowed residential density of the subject parcel from the present inventory of available residential land will increase housing opportunities in the urban area. The proposed Plan Amendment and Zone Change is consistent with both purpose and intent of the Statewide Housing Goal.

Goal No. 11 - Public Facilities and Service

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban development.

Public facilities and services within the Sutherlin urban area are provided by the City of Sutherlin, Douglas County and several special districts. Policies concerning the coordination, timing and location of public facilities and services in the urban area are contained within the Public Facilities and Land Use Elements of the Comprehensive Plan. Specific measures intended to implement these policies are contained in various inter-governmental agreements, including the Sutherlin/Douglas County Urban Growth Management Agreement.

Properties within the urban area receive sewer service from the City of Sutherlin. The City maintains an existing 8-inch sewer main that runs through the property and then along Southside Road. Applicant has consulted with the City regarding the of sanitary sewer service from the existing main to the subject property for the type of development contemplated. The City indicates that sewer service is available to the subject property with the cost of extending new service into the site being Applicant's responsibility.

Water service to the subject site is provided by the City of Sutherlin via an existing 8-inch main that runs along Southside Road. Applicant has coordinated water improvements with the City of Sutherlin to assure proper location for installing a service line sufficient to serve the contemplated residential development.

The existing facilities are sized to provide the property with a supply of water that is adequate for anticipated residential service and for fire protection. Fire protection service is provided by the City of Sutherlin Fire Department. An existing fire hydrant is located on the north side of Southside Road near the northwest corner of the subject property. Police services in the area are provided by the City of Sutherlin Police Department. Street maintenance, storm drainage and street lighting in the area are also provided by the City of Sutherlin. The design and installation of onsite storm drainage facilities, if required, will be the responsibility of Applicant at the time of development. Plans for the installation of these and any other on-site and off-site facilities will be subject to review and approval of the City of Sutherlin and any other agency having jurisdiction over public facilities and services in the area.

On the basis of the foregoing facts, the requested plan amendment and zone change will not adversely impact the present or future provision of public facilities and services in the area. The full range of urban services appropriate for the subject property's proposed residential designation is available and can be provided in a timely, orderly and efficient manner consistent with the purpose and intent of Statewide Goal No. 11.

This conclusion is based on consideration of the existing public service delivery systems and plans that are in place in the area to ensure coordination of the types, locations and delivery of the public facilities and services needed to support existing and proposed land uses in the area.

Goal No. 12 - Transportation

To provide and encourage a safe, convenient and economic transportation system.

Specific transportation-related policies and development standards are included within Sutherlin's Comprehensive Plan and land use ordinances. The applicable development standards assure that the intent of the statewide transportation goal is implemented through the application of local transportation standards at the time of development. The intent of Statewide Goal 12 is also implemented on a site-specific basis by the Transportation Planning Rule (TPR) as set out under Oregon Administrative Rules, Chapter 660, Division 12. OAR 660-12-060(1) requires that " *Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall 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*".

In order to determine whether a proposed Comprehensive Plan amendment will significantly affect a transportation facility, the TPR establishes a set of specific criteria against which the proposed amendment is to be evaluated. The TPR states that "*a plan or land use regulation amendment significantly affects a transportation facility if it:*

a) *Changes the functional classification of an existing or planned transportation facility;*

b) *Changes standards implementing a functional classification system;*

c) *Allows types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of a transportation facility; or*

d) *Would reduce the performance standards of the facility below the minimum acceptable level identified in the TSP.*

Estimates of the average number of daily vehicle trips generated by a specific land use can be obtained from a number of reliable sources. One of the commonly referenced source for such data is Trip Generation, published by the Institute of Transportation Engineers (ITE). Average daily trip generation rates published by ITE are based primarily on field data obtained from direct observation of actual land use activities. Trip generation rates are reported as an average of vehicle counts taken at numerous sites having the same classification of land use. Trip

generation rates are often broken down into specific time frames, such as "Average Daily Trips (ADT)", "Average Peak Hour Trips", and "AM and PM Peak Hour Trips". For most land use activities, including both multi-family residential and duplexes uses, ITE defines an "average daily trip" as a one-way vehicular movement between a single origin and a single destination.

Applicant's proposed zone change from RH to R2 on the subject site will facilitate construction of additional residential housing units as set forth on the conceptual site plan included in this application. The subject site proposed for amendment will accommodate up to four additional residential units considering site conditions and limitation. (See Figure 1)

Comparison of the trip generation of the proposed housing under the proposed R2 zoning with potential uses under the current RH zoning demonstrates a slight increase in the potential traffic impacts on the area road system. Based on the ITE numbers, there will be no increase of potential ADT on the area road system than is currently possible under the current RH zoning. Access connections to Southside Road, which is classified a Collector Street, will be limited as directed by the City of Sutherlin and considered in the traffic analysis completed by Applicant's engineer (See Attachments C and D – Traffic Assessment/Access - i.e. Engineering letters)

At the present time, public roads in the area are adequate to accommodate both existing traffic and potential future traffic volumes likely to be generated as a consequence of the requested plan amendment and zone change. No special traffic controls or other mitigation measures will be required due to the relatively low volume of traffic associated with the requested plan amendment and zone change.

Based on the functional classification and existing service levels of adjacent and nearby transportation facilities, the proposed plan amendment and zone change will be consistent with the identified function, capacity, and level of service of those facilities. Nevertheless, specific transportation-related policies and development standards are included with the City of Sutherlin Comprehensive Plan, as well as the City's zoning code to ensure that the statewide transportation goal is implemented on a site-specific basis at the time of development.

It is Applicant's intent to develop the subject property in full compliance with all applicable transportation-related policies and development standards. The proposed plan amendment and zone change will not conflict with the Statewide Transportation Goal. Compliance with the intent of Goal 12 will be assured through the application of specific local policies and standards at the time specific development plans for the subject property are formulated and submitted for review and approval.

Applicant's proposal, considering there will be no increase in potential traffic levels as a result of the proposed amendment, will not result in a change in the functional classification of existing or planned transportation facilities serving the area, nor will it result in changes to any existing development standards or alter the functional classification of existing or planned transportation facilities. Neither will it allow types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of near-by transportation facilities, or otherwise reduce the level of service of existing and planned transportation facilities below minimum acceptable levels.

Goal No. 13 - Energy Conservation

To conserve energy.

The statewide energy conservation goal is intended to assure that land and uses developed on land are managed and controlled to maximize the conservation of all forms of energy, based upon sound economic principals. The subject property is situated within the established urban area where its subsequent development will promote the efficient energy-related use of existing and planned transportation facilities. Major public facilities and services are immediately adjacent to the site, thus reducing the energy-related inefficiencies associated with extending such services beyond existing urban development. Furthermore, specific energy conservation policies and development standards are included within the Sutherlin Urban Area Comprehensive Plan and the City's zoning code to ensure that the statewide energy conservation goal is implemented on a site-specific basis at the time the property is developed. The proposed

plan amendment and zone change will not conflict with the Statewide Energy Conservation Goal.

Goal No. 14 - Urbanization

To provide for an orderly and efficient transition from rural to urban land use.

The statewide urbanization goal provides the standards and procedures for establishing or expanding the Sutherlin Urban Growth Boundary (UGB). The urbanization goal requires that land within the UGB *"...shall be considered available over time for urban uses."* As previously noted, the subject property is located within both the Sutherlin city limits and UGB. Inclusion of the property within the UGB and city limits demonstrates the City's legislative intent to allow urban development to occur on the site. The proposed plan amendment and zone change will have no effect on the present status of the UGB of Sutherlin, nor will it otherwise conflict with the purpose and intent of the statewide urbanization goal.

Based on the foregoing findings, the proposed plan amendment conforms to all applicable statewide planning goals.

III. COMPLIANCE WITH CITY OF SUTHERLIN COMPREHENSIVE PLAN POLICIES FOR COMPREHENSIVE PLAN AMENDMENTS

Plan Amendment Criteria No. 2 – Conformance With The Comprehensive Plan

The Sutherlin Urban Area Comprehensive Plan contains policy statements which are intended to provide the City with direction when considering a proposal to amend the Plan. Written policies that are applicable to the proposed plan amendment and zone change are contained in various elements of the Plan document, including the Natural Resources Element, the Public Facilities Element, the Housing Element, the Transportation Element, and the Land Use Element. The following proposed findings address each of the Plan policies that are applicable to this plan amendment and zone change request:

HOUSING POLICIES

B. GOAL....
Housing Policy No. 2
Encourage innovative designs for various types of multi-family housing in order to meet the diverse needs of smaller households such as those of the eldierly and young families.

C. GOAL....
Housing Policy No. 1
Encourage infilling of the existing residential areas by incentives for new construction in already-serviced areas.

The subject property is situated on the south side of Southside Road in east Sutherlin. The site is flat to steeply sloped with scattered vegetative and tree cover on the property. As previously mentioned, all the surrounding properties are within the city limits of Sutherlin. Properties lying north of Southside Road are zoned R3 and are part of a manufactured home subdivision. The lands to the east are designated for residential uses, are zoned R2 and are developed with residential facilities. The properties to the south and west are designated and zoned RH and R-1 and contain single family dwellings.

The proposed amendment will promote efficient development of the property by using the existing public access, facilities and services that already exist in the area. The proposed use of the property for residential housing is consistent with the established uses on the surrounding properties and the character of other existing urban residential uses. Public facilities, including sewer, water and storm drainage, are already in place and are adequate to serve the property. The site will be developed in a manner that fully conforms to the applicable development standards for residential uses, including access and internal circulation, signage, lighting, buffering and landscaping. Detailed conceptual site development plans are submitted with this application for the future residential development. The site plan review process at the time of development will assure that the subject property will be developed in the manner represented by the plan amendment and zone change applications and will further assure that development of the site will fully comply with all applicable development standards.

PUBLIC FACILITIES POLICIES

A. GOAL....

Public Facilities and Services Policy No. 1

The city shall ensure that appropriate support systems are installed prior to or concurrent with the development of a particular area. Costs of constructing water and sewer ties to new developments shall be borne by the developer.

Public Facilities Policy No. 12

The city shall provide sewer and water service to areas within the Urban Growth Boundary

Public Facilities Policy No. 14

Ensure that as new development occurs, public facilities and services to support the development are available or will be available within a reasonable time.

C: GOAL....

Public Facilities and Services Policy No. 8

Redevelopment of large lots and infilling and development of undersized lots will be encouraged where appropriate.

The subject 1.31-acre parcel is situated on the east side of the Sutherlin urban area where a full range of public facilities and services are already in place and are adequate to accommodate the types of uses allowed by the proposed R2 zoning at a density of greater than currently allowed. Properties within the urban area receive sewer service from the City of Sutherlin. The City maintains an existing 8-inch sewer main that extends through the subject property and then along Southside Road. The City has previously indicated that sanitary sewer service is available from the existing main to the area property for the type of residential development contemplated. Applicant understands that the cost of sewer improvements into the site will be paid by the developer.

Water service to the subject site is provided by the City of Sutherlin via an existing 8-inch main located in Southside Road along the property's north boundary. The existing mainline is located immediately adjacent to the subject property and would serve as the logical location for installing new service lines to serve the contemplated residential development. The existing facilities are sized to provide the property with a supply of water that is adequate for both residential service and fire protection. Fire protection service is provided by the Sutherlin Fire Department. An existing fire hydrant is located on the north side of Southside Road near the northwest corner of the subject site. Police services in the area are provided by the City of Sutherlin Police Department. Street maintenance, storm drainage and street lighting in the area are also provided by the City of Sutherlin. The design and installation of on-site storm drainage will be the responsibility of Applicant at the time of development. Plans for the installation of these and any other on-site and off-site improvements will be subject to review and approval of the City of Sutherlin and any other agency having jurisdiction over public facilities and services in the area.

It does not appear that additional public expenditures for service and facility extensions will be necessary to allow the development of the property. Any additional facility improvements necessary for Applicant's proposed development plan will be funded by the property owner.

It is important to note that development of vacant and/or underutilized urban parcels that can be readily served by existing public facilities and utilities supports the policy statements of the Comprehensive Plan.

On the basis of the foregoing findings, the requested plan amendment and zone change will not adversely impact the present or future provision of public facilities and services in the area. The full range of urban services appropriate for the subject property's proposed residential land use classification are available and can be provided in a timely, orderly and efficient manner consistent with the intent and purpose of Public Facilities Policies set out above.

TRANSPORTATION POLICIES (set out in Public Facilities element)
B. GOAL....

Transportation Development Policy No. 1

Encourage the expansion of the street improvement program and also coordinate the program with the future street plan, and thus ensure that those streets that have been designated to carry high volumes of traffic (arterials and collectors) are in satisfactory and safe condition.

Access to the subject property is from an existing connection to Southside Road. There are no internal streets in the proposed development. Southside Road is a dedicated public right-of-way that is maintained by the City of Sutherlin. The interior circulation plan for the proposed residential units will connect to the public street system at points of access to the property as directed by the City which connections will be improved in accordance with City design standards and requirements.

Current traffic volumes on the adjacent section of Southside Road, including peak hour volumes, are below the facility's design capacity as set under Goal 12 above. Other public streets in the area are also adequate to accommodate both existing and potential future traffic volumes likely to be generated as a consequence of the requested plan amendment and zone change. The proposed amendment will have no additional traffic associated with it. Development of the subject site under the requested residential designation and zoning will not result in a higher volume of traffic than would occur if the site were to be developed under its present designation and zoning.

The proposed plan amendment and zone change considering the current level of improvements for the area road system will not result in a change in the functional classification of existing or planned transportation facilities serving the area, nor will it result in changes to any existing development standards or alter the functional classification of existing or planned transportation facilities. Neither will it allow types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of near-by transportation facilities, or otherwise reduce the level of service of existing and planned transportation facilities below minimum acceptable levels.

Specific findings addressing the suitability of the subject site for the proposed plan and zone and the intended use are included in preceding sections of this supplemental application document.

Those earlier findings demonstrate that the subject site is well suited for Applicant's proposal with respect to the physical characteristics of the property, availability of necessary and appropriate public facilities and services, adequate access and accessibility to local transportation facilities, and compatibility with adjacent and nearby land use activities. The site is suitable for the proposed zone and its intended use.

IV. COMPLIANCE WITH THE CITY OF SUTHERLIN ZONE CHANGE CRITERION

In addition to the criteria to be addressed when proposing an amendment to the Comprehensive Plan, the City of Sutherlin Development Code (SDC) also establishes criteria that must be considered when a change in zoning is proposed. The criteria for a zone change found in SDC at Section 4.8.110 require the Planning Commission to find:

> *1. Demonstration of compliance with all applicable comprehensive plan policies and map designations. Where this criterion cannot be met, a comprehensive plan amendment shall be a prerequisite to approval;*
>
> *2. Demonstration that the most intense uses and density that would be allowed, outright in the proposed zone, considering the sites characteristics, can be served through the orderly extension of urban facilities and services, including a demonstration of consistency with OAR 660-012-0060. The determination of consistency with OAR 660-012-0060 can be deferred to development review pursuant to 4.3.120 for those zone changes that are located within the approved interchange 136 IAMP area and do not require a comprehensive plan amendment; and*
>
> *3. Evidence of change in the neighborhood or community, or a mistake or inconsistency between the comprehensive plan or zoning district map regarding the subject property which warrants the amendment.*

The requested change in zoning from RH to R2 on the subject property is predicated on a

concurrent request to amend the Comprehensive Plan map relative to the zoning in question. The proposed amendment will allow construction of duplex units on the parcels under the applicable criteria set out immediately above as a permitted use under the R2 zone. If Applicant's plan amendment request is approved, the requested zone change will conform to the amended Comprehensive Plan. Findings demonstrating that the requested change in plan designation will conform to the Statewide Planning Goals and the applicable policies found throughout the Comprehensive Plan are included in preceding sections of this application document. The rezoning will conform to the applicable sections of the Comprehensive Plan. Therefore, the remaining zone change criteria set out in 2. and 3. above do not apply to the requested change in zoning.

Based on the facts and findings set out above, the proposed plan amendment and zone change are consistent with the Statewide Planning Goals, the Oregon Administrative Rules and the Sutherlin Comprehensive Plan and Municipal Code. Applicant requests that the Planning Commission forward a recommendation of approval of this request to the Sutherlin City Council.

ATTACHMENT "A"

ADJUSTED UNIT 1-PLA M168-58

Lot 7, Cooper Creek Estates, as recorded in Volume 22, Page 52, Douglas County plat records, lying in the Northwest Quarter of Section 21, Township 25 South, Range 5 West, Willamette Meridian, Douglas County, Oregon.

TOGETHER WITH:

The following described portion of Lot 8 of said Cooper Creek Estates:

All of said Lot 8, Cooper Creek Estates lying Southerly and Westerly of the following described boundary:

Beginning at a 5/8" iron rod on the Southeasterly right-of-way boundary of South Side Ave. (County Road No. 120), from which the Northwest corner of said Lot 8, Cooper Creek Estates bears South 54°04'57" West, 94.84 feet; Thence along the Southerly boundary of an existing 20-foot wide utility easement the following courses:
North 81°17'10" East, 93.14 feet to a 5/8" iron rod; Thence
North 74°17'03" East, 164.80 feet to a 5/8" iron rod; Thence
South 15°42'57" East, 9.02 feet to a 5/8" iron rod on the Southeasterly boundary of said Lot 8, Cooper Creek Estates and there terminating.

Above described **UNIT 1** contains 0.89 acres, more or less.

ADJUSTED UNIT 2-PLA M168-58

Lot 8, Cooper Creek Estates, as recorded in Volume 22, Page 52, Douglas County plat records, lying in the Northwest Quarter of Section 21, Township 25 South, Range 5 West, Willamette Meridian, Douglas County, Oregon.

EXCEPTING THEREFROM:

The following described portion of said Lot 8, Cooper Creek Estates:

All of said Lot 8, Cooper Creek Estates lying Southerly and Westerly of the following described boundary:

Beginning at a 5/8" iron rod on the Southeasterly right-of-way boundary of South Side Ave. (County Road No. 120), from which the Northwest corner of said Lot 8, Cooper Creek Estates bears South 54°04'57" West, 94.84 feet; Thence along the Southerly boundary of an existing 20-foot wide utility easement the following courses:
North 81°17'10" East, 93.14 feet to a 5/8" iron rod; Thence
North 74°17'03" East, 164.80 feet to a 5/8" iron rod; Thence
South 15°42'57" East, 9.02 feet to a 5/8" iron rod on the Southeasterly boundary of said Lot 8, Cooper Creek Estates and there terminating.

Above described **UNIT 2** contains 0.42 acres, more or less.

ATTACHMENT B

THE GALLI GROUP
Engineering Consulting

STEEP SLOPE EVALUATION AND GEOTECHNICAL DESIGN REPORT 750 SOUTHSIDE ROAD SUTHERLIN, OREGON

For: Dyanna Irvine
3782 Del Rio Road
Roseburg, OR 97471

By: **THE GALLI GROUP**
612 NW Third Street
Grants Pass, OR 97526
(541) 955-1611

02-5731-01
October 31, 2019

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THE GALLI GROUP
Engineering Consulting

STEEP SLOPE EVALUATION AND GEOTECHNICAL DESIGN REPORT 750 SOUTHSIDE ROAD SUTHERLIN, OREGON

1.0 INTRODUCTION

This report presents results of our geotechnical and Steep Slope evaluation of the site for the proposed new residences in Sutherlin, Oregon. The project site is presently a two lot property located on the south side of Southside Road in Sutherlin. Please see Figure 1, Vicinity Map, for a more precise site location.

The purpose of this investigation and report was to evaluate the site surface and subsurface conditions with a series of four (4) exploratory borings. This also included a geology review in order to provide Steep Slope considerations and geotechnical recommendations for design and construction of the proposed residence, including structure foundations and site access.

2.0 SITE AND PROJECT DESCRIPTION

The subject two lots are located along the south side of Southside Road, located southeast of downtown Sutherlin, Oregon. These two lots, with addresses 750 and 780 Southside Road, are side by side along the road. Total acreage is 1.31 acres. This site is moderately sloping by the road, and becoming steeply sloping upward at 60 to 80 feet south of the road. It then climbs up a very steep hill to houses on the top.

We understand the project to consist of dividing the two lots into three or four separate building lots. Each lot would then likely have a duplex constructed for full development. Additional site work will likely include driveways and parking areas, garages, porches, patios, walkways and landscaping. Retaining walls will be used to help develop the building pad areas along the toe of the slope.

We assume the structures will be two story, wood-framed houses. Loads should be on the order of 1 to 2 kips per lineal foot of wall. Isolated column loads should be on the order of 20 kips to 30 kips. No underground levels are planned.

3.0 FIELD EXPLORATION

3.1 SITE INVESTIGATION

On October 14, 2019, Staff Associate, Dennis Duru and our drilling crew visited the site to accomplish the subsurface investigation. A total of four (4) exploratory borings were accomplished throughout the site at the locations shown on Figure 2, Site Plan. At least one boring was accomplished on each of the proposed lots near where the structures may be built. The drilling was accomplished with our ATV-mounted, 4-inch diameter, solid stem auger drill rig.

Borings were terminated at depths of between 6.5 and 21.5 feet in the very stiff, silty Clay and dense, clayey sands. All holes were refilled after drilling. Borings were advanced with sample collection and testing being accomplished at various depths.

The Standard Penetration Test (SPT) was accomplished at various depths in each boring. This entails driving a 2 inch O.D. steel split spoon sampler into the bottom of the boring by dropping a 140-pound weight for a 30-inch drop. The total number of blows it takes to drive the sampler the last 12 inches of an 18-inch drive is called the SPT N-value. These can be correlated with soil strength and density parameters from testing on thousands of other projects.

Our representative identified the final exploration locations, logged subsurface soils and water conditions and obtained soil samples for transport to our laboratory. Visual classifications of the soils were made in the field and are presented in the Boring Logs in Appendix A, at the end of this report. Please note that in the logs, soil changes are depicted as distinct layers, while in nature they may be more gradual.

4.0 SUBSURFACE CONDITIONS

4.1 SOIL

Site soils were somewhat similar in all the borings. All borings encountered the clayey Silt to approximately 2.0 feet just underneath the organic soil layer. This is then followed by the silty Sand (B-1 and B-2), and the silty Clay/clayey Silt (B-3 and B-4). These layers are then underlain by the very stiff silty Clay (B-1 and B-2), and the dense clayey Sand (B-3) and the very stiff clayey Gravel/gravelly Clay (B-4).

4.2 GROUNDWATER

No free groundwater or seepage was observed during our subsurface investigation. Based on experience in these soils, water will tend to "perch" on the weathered bedrock or very stiff clays, beneath the very dense, clayey sand and gravel units, in the wetter

winter months. When areas of the site are excavated, the silt and clay unit may become soft and somewhat unstable during times of heavy rains. If construction is accomplished during the wetter winter months, it is likely that the silty and clayey units will become unworkable and that trenches in these soils will become somewhat unstable.

5.0 GEOLOGIC HAZARDS AND SEISMIC INDUCED HAZARDS

5.1 GEOLOGIC HAZARDS

A review of the site and seismicity of this area of Sutherlin provides information on geologic hazards for this site.

Liquefaction. The site is mostly underlain by silty Clay underlain by weathered mudstone/sandstone. There are some areas where up to 6.5 feet thick layer of silty sand was observed during our site investigation. However, these soils were only moist, with the free ground water much deeper into the fractured rock zone. Therefore, the risk of damage due to liquefaction to the areas where the homes will be constructed is considered low.

Landslide/Slope Instability. No recent or past slope instability was observed at the site or on the slopes nearby. Failures have taken place to the southeast in these hills. But these were in very steep terrain where abundant water collected in a bowl-like area causing complete saturation. This will not be the case on this site. The Statewide Landslide Information Database for Oregon (SLIDO) 2017 mapped the area as having moderate to high landslide likelihood. Given the overlying soil type and existing site slopes, slope stability considerations must be made before making cuts into these slopes. Sections in the geotechnical recommendation portion of this report will provide cut slope recommendations for this project. Cuts into these moderate to steep slopes must be made following the recommendations provided in this report. In our professional opinion, the risk of damage to the residence or adjacent sites by instability or slope failure is considered low provided the recommendations on this report is followed during the design and construction of the project.

Ground Rupture. No known active or quaternary faults cut the project site. Therefore, risk from ground rupture at the site is considered to be very low.

Amplification or Resonance. The project is located over dense mudstone/sandstone formations or stiff silty clay deposits. These soils and rock are not known to be subject to amplification of seismic waves. Therefore, unexpectedly severe ground shaking should not occur during a seismic event. Risk of damage due to amplification of seismic waves is very low.

Tsunami/Seiche. The site is located at elevation over 600 feet and 50 miles inland. There are no reservoirs or lakes upslope of the site. The risk of damage to the site from tsunami/seiche is zero.

Ground Shaking. All project structures, including buildings, retaining walls and fills must be designed according to the IBC methodology and the Oregon Structural Specialty Code. A Site Class C was determined for the site. Seismic design recommendations are provided in Table 1. The PGA_D was found to be 0.301g.

5.2 ASCE 7/16 DESIGN EARTHQUAKE

The design earthquake for the project area is based upon established values and methodology in ASCE 07-16.

The Maximum Considered Earthquake (MCE_R) and spectral response accelerations were established as set forth in Chapters 11, 20 and 22 of ASCE 7/16 and were obtained from the online ASCE 7 Hazard Tool (ASCE, 2019).

Table 1- DESIGN EARTHQUAKE (ASCE 7-16)

Parameter	Value
Project Latitude/ Longitude 750 Southside Road, Oregon (02-5731-02)	Lat. 43.387163 N Long. 123.29918 W
Occupancy/Risk Category (ASCE/SEI 7-16)	III
Mapped Spectral Response Acceleration (MCE_R) - Short Period (S_S)	0.778 g
Mapped Spectral Response Acceleration (MCE_R) - 1-Second Period (S_1)	0.448g
Site Class - *(ASCE/SEI 7-16)*	**C**
Short Period Site Coefficient based on Site Class - (F_a)	1.200
1-Second Site Coefficient based on Site Class - (F_V)	1.500
MCE_R Spectral Response Acceleration - (S_{MS})	S_{MS}= 0.934g
MCE_R Spectral Response Acceleration for 1-Second - (S_{M1})	S_{M1}= 0.671g
Design Spectral Response Acceleration for Short Periods - (S_{DS})	**S_{DS}= 0.623g**
Design Spectral Response Acceleration for 1-Second - (S_{D1})	**S_{D1}= 0.0.448g**
PGA= MCE_G (ASCE/SEI 7-16)	PGA= 0.377g
F_{PGA} (ASCE/SEI 7-16)	F_{PGA}= 1.200
PGA_M= F_{pga}*PGA (ASCE/SEI 7-16)	**0.452g**
Design PGA_D (PGA_D*2/3)	**0.301g**
Seismic Design Category (ASCE/SEI 7-16)	D

6.0 STEEP SLOPE CONSIDERATIONS

6.1 CONCLUSIONS

In our professional opinion, the subject site meets requirements of the development for construction of homes and garages with associated driveways, walks and patios.

Stability. Based on our review of the site, the geologic evaluation and our experience with the weathered mudstone/sandstone rock in the Sutherlin area, in our professional opinion, the subject lots are suitable for the proposed development. Developing the lots with the new home and garage will not adversely affect the stability of this or adjacent parcels provided that recommendations in this report are followed during the design and construction of the project.

Water. There are no mapped watercourses or streams on the parcel which will be altered by the development. The soils are dense and stiff and little water infiltrates into the groundwater, with most of the precipitation leaving as surface runoff. Therefore, development of the proposed homes and driveways will not alter groundwater or surface water flow to a degree where this would adversely impact nearby streams or wells.

Foundation Support. Underlying the slope on the site is a very stable Mudstone and Sandstone of the Tenmile Formation that will not be adversely affected by the development. The near surface native soils when penetrated to below all loose and organic zones will provide reasonably good foundation support. The on-site soils excavated from cuts (less organics and organic soil) could make adequate structural fill for under driveways and parking, when placed and compacted properly in fills. The on site soils shall not be used as fill beneath the structures or for wall backfill.

Erosion Potential. The site soils are moderately erosive when disturbed. However, minimizing disturbance and utilizing common erosion control and preventative methods will be adequate to mitigate adverse impacts of such potential erosion. This is addressed later in the report.

Summary. Therefore, in our opinion, the subject parcel meets all the requirements for development. Items of importance that will be addressed in later sections are as follows:

- Removal of existing loose soils.
- Limiting cuts as discussed in the report.
- Constructing all fills correctly.
- Constructing Retaining Walls with adequate drainage.
- Excavation Safety.
- Foundation preparation and penetration into the stiff/dense underlying soils.
- Control of all concentrated runoff from roof gutters, parking and access driveway.
- Protecting potentially erosive soils.

Our geotechnical recommendations provide the needed information to mitigate potential problems by these items. In our professional opinion, these can be mitigated by commonly used engineer design and construction methods used in this area.

6.2 SLOPE STABILITY CONSIDERATION

The underlying soils and weathered siltstone/mudstone rock on this site are stable. There are no observable slope failures or areas of instability within or adjacent to the project parcel. We performed a 2-D limit equilibrium slope stability evaluation of the site slopes. Our slope stability evaluation indicates that temporary cut slopes at 1H:1V can stand for short periods of time (time needed for retaining wall/footing construction and trench backfill) during dry weather. Permanent cut slopes without the lateral support from retaining walls must be made at 2.5H:1V or flatter for these soils. Cuts and fills needed to develop this lot should be within these limits and are easily accomplished in these soils/weathered rock.

Based on our previous work in the area and our slope stability evaluation, in our professional opinion, the subject development will not increase instability on this or adjacent parcels. With proper development and construction consistent with our geotechnical recommendations, the project should remain stable and not adversely impact the stability of this or adjacent parcels. Proposed cuts and fills on the lot should remain stable when accomplished in accordance with the geotechnical recommendations of this report.

6.3 EROSION CONSIDERATIONS

The subject silty soils and any loose fills can be moderately erosive when disturbed. This potential erosion can be decreased significantly by proper fill compaction, surface preparation, and construction practices and by limiting disturbed areas on the site during construction. Migration of soil fines off site can be limited by proper erosion control prior to and during construction. This would include the normal use of silt fences below all disturbed areas, hay bale V's, Bio Bags and settling ponds or rock lined ditches with settling ponds, in areas of concentrated flow. Any entrance to the site should have a crushed rock/shale covering for at least 50 feet to limit mud tracking onto the street.

Proper construction erosion control and construction practices will limit site erosion for this project. Based on its location, it is unlikely that soil fines from the site will create turbidity above acceptable ODEQ levels in the distant creeks if such good practices are used and erosion is prevented. Therefore, in our opinion, the subject project can be developed without a significant increase in erosion or impact on surface streams. A site Sediment Control Plan should be developed and implemented prior to beginning construction.

6.4 SURFACE WATER CONTROL

Stormwater conveyance across the site can easily be handled by erosion-protected swale inverts and yard catch basins. Erosion can be handled by a shale lining over fabric and flow velocities can be slowed by periodic rock "check dams" across the lower half of the swale conveyance zone ditches. Then all runoff can be conveyed to the roadside ditch below. This is the current discharge location for all of the parcel. The property drains by sheet flow onto slopes below and then into the public right of way. Therefore, runoff will not be conveyed into a different location by this site development. Runoff conveyance and control should not be a difficult issue for the proposed development. These can easily be controlled with standard engineering design and construction practices.

6.5 IMPACTS ON WATER HYDROLOGY

6.5.1 Surface Water

There are no surface water resources on this parcel that will be adversely impacted by the proposed residential construction. The site topography shows no evidence of drainage swales or ephemeral stream channels. As can be seen on the site there are no water courses, springs, ponds or other sources of water visible on the parcel.

Surface runoff currently takes place as general sheet flow across the vegetated (grass and trees) slopes on the parcel. Runoff is intercepted by the existing roadway below and conveyed to a disposal location. Some runoff is conveyed by the driveway location to the roadside ditch. This small amount of sheet flow runoff does not constitute useable surface water resources. After development, all site runoff will end up in the same location downslope of the site as it does now.

Therefore, the proposed residential construction will not adversely impact surface water resources or alter these resources down-basin of the site.

6.5.2 Groundwater

As noted above, there is no shallow groundwater on this site. Minor perched water could be present on top of the dense rock zones during wet months of the year. However, accumulations in excavations would be small and pumping such accumulated water will have no impact on groundwater resources in the area. There are no shallow (less than 25 feet) groundwater levels at the parcel. Wells in the area draw from fractures deep into the rock, not from shallow soil deposits. There is no opportunity for the proposed development to impact subsurface water sources.

Therefore, in our professional opinion, this proposed site development will not have an adverse impact on groundwater resources on this or adjacent parcels.

6.6 GRADING AND DRAINAGE PROCEDURES

Proper grading procedures and surface water control will help maintain slope stability, reduce erosion and provide for good long-term performance of the site.

6.6.1 Grading Issues

In general, careful planning and execution of site grading and surface water control will help with long-term performance of the site. Executing cuts and fills per the geotechnical design recommendations, will mitigate any adverse impacts of the grading work. Specific items which must be done are as listed below:

1. Cuts and fills to be constructed at inclinations no steeper than recommended.
2. Cuts will be limited to only the height necessary to create a driveway and benched home site for the lower level of the residences.
3. All fills on the slope must have a toe key and be placed on level benches cut into the slope.
4. If fills are placed on slopes steeper than 10% they must be accomplished consistent with Figure 3.
5. Subsurface drainage must be installed below fills when deemed necessary by the Geotechnical Engineer.
6. Only those materials allowed/specified for Structural Fill beneath the driveway and the structures may be used.
7. Place and compact the structural fill in level lifts and to densities specified later in this report.
8. Create site shape when grading to help convey site runoff to erosion protected collection and conveyance works.
9. Have all portions of the excavation and grading observed and verified as in compliance with the Geotechnical Recommendations.

6.6.2 Water Control Issues

Proper surface water runoff control will help with the proper performance of any hillside development. The following items must be adhered to for this subdivision.

1. All concentrated runoff entering the lot must be intercepted prior to reaching the structures.
2. Runoff from all new impermeable surfaces (driveways, parking, roof, etc.) must be collected in ditches or a piped system (gutters, downspouts and discharge pipe).
3. Do not allow collected runoff to flow over the crest and down any slopes.
4. Convey all collected runoff in solid wall drainage pipe/culverts or in erosion protected ditches/swales.
5. Discharge all conveyance pipes or swales into the public right away, roadside ditch or other approved discharge location which is properly protected against erosion.

6. Verify all erosion control items on the parcel and within the conveyance systems are in place prior to construction and are performing properly.
7. Verify all water conveyance works will pass the 25-year, time of concentration storm with no damage to the development or adjacent parcels (or higher flow if specified by the City).
8. Have all drainage and conveyance works inspected and verified by the design engineer.

7.0 GEOTECHNICAL RECOMMENDATIONS

Design recommendations in this section are focused on 1) limiting total and differential settlement of footings, 2) providing prudent loading recommendations for footings, 3) providing loads for retaining walls, 4) providing prudent cut and fill slope inclinations, 5) providing wet weather requirements to help construction proceed more smoothly in the winter and spring wet months when site surface soils can disturb easily and become unworkable.

7.1 SITE PREPARATION AND GRADING

The site has grasses, trees and shrubs, but no structures. Therefore, normal methods of debris removal, clearing, grubbing and stripping for organic removal will apply.

7.1.1 Clearing, Grubbing and Stripping

All areas proposed for the structure, access, parking areas, patios, sidewalks or structural fill beneath these items shall be cleared and grubbed of all organics. *It appears that a stripping depth of from 2 to 10 inches will be required (deeper where disturbed organic soils are present).* Additional stripping (or excavations) will most likely be required when removing trees and shrubs from this parcel. The stripped materials removed should be hauled from the site or stockpiled for use in landscape areas only (such as landscape mounds).

Any construction demolition debris and old concrete foundations found on the site must be removed from the site. Holes or depressions resulting from the removal of underground obstructions that extend below the finish subgrade and will be beneath structures, walkways, parking or roadways shall be cleared of all loose material and dished to provide access for compaction equipment. These areas shall then be backfilled and compacted to grade with structural fill, as described later in this report.

It is recommended that debris removal, grubbing and stripping of the site and compaction of depressions below finish subgrade, be observed by the geotechnical engineer or his representative from The Galli Group.

7.1.2 Subgrade Preparation and Proofrolling

Some of the site has loose and medium dense soils near the surface. Based on review of the preliminary plans, it appears almost all of the house will be founded in cuts into very stiff soils on the site. **Note:** The house may also be supported on a retaining wall founded on very stiff soils or the dense weathered rock. Stripped subgrade and all areas proposed for fill must be proofrolled with a loaded truck prior to proceeding with the work (assuming access is available).

The proofrolling may be accomplished with a loaded dump truck, loaded water truck or large heavy roller (no vibration) or by a hoepak where vehicle access is not possible. Proofrolling shall be discontinued if it appears the operation is pumping moisture up to the surface or otherwise disturbing the in-place soils. *When proofrolling, the tires of a loaded truck should not deflect the soils more than 3/8 inch.* ***Note:*** *The surface soils will likely soften during wet weather. This must be prepared for by the contractor.*

Where subgrade soils are disturbed or do not demonstrate a firm, unyielding condition when proofrolled, the soil shall be redensified or aerated and redensified, or replaced with imported granular fill. The imported fill material shall be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM Test Method D-698 (Standard Proctor). All soft and/or unstable areas shall be over-excavated and backfilled with granular structural fill. This includes areas beneath footings.

After completion of site stripping and/or excavation to subgrade, the contractor shall take care to protect the subgrade from disturbance due to construction equipment.

7.2 UTILITY EXCAVATIONS

During the construction of the project, we anticipate excavations will be required for site utilities. These will encounter the overlying soils and the dense weathered rock.

Excavations. All excavators will be able to remove the overlying less dense soils. Only medium to larger excavators will be able to remove the soils on the site. Trench excavations during dry weather should stand in shallow trenches in soils (less than 3 feet). *However, these are likely to have some sloughing or rockfall off the walls.* Seepage or wet weather and long-term dry weather, can cause the upper soils to cave and slough into the trench. Excavations deeper than 3 feet may require the use of temporary shoring, trench boxes and/or temporary cut slopes to protect workmen. *Some areas will likely have rockfall off deeper trenches.*

7.3 CUTS AND FILLS

Cuts and fills of 4 to 8 feet could be required for this site. These must be constructed at proper inclinations and be of the recommended materials to remain stable.

7.3.1 Temporary Cut Slopes

During dry weather, temporary cut slopes may be cut at 1H:1V or flatter. During wet weather, the contractor must be prepared to flatten temporary cut slopes in the soils to 1.5H:1V or flatter. Cut slopes in the weathered rock may be cut at 1H:1V in all weather.

7.3.2 Permanent Cut Slopes

All permanent cut slopes into the native materials which will remain shall be excavated at the following inclinations:

Weathered Rock	1.25H:1V
Upper Soils	2.5H:1V

Note: Where soils transition from weathered rock to the soil the cut slopes shall be at 1.5H:1V to 2H:1V and grade into the flatter and steeper slopes.

7.3.3 Fill Slopes

Fill slopes may be used to create a building pad for a portion of the project and to widen other areas of the site for driveways and parking. These fills shall be constructed as described below.

Fill slope inclinations shall be as follows:

Angular Crushed Rock	1.75H:1V
Angular Clean Jaw Raw Shale	2.0H:1V
Dirty Jaw Run Shale	2.25H:1V
On Site Soil	2.5H:1V*
*Not for Structures	

All such fills shall be placed and compacted as Structural Fill as described later in this report. In order to decrease surface sloughing and erosion of all fill except the dirty shale or pulverized weathered rock slopes, these must be overbuilt and then cut back to a compacted fill face.

7.3.4 Fill on Steep Slopes

All fills placed on slopes steeper than 10% shall be placed and configured as shown in Figure 3. This requires a key trench across the toe and level benches be cut back up the slope. Place and compact the fill in level lifts as Structural Fill. As noted, drainage beneath the fill (at least in the key area) may be required by the geotechnical engineer at the time of excavation.

Note: Our personnel must inspect and verify the key and bench cuts, the drainage installation (if needed) and all fill placement and compaction that will support (vertically or laterally) any portion of the structures or that are on slopes greater than 10%.

Please note, that while we have commented on the anticipated stability of the soil in trenches and cuts, we are not responsible for job site safety. The contractor is at all times responsible for job site safety, including excavation safety. We recommend all local, state and federal safety regulations be adhered to.

7.4 STRUCTURAL FILL PLACEMENT AND COMPACTION

7.4.1 Beneath Structures and Roadways

Structural fill is defined as any fill placed and compacted to specified densities and used in areas that will be under access, structures, driveways, sidewalks and other load-bearing areas or that will create fill slopes. It appears that the access, building pad, parking areas, exterior slabs and sidewalks could have structural fill below them. The subgrade needs to be prepared properly as described earlier and the fill must be placed and compacted correctly for proper long-term performance.

The on site soils may be used as fill beneath the driveways.

Structural Fill Materials. Ideally, and particularly for wet weather construction, structural fill shall consist of a free-draining crushed rock or shale with a maximum particle size of six inches. The material shall be well-graded with less than 5 percent fines (silt and clay size passing the No. 200 mesh sieve) and meet ODOT's requirements for fracture faces on the stones. During dry weather, any organic-free, non-expansive, reasonably well graded crushed rock or clean jaw run material with less than 7% passing the No. 200 sieve, meeting the maximum size criteria, is typically acceptable for this purpose. Locally available crushed rock and jaw-run crushed "shale" have performed adequately for most applications of structural fill. The material must be reasonably well graded and able to be compacted into a dense monolithic unit. ***Note:*** *It is the contractor's responsibility to understand the impending weather and plan for use of structural fill that will be capable of being compacted properly and remain stable in all weather that could arise during the project construction. See Materials Specifications in Section 8.0.*

Structural Fill Placement. All structural fill shall be placed in horizontal lifts not exceeding 8 inches loose thickness (less, if necessary to obtain proper compaction), for heavy compaction equipment and four inches or less for light and hand-operated equipment. Each lift shall be compacted to a minimum of 98 percent (rock materials) of the maximum dry density, as determined by ASTM Test Method D-698 (Standard Proctor).

A large smooth drum vibratory roller shall be utilized when compacting rock materials such as imported crushed rock or jaw-run "shale". *The contractor should use the equipment that will help gain the best compaction without damaging the subgrade.*

Beneath Footings. Structural fill placed beneath footings or other structural elements must extend beyond all sides of such elements a distance equal to 1/2 the total depth of the structural fill beneath the structural element in question for vertical support (i.e. for 2 feet of structural fill beneath footings, extend the fill at least 1 foot past all edges of the footing) unless altered elsewhere in this report (for vertical support). Use the structural fill materials beneath footings as described in the Foundation Section later in this report.

Note: Lateral support of footings on fill will have to be reviewed on a case by case basis. Typically this requires at least 5 feet of fill on a level slope beyond the downslope edge of the footing.

To facilitate the earthwork and compaction process, the earthwork contractor shall place and compact fill materials at or slightly above their optimum moisture content. If fill soils are too high on the west side of optimum, they can be dried by continuous windrowing and aeration or by intermixing lime or Portland Cement to absorb excess moisture and improve soil properties. If soils become dry during the summer months, a water truck should be available to help keep the moisture content at or near optimum during compaction operations. It is the contractor's responsibility to maintain proper moisture content during fill placement.

Fill Placement Observation and Testing Methods. The required construction monitoring of the structural fill utilizing standard nuclear density gauge testing and standard laboratory compaction curves (ASTM D-698 specified) is applicable to materials 1 1/2-inch size and smaller. Larger (2" or above) jaw-run "shale", crushed rock or pulverized weathered rock from the site do not yield consistent results with this type of testing. The high percentage of rock particles greater than 3/4's of an inch in these materials causes laboratory and field density test results to be erratic and does not provide an adequate representation of the density achieved. Therefore, construction specifications for this type of material typically specify method of placement and compaction coupled with visual observation during the placement and compaction operations and proofrolling of lifts, instead of nuclear density testing.

Observation of Fill Placement. For these larger rock materials, we recommend the 8-inch lift (after being "worked in" with a dozer) be compacted by a minimum of 3 passes with a heavy vibratory roller. One "pass" is defined as the roller moving across an area once in both directions. The placement and compaction should be observed by our representative. After compaction, as specified above, is completed, the entire area should be proofrolled with a loaded dump truck to verify density has been achieved. ***Note:*** *Soft subgrades must not be damaged by proofrolling. All areas which exhibit movement or compression of the rock material more than 1/4 inch, under proofrolling, should be reworked or removed and replaced as specified above.*

Nuclear Density Testing of Fill. Field density testing by nuclear density gage would be adequate for verifying compaction of 1 1/2-inch to 3/4-inch minus crushed base rock, and silts and sands and other materials 1 1/2 inches or smaller in size. Therefore, typical % compaction specifications as described elsewhere in the report would suffice. Testing should be accomplished in a systematic manner on all lifts as they are placed. Testing only the upper lifts is not adequate.

7.4.2 Non-Structural Fill

Any waste soil, organic strippings or other deleterious soils would be considered non-structural fill. These materials may make reasonable landscape soils and lawn topsoil material. This material may be placed in landscape areas and waste soil areas such as berms with slopes at 3 1/2H:1V or flatter. It should not be placed under structures, sidewalks, roadways, parking areas or as part of a structural fill slope. They should also not be placed on slopes over 10%. It is recommended that when these soils are used, they be given a moderate level of compaction (90 to 92 percent or higher) to help seal them from surface water.

7.5 BUILDING SUPPORT

Support of all areas of the structure must be founded over materials that will not have adverse impacts on the structure. Support shall be as listed in the sections below.

7.5.1 Foundation Support Recommendations

Foundations must be placed directly on structural rock fill placed over the weathered rock, directly on the rock or on dense and stiff overlying soils. The footings must be constructed and designed as described below.

1. Excavate down to the dense weathered rock or overlying dense soils.
2. Cut the subgrade into level benches for the footings to bear on.
3. Footings placed on the dense/stiff native soil and/or weathered rock covered with at least 18 inches of crushed rock structural fill as listed above may be designed for an allowable bearing pressure of 2,000 pounds per square foot. A 1/3 increase in this allowable bearing pressure may be used when considering short-term transitory wind and seismic loads.
4. All footings shall have the base buried a minimum of 16 inches below finish grade in order to provide lateral support and frost protection.
5. We recommend minimum lateral dimensions of 12 inches for continuous load bearing footings and 18 inches for isolated spread footings constructed in this manner.

Foundation Settlement. For footings constructed as listed above we anticipate total and differential settlement to be less than 7/8 inch and 3/8 inch, respectively.

Foundation Drains. We recommend all footings be installed with a footing drain to intercept seepage. Footing drains consist of a rigid, smooth-wall perforated pipe surrounded by drain rock (sides and above), all wrapped in a non-woven geotextile fabric and should be placed adjacent to the footings. See Figures 4 and 5.

7.5.2 Interior Floor Slabs

A properly prepared building pad area of 6 inches of 3/4" minus crushed rock over the stiff or dense soil will provide good support for concrete slabs-on-grade.

Slab Section. The following recommendations are provided for any interior floor slabs constructed on the densified native soil building pad.

Floor support should be as follows:

1. Excavate down to the dense native soil.
2. Densify exposed/disturbed soils.
3. Place and compact structural 3/4" minus rock fill (minimum of 6 inches) to at least 98% of ASTM D-698 up to the slab subgrade. Depending upon the site layout, the upper 6 inches may have to be 1/4" to 1/2" clean (washed) crushed rock as a drainage layer and capillary break. If the subgrade is sandy, a filter fabric will have to be placed below the drainage layer.
4. The upper 6 inches shall then consist of open work, clean, 1/4" to 3/4" rock which acts as a drainage and capillary break layer.
5. Cover top of rock with a durable vapor barrier such as Stego Industries 15-mil Stego Wrap. Seal all seams, tears and punctures with Stego recommended tape. Install per all manufacturer's recommendations.

The building pad subgrade area beneath interior slabs shall be prepared as described earlier in this report. Footing Drains shall be installed in accordance with Figures 4 and 5 and Section 7.8 below.

Floor Subdrains. In areas where the crushed rock beneath the interior slabs will be below exterior grades (such as basement or daylight basement levels), the drainage layer and floor subdrain system shall be included (and may need to be thickened). This shall be constructed as shown in Figure 6 and per Section 7.8.

7.6 LATERAL LOAD RESISTANCE

Lateral loads exerted upon these structures can be resisted by passive pressure acting on buried portions of the foundations, retaining walls and other buried structures and by friction between the bottom of structural elements of the wall and slabs and the underlying soil.

We recommend the use of passive equivalent fluid pressures of the following values for portions of the structure and foundations embedded into the native soils.

- Native silty Sand or sandy Silt 250 pcf
- Dense Compacted Crushed Rock (5' wide minimum) 450 pcf
- Dense Weathered Rock 600 pcf

A coefficient of friction of 0.55 can be used for elements poured neat against crushed rock structural fill. These should be reduced to 0.20 for areas over a vapor barrier or 0.35 over native soils.

7.7 RETAINING WALLS

Lateral earth pressures will be imposed on all below ground and backfilled structures or walls, including foundations which do not have uniform heights of fill on both sides and grade separation retaining walls. The following recommendations are provided for design and construction of conventional reinforced concrete or CMU block retaining walls:

- We recommend walls which are free to rotate at the top (unrestrained) when backfilled, be designed for the following loads.

Low Grade Angular Rock/Shale EFP	40 pcf
Crushed Rock EFP	35 pcf
Seismic (up to 8 feet tall)	0.20 g

- Walls that are fixed at the top (restrained) when backfilled should be designed for the following loads.

Low Grade Angular Rock/Shale EFP	50 pcf
Crushed Rock EFP	45 pcf
Seismic (up to 10 feet tall)	0.20 g

- The walls <u>all</u> must have full drainage as described in section 7.8 and as shown on Figures 7 and 8.
- These equivalent fluid pressures are to be used for the soil through which the anticipated failure plane will develop (assume envelope beginning 4 feet behind base of wall and rising up and away from wall at 60 degrees off the horizon).
- A wet backfill unit weight of 135 pcf should be used for design of retaining walls which are backfilled with crushed rock or jaw-run "shale".
- These values are for properly compacted, free draining walls. The onsite organic topsoil or very Silty soils shall not be used for wall backfill. Imported crushed rock or clean jaw-run "shale" work well for wall backfill materials.

- These design values assume the wall or structure is fully drained, has a flat backfill and has no surcharge loads from traffic or other structures. The structural designer should include surcharge loading from traffic, building loads and/or sloped backfill.
- We recommend designing retaining walls to resist seismic loading. A horizontal acceleration component of at least 0.20 g should be applied to the mass of an enlarged active wedge of soil behind the walls and utilized in a pseudo-static analysis. The wedge length back from the wall along the ground surface may be taken to be 0.8H, where H is the height of the wall. This relates to an equivalent uniform load over the entire back of the wall of approximately 13 pounds per square foot for each foot of backfill, for walls up to 8 feet tall (i.e. for an 8-foot wall, fully backfilled, uniform seismic load will be on the order of 104 psf over the entire back of the wall).
- The backfill should be placed in lifts at near the optimum moisture content (clayey soils at 2% to 3% above optimum) and compacted to between 93 and 95 percent of the maximum dry density as determined by laboratory procedure ASTM D-698 (Standard Proctor). Loosely placed backfill will exert greater pressures on the wall than the pressures provided above and must be avoided.
- To prevent damage to the wall, backfill and compaction against walls or embedded structures should be accomplished with lighter hand-operated equipment within a distance of 1/2 h to 1/3 h (h being the vertical distance from the level being compacted down to the surface on the opposite side of the wall). Outside this distance, normal compaction equipment may be used.

While proper compaction of wall backfill is critical to the proper performance of the walls, care should be taken to not over-compact the backfill materials. Over-compaction can induce greater lateral loads on the wall or structure than the design pressures given above.

7.8 FOUNDATION, FLOOR AND RETAINING WALL DRAINS

All exterior foundations and embedded structures should have proper drainage.

Footing Drains. Foundation drainage shall consist of a rigid, smooth-wall perforated pipe surrounded by at least 6 inches of drain rock on top and outside edge, all wrapped in a non-woven geotextile designed as a filter fabric (such as Mirafi 140N or equivalent). The perforated pipe shall be located on the footing next to the stem wall (or beside the footing), provided this is at least 12 inches below underslab drain rock or below any crawl space level. Please see Figures 4 and 5.

Floor Drains. Where the drain rock layer below slabs will be lower than the adjacent exterior grades, water will tend to accumulate in this low area. To remove the water, include a series of subdrains at the bottom of the drain rock layer beneath the slab. The subdrain lines typically consist of 3-inch diameter, smooth interior, solid wall, perforated pipe at spacing of 10 feet (or less) across the structure (and around the interior perimeter).

The perforated pipe is placed in a deepened zone of the drain layer as shown on Figure 6. On this site we recommend the drainage layer in basement areas be increased to at least 10 inches thick. The pipes are sloped to drain and collected by a tightline which leads to the stormwater disposal system. We recommend we be allowed to review the subdrain system design prior to final plan submittal or construction bidding.

Retaining Wall Drainage. Wall drains should also have a minimum 12-inch wide drainage zone of drain rock wrapped in non-woven filter fabric immediately behind the wall extending up from the drainage section to within 12 to 18 inches of the surface. A preformed, fabric-wrapped, polymer sheet drain, such as Amerdrain, Linq Drain or Enkamat must be placed against the wall. Exterior wall drains, which will not be sealed on top by asphalt or concrete, should have the upper 12 inches backfilled with compacted onsite silt soils to minimize intrusion of surface waters into the wall drain system. Please see Figures 7 and 8. **Note:** This assumes any overland drainage/runoff is collected and diverted on the surface before getting to the retaining walls.

Walls that should not pass water vapor (for aesthetics or livable space) must be fully sealed (with a bitumen-based sealer that will not harden or crack) before the sheet drain is attached. Wall seal such as MasterBlend HLM5000 or equivalent, shall be used and applied per the manufacturer's recommendations. Multiple coats are preferred. This is in addition to the other items on Figures 7 and 8. All drains should be tightlined and positively sloped to an approved stormwater disposal location into the public right-of-way. **Note:** In no case shall water be collected and/or directed or discharged close to the foundations. Such improper water discharge can cause added water related problems.

We strongly recommend against connecting roof drains or surface area drains to foundation, wall or floor subdrains unless it is to a common discharge line far away from the structure. All drains must consist of rigid, smooth-wall perforated pipe. The rigid smooth-wall pipe can be cleaned out by means of a "roto-rooter" type system should it become plugged with sediment or fine roots. We recommend cleanouts be placed periodically by the designer to facilitate cleaning and maintenance of the drains.

7.9 EXTERIOR CONCRETE FLATWORK DESIGN

Reinforced concrete could be utilized for walkways, patios, parking and related items. These perform best when over a crushed rock base.

Heavy Duty Concrete (Auto Parking).
4" Portland Cement Concrete (3,500 psi mix)
8" Aggregated Base (3/4" or 1" Minus Crushed Rock)

Standard Duty Concrete (Walks and Patios).
3" Portland Cement Concrete (3,500 psi mix)
6" Aggregate Base (3/4" or 1" minus Crushed Rock)

Note: These concrete section designs assume the subgrade is the properly prepared medium stiff to stiff native soil.

The following items shall be part of the concrete design and construction.

Aggregate Base: Extend beyond edges of concrete at least 4 inches.

Reinforcing: No. 4's @ 12" O.C. (parking); No.3's @ 16" O.C. (walks and patios) each way; Include continuous edge bars at 3" to 4" from all edges. Reinforcing to be continuous across all different pours or joints. Overlap all bars at least 24 inches. At all corners use rebar hooks 30" each way.

Concrete: 3,500 psi 28-day strength mix; 6% ± 2% entrained air; place at 4" slump or use admixtures to keep same water/cement ratio for higher slump. Do not use steel trowel on surface, which can trap bleed moisture below the finish and lead to freeze-thaw damage. Should have moderately rough broom finish for skid resistance (rough broom or grooved for sloped driveway areas). Do not allow concrete to freeze for at least 72 hours. Also note that Night Sky Cooling can cause the concrete surface to be 7° to 8° below ambient air temperature.

Surface Jointing: Surface jointing at 6 to 10 feet on center each way will help decrease cracking in the "field". If saw cutting is used (or tool joints) it must be done as soon as the surface will support the work to make sure cracks do not develop within the concrete mass prior to the surface cutting. **Note:** A 12 hour wait (which usually means the next morning) is too long. Cracks will already be formed in the concrete. *The saw cuts must be made the same day as the pour, as soon as the concrete surface will not tear during sawing; typically within 4+ hours.*

Note: All reinforcing and construction details for concrete work should be reviewed and affirmed or changed by the project structural engineer.

7.10 ASPHALTIC PAVEMENTS

The access drive could consist of either crushed rock surfacing or Hot Mix Asphaltic Concrete (HMAC) paved surface. The following sections provide recommendations for both crushed rock and asphaltic concrete section design and construction.

7.10.1 Pavement Subgrade & Traffic Loading

The subject site is underlain by medium dense, clayey Sand or medium stiff, sandy Clay with gravels. These soils will provide good support for the asphaltic concrete paving.

We used the R-value for the soils of 10 for design of the asphalt and crushed rock sections (based on testing on other sites). Assumes there will be a recompacted layer of site soils for the subgrade as recommended earlier in section 8.1.2 in the report.

The following sections were designed utilizing a Crushed Rock Equivalent (CRE) method. Sufficient thickness of asphaltic concrete and/or rock materials are used to provide the computed crushed rock equivalent needed to protect the subgrade soils and successive rock layers from anticipated traffic loads.

We anticipate the traffic loading to consist of autos, pick-ups and occasional heavy delivery trucks. Only medium heavy (3 axle or 4 axle) truck traffic is anticipated. In our professional opinion, the following portion of the project should use the Traffic Indices (TI) as listed. The TI values are based on the anticipated traffic numbers, axle loads from trucks and for a 20-year life.

Project Area	Traffic Index (TI)
Access Drive & Parking	4.5

The successful performance of pavement structures is a function of subgrade material properties, traffic conditions, drainage conditions, the pavement material properties and design, careful construction, and ongoing maintenance.

7.10.2 Asphaltic Concrete Pavement Design

We have designed the pavement sections using the Traffic Indices (TI) listed above. Based on these TI's and R-values of 10, 60 and 85, (subgrade soil, 4" minus or low-grade subbase and 3/4" or 1" minus crushed rock), we have computed asphalt design sections (utilizing the Crushed Rock Equivalent Method) with the following results.

Standard Duty Pavement (Access Drive)

3" AC
8" AB (3/4" or 1" minus Crushed Rock)
Woven Geotextile Support Fabric (ACF 180 or Equivalent)
Redensified Subgrade

Alternate Pavement (Access Drive)

3" AC
3" AB (3/4" or 1" minus Crushed Rock)
8" ASB (4" minus crushed rock on clean Jaw Jun Shale)
Woven Geotextile Redensified Subgrade Support Fabric (ACF 180 or Equivalent)

Note: Any areas that will have heavy trailers or motor homes parked on them should have reinforced concrete pavement. This will alleviate AC "pushing" that occurs when heavy tire loads sit on the AC during hot weather (results in ruts in surface where tires sit).

7.10.3 General Recommendations

Subgrade Preparation. The subgrade should be shaped to a uniform surface running reasonably true to established line and grade described in the contract documents. Areas so specified must be redensified and/or backfilled with structural fill. It is important that dense, stable conditions of the subgrade be maintained until the subgrade is covered with the subbase aggregate. Subgrade preparation should include cleaning and proofrolling (as described earlier in this report) to identify soft and disturbed subgrade areas.

After subgrade preparation is completed, the upper 8" to 12" of exposed subgrade prepared for the pavement structure shall be moisture conditioned and redensified (if it is not dense) from the surface to 95% of ASTM D-698 and shall demonstrate a firm and unyielding condition as shown by proofrolling.

Soft or loose materials disturbed during the site preparation process, incapable of achieving the compaction criteria should be removed to appropriate bearing materials prior to replacing with structural fill. Where loose or softened subgrade areas are identified, the area should be over-excavated and replaced with imported granular fill with less than 7% (5% in wet weather) passing the number 200 sieve.

It should be noted that in no case should repeated construction trucks be allowed to "run" directly on top of the saturated subgrade soils until they are covered with rock (unless hard subgrade in dry weather). This could result in the disturbance of the subgrade soils due to the heavily loaded vehicles (which would result in additional over-excavation to remove softened soils). We recommend covering the subgrade soils with at least 8" inches of crushed rock or "shale" over the woven fabric prior to light construction truck traffic traversing the area (more for heavily loaded trucks). Therefore, construction traffic must be carefully coordinated in order to minimize disturbance to the underlying fine-grained soils.

Wet Weather Construction. During wet weather, the unprotected native soils could become disturbed. *We recommend that for construction during wet weather, in all construction roads and drive lanes where truck traffic will concentrate, the subgrade should be covered with the woven geotextile support fabric and a minimum of at least 8 inches of imported granular 3-inch minus crushed rock with less than 5% passing the No. 200 sieve.* Compaction of the fill should not begin until a minimum of 8 inches of rock is placed above the fabric. Compact carefully so as not to disturb the subgrade. This should provide an adequate working surface and help protect the subgrade from damage from construction traffic. Even light construction traffic should not be allowed to traverse the area until the minimum of 8 inches of compacted material has been placed and compacted over the support fabric. Greater thickness of the rock may be required in very wet weather periods.

Note: *It is the contractor's responsibility to protect the subgrade with proper construction techniques. Repair of disturbed subgrade by construction traffic will typically be a no cost item to the owner.*

Geotextile Fabric Placement. When the subgrade soils have been properly prepared, the silty areas shall be covered with the woven geotextile support fabric. As discussed or detailed above in AC design, we recommend a fabric such as ACF 180 or equivalent. The fabric should be laid longitudinally with the roadway. All ends and edges should be overlapped a minimum of 5 and 2 feet, respectively. Fabric layout shall be such that it "runs" aligned with the lane traffic directions.

Care must be taken to not damage the fabric. In no case shall track vehicles be allowed on the fabric. At least 8 inches of rock (12 inches during wet weather) should be over the fabric prior to allowing repeated truck traffic in the area. Then the traffic should be light to protect the subgrade. Be careful not to disturb the subgrade when compacting the rock.

Materials. All materials used and construction techniques applied at the site must result in conditions as assumed for design of the pavement sections. We recommend materials used in the pavement support sections be as listed in Section 8.0.

8.0 MATERIALS SPECIFICATIONS

The following materials specifications shall apply to the materials used on this project.

Note: All such materials to be used on the project must be submitted for compliance testing or review, at least two weeks prior to use at the site.

Aggregate Base Rock (Acceptable for Structural Fill)

- Angular Crushed Rock (3/4 or 1" Minus); R=85 or greater; Well Graded (No Gaps and at least 60% retained on the No. 4 sieve).
- Exceeds the fracture, durability and sand equivalent requirements outlined in Section 00641 of the Oregon Standard Specifications for Construction.
- Maximum passing the No. 200 sieve $\leq$ 5% Total; $\leq$ 2% Clay Size.
- Compacted to 98% of the maximum dry density as determined by ASTM D698 or AASHTO T-99.

Aggregate Subbase Rock (Acceptable for Structural Fill)

- Angular Clean Crushed (jaw run) hard "Shale" (4" Minus Jaw-Run) or Crushed Rock (2" to 4" Minus); R=60 or greater; Angular and Reasonably Well Graded.
- At Least 60% retained on the No. 4 Sieve.
- Exceeds the fracture, durability and sand equivalent requirements outlined in Section 00641 of the Oregon Standard Specifications for Construction.
- Maximum passing the No. 200 sieve $\leq$ 10% Total; $\leq$ 3% Clay Size.
- During wet weather; passing No. 200 sieve $\leq$ 5%.
- Compacted to 95% of the maximum dry density as determined by ASTM D698 or AASHTO T-99; initial lift may not attain 95% due to soft subgrade; Engineer to decide in the field.
- Care must be taken to avoid very silty subbase that will not support construction loads, especially when wet (will not meet specifications).

On-Site Soil Fill

- Sandy Clay under asphalt only.
- Where specifically allowed in the Geotechnical Recommendations.

Note: Some fill materials will be difficult to nearly impossible to compact during wet weather. *The contractor must select the type of structural fill that will be able to be placed and compacted to specified conditions during the weather conditions that may take place during the construction schedule.*

Sand

- Clean washed sand or sand and gravel, less than 1% passing No. 200.
- Gravel to be rounded or subrounded (no fracture faces), 1" or less.
- Must have less than 30% gravel by weight.

Drain Rock (For drainage sections)

- Clean, washed, rounded or angular openwork drain rock.
- Gradation to be 1/4" and greater, sized to not move into and through perforations in the pipe.
- 1/4" to 3/4" clean crushed, 3/4" to 1" clean rounded rock, 1" to 2" clean angular rock are all acceptable.
- Clean means washed rock with NO coating of silt, clay or sand.

Note: All types may be used in all applications of drain rock that are not beneath Asphaltic Concrete paved areas. Beneath all AC areas angular clean drain rock must be used (where drain rock is required) for AC support.

Note: Drainage layer drain rock that is beneath the floor slab must be the angular clean drain rock.

Geotextile Filter Fabric

- Non-woven geotextile filter fabric for wrapping drainage sections and separation of openwork rock from sands or soils fines.
- Meet specifications as per Mirafi 140N or equivalent.
- Overlap all edges at least 24 inches (12" for drainage section envelope).
- Secure in place such that overlaps will not move during covering operation.

Geotextile Support Fabric

- Woven geotextile support fabric designed for separation of crushed rock and subgrade soil and for rock section support.
- Meet specifications as per ACF180 woven support fabric.
- Overlap edges at least 2 feet and ends at least 5 feet.
- Align roll lengthwise with direction of traffic in all drive lanes.
- Pull tight full length and keep tight during placement of crushed rock above fabric.
- Do not drive on the fabric until it is covered with rock.\

Perforated Pipe

- 3", 4" or 6" rigid wall, smooth interior, perforated pipe.
- Secure all joints with solvent weld glue. DO NOT use only compression push together fittings.
- Slope to drain per specifications in report or on plan sheets.
- Align perforations in the downward direction.
- Must always be placed within filter fabric wrap unless specifically specified otherwise.
- Protect from construction traffic until buried at least 2 times pipe diameter (minimum 8 inches) of angular rock fill.

Wall Sheet Drain

- Polymer sheet drain with filter fabric attached 1 or 2 sides, designed for drainage of vertical embedded foundation or retaining walls.
- For walls up to 10 feet tall. Must meet specifications as for American Wick Drain's AMERDRAIN 200 or 220.
- Install and splice and patch per manufacturer's recommendations.
- Install with fabric side towards the backfill.
- Attach to wall per manufacturer's recommendations.
- Extend down wall all the way to bottom of drainage section around perforated pipe.
- Protect from damage when backfilling with crushed rock larger than 2-inch minus.
- Repair all damaged areas prior to final backfill.

Asphaltic Concrete

- Type 2 Dense Graded HMAC
- PG 64-22
- Compacted to between 91% and 95% of "Maximum Specific Gravity" for first courses; between 92% and 95% for wearing course.
- Must have densification completed while temperature is above 185 degrees F.
- Do not over densify as this will significantly decrease frost heave protection of internal air voids.
- The contractor must provide a HMAC design mix for review and approval.
- All aspects of the asphaltic paving shall be accomplished in accordance with applicable ODOT standards and recommendations.

These materials shall be used on this project as specified in this report and on project plans or specifications.

NOTE: DEVIATIONS FROM SPECIFIED MATERIALS MUST BE APPROVED IN WRITING BY THE GEOTECHNICAL ENGINEER, OWNER AND OWNER'S OTHER CONSULTANTS/DESIGN ENGINEERS PRIOR TO USE AT THE SITE.

Drainage. Adequate provision should be made to direct surface water away from the pavement section and subgrade. Ponded water adjacent to the asphalt areas can saturate the subgrade resulting in loss of support. Therefore, we recommend the areas along the edge of the asphalt be well drained. All paved areas should be sloped and drainage gradients maintained to carry surface water to catch basins or to concrete ditches or rock lined ditches for transmission off the roadway and parking areas. Excessive landscape watering can also saturate the subgrade and decrease pavement life. Deep curbs, drip irrigation and/or use of dry-land plants will mitigate these affects.

Maintenance. Pavement life can be extended by providing proper maintenance and overlays as needed. Cracks in the pavement should be filled to prevent intrusion of surface water into the subbase. Asphalt pavements typically require seal coats or overlays after 10 to 12 years to maintain structural performance and aesthetic appearance.

9.0 DRAINAGE AND EROSION CONTROL

9.1 SITE DRAINAGE

The site should be graded during construction such that surface water does not pond within the building footprint or beneath pavement areas. Surface runoff should be controlled during construction and with final site grading. All areas adjacent to the structures should have a permanent slope away from the foundations at an inclination of at least 6 inches in eight (8) feet. This surface water should be channeled into landscape area drains or catch basins, or should be conveyed around the structure and to an erosion protected ditch or discharge conveyance line. Where items such as landscape areas and walkways block the flow of surface water, small area drains should be installed to collect the surface runoff. Good site design accommodates all site runoff and conveys it away from the structures and off the site to an acceptable disposal location. This would include drainage of surface water along the upslope side of the project. In no case shall collected water be allowed to run down the face of cut or fill slopes or uncontrolled onto unprotected native ground.

All roof downspouts shall be connected to a sealed tightline system, which discharges to an acceptable disposal location. In no case should these be connected to footing drains, wall drains or subdrains beneath floors.

9.2 SITE EROSION CONTROL

The site soils are mildly to moderately susceptible to erosion. The site grades are moderately steep, especially in the area which will be disturbed by construction. Therefore, site erosion should be moderate.

Construction Erosion Control. All disturbed areas shall have the low side surrounded by a silt fence with the bottom edge embedded in the soil at least two (2) inches. At select locations settling ponds of hay-bale backed silt fence should be established to decrease silt content of water flowing off site. Hay bales or wattles should be used to protect the road side ditches and offsite areas. Hay bale "V's" may be needed in the ditch to stop silt migration for up to 200 feet from the site. Rock check dams in ditches will help collect sediment and decrease discharge water velocity. Protect all catch basins or pipe inlets within 300 feet of the site.

The site will also require crushed rock (or shale) entrances to prevent "tracking" of mud by construction vehicles onto the roads. These are typically required to be 50 feet long and be constructed of 8" of rock over a woven fabric (more if needed to protect the subgrade soils).

Note: Abide by all aspects of the project Erosion Control Plan.

Permanent Erosion Control. Permanent project landscaping and paving or crushed rock covering as required by the City of Sutherlin could help meet some needs of long-term erosion control. All disturbed areas on the site but outside the developed area of the project that will not get formal landscaping must be reseeded with local native grasses for erosion prevention. These areas shall be graded reasonably smooth and the surface scarified to 1/2-inch deep. The area should then be hydroseeded with a combination of erosion control grass seed, (include wild flower seed for seasonal color), fertilizer and mulch OR should be covered with a thin layer of crushed rock.

10.0 ADDITIONAL SERVICES AND LIMITATIONS

10.1 ADDTIONAL SERVICES

We should review construction plans and specifications for this project as they are being developed. In addition, The Galli Group should be retained to review all geotechnical-related portions of the plans and specifications to evaluate whether they are in conformance with the recommendations provided in our report. Additionally, to observe compliance with the intent of our recommendations, design concepts, and the plans and specifications, all construction operations dealing with earthwork, foundations and rock placement and compaction should be observed by a representative from The Galli Group.

For this project, we anticipate additional services could include the following:

- Review of construction plans and specifications for compliance with geotechnical recommendations and to verify adverse conditions are not created. Such review must be accomplished prior to start of construction bidding.
- Review of all drainage measure designs.
- Possible project team meetings to clarify issues and proceed smoothly into and through the construction process.

- Observation of site stripping, overexcavation and subgrade redensification.
- Observation of onsite cut slopes and trenches to verify stability is acceptable.
- Observation of key trench and benches for areas with Fill on Steep Slopes. Recommend use (or not) of subdrains and verification of all structural fill.
- Observation of footing drains, floor slab subdrains and retaining wall seal and drainage.
- Observation and/or testing of over-excavated areas, subgrade preparation, subgrade proofrolling, structural fill placement and compaction, subdrains, pavement subgrade preparation, footing subgrade and overexcavation, aggregate base placement and compaction, site grading, surface drainage, wall and floor drainage.
- Verification of location of footings related to fill slopes.
- Redesign of portions of the project as required.
- Periodic construction field reports, as requested by the client and required by the building department.

We would provide these additional services on a time-and-expense basis in accordance with our current Standard Fee Schedule and General Conditions at the time of construction. If we are not retained to provide these services, we cannot be held responsible for the decisions by others for geotechnical related issues in the constructed product or for items which we did not observe and verify.

10.2 LIMITATIONS

The analyses, conclusions and recommendations contained in this report are based on site conditions and assumed development plans as they existed at the time of the study, and assume soils, rock and groundwater conditions exposed and observed during our site visit and in the borings are representative of soils and groundwater conditions throughout the site. If during construction, subsurface conditions or assumed design information is found to be different, we should be advised at once so that we can review this report and reconsider our recommendations in light of the changed conditions. If there is a significant lapse of time (5 years) between submission of this report and the start of work at the site, if the project is changed, or if conditions have changed due to acts of God or construction at or adjacent to the site, it is recommended that this report be reviewed in light of the changed conditions and/or time lapse.

This report was prepared for the use of the owners and their design and construction team for the design and construction of the project. It should be made available to contractors for information and factual data only. This report should not be used for contractual purposes as a warranty of site subsurface conditions. It should also not be used at other sites or for projects other than the one intended.

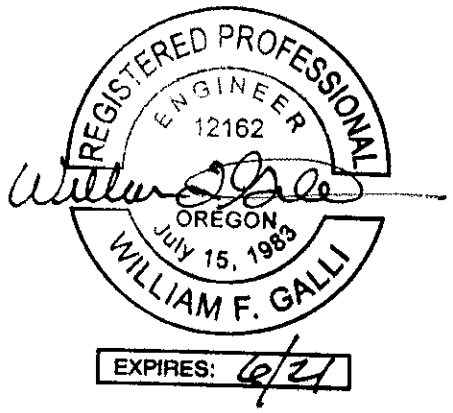
We have performed these services in accordance with generally accepted geotechnical engineering practices in Oregon, at the time the study was accomplished. No other warranties, either expressed or implied, are provided.

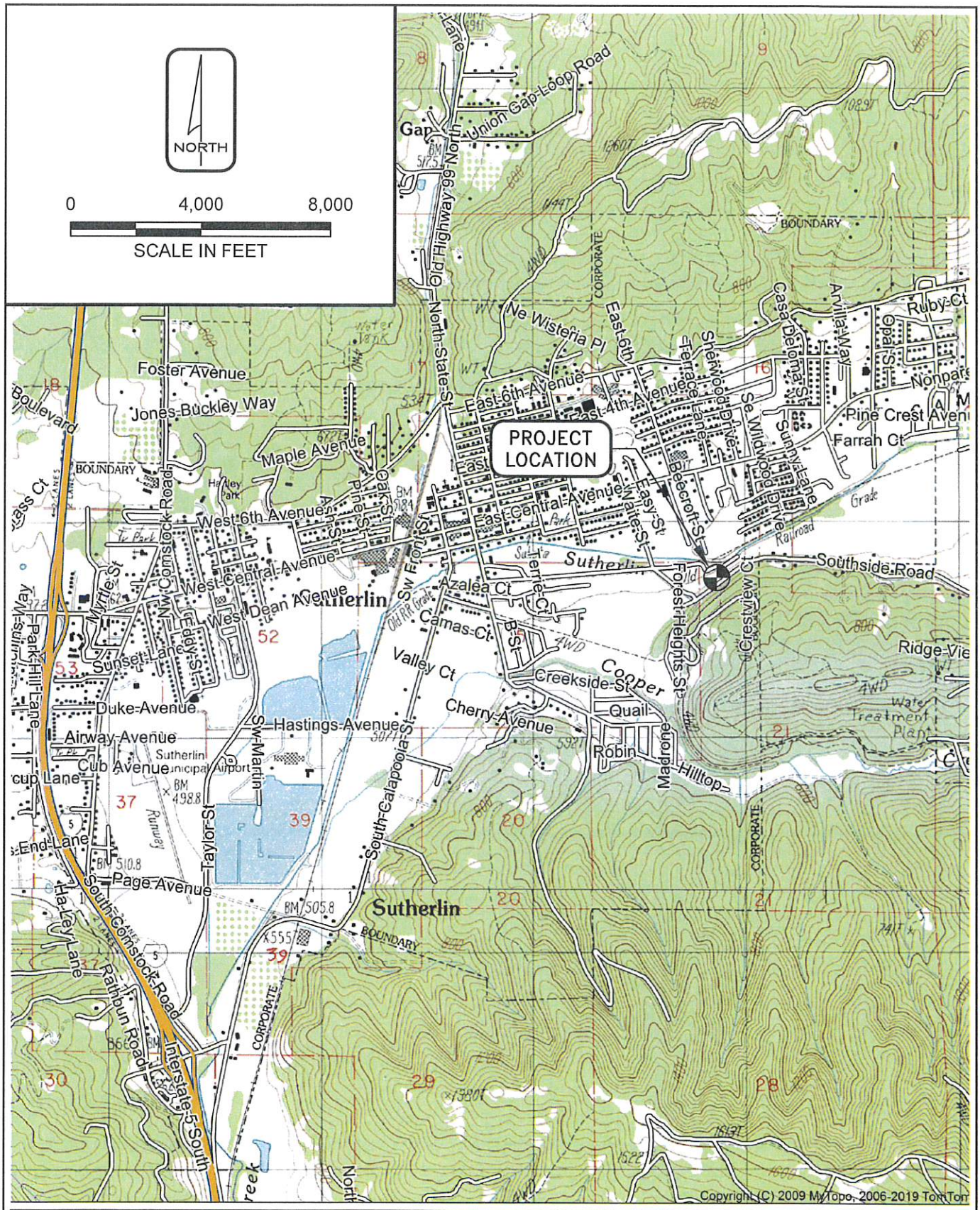
Respectfully Submitted,

THE GALLI GROUP
GEOTECHNICAL CONSULTING

Dennis C. Duru, M.S., E.I.T.
Staff Associate

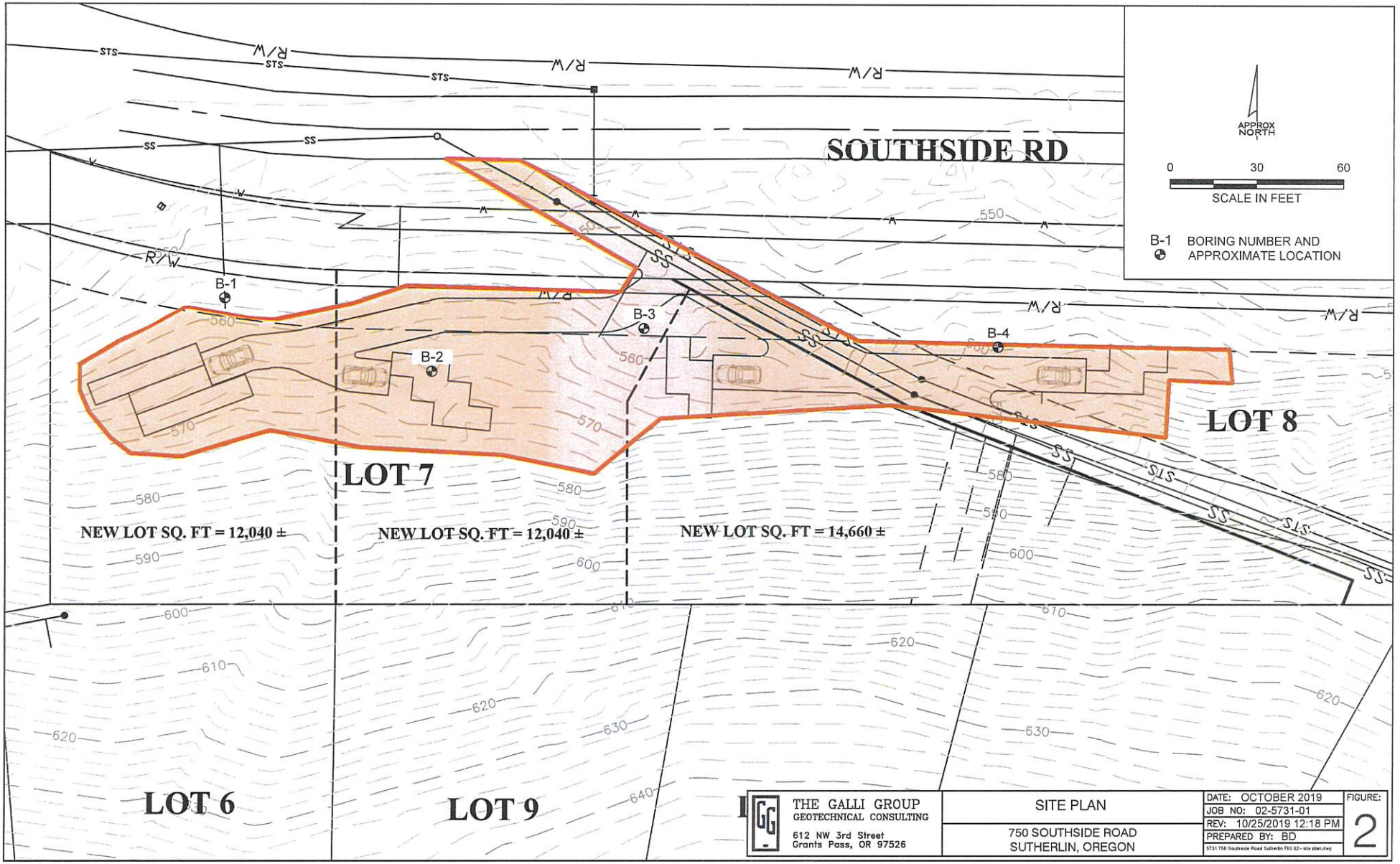
William F. Galli, P.E., G.E.
Principal Engineer





THE GALLI GROUP GEOTECHNICAL CONSULTING 612 NW 3rd Street Grants Pass, OR 97526	VICINITY MAP 750 SOUTHSIDE ROAD SUTHERLIN, OREGON	DATE: OCTOBER 2019 JOB NO: 02-5731-01 REV: 10/25/2019 12:17 PM PREPARED BY: MG3/BD 5731 750 Southside Road Sutherlin FIG 01 - Vicinity.dwg

FIGURE: 1



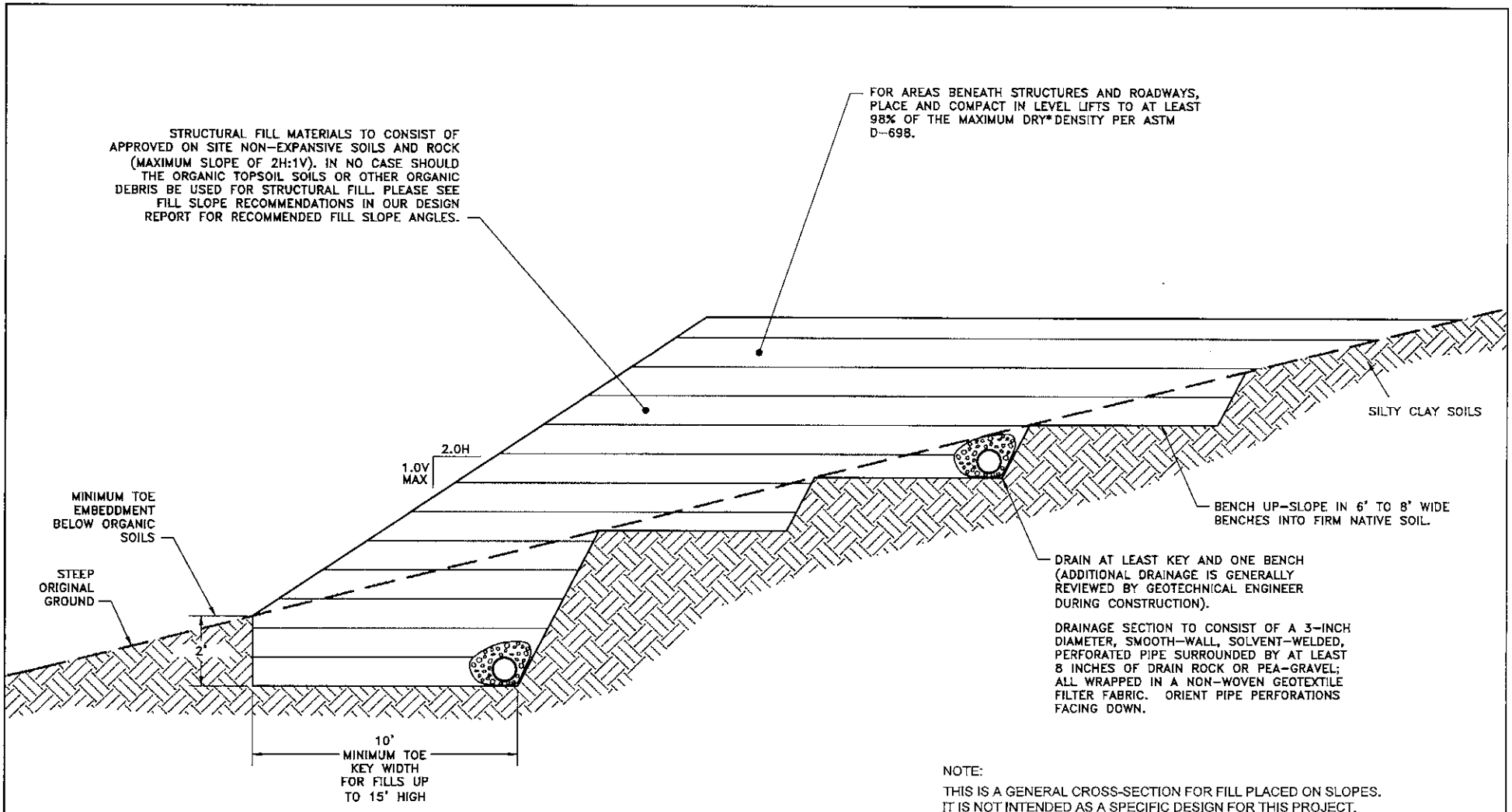
THE GALLI GROUP
GEOTECHNICAL CONSULTING
612 NW 3rd Street
Grants Pass, OR 97526

SITE PLAN

750 SOUTHSIDE ROAD
SUTHERLIN, OREGON

DATE: OCTOBER 2019
JOB NO: 02-5731-01
REV: 10/25/2019 12:18 PM
PREPARED BY: BD
5731 750 Southside Road Sutherlin FIG 02 - site plan.dwg

FIGURE: 2

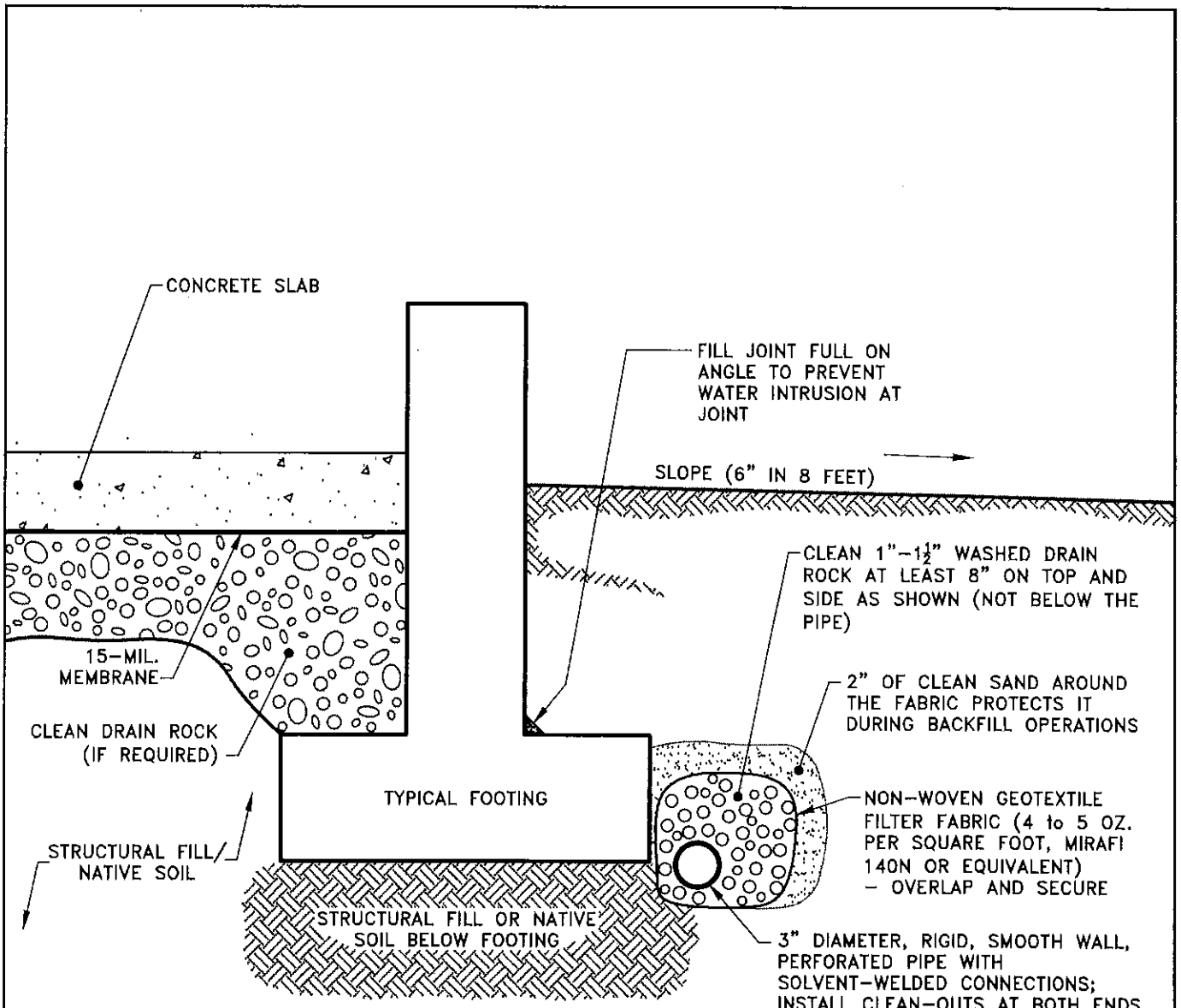


NOTE:

THIS IS A GENERAL CROSS-SECTION FOR FILL PLACED ON SLOPES. IT IS NOT INTENDED AS A SPECIFIC DESIGN FOR THIS PROJECT.

FOR ILLUSTRATION PURPOSES ONLY
NOT TO SCALE

THE GALLI GROUP GEOTECHNICAL CONSULTING 612 NW 3rd Street Grants Pass, OR 97526	FILL ON STEEP SLOPE CROSS-SECTION 750 SOUTHSIDE ROAD SUTHERLIN, OREGON	DATE: OCTOBER 2019 JOB NO: 02-5731-01 REV: 10/25/2019 12:19 PM PREPARED BY: BD	FIGURE: 3



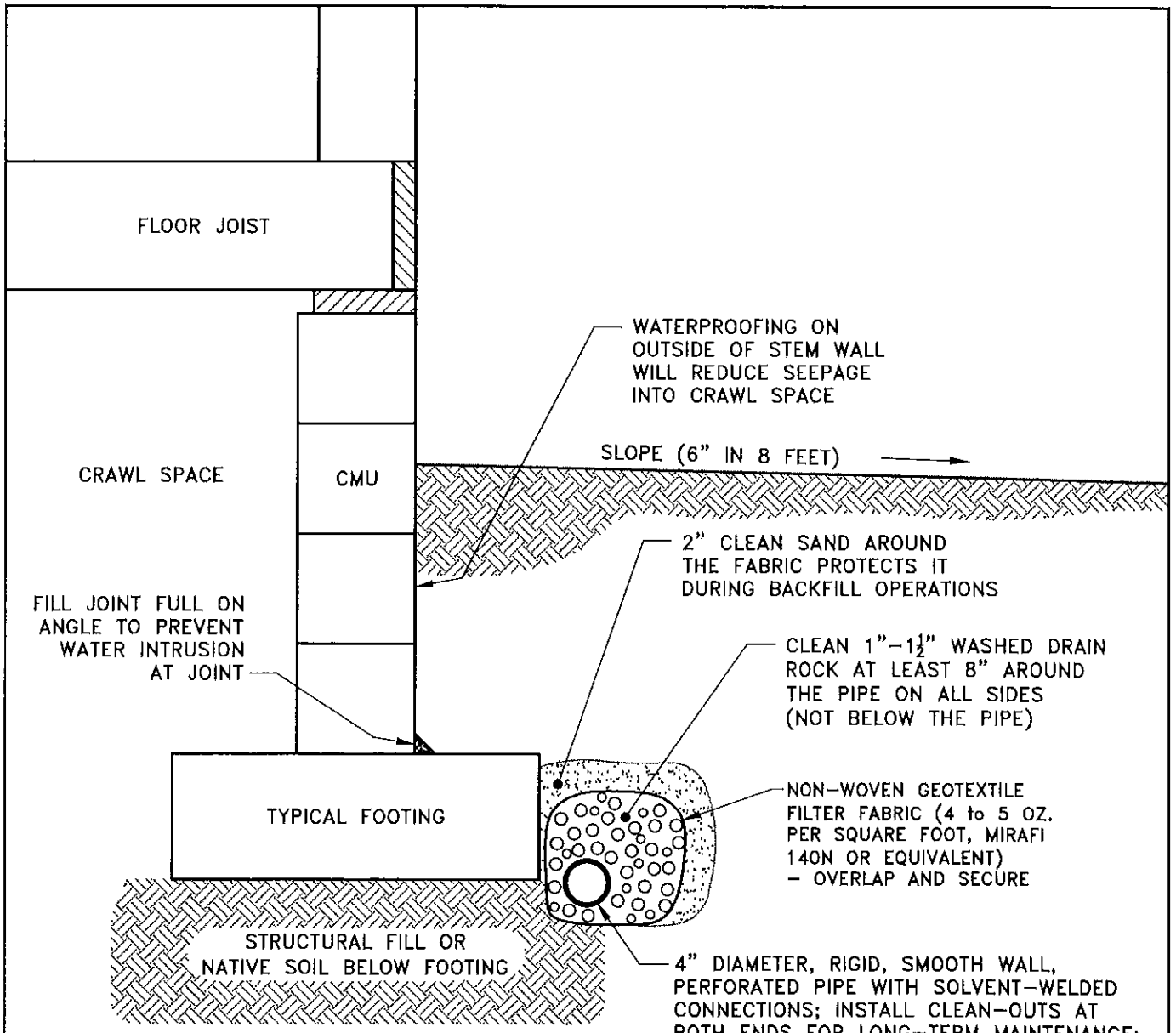
NOTES:

(1) VAPOR BARRIER TO BE STEGO INDUSTRIES 15mil STEGO WRAP OR EQUIVALENT. OWNER MAY CHOOSE TO USE 6mil VISQUENE, UNDERSTANDING IT WILL NOT WORK AS WELL.

(2) CAPILLARY BREAK ROCK BELOW VAPOR BARRIER TO BE 1/4" TO 3/4" CLEAN CRUSHED ROCK OR EQUIVALENT.

FOR ILLUSTRATION PURPOSES ONLY – NOT FOR CONSTRUCTION
NOT TO SCALE

THE GALLI GROUP GEOTECHNICAL CONSULTING 612 NW 3rd Street Grants Pass, OR 97526	TYPICAL FOUNDATION DRAIN SLAB ON GRADE FLOOR 750 SOUTHSIDE ROAD SUTHERLIN, OREGON	DATE: OCTOBER 2019 JOB NO: 02-5731-01 REV: 10/25/2019 1:49 PM PREPARED BY: MG3/BD 5731 750 Southside Road Sutherlin FIG 04 - slab og.dwg	FIGURE: 4



NOTES:

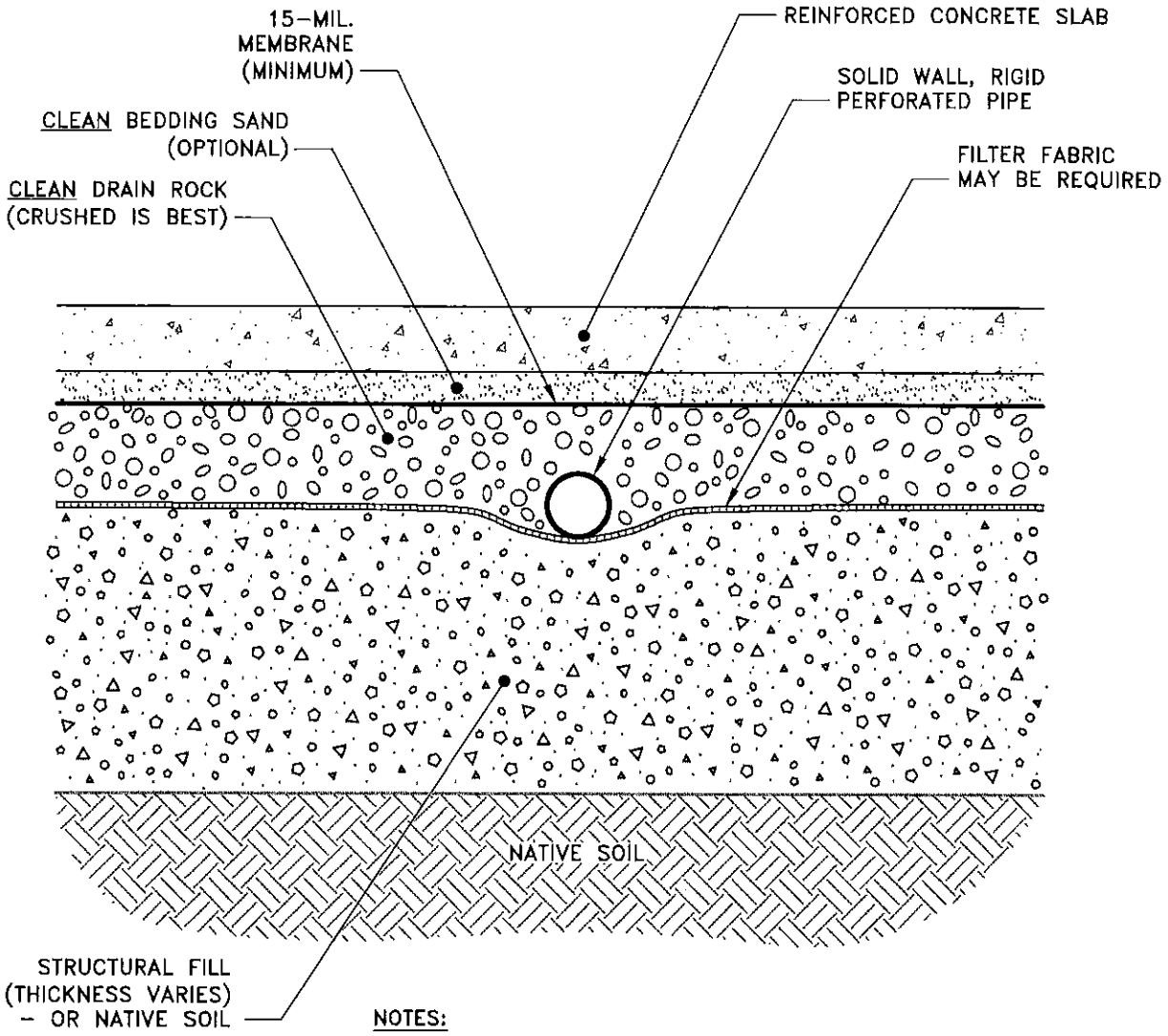
(1) VAPOR BARRIER TO BE STEGO INDUSTRIES 15mil STEGO WRAP OR EQUIVALENT. OWNER MY CHOOSE TO USE 6mil VISQUENE, UNDERSTANDING IT WILL NOT WORK AS WELL.

(2) CAPILLARY BREAK ROCK BELOW VAPOR BARRIER TO BE 1/4" TO 3/4" CLEAN CRUSHED ROCK OR EQUIVALENT.

FOR ILLUSTRATION PURPOSES ONLY – NOT FOR CONSTRUCTION
NOT TO SCALE

THE GALLI GROUP
GEOTECHNICAL CONSULTING
612 NW 3rd Street
Grants Pass, OR 97526

TYPICAL FOUNDATION DRAIN WITH CRAWL SPACE	
750 SOUTHSIDE ROAD SUTHERLIN, OREGON	
DATE: OCTOBER 2019	FIGURE: 5
JOB NO: 02-5731-01	
REV: 10/25/2019 12:20 PM	
PREPARED BY: BD	
5731 750 Southside Road Sutherlin FIG 05 - slabcrawl.dwg	



NOTES:

(1) MAXIMUM SPACING IS 15 FEET.

(2) ORIENT PIPE PERFORATIONS TO BOTTOM.

(3) ASSEMBLE PIPE USING SOLVENT-WELDED CONNECTIONS.

(4) DO NOT DRIVE OVER DRAIN LINES.

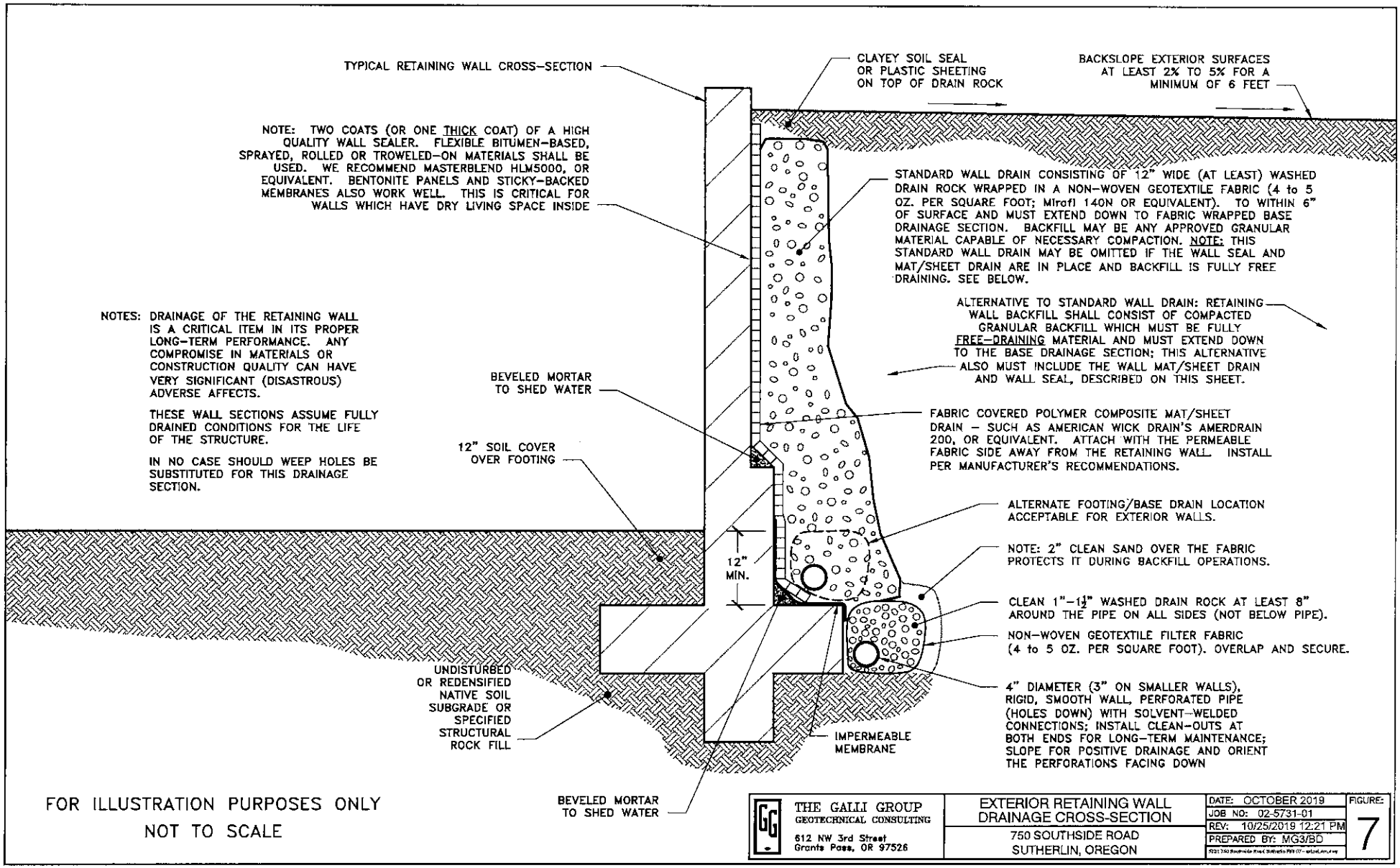
(5) DRAIN ROCK AND STRUCTURAL FILL TO MEET SPECS. IN REPORT BODY - SLOPE PIPE TO DRAIN.

(6) MAY REQUIRE FILTER FABRIC ON NATIVE SUBGRADE OR IF STRUCTURAL FILL IS VERY SILTY OR SANDY.

FOR ILLUSTRATION PURPOSES ONLY

NOT TO SCALE

THE GALLI GROUP GEOTECHNICAL CONSULTING 612 NW 3rd Street Grants Pass, OR 97526	FLOOR SUBDRAIN DETAIL 750 SOUTHSIDE ROAD SUTHERLIN, OREGON	DATE: OCTOBER 2019 JOB NO: 02-5731-01 REV: 10/25/2019 12:21 PM PREPARED BY: BD 5731 750 Southside Road Sutherlin FIG 06 - floorsub.dwg	FIGURE: 6



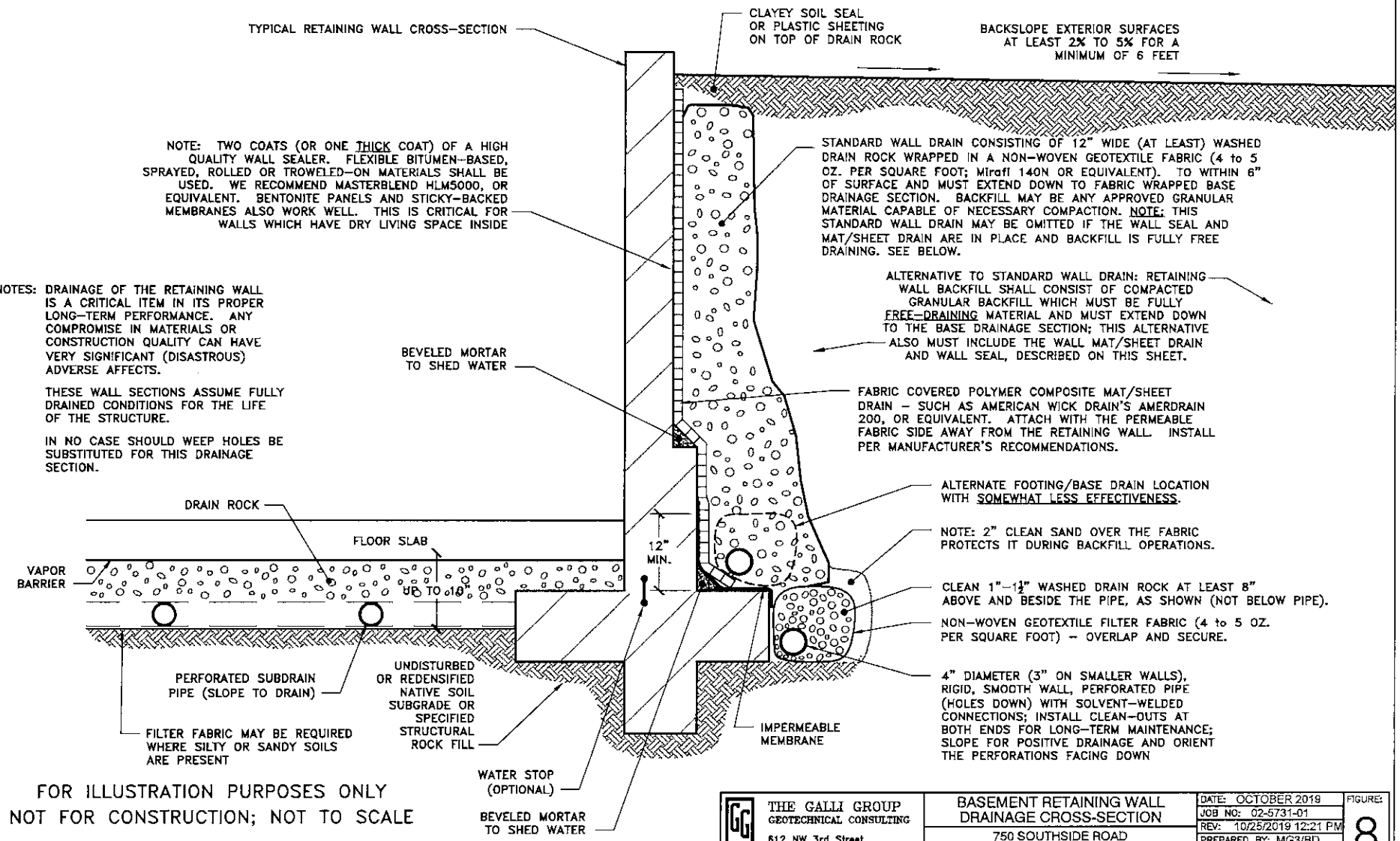
FOR ILLUSTRATION PURPOSES ONLY
NOT TO SCALE

THE GALLI GROUP
GEOTECHNICAL CONSULTING
612 NW 3rd Street
Grants Pass, OR 97526

EXTERIOR RETAINING WALL DRAINAGE CROSS-SECTION
750 SOUTHSIDE ROAD
SUTHERLIN, OREGON

DATE: OCTOBER 2019
JOB NO: 02-5731-01
REV: 10/25/2019 12:21 PM
PREPARED BY: MG3/BD

FIGURE: 7



THE GALLI GROUP GEOTECHNICAL CONSULTING 612 NW 3rd Street Grants Pass, OR 97526	BASEMENT RETAINING WALL DRAINAGE CROSS-SECTION 750 SOUTHSIDE ROAD SUTHERLIN, OREGON	DATE: OCTOBER 2019 JOB NO: 02-5731-01 REV: 10/25/2019 12:21 PM PREPARED BY: MG3/BD	FIGURE: 8

APPENDIX A

BORING LOGS

THE GALLI GROUP
GEOTECHNICAL CONSULTANTS

BORING LOG
B-1

Project: 750 SOUTHSIDE ROAD, SUTHERLIN
Client: DYANNA IRVINE
Location: W. SIDE OF LOT 7 (APPROX. 55' FROM S. EDGE OF SOUTHSIDE RD.)
Driller: TGG (BLAKE, KEN)
Drill Rig: ATV MOUNTED RIG, 4" DIA. SSA
Depth To Water> Initial ⏚ : At Completion ⏚ :

Project No.: 02-5731-01
Date: 10/14/2019
Elevation:
Logged By: DENNIS DURU

Graphic Log	USCS	Description	Depth	Sample No. and Type	NMC	Standard Penetration Test N	Standard Penetration Test CURVE (10 30 50)
	OL	Organic topsoil/rootzone. 0.2	0				
	ML/SM	Medium dense, brown, sandy clayey silt; moist. 2.0		S-1	16%		
	SM/ML	Medium dense, light brown, silty fine Sand; moist.	3.5	S-2	14%	11	
				S-3	18%	9	
			7				
		8.5		S-4	12%	11	
	CH/MH	Stiff to very stiff, brown, silty Clay; moist, some weathered rock fragments.	10.5	S-5	21%	17	
			14				
				S-6	23%	21	
			17.5				
		21.5	21	S-7	23%	24	
		Bottom of Boring at 21.5 Feet. No Free Groundwater Encountered.	24.5				

Legend of Samplers: ☐ Grab sample ◧ SPT sample 𝙸 Shelby tube sample

This information pertains only to this boring and should not be interpreted as being indicative of the site.

THE GALLI GROUP
GEOTECHNICAL CONSULTANTS

BORING LOG
B-2

Project: 750 SOUTHSIDE ROAD, SUTHERLIN
Client: DYANNA IRVINE
Location: E. SIDE OF LOT 7 (APPROX. 80' FROM S. EDGE OF SOUTHSIDE RD.)
Driller: TGG (BLAKE, KEN)
Drill Rig: ATV MOUNTED RIG, 4" DIA. SSA
Depth To Water> Initial ⏚ : At Completion ⏚ :

Project No.: 02-5731-01
Date: 10/14/2019
Elevation:
Logged By: DENNIS DURU

Graphic Log	USCS	Description	Depth	Sample No. and Type	NMC	Standard Penetration Test N	Standard Penetration Test CURVE (10 30 50)
	OL	Organic topsoil/rootzone.	0.2				
	ML/SM	Medium dense, brown, sandy clayey silt; moist.	1.0				
	SM/ML	Medium dense, light brown, silty fine Sand; moist	0	S-1	12%	25	
			3.5				
	MH/CH	Stiff to very stiff, brown, silty Clay; moist, some weathered rock fragments.	5.0	S-2	22%	12	
			7	S-3	21%	20	
			9.0				
		Bottom of Boring at 9.0 Feet. No Free Ground Water Encountered.	10.5				
			14				
			17.5				
			21				
			24.5				

Legend of Samplers: ☐ Grab sample ◪ SPT sample ▯ Shelby tube sample

This information pertains only to this boring and should not be interpreted as being indicative of the site.

THE GALLI GROUP
GEOTECHNICAL CONSULTANTS

BORING LOG
B-3

Project: 750 SOUTHSIDE ROAD, SUTHERLIN
Client: DYANNA IRVINE
Location: W. SIDE OF LOT 8 (APPROX. 70' FROM S. EDGE OF SOUTHSIDE RD.)
Driller: TGG (BLAKE, KEN)
Drill Rig: ATV MOUNTED RIG, 4" DIA. SSA
Depth To Water> Initial ⏚ :

Project No.: 02-5731-01
Date: 10/14/2019
Elevation:
Logged By: DENNIS DURU
At Completion ⏚ :

Graphic Log	USCS	Description	Depth	Sample No. and Type	NMC	Standard Penetration Test N	Standard Penetration Test CURVE (10 30 50)
	OL	Organic topsoil/rootzone.	0.2				
	ML/SM	Medium dense, brown, silty fine Sand; moist.	1.0				
	GC-GM	Very stiff, brown, gravelly silty Clay; dry to damp.	3.5	S-1	16%	22	
	SC	Medium dense, brown clayey Sand; moist, some gravel.	5.0	S-2	16%	31	
		Bottom of Boring at 6.5 Feet. No Free Ground Water Encountered.	6.5				

0 — 7 — 10.5 — 14 — 17.5 — 21 — 24.5

Legend of Samplers: ☐ Grab sample ◪ SPT sample ▯ Shelby tube sample

This information pertains only to this boring and should not be interpreted as being indicative of the site.

THE GALLI GROUP
GEOTECHNICAL CONSULTANTS

BORING LOG
B-4

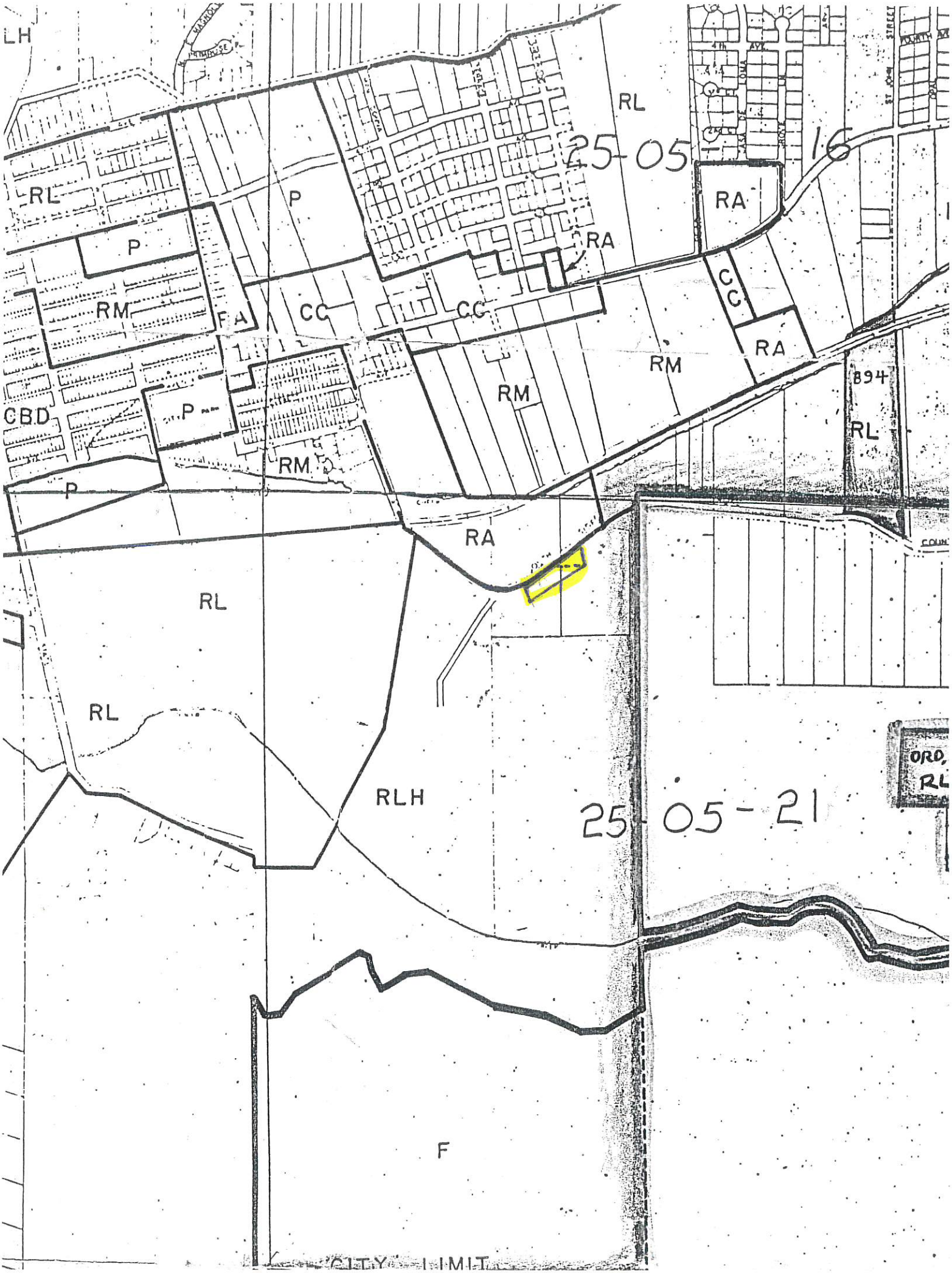
Project: 750 SOUTHSIDE ROAD, SUTHERLIN
Client: DYANNA IRVINE
Location: E. SIDE OF LOT 8 (APPROX. 50' FROM S. EDGE OF SOUTHSIDE RD.)
Driller: TGG (BLAKE, KEN)
Drill Rig: ATV MOUNTED RIG, 4" DIA. SSA
Depth To Water> Initial ⏚ : At Completion ⏚ :

Project No.: 02-5731-01
Date: 10/14/2019
Elevation:
Logged By: DENNIS DURU

Graphic Log	USCS	Description	Depth	Sample No. and Type	NMC	Standard Penetration Test N	Standard Penetration Test CURVE (10 30 50)
	OL	Organic topsoil/rootzone. 0.2	0				
	ML/SM	Medium dense, brown, sandy clayey silt; moist. 2.0					
	GC/SC	Medium dense, brown, clayey Sand and Gravel; dry. 5.0	3.5	S-1	18%	24	
	GC	Medium dense, brown, clayey Gravel; moist. 6.5		S-2	18%	17	
	CL/SC	Very stiff, brown, Gravelly Clay; moist. 8.0	7	S-3	18%	20	
		Bottom of Boring at 8.0 Feet. No Free Ground Water Encountered.	10.5				
			14				
			17.5				
			21				
			24.5				

Legend of Samplers: ☐ Grab sample ◪ SPT sample ▯ Shelby tube sample

This information pertains only to this boring and should not be interpreted as being indicative of the site.


LH
RL
25-05-16
RA
RL
P
P
RA
CC
RM
FA
CC
CC
RA
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RM
894
CBD
P
RL
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RA
RL
RL
RLH
25-05-21
ORD,
RL
F
CITY LIMIT

PLAN DESIGNATIONS

RESIDENTIAL

RL	Low Density
RLH	Low Density Hillside
RM	Medium Density
RA	High Density

COMMERCIAL

CBD	Commercial Business District
CC	Commercial Community

INDUSTRIAL

LI	Light Industrial
HI	Heavy Industrial

COMMUNITY

CSA	Community Service Airport
P	Public
F	Forestry

ATTACHMENT C

civil
structural
surveying
architecture
planning

809 SE Pine St
Roseburg, OR 97470

ieengineering.com
541.673.0166

MEMO

To: City of Sutherlin – Planning Department

From: Emily Brandt, Planner, i.e. Engineering

cc: Mark Garrett, Dyanna Irvine

Date: 2020-01-03

Re: Cooper Creek Estates Subdivision Lots 7 & 8 Zone Change– Traffic

This memo is being written to address traffic counts for the proposed construction of up to four (4) duplexes, three (3) associated driveways, and utilities on lots 7 and 8 of Cooper Creek Estates Subdivision located along Southside Road in Sutherlin, OR. The proposed project will occur on the existing two lots: R131991 (38,768 sq. ft. /0.82 acres) and R131992 (18,295 sq. ft. /0.42 acres) located along Southside Road between the intersections of Waite Avenue and Sea Street. Southside Road is classified as a 'collector' by Sutherlin's Transportation System Plan (TSP). The parcels are located within the Urban Growth Boundary and City Limits for the City of Sutherlin. Currently, the properties are undeveloped with the exception of a utility easement which passes along the property lines of lots 7 and 8 which was developed as part of an earlier phase of Cooper Creek Estates Subdivision.

The current zoning of both lots 7 and 8 is RH (Residential Hillside) which permits the development of single family lots with min. lot size of 12,000 sq. ft. and duplexes as a PUD (Planned Unit Development). Development of the site under the proposed zone change of R2 (Medium Density Residential) will include four (4) duplex buildings and associated impervious paved driveways and sidewalks, underground utilities, and open areas and landscaping. The minimum lot size for duplexes is 6,000 sq. ft. A partition of Lot 7 into three (3) lots will meet the minimum lot size for duplexes under the R2 zoning requirements.

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541.673.0166

Estimated average daily traffic counts for each of the RH allowable uses and the proposed R2 allowable uses are outlined in the following table:

TRIP GENERATION ANALYSIS*:

Zone	Land-Use	Min. lot size (sq. ft.)	Number of Allowable Units	ITE Code	Trips per Unit	ADT Weekday Total
RH (existing)	Single Family	12,000 sq. ft.	3 total (2 for lot 7 and 1 for lot 8)	210	9.57	29
RH (existing)	Duplex PUD (rented)	na	8	270	7.50	60
R2 (proposed)	Duplex (rented)	6,000 sq. ft.	9	224	5.11	46

*Trip Generation 7th Edition, Institute of Transportation Engineers

Under the existing RH zoning, the Average Daily Trips on a weekday would expect to be somewhere between 29-60 trips per day. With the zone change and proposed design, we expec the development to generate up to 46 trips per day. Hence, trip generations for rented duplexes in the proposed R2 Zone fall within the range of current allowable uses under the RH zoning.

Sincerely,

Emily Brandt

Emily Brandt, Planner

ATTACHMENT D

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Roseburg, OR 97470

ieengineering.com
541.673.0166

MEMO

To: City of Sutherlin – Planning Department

From: Emily Brandt, Planner, i.e. Engineering

cc: Mark Garrett, Dyanna Irvine

Date: 2020-01-03

Re: Cooper Creek Subdivision Lots 7 & 8 Zone Change – Access

This memo is being written to address access driveways for the proposed construction of up to four (4) duplexes, three (3) associated driveways, and utilities on lots 7 and 8 of Cooper Creek Subdivision located along Southside Road in Sutherlin, OR. The proposed project will be on two lots: R131991 (38,768 sq. ft. /0.82 acres) and R131992 (18,295 sq. ft. /0.42 acres) located along Southside Road between the intersections of Waite Avenue and Sea Street. The parcels are located within the Urban Growth Boundary and City Limits for the City of Sutherlin. Currently, the property is undeveloped with the exception of an existing utility easement located between along the shared property lines of lots 7 and 8.

Proposed development of the two lots will include up to four (4) duplex buildings, impervious paved driveways and sidewalks, underground utilities, and open areas and landscaping. Three (3) total driveways, with minimum of 250' spacing, are proposed off of Southside road; which is classified as a 'collector' street per Sutherlin's current Transportation System Plan. Each driveway will be spaced at the minimum distance of 250' required by the City of Sutherlin's requirements. Existing lots 7 and 8 have approximately 535' of frontage along Southside Road. One driveway at a minimum, would need to serve multiple units.

Sincerely,

Emily Brandt

Emily Brandt, Planner

ATTACHMENT E

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809 SE Pine St
Roseburg, OR 97470

ieengineering.com
541.673.0166

MEMO

To: City of Sutherlin – Planning Department

From: Emily Brandt, Planner, i.e. Engineering

cc: Mark Garrett, Dyanna Irvine

Date: 2020-01-03

Re: Cooper Creek Subdivision Lots 7 & 8 Zone Change – Site Drainage

This memo is being written to address the conceptual drainage design for the proposed construction of up to four (4) duplexes, associated driveways, and utilities on lots 7 and 8 of Cooper Creek Subdivision located along Southside Road in Sutherlin, OR. The proposed project will be on two lots: R131991and R131992 located along Southside Road between the intersections of Waite Avenue and Sea Street. The parcels are located within the Urban Growth Boundary and City Limits for the City of Sutherlin. Currently, the property is undeveloped and generally drains towards South Side Road, flowing from the north southeast to northwest of the properties.

Development of the site will include up to four (4) duplex buildings, impervious paved driveways and sidewalks, underground utilities, and open areas and landscaping. All stormwater will remain surface flow and collect in drains. All drains will be piped to swales or detention basins, located within the parcel, to address water quantity and quality and then discharge into the seasonal creek. Stormwater will not discharge to adjacent properties. The storm system will be designed to comply with the City of Sutherlin's stormwater manual.

During construction of the site, proper erosion control measures will be installed. Development of the site will not negatively impact existing drainage patterns or neighboring properties.

Sincerely,

Emily Brandt

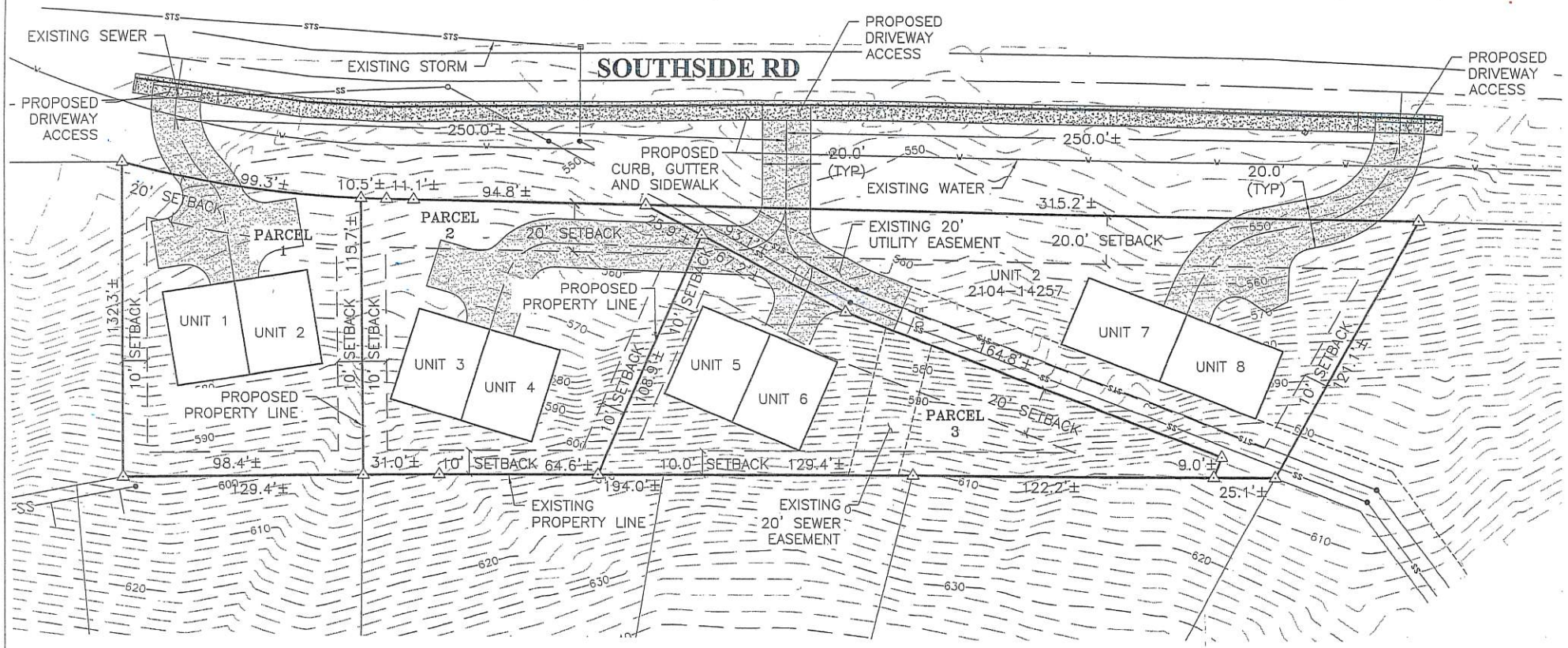
Emily Brandt, Planner

APPLICANT'S EXHIBIT

FIGURE 1

20-S002

ZONE CHANGE & LAND PARTITION APPLICATION EXHIBIT
FOR LOTS 7 & 8 OF COOPER CREEK ESTATES



PROPERTY INFO:

OWNER:	COOPER CREEK ESTATES LLC
TAX ID NO./ACREAGE:	R131991/0.89± & R131992/0.42±
MAP ID NO.:	250521BA3400 & 3500
EXISTING ZONE:	RH– RESIDENTIAL HILLSIDE
PROPOSED ZONE:	R2– MEDIUM DENSITY RESIDENTIAL
ZONED:	CITY OF SUTHERLIN
SEWER:	CITY OF SUTHERLIN
FIRE:	~~FIRE DISTRICT #2~~ CITY OF SUTHERLIN

PROPOSED PARCELS:

PARCEL 1 SIZE 11,975± SF
PARCEL 2 SIZE 13,504± SF
PARCEL 3 SIZE 12,944± SF

809 SE Pine Street
Roseburg, Oregon 97470
PHONE (541) 673-0166
FAX (541) 440-9392
iemail@ieengineering.com

PROJECT NO. 2458-04
DWG BY: DTM

ieintern Jan 10, 2020 Z:\JOBS\2458-Dynnna Irvine\2458-04 Cooper Creek Estates\CADD\Cooper Creek Lots 7 and 8 Exhibi EBL.dwg

(*) CONSIDERATION NEEDS TO BE TAKEN INTO DRIVEWAY LOCATION ONTO SOUTHSIDE RD. AND INTERSECTION OF WAHR STREET AND SOUTHSIDE RD. (BE)

2-25-2020

Jamie Chartier

From: HOROWITZ Micah <Micah.HOROWITZ@odot.state.or.us>
Sent: Thursday, April 9, 2020 1:58 PM
To: Jamie Chartier
Cc: WANG Wei * Michael; WELLS David; PEDERSON Glen O; BROOKS Aaron G
Subject: 750 & 780 South Side Rd - 20-S002

Hi Jamie,

The proposed rezone of the 1.31 proposed rezone from RH to R-2 should not affect ODOT facilities. Thanks for keeping us in the loop.

Best regards,
Micah

Micah Horowitz, AICP
ODOT Region 3 | Senior Transportation Planner
100 Antelope Road, White City, OR 97503
p: 541.774.6331 | c: 541.603.8431
e: micah.horowitz@odot.state.or.us

Dr. Sheila Strauch & Matthew Strauch

805 Valley Vista St.

Sutherlin, Oregon 97479

(541)212-6078

Community Development Department:

We live within the 100-foot zone of the proposed zone map change File No. 20-S002 and thus qualify as an affected party.

We see changing the zone from low density to medium would be a negative for our area. From looking at the plans supplied, these would be smaller duplex two-story homes. It would be safe to assume that these homes would be targeted towards a lower income demographic. Thus, affecting our property values as well as bringing less then savory people to our otherwise quiet neighborhood. We understand that Cooper Creek Estates could start building a single home there now and that is within their rights. However, the building of multiple residential homes, as well as all the ground work involved, would create a lot of noise pollution. We love the greenbelt that not only separates us, but also welcomes the local wildlife to us. Living on top of the hill we also have to be concerned about the structural integrity of the hill and how it may be compromised by work below us. A geological survey would have to be completed. If there is any work to be done on that hill, we would want a copy of said survey. Some of us in this area have had problems obtaining surveys and have had a large amount of ground shift, causing problems.

Due to the current Covid-19 outbreak and social distancing requirements we will not be able to appear at the hearing. We would also like to be notified if there will either be a rescheduling or a way online to at least hear it. We would advise against using the "Zoom" platform as it has recently been shown to have many security flaws and has resulted in multiple hacking instances.

Thank you for your time and respect,

Matthew and Sheila Strauch

Hi our names are Douglas Burt and Amanda Burt we represent the Burt and Santos house at 765 Valley Vista St. Sutherlin OR.

We are currently opposing the Plan Amendment, Zone change & Land Partition of 750-780 South Side Road.

We believe this will cause several issues with the south side road traffic, possible accidents and noise. We are currently concerned with the stability of our hill and of the impact the digging may have on our property and the potential to cause a slide of our property. We would request a full copy of the geological survey before any construction is started. We are also concerned that the construction of the multiple housing units may affect our property value in a negative way, also increasing our home insurance cost due to the hazard of the ground being compromised.

Thank you for your time and consideration to this matter.

Douglas & Amanda Burt
765 Valley Vista St, Sutherlin, OR 97479
541-580-1402

126 E. Central Avenue
Sutherlin, OR 97479
541-459-2856
Fax: 541-459-9363
www.ci.sutherlin.or.us

City of Sutherlin

Date: April 14, 2020
To: Sutherlin Planning Commission
From: Community Development
Re: Monthly Activity Report

This report is provided in an effort to keep you apprised of recent land use and other relevant activities.

COMMUNITY DEVELOPMENT

Urban Renewal Feasibility Study

The City completed a feasibility study for a Urban Renewal District in December, 2019. Based on the findings of the feasibility study, the City is now moving forward with the Urban Renewal Plan to create the district. Task force meetings were held in February and March. An Urban Renewal Agency meeting will be held in May. The proposed district will also be presented to the Planning Commission in May, followed by potential adoption by the City Council in June and July, 2020.

SDC Feasibility Study

As part of the City Council 2019-2020 Strategic Plan, Council identified an analysis of the City's System Development Charges (SDC's) as a high priority for the City. The Analysis has begun and is anticipated to be completed by late spring, 2020. In order to utilize the most up to date information, staff has recommended postponing the hearing until the Transportation System Plan has been completed. The public hearing is scheduled for May 11, 2020.

Ford's Pond

Final Design was presented at the March 9, 2020 City Council Meeting by the Dyer Partnership Engineers & Planners, Inc. and DLK Design.

- Waiting on Wetland Delineation Jurisdictional Determination before we can go out for bid for construction.
- RTPG due June 15, 2020
- LGGP due April 8, 2020
- LWCF due April 13, 2020

Central Plaza Park

The property has been cleared and construction is underway. The project is scheduled to be completed in June, 2020.

- Pending final design from I.E. Engineering

TRANSPORTATION

Central Avenue Paving Improvement

- Project finalized, project closed

Valentine Ave Paving Improvement

- Knife River final punch list is near completion.

Transportation System Plan (TSP)

Consultants have completed the Draft TSP and Tech Memo 7, Transportation Policy and Code Alternatives. DLCD 35-Day notice was submitted on February 11, 2020. Planning Commission will hold a public hearing on the Draft TSP and Code Alternatives on March 17, 2020.

Sidewalk Replacement/Repair

Central Park and south side of Central Avenue from Beecroft east to Silver Glen Trailer Park.

- Project complete

UTILITIES

WWTP Improvement

Substantial completion is April 7, 2020 which will start the one-year performance evaluation. The Final Performance Evaluation "Report" will be submitted to DEQ 10.5 months later (February 2021). The Performance Certification" will be submitted to DEQ 12 months after the start of the "Initiation of Operations or March of 2021.

- Project still on track with current schedule

Schoon Mountain Storage Tank and Sixth Avenue & Oak Street Pump station improvements. Bid Opening was held on February 19, 2020. Four bids were received. Fackler Construction submitted the lowest bid and has the sufficient experience and qualifications to satisfactorily construct the project. City Council awarded the contract to Fackler Construction in the amount of $705,749.00 on February 24, 2020.

- Construction started April 1, 2020
- Construction completion date November 2020

South Calapooia Low Pressure Force Main Sewer Extension Project: Bid Opening was held on February 18, 2020. Five bids were received. Cradar Enterprise Inc. submitted the lowest bid and has the sufficient experience and qualifications to satisfactorily construct the project. City Council awarded the contract to Cradar Enterprise Inc. in the amount of $88,538.00 on February 24, 2020.

- Construction start date April 20, 2020
- Construction completion date late summer 2020

Nonpareil Water Treatment Plant Improvement. Contract awarded on January 27, 2020 to The Dyer Partnership Engineers & Planners, Inc. for Engineering Services and Construction Management. Kick-Off meeting was held on March 11, 2020.

- Start design February 2020
- Complete design July 2020
- Bid process and contract award September/October 2020
- Start construction October 2020
- Complete construction June 2021

LAND USE ACTIVITY

Building Worksheets

- 2020-001 -008 on previous Activity Report(s)
- 2020-009 - 195 Addison Ave – SFD
- 2020-010 – 119 S Calapooia St – CIU – new business (Massage Therapy)

- 2020-011 – 1352 E Central Ave – sign
- 2020-012 – 2610 Greyfox Ct – SFD
- 2020-013 – 867 W Central Ave – CIU – new business (Escape Room)
- 2020-014 – 1000 E Central Ae, #48 – MH
- 2020-015 – 105 W Central Ave – CIU – new business & remodel (Backside Brewery)
- 2020-016 – 172 Sunset – Accessory Bldg
- 2020-017 – 116 E Second Ave – accessory bldg
- 2020-018 - 324 St Johns St – foundation repair
- 2020-019 – 1313 Duke Ave – Vehicle Repair within an existing Ind Bldg
- 2020-020 – 119 S Calapooia St – reroof existing Commercial Bldg
- 2020-021 – 142 Addison Ave – SFD
- 2020-022 – 1000 E Central Ave, Sp 48 – carport

Active Land Use Applications

- 20-S001 – 20-S002 on previous Activity Report(s)
- 20-S003 – City of Sutherlin – TSP update and amendment to SDC
- 20-S004 – Mid Oregon Builders – PLA
- 20-S005 -- Mid Oregon Builders – PLA
- 20-S006 – Orr – Major Modification
- 20-S007 – Houde – Class A Variance

Right of Way Applications

- 20-01 – 20-02 on previous Activity Report(s)
- 20-03 – 667 W Central Ave – Avista Utilities
- 20-04 – 720 South Side Rd – Avista Utilities
- 20-05 – 1000 block of Laurel – Avista Utilities
- 20-06 – 251 W Everett Ave – Pacific Power
- 20-07 – 356 Jade St – Avista Utilities