EXHIBIT A

City of Sweet Home
Community and Economic Development Department- Planning Program
3225 Main Street, Sweet Home, OR 97386 541-367-8113

City of Sweet Home 2025 North Sweet Home Area Plan Adoption Legislative Findings

INTRODUCTION

The Draft 2025 North Sweet Home Area (NSHA) Plan is intended to provide guidance for future City decisions, certainty for landowners, and a cohesive and functional built environment through incremental development of NSHA properties. The Plan was prepared in collaboration with City staff, stakeholders, and community residents and documents the research, analysis, and community involvement process used to identify system assets and needs. The intent with this plan is to add it as an amendment to and sub-element of the 2025 Transportation System Plan (TSP) and current Comprehensive Plan.

The 2010 Sweet Home Comprehensive Plan includes goals for transportation systems in Sweet Home, incorporating Statewide Planning Goals 12 (Transportation). The Plan also adds community goals to balance the development needs of future land development with a system that serves all users. This Draft 2005 NSHA Plan is compatible with these goals and further details recommendations and improvement projects to align with the intent of the Comprehensive Plan.

The Draft 2025 NSHA Plan is proposed for adoption as an amendment to the Comprehensive Plan and a contextual sub-element document to the 2025 TSP that replaces the 2005 TSP. This document includes criteria of approval and findings of compliance that support a Type IV Legislative Procedure for plan adoption.

CRITERIA OF APPROVAL

Sweet Home Municipal Code Chapter 17.116 sets out the decision-making criteria for amendments to the Comprehensive Plan and Development Code. The decision criteria are listed in bold text with findings in plain text.

17.116.030 DECISION CRITERIA

Amendments to the Comprehensive Plan or Development Code test shall be approved if the evidence can substantiate the following:

A. The proposed amendment will not adversely impact the following:

1. Traffic generation and circulation patterns;

The Draft 2025 NSHA Plan includes an analysis of existing conditions; creation and evaluation of land use/transportation options; selection of a preferred alternative; and suggestion of changes to comprehensive plan and zoning designations, as well as policies and transportation projects identified in the Draft 2025 NSHA Plan. Therefore, this criterion is satisfied.

2. **Demand for public facilities and services;**

The proposed plan does not include any improvements that will increase demand for public services—all proposed improvements are intended to satisfy existing demand, and future demand resulting from population growth. Therefore, this criterion is satisfied.

3. **Level of park and recreation facilities;**

The Draft 2025 NSHA Plan does not include any changes in the level of park and recreation facilities. Therefore, this criterion is satisfied.

B. A demonstrated need exists for the proposed amendment.

The current Comprehensive Plan includes the goal for "a well-planned, comprehensive transportation system that balances the need for future land development with a system that serves all users." The last Transportation System Plan that was mentioned in the Comprehensive Plan was completed in 2005 and did not include a North Sweet Home Area plan. The City of Sweet Home has grown substantially since that time. TSPs are mandated by Oregon's land use laws to promote thoughtful growth and assist local agencies in developing transportation systems that meet the needs of residents. The Draft 2025 NSHA Plan was prepared in conjunction with the 2025 TSP. Therefore, this criterion is satisfied.

C. The proposed amendment complies with all applicable Statewide Planning Goals and administrative rule requirements. In addition, amendments to the Development Code shall conform with applicable City Comprehensive Plan policies.

Goal 1 Citizen Involvement:
To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process: To provide for widespread citizen involvement; To assure effective two-way communication with citizens; To provide the opportunity for citizens to be involved in all phases of the planning process; To assure that technical information is available in an understandable form; To assure that citizens will receive a response from policy-makers; and To insure funding for the citizen involvement program.

The Draft 2025 NSHA Plan is a long-term planning document that guides future development and investment in a transportation system in the north Sweet Home area. The development of the Plan included technical analysis, guidance from a combined Public Advisory Committee (PAC) and Technical Advisory Committee (TAC), and public engagement events. The project team created an introductory video and used flyers and a combination of social media and physical posters to generate public interest. Stakeholders represented small businesses, Sweet Fire District, Linn Shuttle, ODOT representatives, local landowners, Albany & Eastern Railroad, City committees, and City officials.

The process for approval of the Draft 2025 NSHA Plan is detailed in 17.128.020. The adoption process requires public hearings and notifications as outlined in 17.128.020(D) and (F): two hearings are required, one Planning Commission hearing and one City Council hearing, for application approval. The Planning Commission public hearing date is scheduled for April 3, 2025. The City Council public hearing is scheduled for April 22, 2025. The City provided notice in accordance with 17.128.020(D) and (F), which details the required public hearing notification process. In compliance with these sections, the City met the required notice timelines and published the notices in the local newspaper. Additionally, the Department of Land Conservation and Development was notified in writing by the City.

Based on the above findings, the process for adoption of the amendment complies with Goal 1 and meets the requirements of the State's Citizen Involvement provisions.

Goal 2 Land Use Planning:
To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions. City, county, state and federal agency and special district plans and actions related to land use shall be consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS Chapter 268.

The City has an established land use planning process and a policy framework that serves as a basis for the decision on this request. The policy framework is found in the City's acknowledged Comprehensive Plan, which includes policies and goals relevant to the decision. An analysis of how the Draft 2025 NSHA Plan is consistent with this policy framework is presented below, as required for the requested Comprehensive Plan amendments.

- Amendments to the City's Comprehensive Plan have become part of the policy framework that serves as the basis for decisions and actions related to the use of land. The proposal is to replace the currently adopted 2005 TSP with the Draft 2025 NSHA Plan as an amendment to and sub-element of the 2025 TSP and current Comprehensive Plan, to be adopted and incorporated by reference as an element of the Comprehensive Plan.
- Existing state, regional, and local plans, policies, and regulations relevant to the Draft 2025 NSHA Plan were reviewed and summarized in order to guide the development of the NSHA Plan. (See Appendix A, TM #1, Plans & Policy Framework).
- Coordination between state, regional, and local agencies was accomplished through both the PMT, which included key City staff members, the TAC and PAC. Members of the TAC and PAC that provided guidance on the development of the NSHA Plan included representatives from multiple agencies and organizations, including those listed below.
  - City of Sweet Home
  - Sweet Home Planning Commission
  - Sweet Home City Council
  - Sweet Home Fire District
  - DLCD
  - ODOT
  - Albany & Eastern Railroad
  - US Forest Service
  - Sweet Home School District
  - Sweet Home Chamber of Commerce
  - Linn Shuttle/Senior Center
- The project management team for the Draft 2025 NSHA Plan was comprised of City staff and consultants from DKS Associates, MIG and ODOT. In addition, the project team met in workshops with the PAC and TAC members on June 18, 2024, October 30, 2024, and January 9, 2025. The project team had joint work sessions with the Planning Commission and City Council on November 12, 2024 and January 28, 2025.

Based on the above findings, the process for adoption of the amendment complies with Goal 2 and meets the requirements of the State's Land Use Planning provisions.

Goal 3 – Agricultural Lands:
Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.

Goal 3 is not applicable to the Draft 2025 NSHA Plan.

Goal 4 Forest Land:

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

Goal 4 is not applicable to the Draft 2025 NSHA Plan.

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

To protect natural resources and conserve scenic and historic areas and open spaces. Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability.

OAR 660-015-0000(5) requires local governments to protect significant riparian corridors, upland wildlife habitat, and wetlands to conserve these resources and the biological systems they contain and support. The City of Sweet Home details protection and conservation efforts in the Comprehensive Plan and Development Code (Title 17 of the Sweet Home Municipal Code).

The Draft 2025 NSHA Plan contains significant areas of wetlands and floodplains in the vicinity of the South Santiam River. Much of the area is within a Natural Resources overlay zone, which requires additional screening for environmental issues through the City's development process.

The Draft 2025 NSHA Plan Policies and Plan Elements (see Exhibit B, NSHA Plan) support natural and cultural resource protection, including objectives below specifically address protection objectives and projects that generally support protection by promoting walking, biking, and taking transit.

- NSHA Policy 4, Parks and Trails: The existing Quarry Park, riverfront amenities, and new parks and open spaces will be connected by a system of trails and pathways, including a mixed-use path along the area's framework streets.
- NSHA Policy 5, Natural Resources: The North Sweet Home Area contains significant river frontage, riparian areas, wetland features, scenic views, and other natural resources that will be protected and enhanced as the area develops.
- Plan Element, Parks and Trails: A system of parks and trails are envisioned for the NSHA to take advantage of existing City-owned open space and buildout of new transportation infrastructure. The park and trails system will include the following elements.
    - Public Riverfront access at key locations
    - Connections to and through Quarry Park
    - Multi-use trails along key roadways to provide safe and comfortable access for people walking and rolling
    - Protected wetlands to provide open spaces within future development areas
- Proposed Transportation Projects:
    - M-1: 18th Avenue Multiuse Path: Install multiuse path along 18th Avenue and Tamarack Street.
    - M-2: New Neighborhood Street 2 MUP: Install multiuse path along New Neighborhood Street 2.
    - M-3: Quarry Park Trail: Install new trail route through Quarry Park.
    - M-4: Tamarack Street Pedestrian Trail: Install new trail route between Tamarack Street and 24th Avenue, including pedestrian bridge over existing body of water.
    - M-5: 24th Ave/Neighborhood St 1 Crossing: Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.

- M-6: 24th Ave/Neighborhood St 2 Crossing: Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.
- M-7: 25th Ave/Willow St Crossing: Install pedestrian crossing at 24th Ave/Willow Street intersection. Type of crossing to be identified following engineering study.

The Draft 2025 NSHA Plan provides a draft set of goals and objectives that are built upon the existing transportation goal and incorporates other key interests of Sweet Home (see Appendix B, TM #2 Goals Objectives and Evaluation Criteria).

- Goal 2 – Safety:
  - Identify and improve safe crossings for bicycles and pedestrians.
  - Prioritize safe routes to school.
  - Expand the sidewalk network throughout the city.
  - Identify and implement bicycle corridors to navigate the city.
  - Improve lighting along pedestrian and bicycle corridors.
- Goal 3 – Quality of Life:
  - Minimize the impacts of transportation system improvements on existing land uses.
  - Identify and seek funding for programs that encourage healthy transportation habits.
  - Connect the city through pedestrian and bicycle paths.

The Draft 2025 NSHA Plan Goals and Objectives: will protect water quality resources and wetlands as required by law and provides land available to riverfront hospitality uses along the South Santiam River, which will continue to be protected through riparian area regulations. The preferred alternative should include a robust and connected transportation network is proposed in this area, for those walking, rolling, and driving (see Appendix B, TM #2, Goals Objectives and Evaluation Criteria).

The cumulative effect of the planned projects in the Draft 2025 NSHA Plan will protect and conserve existing natural resources and improve open spaces in Sweet Home. The amendment does not change or functionally alter any previously established protection or conservation measures.

Based on the above findings, the process for adoption of the amendment complies with Goal 5 and meets the requirements of the State's Natural Resources, Scenic and Historic Areas and Open Spaces provisions.

Goal 6 - Air, Water and Land Resources Quality:
To maintain and improve the quality of the air, water and land resources of the state. All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards.

Recommendations and development projects in the Draft 2025 NSHA Plan were designed to protect air, water, and land resources from pollution and contaminants. The recommendations support the enhancement of air, water, and land quality, ensuring the amendment aligns with Statewide Planning Goal 6.

Goal 7 - Areas Subject to Natural Disasters and Hazards:
To protect people and property from natural hazards. Local governments shall adopt comprehensive plans (inventories, policies and implementing measures) to reduce risk to people and property from natural hazards.

This amendment does not directly address potential natural disasters and hazards. These hazards are addressed in other planning processes. Therefore, this amendment is consistent with Statewide Planning Goal 7.

Goal 8 – Recreational Needs:

To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

Roughly 70 acres of land north of Zelkova Street and adjacent to the South Santiam River is designated as Residential with a "Hospitality Overlay" zone. This designation is intended to provide additional allowances for development that takes advantage of the site's potential as a recreational hub (see Exhibit B, NSHA Plan). Riverfront hospitality considerations include:

- A resort could be designed around unique site features and take advantage of views of the river and mountain landscape.
- A small resort or lodge sited adjacent to neighborhoods could be more residential in character.
- Riverfront hospitality uses like cabins and campgrounds could preserve natural features within the NSHA.
- Hospitality uses including short term rentals, campsites, yurts, or RV resorts could be located within hospitality zones.

A large new commercially focused area is envisioned for the land in the southwestern area of the NSHA, west of 24th Avenue, occupying a portion of the former Sweet Home Mill site. Many commercial uses may also be developed as outright permitted use within the Hospitality Overlay zone (see Exhibit B, NSHA Plan). Additional commercial considerations include:

- Interim uses in commercial zones could include pop- up food and drink vendors, potentially serving tourism during the Oregon Jamboree.
- Small retail businesses could serve locals as well as tourists passing through town.
- Incubator space related to tourism could be located within NSHA Hospitality overlay zone.
- A covered stage area could be located within Quarry Park.
- A commercial node near the Hospitality Overlay zone could include outdoor equipment rentals.
- Open space within the NSHA could be used to host events like the Oregon Jamboree.

A system of parks and trails are envisioned for the NSHA to take advantage of existing City-owned open space and buildout of new transportation infrastructure (see Exhibit B, NSHA Plan). The park and trails system will include the following elements.

- Public Riverfront access at key locations
- Connections to and through Quarry Park
- Multi-use trails along key roadways to provide safe and comfortable access for people walking and rolling
- Protected wetlands to provide open spaces within future development areas

Based on the above findings, the process for adoption of the amendment complies with Goal 8 and meets the requirements of the State's Recreational Needs provisions.

Goal 9 - Economic Development:

This goal requires that local comprehensive plans and policies contribute to a stable and healthy economy in all regions of the state.

The Draft 2025 NSHA Plan Economic Development Policy: will provide opportunities for industrial, commercial, and service jobs. New employment areas will be focused in the vicinity of 24th Avenue and within the Hospitality Overlay area (see Exhibit B, NSHA Plan).

The Draft 2025 NSHA Plan contains roughly 75 acres of land in Industrial designation in a large contiguous site, located at the rail crossing at 24th Avenue. This location would allow future industrial

users to take advantage of the active rail line and the flat topography of the former Sweet Home Mill site (see Exhibit B, NSHA Plan). Industrial considerations include:

- Manufacturers of prefabricated buildings or prefabricated wood components could take advantage of nearby timber industry businesses and sources.
- Timber-related industrial uses would be well situated on this railroad-adjacent site in the NSHA.
- Employment areas could include pedestrian and bike connections for both workers and residents to access the river and downtown.
- Small scale “Craft” manufacturing related to nearby tourism industries (e.g., boating, snow sports, hiking, etc.), could locate manufacturing and show-room space within the NSHA in this option.
- A brewery or food-related manufacturer could locate their facility within employment industrial employment areas.

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- A covered stage area could be located within Quarry Park.
- A commercial node near the Hospitality Overlay zone could include outdoor equipment rentals.
- Open space within the NSHA could be used to host events like the Oregon Jamboree.

Goal 4 – Economic Development (see Appendix B, TM #2) promotes economic development and tourism. The objectives of the TM #2 Goal 4 are as follows:

- Provide facilities to connect the public to downtown, parks, and other event locations and recreation opportunities
- Manage arterials to support freight in the efficient movement of goods and services
- Improve wayfinding and signage around the City to improve the ability to confidently navigate the transportation network by residents and visitors
- Coordinate with state and regional partners to implement transportation strategies that support increased tourism
- Improve walkability in the Downtown area to promote economic activity.

The Draft 2025 NSHA Plan Goals and Objectives (see Appendix E, TM #10):

- The Preferred Alternative provides land for a range of industrial and commercial uses, in areas to the SW of the study area, closest to existing downtown uses and activity.

This amendment does not directly impact or inhibit economic activities or propose any zoning designation changes. Based on the above findings, the process for adoption of the amendment complies with Goal 9 and meets the requirements of the State's Economic Development provisions.

Goal 10 - Housing:
This goal requires the City plans provide for the appropriate type, location and phasing of public facilities and services sufficient to support housing development in areas presently developed or undergoing development or redevelopment.

Several Draft 2025 NSHA Plan policies and projects promote a transportation system that can adequately support housing development and future travel demand. The Draft 2025 NSHA Plan will provide a variety of housing types to help accommodate the long-term growth of the City. Residentially designated land in the NSHA will receive the R-2 zoning designation, with the possibility of additional flexibility provided by the City's Planned Development process. The residential Plan element of the Draft 2025 NSHA Plan includes over 300 acres of the NSHA area has a residential designation, providing land to help the City of Sweet Home meet its future housing needs. Design of residential neighborhoods in the NSHA will follow the following principles (see Exhibit B, NSHA Plan):

- Preserve natural features for future enjoyment of all
- Provide scenic views
- Include parks, trails, and open spaces
- Are pedestrian and bicycle friendly
- Have connected streets
- Have a mix of activities
- Provide housing for a range of incomes and lifestyles
- Have a variety of housing forms

Travel demand analysis conducted through the TSP/NSHA Plan process estimates total traffic will increase by over 20% (approximately 1,785 new households) by 2045 (see Appendix D, TM #5). Many of the identified Draft 2025 NSHA Plan projects are intended to increase travel capacity among various modes to accommodate future demand. Transportation improvements that accommodate traffic increases over the next 20 years will also help the City meet future housing needs. Many other projects are intended to complete the transportation network and options within existing residential areas. Examples of goals and projects that support increased housing capacity and other transportation improvements that serve existing residential areas include (see Appendix B, TM #2):

- Goal 1: Mobility, Accessibility, and Connectivity.
  - Address intersection capacity needs for present and future traffic volumes.
  - Upgrade key intersection locations to meet Americans with Disabilities Act (ADA) requirements.
  - Encourage active transportation through policy and engineering.
  - Ensure the transportation system provides equitable access for all people.
  - Provide connectivity within the city and identify and prioritize needed transportation connections.
- Goal 2: Safety
  - Identify and improve safe crossings for bicycles and pedestrians.
  - Prioritize safe routes to school.
  - Expand the sidewalk network throughout the city.
  - Identify and implement bicycle corridors to navigate the city.
  - Improve traffic safety through a comprehensive program of engineering, education, and enforcement.
  - Design streets to serve their anticipated function and intended use.
  - Improve lighting along pedestrian and bicycle corridors.
- Goal 3: Quality of Life
  - Preserve community identity through transportation design choices.

    - Minimize the impacts of transportation system improvements on existing land uses.
    - Connect the city through pedestrian and bicycle paths.
- Goal 4: Economic Development
    - Provide facilities to connect the public to downtown, parks, and other event locations and recreational opportunities.
    - Improve wayfinding and signage around the city to improve the ability to confidently navigate the transportation network by residents and visitors.
    - Improve walkability in the Downtown area to promote economic activity.
- Goal 5: System Management and Maintenance
    - Maintain a roadway functional classification system that prioritizes the purpose and design of each existing and future roadway. Classify streets according to function to achieve consistency in construction, operation, and maintenance.
    - Streets should operate with the intended purpose and provide a combination of mobility and access consistent with the functional classification. Traffic volumes should align with the functional classification with higher classification facilities generally carrying higher traffic volumes.
    - Street policies and design standards should be based on functional classification and other contextual considerations. Streets should be constructed to these standards unless exceptions are granted as approved by Public Works.
    - Where existing streets do not meet standards or proposed streets are unable to meet standards, other management practices (such as parking prohibition) may be utilized to maintain safe operation.
    - Balance local access to US 20 with the need to serve regional and statewide traffic, while supporting adjacent land uses
    - Plan for a transportation system that supports projected population and employment growth and maximize travel options by providing efficient routes for all modes of transportation.
- TSP and NSHA Considerations: The TSP and NSHA will likely incorporate the same or similar transportation goals and policies. However, there may be deviations to apply additional focus for considerations within the NSHA or other parts of Sweet Home. Potential considerations between variation in TSP (Citywide) and NSHA goals and policies may include:
    - Location and context specific considerations
        - Presence of rail crossings within NSHA
        - NSHA connections to downtown
        - Many areas of Sweet Home are built out while NSHA has more space for right of way opportunities
    - Intent-based considerations
        - Promotion of future development within NSHA
- Street Improvement Projects (Draft 2025 NSHA Plan, Table 1, Projects C-1 and C-2)
- New Neighborhood Street Projects (Draft 2025 NSHA Plan, Table 1, Project C-3 and C-4)
- Street Extension Projects (Draft 2025 NSHA Plan, Table 1, Projects C-5 and C-6)
- Street Improvement Projects (Draft 2025 NSHA Plan, Table 1, Projects S-1 through S-9)
- Multiuse Path Projects (Draft 2025 NSHA Plan, Table 1, Projects M-1 and M-2)
- Trail Projects (Draft 2025 NSHA Plan, Table 1, Project M-3 and M-4)
- Street Crossing Projects (Draft 2025 NSHA Plan, Table 1, Projects M-5 through M-7)

The provisions of this amendment do not address the planning or development of housing. Based on the above findings, the process for adoption of the amendment complies with Goal 10 and meets the requirements of the State's Housing provisions.

Goal 11 - Public Facilities and Services:

Goal 11 requires cities and counties 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. The goal requires that urban and rural development be "guided and supported by types and levels of urban

and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served."

Transportation facilities, including roadways, bikeways, sidewalks, and multi-use paths are a primary type of public facility and, in Sweet Home, are managed by public agencies including the City, Linn County, and ODOT. The Draft 2025 NSHA Plan documents existing conditions and future needs for Sweet Home's transportation system based on the existing and planned land uses (see Appendix C, TM #3 and Appendix D, TM #5), respectively. The Draft 2025 NSHA Plan projects (listed in Draft 2025 NSHA Plan Table1, Exhibit B) are tailored to meet identified existing and future needs and address project goals and objectives.

Based on the above findings, the process for adoption of the amendment complies with Goal 11 and meets the requirements of the State's Public Facilities and Services provisions.

Goal 12- Transportation:

Goal 12 requires cities, counties, metropolitan planning organizations, and ODOT to provide and encourage a "safe, convenient and economic transportation system." This is accomplished through development of Transportation System Plans based on inventories of local, regional and state transportation needs. Goal 12 is implemented through OAR 660, Division 12, also known as the Transportation Planning Rule ("TPR"). The TPR contains numerous requirements governing transportation planning and project development. (See the "OAR 660, Division 12" section of this document for findings of compliance with the TPR.)

Project goals and priorities that address mobility and connectivity, capital investments/funding, community needs, system management, environment, transit, safety, equity, and health guided the development of the Draft 2025 NSHA Plan. Existing conditions and future transportation needs were analyzed with respect to these goals and objectives. Elements of the Draft 2025 NSHA Plan – including existing conditions and future needs, as well transportation system standards, implementation strategies, and recommended transportation system improvements – are consistent with TPR Section -0020 requirements.

The inventory and analysis of existing and future conditions identified opportunities, by mode, to improve the transportation system are in the Draft 2025 NSHA Plan (see Appendix C, TM #3). These needs were identified in the existing conditions and needs analysis; by project team members, advisory committee members, and other community members; and through analysis using projected future traffic volumes and patterns, consistent with TPR Section -0030 requirements.

Evaluation criteria, developed in accordance with TPR Section -0035 and based on the NSHA Plan goals and objectives, were used to evaluate improvement alternatives that would address identified needs. Evaluation criteria is detailed in the Draft 2025 NSHA Plan (see Appendix B, TM #2). The criteria were presented to and refined during discussions with the TAC/PAC during their scheduled meetings and community members at public meetings.

The regulatory basis for proposed transportation policies and development code amendments – in particular, TPR requirements – is outlined in the Draft 2025 NSHA Plan (see Appendix A, TM #1) and Comprehensive Plan and Development Code Amendments (see Appendix F). This coordination of land use and transportation planning is consistent with both the general purpose and specific requirements in the TPR, including Section -0045 (Implementation of the Transportation System Plan).

The Draft 2025 NSHA Plan will be adopted as an amendment to and sub-element of the 2025 TSP, the Transportation Element of the City's Comprehensive Plan. NSHA Plan adoption will be accomplished through a legislative amendment process consistent with City procedures and requirements.

Based on the above findings, the process for adoption of the amendment complies with Goal 12 and meets the requirements of the State's Transportation provisions.

Goal 13 - Energy Conservation:
To conserve energy. Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

A robust set of bicycle and pedestrian projects are recommended in the Draft 2025 NSHA Plan. The transportation sector is the biggest Green House Gas (GHG) polluter, and the transportation system is increasingly vulnerable to climate change and extreme weather events. Reducing GHG emissions through mitigation actions is necessary to help achieve Oregon's climate goals and decarbonize the transportation system. As the climate changes and there are more wildfires, floods, and landslides, efforts are needed to adapt the transportation system to be able to better withstand or recover quickly from these events (Oregon Transportation Plan, Chapter 2 - Key Drivers of Change, 2.2 Climate Change).

Active transportation relies on safe and connected bicycle and pedestrian infrastructure tailored to Oregon's diverse communities (Oregon Transportation Plan 3.2 – Bicycle and Pedestrian Infrastructure)

The Draft 2025 NSHA Plan includes policies and projects that are intended to promote pedestrian and bicycle mobility, which supports energy conservation for the City's transportation system (see Appendix B, TM #2). The following Draft 2025 NSHA Plan policies and projects support the City's pedestrian and bicycle mobility goals:

- Goal 2: Safety
  - Expand the sidewalk network throughout the city.
  - Identify and implement bicycle corridors to navigate the city.
- Goal 3: Quality of Life
  - Identify and seek funding for programs that encourage healthy transportation habits.
  - Connect the city through pedestrian and bicycle paths.
- Goal 4: Economic Development
  - Improve walkability in the Downtown area to promote economic activity.
- Comprehensive Plan Policy 5: The Standards for Pedestrian and Bicycle System improvements listed in the Transportation System Plan, shall be implemented when reviewing new development.

The Draft 2025 NSHA Plan Policies and Plan Elements (see Exhibit B, NSHA Plan) support natural and cultural resource protection, including objectives below specifically address protection objectives and projects that generally support protection by promoting walking, biking, and taking transit.

- NSHA Policy 4, Parks and Trails: The existing Quarry Park, riverfront amenities, and new parks and open spaces will be connected by a system of trails and pathways, including a mixed-use path along the area's framework streets.
- Proposed Transportation Projects (see Exhibit B, Table 1):
  - M-1: 18th Avenue Multiuse Path: Install multiuse path along 18th Avenue and Tamarack Street.
  - M-2: New Neighborhood Street 2 MUP: Install multiuse path along New Neighborhood Street 2.
  - M-3: Quarry Park Trail: Install new trail route through Quarry Park.
  - M-4: Tamarack Street Pedestrian Trail: Install new trail route between Tamarack Street and 24th Avenue, including pedestrian bridge over existing body of water.
  - M-5: 24th Ave/Neighborhood St 1 Crossing: Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.

- M-6: 24th Ave/Neighborhood St 2 Crossing: Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.
- M-7: 25th Ave/Willow St Crossing: Install pedestrian crossing at 24th Ave/Willow Street intersection. Type of crossing to be identified following engineering study.

Based on the above findings, the process for adoption of the amendment complies with Goal 13 and meets the requirements of the State's Energy Conservation provisions.

Goal 14 - Urbanization:
To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

The Draft 2025 NSHA Plan includes a number of policies and projects that are intended to accommodate future housing and employment growth forecasted out to 2045, as described in findings for Statewide Planning Goals 9 (Economic Development) and 10 (Housing).

Draft 2025 NSHA Plan Goal 1 – Mobility, accessibility and Connectivity (see Appendix B, TM #2):
- Address intersection capacity needs for present and future traffic volumes.

Draft 2025 TSP Goal 5 – System Management and Maintenance (see Appendix B, TM #2):
- Plan for a transportation system that supports projected population and employment growth and maximize travel options by providing efficient routes for all modes of transportation.

See findings to Goal 9 and 10 for more details on how specific Draft 2025 NSHA Plan policies and projects are intended to respond to a growing community.

Based on the above findings, the process for adoption of the amendment complies with Goal 14 and meets the requirements of the State's Urbanization provisions.

Statewide Planning Goals 15 (Willamette River Greenway), **16** (Estuarine Resources), **17** (Coastal Shorelines), 1**8** (Beaches and Dunes), and **19** (Ocean Resources) are not applicable to the City of Sweet Home.

Conforming with Applicable City Comprehensive Plan Policies

The 2000 Sweet Home Comprehensive Plan (updated in 2010) includes Transportation Systems goals outlined in Chapter 6. The goals are:

- The City of Sweet Home wants a well-planned, comprehensive transportation system that balances the needs of future land development with a system that serves all users.

Development of the Draft 2025 NSHA Plan included a community outreach and involvement process that involved the collection of feedback from a variety of community members that informed recommendations used to develop the goals and objectives of the NSHA Plan update and identify community needs and priorities. The project team evaluated the existing conditions and future needs of the transportation system in Sweet Home to develop several technical memorandums and a list of recommended projects for the City to consider over the next 20 years.

As stated previously, the Draft 2025 NSHA Plan is designed to be consistent with the Comprehensive Plan goals and further implements the goals through recommendations and projects in the Plan. The proposed amendment does not affect any other goals in the Comprehensive Plan nor create any inconsistency within the Comprehensive Plan. Therefore, this criterion is satisfied.

D. The amendment is appropriate as measured by at least one of the following criteria:

1. It corrects identified error(s) in the provisions of the plan.

The previous 2005 TSP did not include an NSHA Plan. The NSHA Plan is an amendment to and sub-element of the 2025 TSP and current Comprehensive Plan.

2. It represents a logical implementation of the plan.

Because the Comprehensive Plan includes the goal that the City "wants a well-planned, comprehensive transportation system that balances the needs of future land development with a system that serves all users," this Plan represents a logical implementation of the current Sweet Home Comprehensive Plan. Therefore, this criterion is satisfied.

3. It is mandated by changes in federal, state, or local law.

TSPs are mandated by Oregon's land use laws to promote thoughtful growth and assist local agencies in developing transportation systems that meet the needs of residents. The NSHA Plan is an amendment to and sub-element of the 2025 Transportation System Plan (TSP) and current Comprehensive Plan Therefore, this criterion is satisfied.

4. It is otherwise deemed by the City Council to be desirable, appropriate, and proper.

The Draft 2025 NSHA Plan will be brought before the Planning Commission for recommendation and the City Council for adoption, which will further show that the amendment is deemed by the Council to be desirable, appropriate, and proper. Therefore, this criterion is satisfied.

Exhibit B: Draft North Sweet Home Area Plan

Appendix A: Technical Memorandum #1
Appendix B: Technical Memorandum #2
Appendix C: Technical Memorandum #3
Appendix D: Technical Memorandum #5
Appendix E: Technical Memorandum #10
Appendix F: Comprehensive Plan and Development Code Amendments

EXHIBIT B

North Sweet Home Area Plan

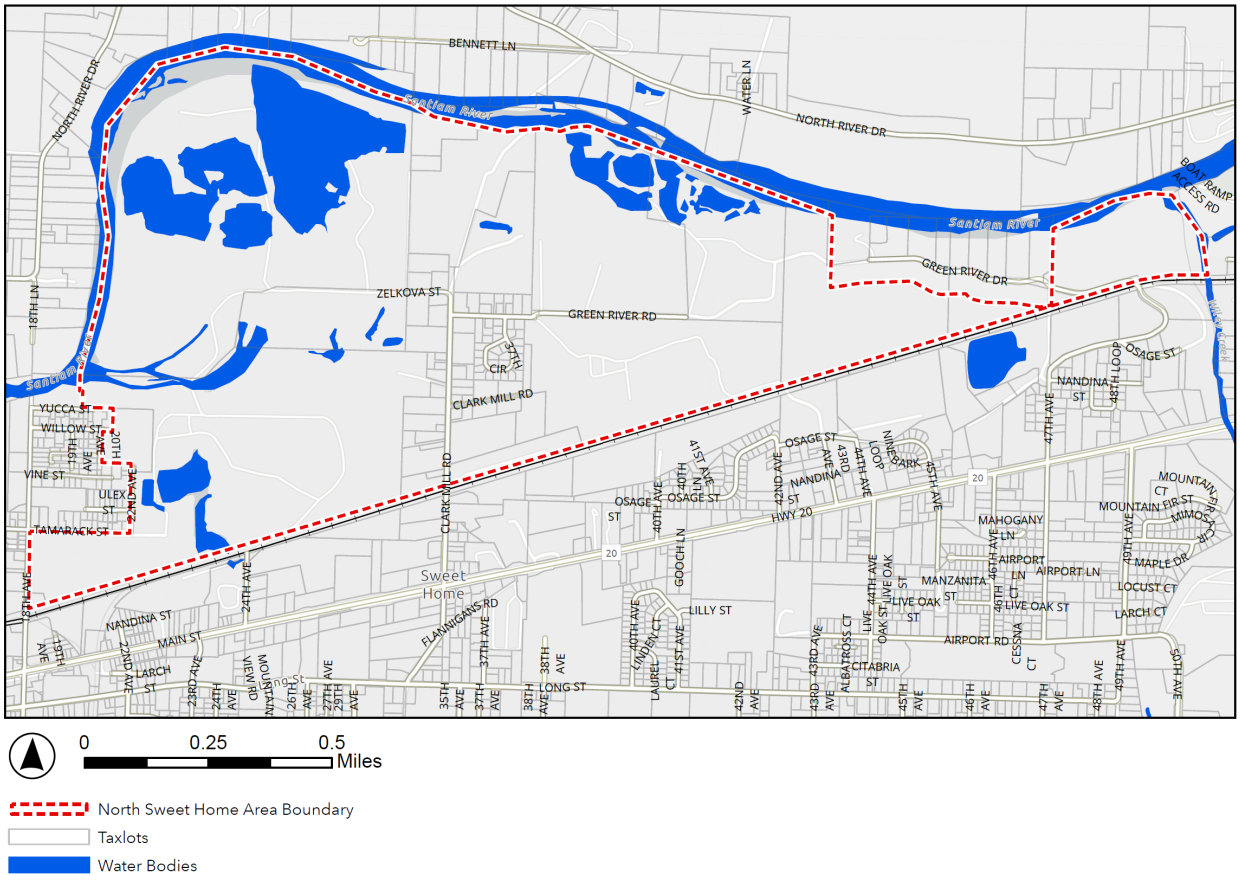
City of Sweet Home, Oregon

DRAFT February 28, 2025

Introduction

This area plan was prepared by the City of Sweet Home for land in the northern part of the City limits, called the North Sweet Home Area (NSHA). The NSHA is shown in Figure 1.

Figure 1. North Sweet Home Area



The North Sweet Home Area Plan is intended to provide guidance for future City decisions, certainty for landowners, and a cohesive and functional built environment through incremental development of NSHA properties. The plan document includes:

1. Introductory materials, including an overview of plan policies and the planning process.
2. A description of existing conditions in the NSHA.
3. Plan elements describing the plan's intent and policies across each of several topic areas

4. Case studies of other communities which have successfully redeveloped similar sites, providing lessons for the City of Sweet Home
5. Implementation actions
6. Appendices which include a summary of alternatives evaluated, implementing Comprehensive Plan and Zoning Code amendments, and supporting information from the Transportation System Plan.

NSHA Policies

The following policies are intended to guide the incremental development of the North Sweet Home Area into a cohesive and vibrant part of the City of Sweet Home.

1. **Housing.** The North Sweet Home Area will provide a variety of housing types to help accommodate the long-term growth of the City.
2. **Economic Development.** The North Sweet Home Area will provide opportunities for industrial, commercial, and service jobs. New employment areas will be focused in the vicinity of 24th Avenue and within the Hospitality Overlay area.
3. **Connectivity.** The North Sweet Home Area will be served by a connected and multi-modal transportation system built consistent with the standards in the City's Transportation System Plan.
4. **Parks and Trails.** The existing Quarry Park, riverfront amenities, and new parks and open spaces will be connected by a system of trails and pathways, including a mixed use path along the area's framework streets.
5. **Natural Resources.** The North Sweet Home Area contains significant river frontage, riparian areas, wetland features, scenic views, and other natural resources that will be protected and enhanced as the area develops.

Planning Process

This area planning effort includes the following steps: 1) an analysis of existing conditions; 2) creation and evaluation of land use/transportation options; 3) selection of a preferred alternative; and 4) suggestion of changes to comprehensive plan and zoning designations, as well as policies and transportation projects identified in the updated TSP.

The North Sweet Home Area Plan was prepared in consultation with City staff, elected and appointed officials, property owners in the study area, and the broader public. Three alternatives were prepared to examine different potential combinations of land use and

transportation systems in the area. They are summarized in the Community Booklet, included as Appendix A.

Existing Conditions

The North Sweet Home Area today consists of roughly 750 acres in total, including the City-owned Quarry Park, the former Sweet Home Mill site, existing residences and businesses, and undeveloped land. The majority of the land has a "Mixed Use Employment" Comprehensive Plan designation and a "Recreational Commercial" zoning designation. Comprehensive Plan designations are shown on Figure 2 and zoning map designations are shown in Figure 3.

Figure 2. Comprehensive Plan Designations

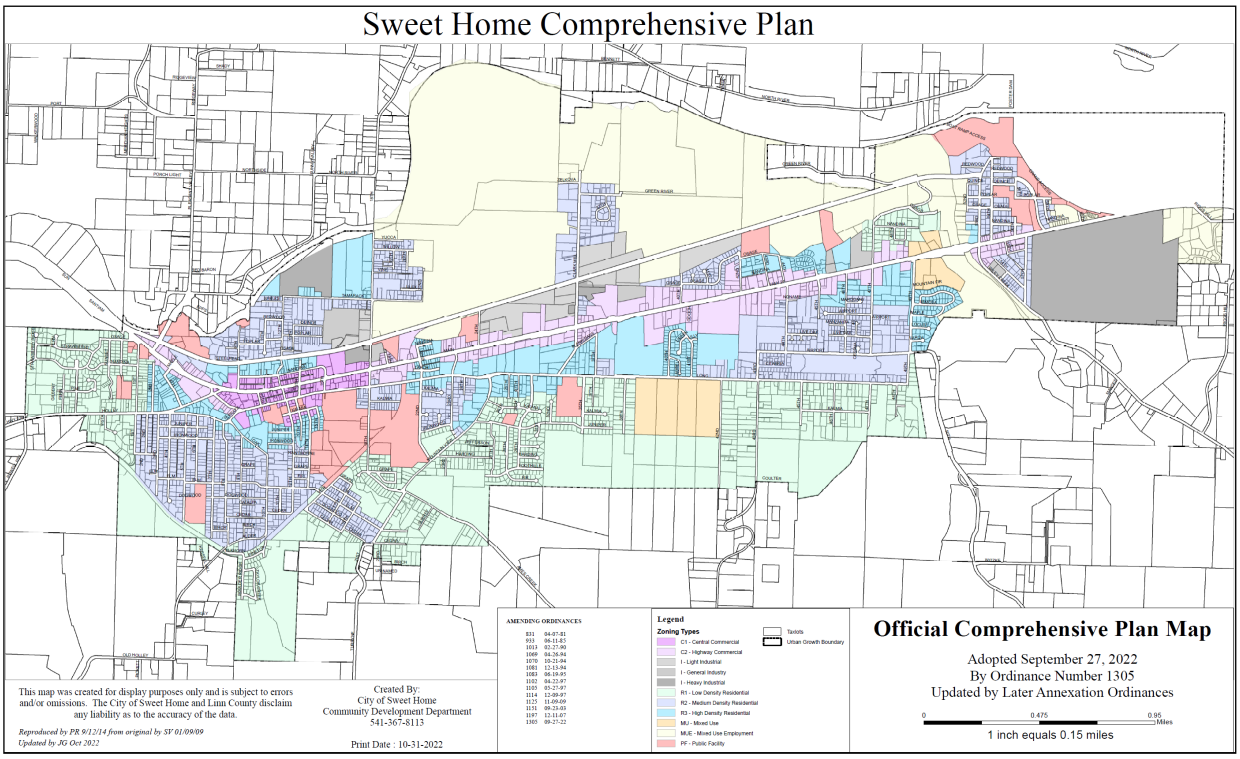
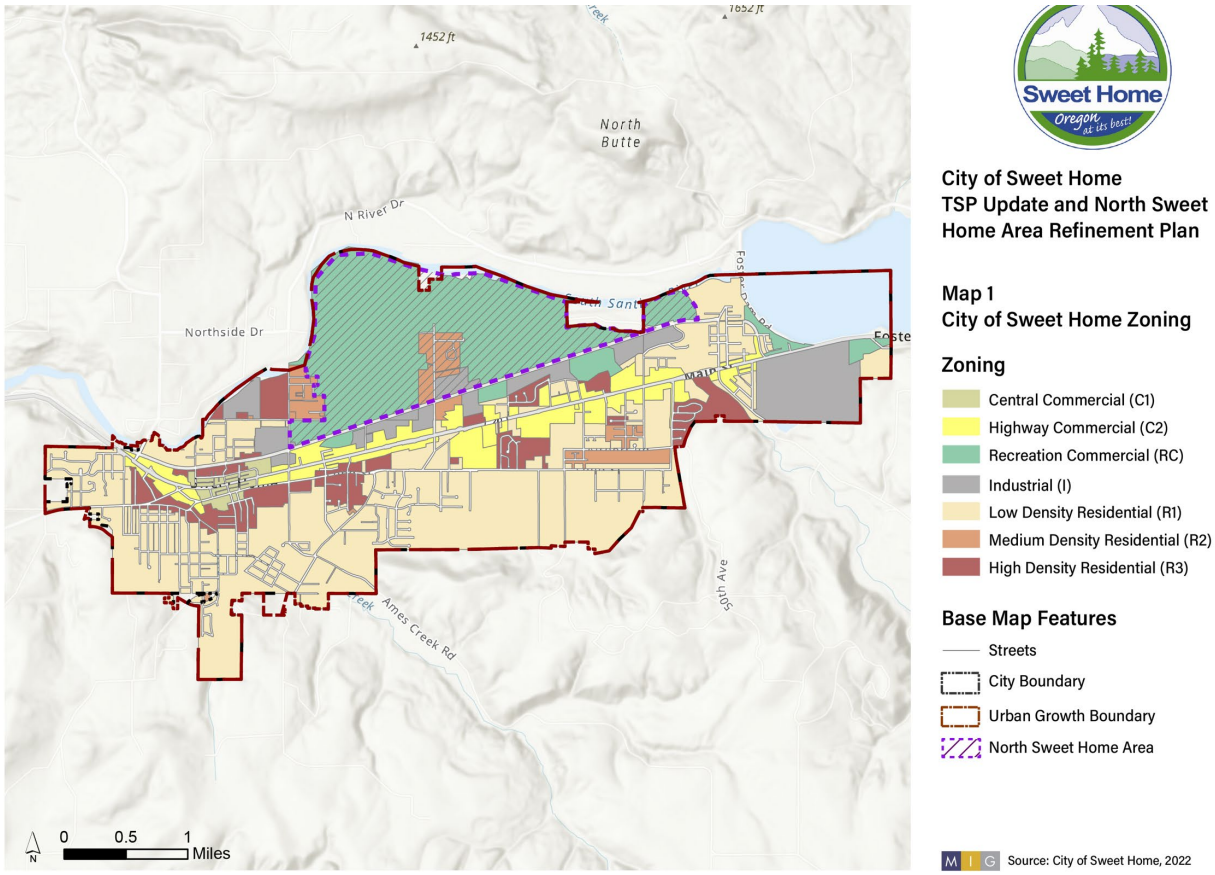


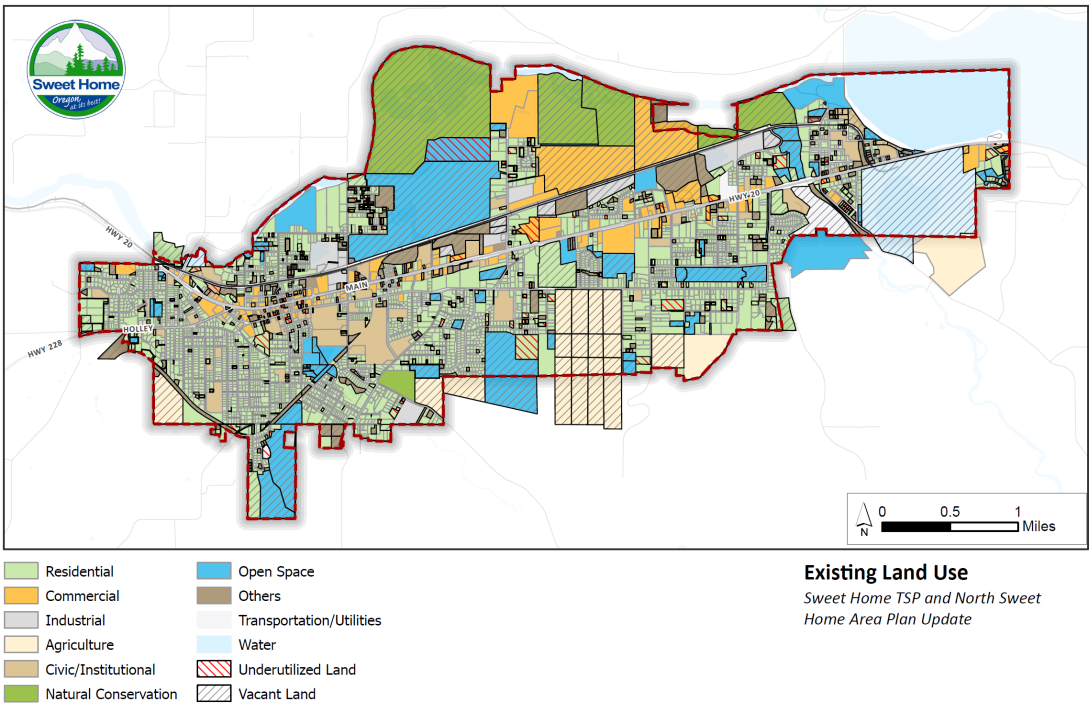
Figure 3. City of Sweet Home Zoning



Existing Land Use

Existing land uses in the North Sweet Home Area are shown in Figure 4. Uses include residential neighborhoods, industrial and/or commercial uses, and open spaces. Much of the area is undeveloped or underdeveloped, with low-improvement uses occupying most large parcels in the area. The former Sweet Home Mill site is within the study area, which serves as an opportunity for a redevelopment anchor and informs the likely infrastructure phasing.

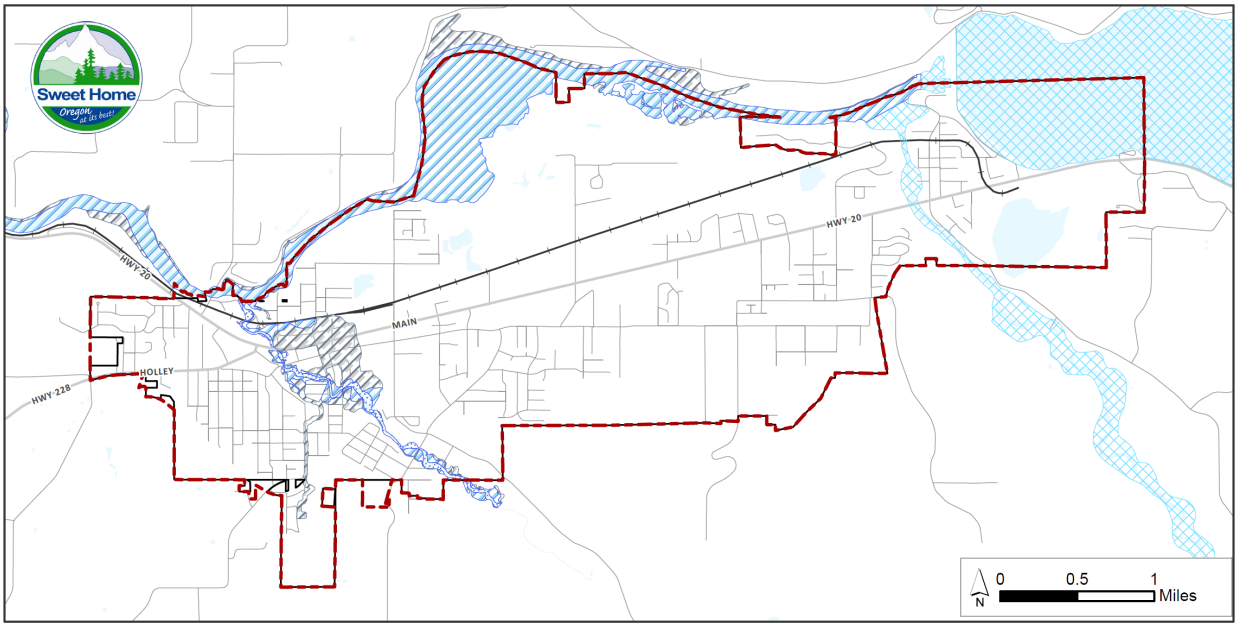
Figure 4. Existing Land Uses



Environmental Characteristics

The North Sweet Home Area contains significant areas of wetlands and floodplains in the vicinity of the South Santiam River. Much of the area is within a Natural Resources overlay zone, which requires additional screening for environmental issues through the City's development process. These features are shown in Figure 5.

Figure 5. Environmental Characteristics



Environmental Conditions

FEMA Floodplain

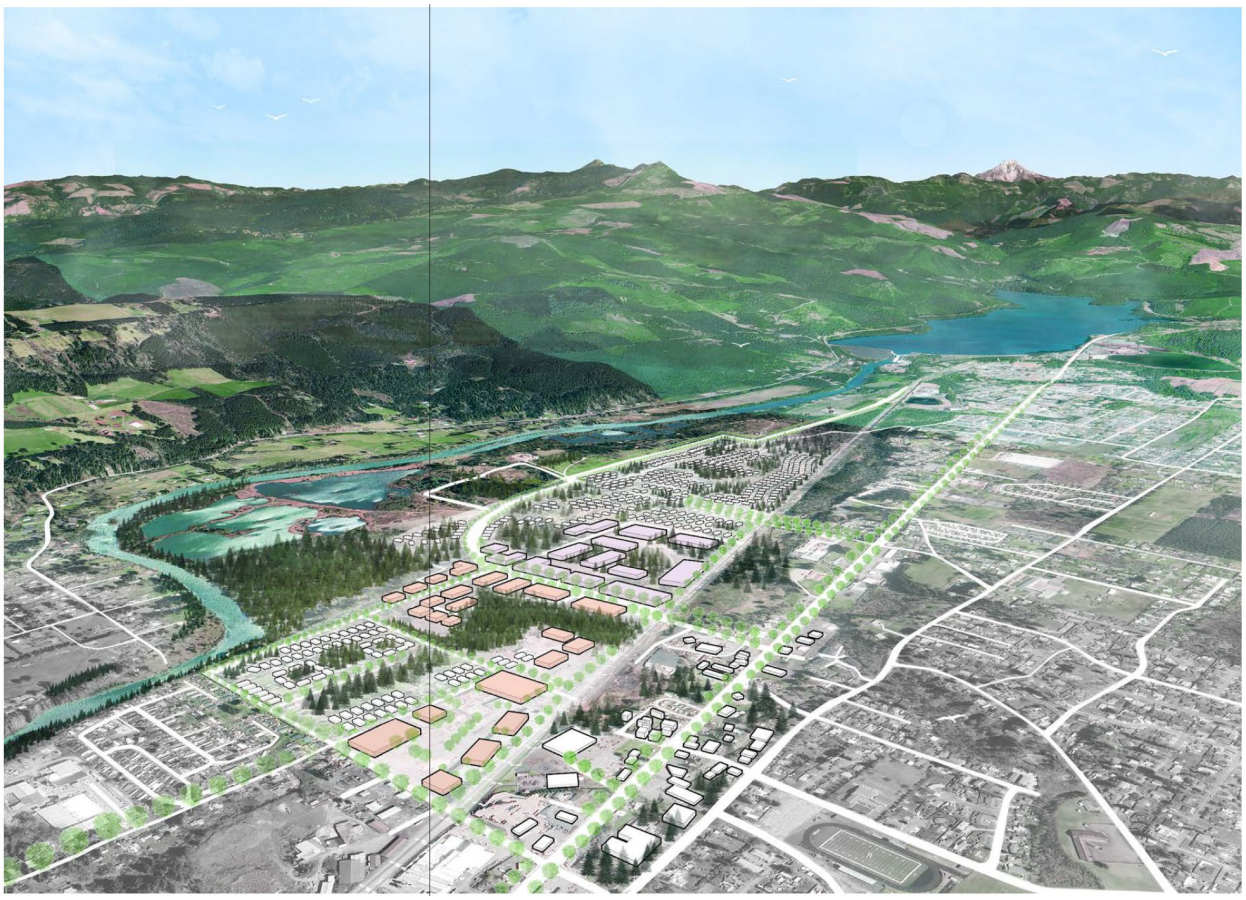
- 500-year Floodplain
- A (100-year undetermined)
- AE (100yr)
- AE (100yr) Floodway
- Waterbody
- Sweet Home City Limits
- Urban Growth Boundary

Environment

Sweet Home TSP and North Sweet Home Area Plan Update

MIG *Prepared in Jan 2023*

Plan Elements



A view looking NE across the North Sweet Home area towards Foster Reservoir and the Cascade Mountains, showing one potential buildout of the Preferred Alternative in the next 20-30 years, integrating a new neighborhood into this beautiful riverfront next to downtown Sweet Home. The ultimate eventual developed neighborhood will be shaped by this plan, with flexibility for individual design decisions from property owners and developers.

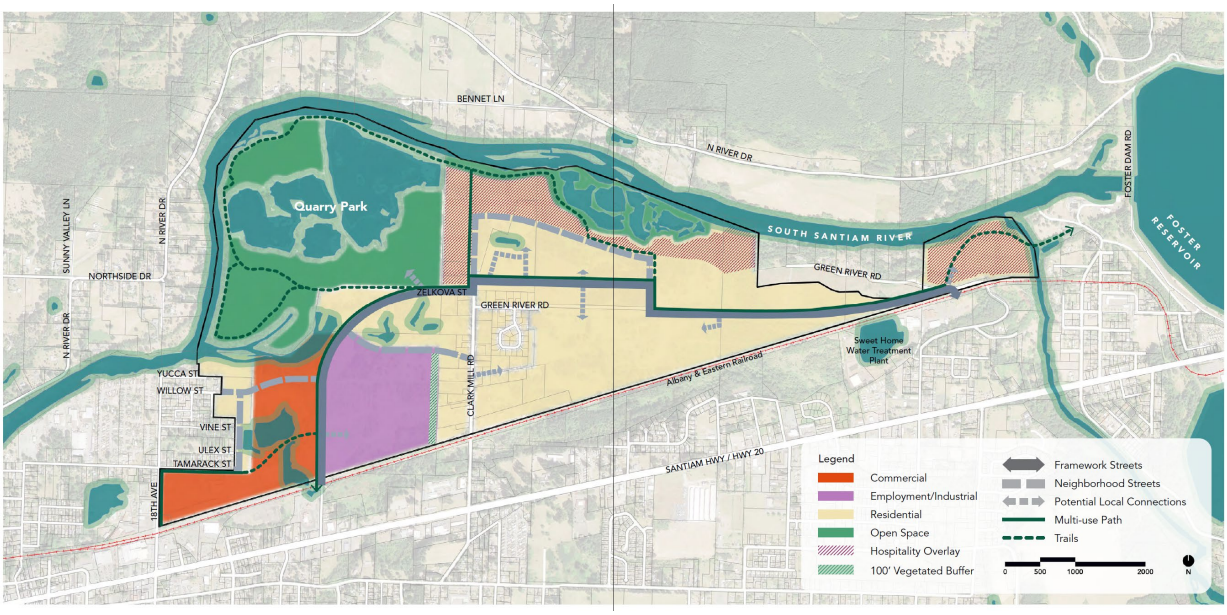
Land Use Summary

The Preferred Land Use Plan is shown in Figure 6. It contains industrial and commercial uses in the Southwest of the NSHA, open space designations on Quarry Park and wetland areas, and residential uses in the remainder of the area. A "Hospitality Overlay" zone on land in the vicinity of the South Santiam River is intended to allow for uses catering to a visiting public, including hotels, restaurants, equipment rentals, and similar uses. Hospitality uses could range in scale depending on the size of a given development, but could retain a more residential feel to match surrounding uses. Less intensive hospitality

uses may include rental cabins, campsites, yurts, or RV sites with access to the river or nearby riverfront trails. More intensive hospitality uses could include a small resort.

Nearby commercial and employment lands could also provide services related to tourism, like outdoor recreation equipment rentals or venue / restaurant space.

Figure 6. Preferred Land Use Plan



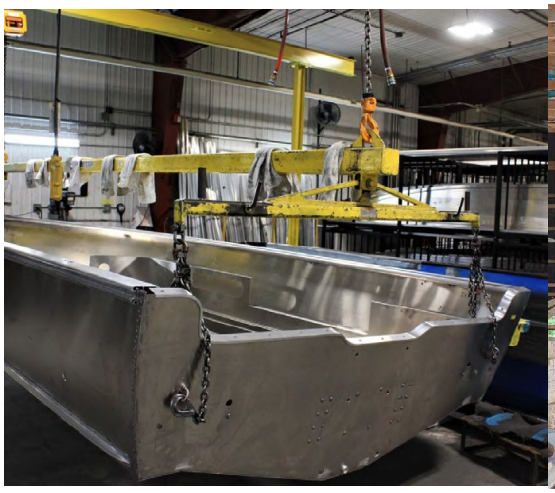
Employment / Industrial

The Plan contains roughly 75 acres of land in Industrial designation in a large contiguous site, located at the rail crossing at 24th Avenue. This location would allow future industrial users to take advantage of the active rail line and the flat topography of the former Sweet Home Mill site. Industrial considerations include:

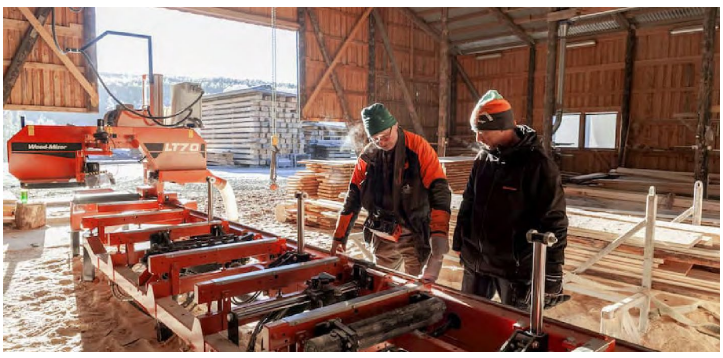
- Manufacturers of prefabricated buildings or prefabricated wood components could take advantage of nearby timber industry businesses and sources.
- Timber-related industrial uses would be well situated on this railroad-adjacent site in the NSHA.
- Employment areas could include pedestrian and bike connections for both workers and residents to access the river and downtown.
- Small scale "Craft" manufacturing related to nearby tourism industries (e.g., boating, snow sports, hiking, etc.), could locate manufacturing and show-room space within the NSHA in this option.

- A brewery or food-related manufacturer could locate their facility within employment industrial employment areas.









Riverfront Hospitality

Roughly 70 acres of land north of Zelkova Street and adjacent to the South Santiam River is designated as Residential with a "Hospitality Overlay" zone. This designation is intended to provide additional allowances for development that takes advantage of the site's potential as a recreational hub. For additional details about the Hospitality Overlay zone, see **Appendix B: Comprehensive Plan and Zoning Code Amendments.**

Riverfront hospitality considerations include:

- A resort could be designed around unique site features and take advantage of views of the river and mountain landscape.
- A small resort or lodge sited adjacent to neighborhoods could be more residential in character.
- Riverfront hospitality uses like cabins and campgrounds could preserve natural features within the NSHA.
- Hospitality uses including short term rentals, campsites, yurts, or RV resorts could be located within hospitality zones.




Residential

Over 300 acres of the NSHA area has a residential designation, providing land to help the City of Sweet Home meet its future housing needs. Design of residential neighborhoods in the NSHA will follow the following principles:

Neighborhood Design Principles:

Great neighborhoods…

- *Preserve natural features for future enjoyment of all*
- *Provide scenic views*
- *Include parks, trails, and open spaces*
- *Are pedestrian and bicycle friendly*
- *Have connected streets*
- *Have a mix of activities*
- *Provide housing for a range of incomes and lifestyles*
- *Have a variety of housing forms*

Residentially designated land in the NSHA will receive the R-2 zoning designation, with the possibility of additional flexibility provided by the City's Planned Development process.

Commercial, Retail, & Event Spaces

A large new commercially-focused area is envisioned for the land in the southwestern area of the NSHA, west of 24th Avenue, occupying a portion of the former Sweet Home Mill site. Many commercial uses may also be developed as outright permitted use within the Hospitality Overlay zone.

Additional commercial considerations include:

- Interim uses in commercial zones could include pop- up food and drink vendors, potentially serving tourism during the Oregon Jamboree.
- Small retail businesses could serve locals as well as tourists passing through town.
- Incubator space related to tourism could be located within NSHA Hospitality overlay zne, like this photo of incubator wineries at the Port of Walla Walla.
- A covered stage area could be located within Quarry Park.
- A commercial node near the Hospitality Overlay zone could include outdoor equipment rentals.
- Open space within the NSHA could be used to host events like the Oregon Jamboree.


SCAPPOOSE BAY PADDLING CENTER
RENTALS
NEXT ADVENTURE

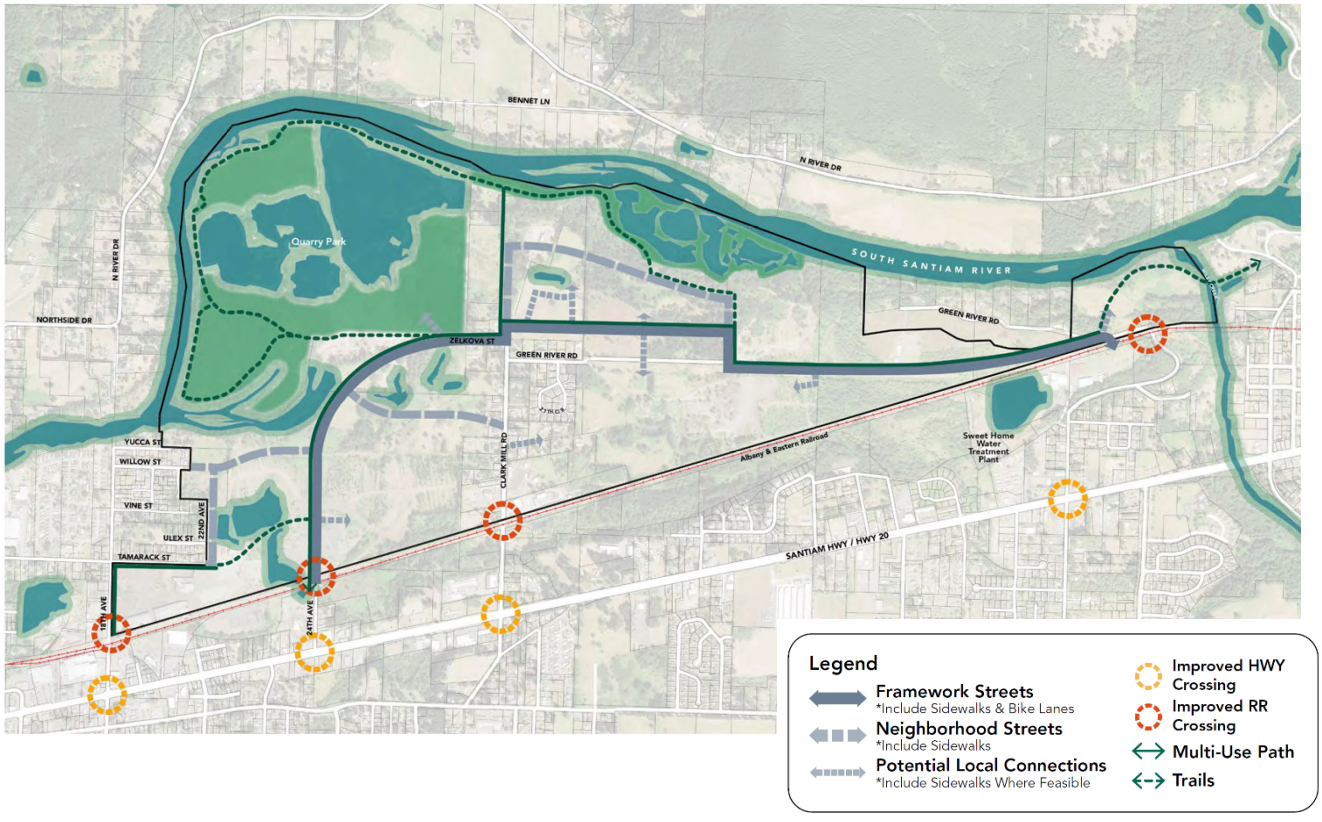
Transportation

The NSHA Street Network includes a main vehicular entrance into the study area along 24th Ave, and a connection to the east that stays as close to city limits as possible. The City has received approval of a new rail crossing at 24th Avenue.

New transportation facilities could support and be supported by redevelopment of the mill site. Pedestrian and bike infrastructure improvements are proposed throughout the study area, including improved crossings along the framework street, 24th Avenue/Zelkova Street, at the following intersections: 18th Avenue, 24th Avenue, Clark Mill Road, and 47th Avenue. Recreational paths are also proposed through Quarry Park and along the Riverfront, including a pedestrian footbridge across Wiley Creek at the eastern edge of the NSHA.

The proposed street network (Figure 7) addresses the transportation-related needs for the North Sweet Home Area by emphasizing connectivity for bikes and pedestrians in/ around the North Sweet Home Area. As the area grows and develops, impacts to the city and regional transportation system that can be mitigated with reasonable projects that emphasize the efficiency and safety of auto travelers, pedestrians, and cyclists alike.

Figure 7. NSHA Transportation Network



A list of projects was developed that supports the preferred land use and street network. Projects were divided into three categories Corridor (C), Spot (S), and Multi-modal (M) improvements projects. These projects were identified as part of the Sweet Home Transportation System Plan Update.

Table 1 shows each proposed project and its associated cost, which includes a new roadway and path system. The total cost of transportation projects supportive of the NSHA Preferred Scenario is approximately $120 million. The Corridor (C) projects focus on providing connectivity through the North Sweet Home Area by providing a parallel collector street to Main Street (US20) that also supports development and re-development of parcels abutting the new framework street. New street extensions and new neighborhood streets stemming from the framework street will help serve the new developments that arise in the North Sweet Home Area and further enhance connectivity for pedestrians and cyclists. The corridor projects form the backbone of the transportation network that the Spot (S) projects and Multimodal (M) projects enhance.

The Framework Streets (Projects C-1 and C-2) will be built to the cross-section standards outlined in this memorandum (Fig. 6), however there is potential that this project could be modified to have a wider cross section on 24th Avenue (project C-1). The City of Sweet Home in coordination with ODOT rail have determined that a 4 to 5 lane section could be allowable along this alignment.

While traffic is not anticipated to reach levels that would require 4 to 5 travel lanes, the City may choose to develop with flexibility in mind in case dense development takes place in the North Sweet Home Area. Doing so would require the 3 lane framework street to include larger on-street bike lane buffers that allows for future conversion to a 5 lane section without any full-deep pavement construction (i.e. dedicate 22 feet between the curbs to bike lanes and buffers) and without relocating existing curblines. This is not anticipated to take place within the planning horizon, and project C-1 does not assume this to take place.

Table 1. Transportation Projects

Index	***Project Name***	***Project Description***	***Planning Level Cost Estimate***
C-1	24th Ave Improvements	Widen 24th Ave with Framework Street cross section from US20 to railroad. Extend 24th Avenue north of railroad to to Zelkova St.	$21,450,000

Index	*Project Name*	*Project Description*	*Planning Level Cost Estimate*
C-2	Zelkova St Improvements	Extend Zelkova Street east of 24th Avenue to Zelkova Street.	$43,550,000
C-3	New Neighborhood Street 1	Construct new neighborhood street connecting 24th Avenue to Clark Hill Road.	$9,005,000
C-4	New Neighborhood Street 2	Construct new neighborhood street connecting Zelkova Street to proposed hospitality district.	$18,005,000
C-5	Willow St Extension	Extend Willow Street east of 20th Avenue to 24th Avenue.	$9,000,000
C-6	22nd Ave Extension	Extend 22nd Avenue from Tamarack Street to Willow Street.	$9,000,000
S-1	US20/18th Ave Improvements	Modify existing signal to meet capacity needs, including potential addition of protected left turns on US20.	$150,000
S-2	US20/24th Ave Improvements	Install signal at existing intersection.	$1,000,000
S-3	US20/Clark Mill Rd Improvements	Traffic control upgrade pending the completion of an Intersection Control Evaluation and review and approval of ODOT Traffic Engineer	$2,000,000
S-4	US20/47th Ave Improvements	Traffic control upgrade pending the completion of an Intersection Control Evaluation and review and approval of ODOT Traffic Engineer	$2,000,000
S-5	Zelkova St/Clark Mill Rd Improvements	Traffic control upgrade pending the completion of an Intersection Control Evaluation and review and approval of ODOT Traffic Engineer	$2,000,000
S-6	18th Ave Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000
S-7	24th Ave Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000
S-8	Clark Mill Rd Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000

Index	*Project Name*	*Project Description*	*Planning Level Cost Estimate*
S-9	47th Ave Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000
M-1	18th Avenue Multiuse Path	Install multiuse path along 18th Avenue and Tamarack Street.	$360,000
M-2	New Neighborhood Street 2 MUP	Install multiuse path along New Neighborhood Street 2	$260,000
M-3	Quarry Park Trail	Install new trail route through Quarry Park.	$1,440,000
M-4	Tamarack Street Pedestrian Trail	Install new trail route between Tamarack Street and 24th Avenue, including pedestrian bridge over existing body of water.	$1,650,000
M-5	24th Ave/Neighborhood St 1 Crossing	Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.	$50,000
M-6	24th Ave/Neighborhood St 2 Crossing	Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.	$50,000
M-7	25th Ave/Willow St Crossing	Install pedestrian crossing at 24th Ave/Willow Street intersection. Type of crossing to be identified following engineering study.	$50,000
Total:		**$123,420,000**	

The Spot (S) projects focus on intersections that will require operational and safety upgrades based on the new street network. For example, additional side street traffic is expected at the existing intersections with US20, including: 18th Avenue, 24th Avenue, Clark Mill Road, and 47th Avenue due to additional trip demand in the North Sweet Home Area. As development takes place, this additional trip demand will cause operational deficiencies at these existing intersections that need to be mediated with intersection control upgrades. Similarly, additional traffic using the existing rail crossings will spur the need to update existing rail crossing orders and upgrade the existing rail crossings. Today, some of the existing rail crossings do not include pedestrian or bicycle facilities to safely cross the rail, and some of the crossings do not include any treatment other than signing and striping for motor vehicles. See Figures 4 and 5.

The Multimodal (M) projects focus on safety and connectivity specific to cyclist and pedestrian modes, including the installation of new multiuse paths that enhance pedestrian connectivity, and improvements to the trail system that provide a recreational aspect to the walking and biking previously unavailable in the North Sweet Home Area. Pedestrian crossing installations are also included at some strategic locations to enhance the pedestrian network. Additional street crossings should be considered as development occurs to include crossings at/near schools or neighborhoods. Street crossing treatment types should be determined with an engineering study to identify the appropriate treatments based on vehicle traffic volumes and speeds as growth occurs.

Project costs for some projects, especially those constructing new roadways, trend on the higher end due to the expectation that the terrain will be difficult to build on due to variable grades, wetlands, and anticipated impacts to existing parcels. The Preferred Street Network may require changes to alignment to conform to the natural environment and to maneuver other obstacles, such as the area the encompasses much of Green River Road that is not within the City urban growth boundary (UGB).

Rail crossing at 47th Avenue (Google Maps, 2022)

Rail crossing at 18th Avenue (Google Maps, 2022)

Figure 8. Framework Street with adjacent Multi-use Path (MUP)

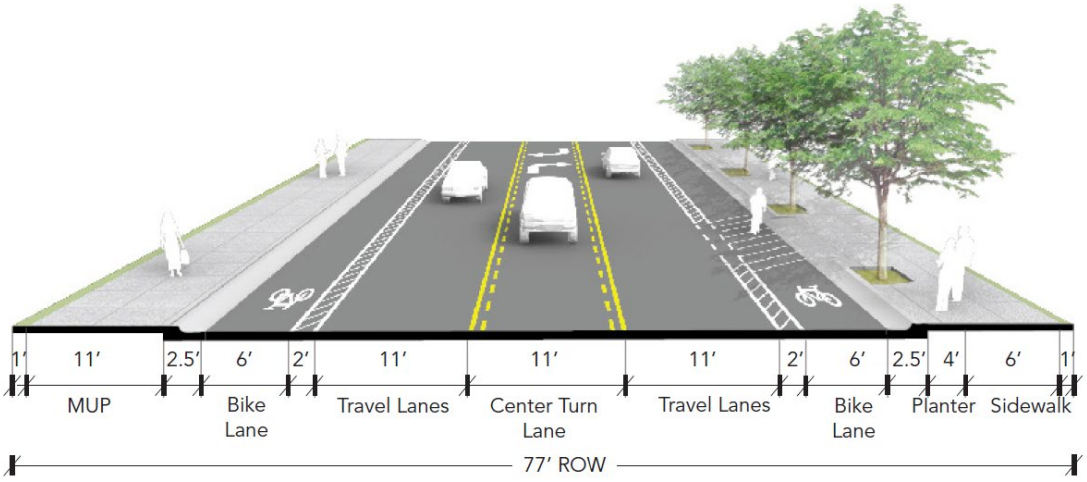


Figure 9. Neighborhood Street

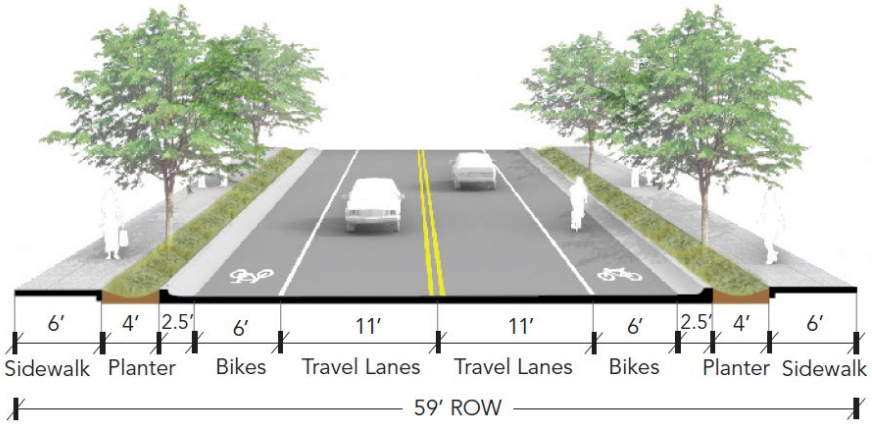


Figure 10. Neighborhood Street with Parking

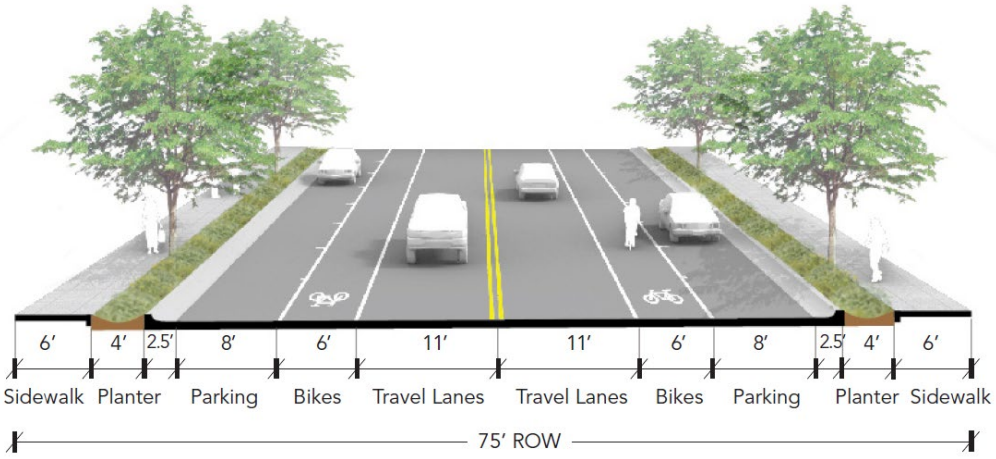
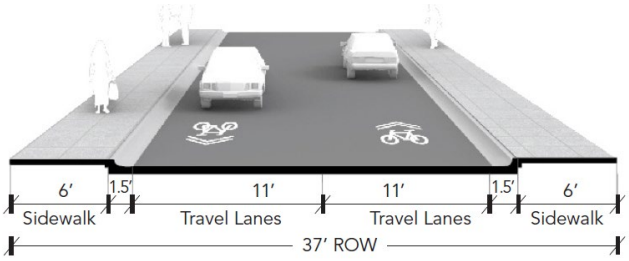


Figure 11. Local Street



Parks and Trails

A system of parks and trails are envisioned for the NSHA to take advantage of existing City-owned open space and buildout of new transportation infrastructure. The park and trails system will include the following elements.

- Public Riverfront access at key locations
- Connections to and through Quarry Park
- Multi-use trails along key roadways to provide safe and comfortable access for people walking and rolling (see **Error! Reference source not found.**)
- Protected wetlands to provide open spaces within future development areas


A multi-use path in the vegetated buffer along employment areas could provide a direct dedicated connection from the NSHA to Foster Reservoir and into town.


Trails could weave through neighborhood open spaces, providing pedestrian connectivity to natural resources, and access to passive recreation opportunities.

Case Studies

The following case studies offer inspiration for the North Sweet Home Area. They include a range of residential, industrial, commercial, and hospitality efforts that have successfully transformed other communities.

Case Study 1: Chemainus, BC

The closure of a sawmill in 1983 devastated the local economy in Chemainus, a small town on Vancouver Island, British Columbia. But it revived itself as a tourist destination, hosting events like the Festival of Murals Society since 1987 and the Theater Festival since 1993. Strategic long-term planning efforts transformed the resource- based economy into a successful community-based tourist industry.

The Chemainus Theater is a popular tourist destination.

Paul Ygartua's Native Heritage mural pictured above is a highlight of the Chemainus Festival of Murals.

Case Study 2: Prineville, OR

The decline in the timber industry 30+ years ago led to the highest unemployment in Oregon. But Prineville attracted data centers to support the high-tech industry over the last 15 years.

While other timber towns in Oregon pivoted to outdoor recreation and craft breweries, Prineville invested in an economy around data centers.

Aerial view of the Meta data center campus in Prineville.

The newest Meta data center in Prineville is LEED Gold certified.

Case Study 3: Port Gamble, WA

Port Gamble is undergoing a transformative redevelopment effort aimed at rejuvenating its economy while preserving its rich legacy. It was originally established in the 1850s by New England timber entrepreneurs and built as a company town for the Puget Mill Company to produce lumber for the California gold rush.

For roughly 140 years, the mill churned out lumber, holding the title as the nation's longest-operating mill until it ceased operations in 1995. The decline in the timber industry has led to economic challenges for the town.

The current redevelopment initiative, driven by a collaborative partnership involving private developers, local government entities, and community stakeholders, seeks to revitalize Port Gamble into a thriving, sustainable community. Central to this effort is the preservation of its historic charm and architectural heritage, which includes carefully restoring and repurposing existing buildings to maintain their historical significance.

The master plan for Port Gamble's redevelopment emphasizes a mix of land uses designed to enhance the town's livability and attractiveness to visitors. This includes plans for new residential units to support a diverse population, commercial spaces to foster local business growth, and recreational amenities to promote tourism and community engagement.

Key components of the 318-acre redevelopment project include infrastructure improvements such as road enhancements and utility upgrades, ensuring that the town can accommodate new development while maintaining its environmental integrity.

The plan also includes provisions for public spaces and parks, aimed at enhancing the quality of life for residents and visitors alike. Community involvement played a crucial role in shaping the redevelopment vision, with ongoing input from local residents and stakeholders guiding the project's evolution. This collaborative approach aims to create a sustainable economic future for Port Gamble while honoring its unique history and character.

Overall, the Port Gamble redevelopment project represents a comprehensive effort to revitalize a historic community, stimulate economic growth through thoughtful development, and create a sustainable and vibrant destination that celebrates its past while looking towards the future.

Historic Port Gamble water tanks, painted with the city's logo.

Olympic Outdoor Center in Port Gamble.

The Port Gamble General Store.

Port Gamble's historic buildings are popular filming locations.

Implementation

The North Sweet Home Area Plan will be realized through the following implementing actions:

- Adoption of the Sweet Home TSP, which establishes an updated set of transportation standards, projects, and plans for the City of Sweet Home. These are intended to improve the City's multi-modal transportation system, including in the North Sweet Home Area.
- Adoption of the North Sweet Home Area Plan as an attachment to the City of Sweet Home's Comprehensive Plan, as described in **Appendix B: Comprehensive Plan and Zoning Code Amendments**
- Adoption of changes to the City of Sweet Home Comprehensive Plan Map and Zoning Map included in **Appendix B: Comprehensive Plan and Zoning Code Amendments**.

Appendices

Appendix A: North Sweet Home Area Community Booklet

Appendix B: Comprehensive Plan and Zoning Code Amendments

DRAFT TECHNICAL MEMORANDUM#1

Plans and Policy Framework

Sweet Home TSP and North Sweet Home Area Plan

DATE March 6, 2023

TO Project Management Team

FROM Matt Hastie, Andrew Parish & Emma-Quin Smith, MIG|APG

CC

OVERVIEW

This **draft** document presents a review of the local, county, and state level plans that may be relevant to the Sweet Home Transportation System Plan (TSP) Update and North Sweet Home Area Plan (NSHAP). Plans and policies are arranged by jurisdiction – City of Sweet Home, Linn County, and State of Oregon.

Following the document review, an audit of the Sweet Home's comprehensive plan and development code for compliance with the Oregon Transportation Planning Rule (TPR) is also included.

SECTION 1: PLANS AND POLICIES REVIEW

Local Plans and Policies

This section addresses plans and policies enacted by the City of Sweet Home.

Sweet Home Comprehensive Plan

The Sweet Home Comprehensive Plan, adopted in 2003, was most recently amended in 2010.

Land Uses

Table 1 shows the Comprehensive Plan designations identified in the Land Use Element (Chapter 2). The Comprehensive Plan does not specifically identify North Sweet Home as an area of special concern.

Table 1. City of Sweet Home Comprehensive Plan Designations

Land Use Designation	Purpose
Low Density Residential	To provide appropriate lands for low density, single-family homes. This category has the lowest density of the residential designations s, providing larger lots for single family homes.
Medium Density Residential	To provide areas suitable and desirable for single family homes, duplexes on corner lots, condominiums, town houses, and appropriate community facilities. Densities in this category are slightly higher than those in the low density category.
High Density Residential	To provide areas suitable and desirable for higher density residential development, and particularly for apartments, manufactured home parks, other residential uses, and appropriate community facilities.
Mixed Use Residential	To provide areas suitable for medium to high density residential with limited commercial, institutional, office, and service uses distributed on a site.
Central Commercial	To provide an area suitable and desirable for retail and service firms, offices, financial institutions, and other uses appropriate in the intensively developed commercial center of the community.
Highway Commercial	To provide suitable and desirable commercial areas along the highway intended to meet the business needs of the community.
Recreation Commercial	To provide and maintain areas that possess unique characteristics for recreational commercial development that caters to tourist and recreational activities. Development should maintain or enhance the appearance of the area and its unique value to the community.
Heavy Industrial	To provide areas for intense manufacturing activities, characterized by their potential conflicts with residential and other land uses.
General Industrial	To provide for the appropriate locations for general industrial uses with minimum conflict between industrial uses and residential and commercial uses.
Light Industrial	To provide for heavier commercial use and limited manufacturing that have few nuisance characteristics.
Public	To provide areas suitable and desirable for government offices and facilities, schools and associated grounds. The Public designation includes areas suitable and desirable for recreation activities (both active and passive) and facilities. Recreation areas include, but are not limited to, open spaces (including cemeteries), scenic landscapes, waterways, parks, special use areas, and trails.

Land Use Designation	Purpose
Natural Resource Overlay	To protect areas identified as significant natural resources. The designation shall ensure reasonable economic use of property, while protecting valuable natural resources.
Planned Development Overlay	To allow diversification in the relationships between buildings and open spaces in planned building groups, while ensuring compliance with the purposes and objectives of the various zoning regulations and the intent and purpose of this ordinance.

Transportation Element

Cities in Oregon are required to adopt a TSP as part of their comprehensive plan. The 2005 Sweet Home TSP is incorporated into the 2010 amendment of the Sweet Home Comprehensive Plan. The Transportation Systems Chapter (Chapter 6) of the Sweet Home Comprehensive Plan addresses statewide planning Goal 12, provides an overview of street functional classifications, summarizes key improvement projects identified in Chapter 8 of the 2005 TSP, and identifies nine transportation policies to support the implementation of the TSP. The City's transportation policies will need to be reviewed and revised to be consistent with the goals and objectives of this TSP update and its ensuing recommendations.

What this means for the Sweet Home TSP and NSHAP

Land use designations in the North Sweet Home area will be a key item of discussion and possible amendment as part of the NSHAP. Updates could include re-designation of land in the area, creation of new land use districts, or amendment of existing districts.

The TSP update process will provide an opportunity to review and update the Comprehensive Plan transportation element and other transportation policies, to better represent current state and local practices and objectives. Potential policy changes may reflect issues that have emerged since the TSP was last updated, such as strategies to optimize transportation management and maximizing the efficiency of the existing transportation system, integrating alternative transportation options, balancing modal capacity of facilities, and the role the transportation system plays in human health. Towards the end of the planning process, when solutions have been identified to satisfy future needs, policy statements will be developed to help implement TSP recommendations. Updated policy statements may augment or replace adopted comprehensive plan transportation policies and will help guide future actions, including land use decisions, after the TSP is adopted.

Sweet Home Development Code

The Sweet Home Development Code is title adopted as Title 17 – Zoning in the City's Municipal Code.

- What zones are there? What types of uses are allowed in each zone?
- What zones are in the North Sweet Home area?

- Note that a detailed TPR audit is in a following section.

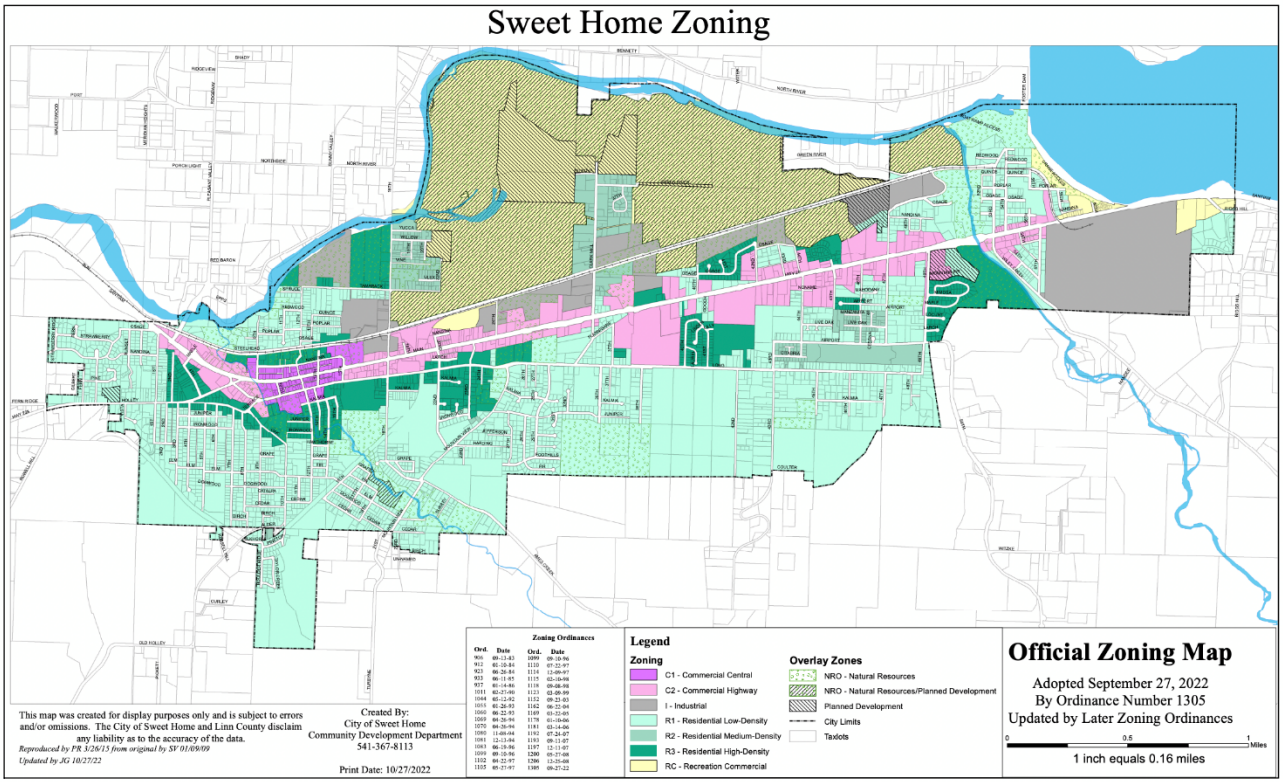
Zoning Designations

The following table includes a summary of the purpose and permitted uses of each zone in Sweet Home.

Table 2. City of Sweet Home Zoning Designations

Zoning Designation	Purpose
Residential Low-Density (R-1)	The purpose of the R-1 zone is to provide areas suitable and desirable for single-family homes, associated public service uses and duplexes on corner lots. Permitted uses include single-family homes and duplexes.
Residential Medium-Density (R-2)	The R-2 zone allows slightly higher density single-family housing than the R-1 zone, including single-family homes, duplexes, townhouses, and amenities to support those development.
Residential High-Density (R-3)	The purpose of the R-3 zone is to provide multifamily housing options and the amenities and services associated with those developments. Permitted uses include single-family attached and detached dwellings, duplexes, and multi-family dwellings.
Mixed-Use (MU)	The mixed-use zone provides a variety of businesses and services in a commercial center that can meet the needs of associated residential development. Uses permitted in the MU zone include multifamily housing, shops, offices, hotels and motels, and eating and drinking establishments. Single family attached dwellings are also allowed in this zone.
Commercial Central (C-1)	The purpose of the C-1 zone is to provide an area suitable and desirable for retail and service enterprises, offices, financial institutions and public service uses which are appropriate in the intensively developed commercial center of the community in order to meet shopping and other business needs of area residents.
Commercial Highway (C-2)	The purpose of the C-2 zone is to provide areas suitable and desirable for highway related commercial enterprises intended to meet the business needs of area residents and highway travelers.
Industrial (I)	The purpose of the Industrial zone is to provide areas suitable and desirable for all types of industrial activity; provided that, development controls are utilized to minimize possible harmful effects related to air and water pollution and to potential nuisance hazards such as fire, explosion, or noise.
Public Facility (PF)	The purpose of the Public Facility zone is to provide areas appropriate for specific public and semi-public uses and to ensure their compatibility with adjacent uses. Permitted uses include schools, fire stations, libraries, parks, and utilities.

Recreation Commercial (RC)	The purpose of the RC zone is to provide and maintain areas which possess unique characteristics for recreation-related commercial and residential development, and which are suitable and desirable for recreation businesses for tourists and recreationists in the area. Permitted uses include museums, hotels, RV parks, resorts, restaurants, and recreational retail.
Mixed-Use Employment (MUE)	The purpose of the Mixed-Use Employment zone is to provide a mix of business and professional services, research facilities, offices, retail and services firms and limited manufacturing opportunities and serve as an employment center. A mix of residential, commercial, public facilities, and light industrial uses are permitted in this zone.



Overlay Zones

The following overlay zones can apply in addition to base zoning.

- **Natural Resource Overlay (NRO):** The NRO zone is designed to protect identified significant natural resources in The City of Sweet Home. The intent of this zone is to ensure reasonable economic use of property while protecting valuable natural resources.

- **Flood Hazard Overlay (FHO):** This overlay was established in compliance with ORS 197.175. It is the purpose of the FHO is to promote public health, safety, and general welfare, and to minimize public and private losses due to flooding in flood hazard areas
- **Historical Property Overlay (HPO):** The purpose of the HPO zone is to foster civic pride, preserve the history of the community, and promote LCDC Goal 5.
- **Planned Development Overlay:** The purpose of Planned Development regulations is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Developments are intended to allow substantial flexibility in planning and designing a proposal. This flexibility often is in the form of relief from compliance with conventional zoning ordinance site and design requirements.

NSHAP Zoning

The North Sweet Home Area Plan includes parcels zoned RC, R-2, and I. The area is within a NRO overlay zone and planned development area. Additional detail will be provided as part of a later task examining existing conditions in the area.

What this means for the Sweet Home TSP and NSHAP

The zoning designations of the North Sweet Home Area may be amended as part of the Area Plan, including re-designation of properties, text amendments to the development code, or the creation of new zones/overlays to implement the plan. Much of the area is under the "Planned Development" overlay and the Natural Resources overlay.

As part of the TSP update, amendments to the City's zoning code may be recommended in order to implement the plan's goals. These may include changes to the uses allowed, dedication requirements for rights-of-way, procedural updates, or other amendments. The TPR audit at the end of this document identifies some areas of potential changes.

Other City Plan Documents

Table 3 presents a review of existing local plans, regulations, and policies that are relevant to this process.

Table 3. City Planning Document Review

PLAN DOCUMENT (YEAR)	PLAN DESCRIPTION	RELATION TO SWEET HOME TSP / NSHAP
Streetscape Plan (2021)	The Streetscape Plan highlights opportunities to enhance the pedestrian experience, build attractive streets, and create gathering places in the Downtown Core. The plan also recommends parking improvements. The plan focuses on Main St. (Hwy 20), Long St., and intersecting streets. The plan recommends locations for pedestrian improvements, street trees and pocket parks, and identifies development opportunities sites. The plan also provides a materials and fixtures palette.	The TSP update will consider the recommendations of the downtown streetscape plan along Hwy between 12th Ave. and 15th Ave.
Natural Hazards Mitigation Plan (2022)	This plan identifies the natural hazards Sweet Home is most at risk for and recommends way to mitigate the risk from these natural hazards. The top 5 hazards Sweet Home is most at risk for are: • Severe Storms (High risk) • Wildland-Urban Interface Fires (Medium risk) • Floods (Medium risk) • Earthquakes (Medium risk) • Volcanic events (Medium risk)	The TSP may consider how the transportation network in Sweet Home and contribute to the resilience of the community and reduce threats to the transportation system. Updates to the TSP could also consider how emergency response and post-disaster recovery can be improved through the transportation network.
Economic Opportunities Analysis (2017)	This document includes a buildable lands inventory, forecasted land need to support employment, and recommendations to support economic development. Key recommendations include: • Align the City's goals for economic development with planning for infrastructure development.	The TSP and NSHAP projects should align with the goals of the EOA, particularly identifying areas where infrastructure can support economic development. The use of City property in the North Sweet Home Area is also a potential economic driver.

PLAN DOCUMENT (YEAR)	PLAN DESCRIPTION	RELATION TO SWEET HOME TSP / NSHAP
Sweet Home Livability Assessment (2014)	The Livability Assessment identifies opportunities to connect the community to public lands, provide more transportation options, and foster the unique character and economy of Sweet Home. Key recommendations include: • Take a regional approach • Develop a strategic economic development plan • Invest in existing infrastructure and downtown • Become active stewards of community character and natural resources • Make improving quality of life for residents a priority	The TSP will address transportation options in Sweet Home with the goal of enhancing connectivity within the City and to the broader region.
24th Ave. Rail Crossing Order (2021)	A rail crossing was approved by ODOT for 24th Avenue. Per the order, the crossing must be constructed within five years of the order date.	The location and design of this crossing will be addressed and included in the TSP update.
Santiam River Club / Salmon Run Master Plan (2022)	The Santiam River Development project, Salmon Run Master Plan, is a 36 lot single-dwelling subdivision accessed via 1400 Clark Mill Road.	The subdivision is located in the NSHAP area and will be taken into consideration as part of this project.
Capital Improvement Program	The City's Capital Improvement Program identifies major projects and funding sources for improvements, including transportation improvements.	A key outcome of the TSP will be a list of priority projects for inclusion in the CIP.
Oregon Downtown Development Association (ODAA) Report (1994)	This report details the findings of a two-day assessment completed in March 1994. The goals of the assessment were to educate the community, assess capacity to implement long term downtown redevelopment, identify opportunities and constraints for downtown redevelopment, and identify implementation steps or prioritize downtown projects. The assessment concluded that Sweet Home should identify one group to lead downtown redevelopment and hire an economic	The TSP and NSHAMP may continue to implement the recommendations of this report, particularly through implementing design and development standards.

PLAN DOCUMENT (YEAR)	PLAN DESCRIPTION	RELATION TO SWEET HOME TSP / NSHAP
	development staff person. Design and maintenance projects were also recommended to continue.	
ODDA Resource Team Report (2003)	The goals of the Sweet Home Resource Team were to promote a mixed-use, pedestrian friendly, attractive, and efficient downtown district. The Resource Team recommended concentrating commercial development and revitalization to the downtown core. The team proposed gateway design and downtown design standards. The report also includes connectivity and parking policy suggestions.	The TSP may revisit or implement outstanding connectivity, parking, and gateway recommendations suggested in this report.
Council Vision and Goals (2022)	Sweet Home's City Council identifies its vision and goals annually. https://www.sweethomeor.gov/citycouncil/page/council-goals Infrastructure, Economic Development, and Image Building are key elements of the current vision and goals.	The TSP and NSHAP will implement Council goals, with direct input from councilmembers.
City Strategic Plan (2014)	Sweet Home developed a community strategic plan in 2013. The plan focused on creating a vision and strategy for Hobart Park and other city parks. Vision components include protection of open space, a robust and diverse economy, education, and inclusivity.	These vision elements will be incorporated into the long-range plan for North Sweet Home and in the goals of the TSP itself.
Park System Master Plan (2014)	The Parks Master Plan inventories existing park facilities and identifies current and future needs for the parks system. The plan includes a Capital Improvement Plan with specific improvements, costs, and an implementation timeline. The plan also identifies potential funding sources to implement the CIP.	The Plan identifies a need for a multimodal path and trail system that will be reviewed and potentially updated as part of the TSP

County Planning documents

Linn County TSP (2018)

Linn County updated their TSP in 2018. Table 4 shows Financially Constrained and Aspirational Projects that would improve multimodal transportation in Sweet Home were identified in the 2018 TSP.

Table 4. Financially Constrained and Aspirational Project List

PROJECT ID	PROJECT DESCRIPTION	PROJECT ELEMENTS
BP-55	Mt. Home Dr. - Road Surface Improvement	Pave Mt. Home Dr. between Sodaville Mountain Home Rd. and Northern Dr. to allow bicycle travel between Sweet Home and Brownsville without using OR 228.
BP-01	Bike Route - Halsey to Brownsville (Peoria Rd.) Hwy 99E	Connect and expand existing bike routes (Brownsville to Lebanon / Sweet Home and from Corvallis/Peoria)
BP-20	US 20 through Sweet Home - Pedestrian Access Improvements	Pedestrian Access Improvements.
RM-14	OR 228 / Crawfordsville Dr. (east end of Crawfordsville Dr., near Holley) - Improve Sight Distance and Provide Two-Stage Left Turn Bay	Sight distance improvement. Provide two-stage left turn bay sized for school busses exiting Crawfordsville Dr. heading toward Sweet Home
RM-22	City of Sweet Home - Local Roads Shoulder Improvements	Widen shoulder pavement outside fog line on local road network in Sweet Home
SI-61	US 20 - Sweet Home Police Department Access Improvements	Vehicle and pedestrian access improvements
SI-85	US 20 / Pleasant Valley Rd. (Sweet Home) - Additional Hotspot Intersection Safety Improvements	Monitor impact of systemic safety improvements and consider need for additional (beyond systemic) hotspot safety improvements. Potential options include: Enhanced Signing Treatment, Roundabout, Traffic Signal pending engineering investigation and warrant.
SS-085	US 20 / 9th Ave. (Sweet Home) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements
SS-088	US 20 / Clark Mill Rd. (Sweet Home) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements
SS-096	US 20 / Pleasant Valley Rd. (Sweet Home) - Systemic Intersection Safety Improvements	Provide systemic intersection safety improvements including: Basic Set of Sign and Marking Improvements

Linn County Comprehensive Land Use Plan (2015)

The Linn County Comprehensive Plan was most recently amended in 2015. The Comprehensive Plan addresses the use of land outside urban growth boundaries, and coordination on land use within urban growth boundaries, pursuant to State law.

What this means for the Sweet Home TSP and NSHAP The TSP update process will provide an opportunity to review and coordinate with Linn County planning efforts. Timelines and funding sources

for projects identified in the County TSP could potentially align with projects in the Sweet Home TSP update.

State Planning Documents

Table 5 presents a review of existing state plans, regulations, and policies that affect transportation planning in Sweet Home. The review explains the relationship between the document and the planning process and identifies key issues that will factor into the project. The plans and regulations will guide decisions regarding selection of preferred transportation improvements and identifies potential amendments to related plan documents that would occur later in the planning process.

Some documents in this review establish transportation-related standards, target, and guidelines with which the corridor study must be coordinated and consistent with; others contain transportation improvements that will need to be factored and reflected in the project.

Table 5. State Planning Documents and Relevance to Sweet Home TSP and NSHAP

PLAN DOCUMENT (YEAR)	PLAN SUMMARY & RELEVANCE
Oregon Highway Plan (1999 with 2006 amendments, recent updates through 2015 Amendments)	The Oregon Highway Plan (OHP) is a functional element of the Oregon Transportation Plan. The OHP establishes policies and investment strategies for Oregon's state highway system over a 20-year period and refines the goals and policies found in the Oregon Transportation Plan (OTP) Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity Oregon Highway 228 and US-20 lie within Sweet Home. US-20: • Regional Highway • Freight: Reduction Review Route, OHP Freight Route (west of OR 228) OR 228: • District Highway • No freight designation
Bicycle & Pedestrian Plan (2016)	The intent of the Oregon Bicycle and Pedestrian Plan (OBPP) is to create a policy foundation that supports decision-making for walking and biking investments, strategies, and programs. The OBPP contains standards and designs for bicycle and pedestrian facilities on state highways, and for a variety of roadway types and land uses. OBPP policies will apply to projects and designs that affect highways within the study area.
Oregon Freight Plan (2011)	The Oregon Freight Plan (OFP) identifies a number of challenges facing Oregon's freight system including system operation and development, safety, communications, environmental considerations, and funding. Implementation actions to improve the freight system include working with cities and counties to consider the freight system in transportation planning, as well as developing performance measures to help make choices about where to invest in freight improvements.

PLAN DOCUMENT (YEAR)	PLAN SUMMARY & RELEVANCE
	Highways in Sweet Home play an important role in freight movement – the Oregon Freight Plan's policies will apply to designs and projects affecting those facilities.
Oregon Public Transportation Plan (2018)	The Oregon Public Transportation Plan (OPTP) is the modal plan of the OTP that provides guidance for ODOT and public transportation agencies regarding the development of public transportation systems. The OPTP provides guidance for the development of transit, rideshare, and transportation demand management services over a 20-year period. The OPTP provides technical information on public transportation standards and needs that assist communities preparing the TSPs required under the TPR and responds to TPR requirements for per capita reductions in vehicle miles traveled in Oregon's metropolitan communities.
Oregon Transportation Options Plan (2015)	The purpose of the Oregon Transportation Options (OTO) Plan is to "establish a vision and policy guidance that integrates transportation options in local, regional, and state transportation planning, programming, and investment." The OTO Plan: • Identifies opportunities to expand transportation choices. • Looks to increase funding opportunities for transportation options programs and investments. • Provides information to better integrate transportation options into local, regional, and state transportation planning.
Transportation Planning Rule (OAR 660-012).	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 pollutions, traffic, and other livability problems faced by urban areas in other parts of the country might be avoided." The TPR also established requirements for coordination among affected levels of government for preparation, adoption, refinement, implementation, and amendment of transportation system plans. A detailed audit of the TPR is included in this memorandum.
Access Management Rule (OAR 734-051).	Oregon Administrative Rule 734-051 defines the State's role in managing access to highway facilities in order to maintain functional use and safety and to preserve public investment. The provisions in the access management rules include spacing standards for varying types of state roadways. It also lists criteria for granting right of access and approach locations onto state highway facilities.
ODOT Analysis Procedures Manual Version 2	The Analysis Procedures Manual (APM) provides current methodologies, practices, and procedures for conducting long-term analysis of ODOT plans and projects.
Highway Design Manual (2012),	The 2012 Highway Design Manual (HDM) provides uniform standards and procedure for the Oregon Department of Transportation (ODOT) Intended to provide guidance for the design of new construction, major reconstruction, resurfacing, restoration, and rehabilitation of state roadways.
Blueprint for Urban Design (2020)	The Blueprint for Urban Design (BUD) is a "bridging document" that establishes revised criteria to be used when design urban projects on the state system. The document provides guidance for urban design on Oregon state highways until such time that all ODOT manuals related to urban areas are updated. The Blueprint for Urban Design and its recommendations will be utilized in the TSP update.
American Association of State Highway Transportation Officials: Policy of Geometric Design of Highways and Streets	The American Association of State Highway Transportation Officials (AASHTO) Policy for Geometric Design of Highways and Streets provides additional design standards to supplement ODOT's HDM and BUD. AASHTO standards are organized in a system so the roadway's functional classification and other variables can be used to determine applicable roadway policies and designs. The HDM identifies the 2011 version as the basis for ODOT 4R/New Standard for New Construction and Reconstruction on all State Highways.
Draft 2021 2024 Statewide Transportation	The Statewide Transportation Improvement Program (STIP) is Oregon's 4-year transportation capital improvement program. The STIP documents funding sources and implementation schedules for transportation improvement projects and programs throughout the state.

PLAN DOCUMENT (YEAR)	PLAN SUMMARY & RELEVANCE
System Improvement Program (STIP)	The following STIP Projects are planned in Sweet Home: • 18853 US 20: 53rd Avenue east of 60th Ave – Construct sidewalks, bike lanes along US20, and add midblock crossings near 40th and 49th Avenues to improve safety • 21900 North River Drive Public Access Improvements Project - Construct a combination of roadway widening improvements, road surface repair and pavement preservation to meet current and future needs. • 22391 US20/OR228 Curb ramps - Construct curb ramps to meet compliance with the Americans with Disabilities Act (ADA) standards. Convert the traffic loops to radar and add a median island at 22nd Street. • 22742 US 20 from US 101 to the Idaho border - Install National Electric Vehicle Infrastructure (NEVI) fast charging stations every 50 miles along US20 from US101 to the Idaho border, to provide electric vehicle drivers with reliable and fast charging.

SECTION 2: TRANSPORTATION PLANNING RULE AUDIT

Table 6 describes how City land division, zoning, and development requirements meet specific Transportation Planning Rule (TPR) requirements and identifies recommended improvements where local requirements could be strengthened or modified to be more consistent with the TPR. Suggested draft code language will be prepared at the implementation phase of the TSP update that supports the policies and recommendations of the draft TSP and ensures consistency with the TPR.

Table 6. TPR Requirements and Recommendations for the Sweet Home Development Code

TPR REQUIREMENT	MUNICIPAL CODE REFERENCES AND RECOMMENDATIONS
OAR 660-012-0045 – Implementation of the Transportation System Plan	
(1) Each local government shall amend its land use regulations to implement the TSP.	
(a) The following transportation facilities, services and improvements need not be subject to land use regulations except as necessary to implement the TSP and, under ordinary circumstances do not have a significant impact on land use: *(A) Operation, maintenance, and repair of existing transportation facilities identified in the TSP, such as road, bicycle, pedestrian, port, airport and rail facilities, and major regional pipelines and terminals;* *(B) Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, where the improvements are consistent with clear and objective dimensional standards;* *(C) Uses permitted outright under ORS 215.213(1)(m) through (p) and 215.283(1)(k) through (n), consistent with the provisions of 660-012-0065; and* *(D) Changes in the frequency of transit, rail and airport services.* *(b) To the extent, if any, that a transportation facility, service, or improvement concerns the application of a comprehensive plan provision or land use regulation, it may be allowed without further land use review if it is permitted outright or if it is subject to standards that do not require interpretation or the exercise of factual, policy or legal judgment.*	The purpose of this provision is to allow for certain transportation uses, such as operation, maintenance, and repair of transportation facilities identified in the TSP, without being subject to land use regulations. Currently transportation uses are not included in the list of permitted uses in the zoning ordinance, nor is there a general provision indicating that transportation uses consistent with the adopted transportation system plan do not require a separate land use review. This TPR provision is not met. Recommendation: The City should amend the Zoning Code (Title 17) to allow transportation improvements in all zones, provided that the proposed improvements implement the TSP and/or can be shown to be consistent with adopted policy.
(c) In the event that a transportation facility, service or improvement is determined to have a significant impact on land use or requires interpretation or the exercise of factual, policy or legal judgment, the local government shall provide a review and approval process that is consistent with 660-012-0050. To facilitate implementation of the TSP, each local government shall	TPR Section -0050 addresses project development and implementation - how a transportation facility or improvement authorized in a TSP is designed and constructed. Project development may or may not require land use decision-making. The TPR directs that during project development, projects authorized in an acknowledged TSP will not be subject to further justification with regard to their need, mode, function, or general location. To this end, the TPR calls for consolidated review of land use decisions and proper noticing requirements for affected

TPR REQUIREMENT	MUNICIPAL CODE REFERENCES AND RECOMMENDATIONS
amend regulations to provide for consolidated review of land use decisions required to permit a transportation project.	transportation facilities and service providers. §17.42.130 – Traffic Impact Study requires a TIA as part of a development application, change in use, or change in access. **This TPR provision is met.**
(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities corridors and sites for their identified functions. Such regulations shall include:	
(a) Access control measures, for example, driveway and public road spacing, median control and signal spacing standards, which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;	§17.42.040 – Streets includes system spacing, intersection spaces, and driveway spacing standards by functional classification per the Transportation System Plan. This TPR provision is met.
(b) Standards to protect the future operations of roads, transitways and major transit corridors	§17.42.130 addresses Traffic Impact Studies. The City or other road authority with jurisdiction may require a Traffic Impact Analysis (TIA) as part of an application for development, a change in use, or a change in access as specified in OAR 660-012-0060. This study is intended to ensure that operations of transportation facilities is maintained through individual land use decisions. Recommendation: This TPR provision is met. However, the TSP update provides an ideal opportunity to revisit the thresholds that trigger a TIA, as well as the process and requirements. Any recommended changes resulting from this review may necessitate updates to §17.42.130 .
(c) Measures to protect public use airports by controlling land uses within airport noise corridors and imaginary surfaces, and by limiting physical hazards to air navigation;	There is no airport in Sweet Home, therefor the municipal code does not regulate the use. This TPR provision is met.
(d) A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites;	See response to -0045(1)(c). This TPR provision is met.
(e) A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;	This section is implemented by section 17.42.130 (Traffic Impact Study), 17.42.104 (Conditional Uses), and 17.42 (Street Standards). Section 17.42.130 establishes the standards for when a proposal must be reviewed for potential traffic impacts, when a TIS must be submitted with a development application, and who is qualified to prepare the analysis. This TPR provision is met. The provisions of these sections will be revisited to ensure compliance with the updated TSP.
(f) Regulations to provide notice to public agencies providing transportation facilities and services, MPOs, and ODOT of:	Notice requirements are detailed in Section 17.122, 17.124, 17.126, and 17.128. These sections address procedures for land use applications (Type I through Type IV). Wording varies somewhat between sections,

TPR REQUIREMENT	MUNICIPAL CODE REFERENCES AND RECOMMENDATIONS
(A) Land use applications that require public hearings; *(B) Subdivision and partition applications;* *(C)Other applications which affect private access to roads; and* *(D)Other applications within airport noise corridor and imaginary surfaces which affect airport operations.*	though is generally consistent with the TPR. Recommendation: This TPR provision is met, though additional review of notice language is recommended as part of the TSP update.
(g) Regulations assuring amendments to land use designations, densities, and design standards are consistent with the functions, capacities and performance standards of facilities identified in the TSP.	Decision criteria for Comprehensive Plan map amendments are located in 17.112.050. Decision criteria for other uses are located in various locations in the code. Language includes "The proposed development is timely, considering the adequacy of transportation systems, public facilities and services, existing or planned for the area affected by the use" but does not specifically reference standards of the TSP **Recommendation:** Include specific requirements ensuring consistency with the "functions, capacities, and performance standards of facilities identified in the TSP" in 17.112.050 and elsewhere as appropriate.
(3) Local governments shall adopt land use or subdivision regulations for urban areas and rural communities as set forth below.	
(a) Bicycle parking facilities as part of new multi-family residential developments of four units or more, new retail, office and institutional developments, and all transit transfer stations and park-and-ride lots.	Bicycle parking is addressed in Section 17.44.060. Bicycle parking facilities are required as part of new multifamily residential developments of 4 units or more, as well as new retail, office, and institutional developments. The amount of bicycle parking required depends on the number of required vehicle parking spaces. Recommendation: As appropriate, consider adding transit transfer stations and park-and-ride lots to the facilities which require bicycle parking.
(b) On-site facilities shall be provided which accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. Single-family residential developments shall generally include streets and accessways. Pedestrian circulation through parking lots should generally be provided in the form of accessways. *(A) "Neighborhood activity centers" includes, but is not limited to, existing or planned schools, parks, shopping areas, transit stops or employment centers;* *(B) Bikeways shall be required along arterials and major collectors. sidewalks shall be required along arterials, collectors and most local streets in urban areas except that sidewalks are not required along controlled access roadways, such as freeways;*	On-site circulation and connections: Circulation diagrams are a required part of a 17.102 showing the vehicular and pedestrian circulation patterns, parking, loading and service areas. However, requirements related to on-site circulation and connections to nearby activity centers for non-motorized modes of transportation are not addressed in the either the Zoning or the Land Division Ordinance. Parking Lots: Chapter 17.44 addresses off-street parking and loading, and access requirements. Pedestrian and/or bicycle circulation through parking lots are not addressed. Bikeways and sidewalks: Street standards are identified in 17.42, including sidewalks and bikeways. Street and accessway layout: 17.58.040 includes standards for subdivisions, including a maximum block length of 1,000' and a note that the City may require accessways for blocks greater than 600' in length. Cul-de-sacs: Cul-de-sacs may be required to include pedestrian accessways. They are also limited to a length of 800 feet (17.42.030). <u>Recommendations:</u>

TPR REQUIREMENT	MUNICIPAL CODE REFERENCES AND RECOMMENDATIONS
(C) Cul-de-sacs and other dead-end streets may be used as part of a development plan, consistent with the purposes set forth in this section; *(D) Local governments shall establish their own standards or criteria for providing streets and accessways consistent with the purposes of this section. Such measures may include but are not limited to: standards for spacing of streets or accessways; and standards for excessive out-of-direction travel;* *(E) Streets and accessways need not be required where one or more of the following conditions exist:* *(i) Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep slopes, wetlands or other bodies of water where a connection could not reasonably be provided;* *(ii) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or* *(iii) Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.*	Amend the development code to include language related to on-site circulation and connections, and pedestrian access through parking lots. Include references to adopted street standards in the updated TSP. Street standards will need to comply with the bikeway requirements within the TPR. Evaluate the 1,000' block length and accessway requirements as part of the TSP update.
(c) Off-site road improvements are otherwise required as a condition of development approval, they shall include facilities accommodating convenient pedestrian and bicycle and pedestrian travel, including bicycle ways on arterials and major collectors	Off-site improvement requirements area not mentioned specifically in the code. Recommendation: Add specific language stating that the City may require off-site improvements proportionate to the impacts of proposed development and that conditioned improvements may include facilities accommodating convenient pedestrian and bicycle travel, consistent with the TSP. Proposed code modifications would suggest what type of findings are necessary to require such off-site improvements.
(d) For purposes of subsection (b) "safe and convenient" means bicycle and pedestrian routes, facilities and improvements which: *(A) Are reasonably free from hazards, particularly types or levels of automobile traffic which would interfere with or discourage pedestrian or cycle travel for short trips;* *(B) Provide a reasonably direct route of travel between destinations such as between a transit stop and a store; and*	Adopted City development requirements do not contain language requiring "safe and convenient" bicycle and pedestrian routes. Recommendation: Address TPR requirements related to bicycle and pedestrian access and mobility through the addition of a new Pedestrian Access and Circulation section in the Land Division Ordinance. Review the applicability of proposed new requirements for all future subdivisions.

TPR REQUIREMENT	MUNICIPAL CODE REFERENCES AND RECOMMENDATIONS
(C) Meet travel needs of cyclists and pedestrians considering destination and length of trip; and considering that the optimum trip length of pedestrians is generally 1/4 to 1/2 mile.	
(e) Internal pedestrian circulation within new office parks and commercial developments shall be provided through clustering of buildings, construction of accessways, walkways and similar techniques.	The City currently does not have requirements related to non-motorized circulation internal to office park and commercial development. Recommendation: See recommendation above.
(4) To support transit in urban areas containing a population greater than 25,000, where the area is already served by a public transit system or where determination has been made that a public transit system is feasible, local governments shall adopt land use and subdivisions as provided in (a)-(g) below.	
(a) Transit routes and transit facilities shall be designed to support transit use through provision of bus stops, pullouts and shelters, optimum road geometrics, on-road parking restrictions and similar facilities, as appropriate	The City of Sweet Home does not have a population greater than 25,000. However, the community is currently served by modest transit service. The updated TSP will address existing and future transit facilities and services. This provision is met.
(b) New retail, office and institutional buildings at or near major transit stops shall provide for convenient pedestrian access to transit through the measures listed in (A) and (B) below. *(A) Walkways shall be provided connecting building entrances and streets adjoining the site;* *(B) Pedestrian connections to adjoining properties shall be provided except where such a connection is impracticable. Pedestrian connections shall connect the on site circulation system to existing or proposed streets, walkways, and driveways about the property. Where adjacent properties are undeveloped or have potential for redevelopment, streets, accessways and walkways on site shall be laid out or stubbed to allow for extension to the adjoining property;* *(C) In addition to (A) and (B) above, on sites at major transit stops provide the following:* *(i) Either locate buildings within 20 feet of the transit stop, a transit street or an intersecting street or provide a pedestrian plaza at the transit stop or street intersection;* *(ii) A reasonably direct pedestrian connection between the transit stop and building entrances on the site* *(iii) A transit passenger landing pad accessible to disabled persons* *(iv) An easement or dedication for a passenger shelter if requested by the transit provide; and*	Access to transit is not currently addressed by the TSP. Recommendation: See response to -0045(4)(a).

TPR REQUIREMENT	MUNICIPAL CODE REFERENCES AND RECOMMENDATIONS
(v) Lighting at the transit stop.	
(c) Local governments may implement 4(b)A) and (B) above through the designation of pedestrian districts and adoption of appropriate implementing measures regulating development within pedestrian districts. Pedestrian districts must comply with the requirement of (4)(b)(C) above.	The City can also meet the requirements of the TPR related to pedestrian connections to transit (TPR -0045(4)(b)(A) and (B)) by adopting appropriate implementing measures within a designated pedestrian district. The City of Sweet Home currently does not have pedestrian district designations. Recommendation: For the approach offered by TPR -0045(4)(c), the City would need to consider designating pedestrian districts and developing specific code language to address, among other things, "major transit stops," as defined through the TSP update.
(d) Designated employee parking areas in new developments shall provide preferential parking for carpools and vanpools	Section 17.44 addresses parking and loading, and does not address preferential parking for carpools/vanpools. Recommendation: The City should consider requiring that new developments with planned designated employee parking areas provide preferential parking for employee carpools and vanpools. A typical local code requirement is requiring employers with more than a specific number of employees, or developments where required parking spaces exceed a specific number, to dedicate a percentage of the required parking spaces for car/vanpools.
(6) In developing a bicycle and pedestrian circulation plan as required by 660-012-0020(2)(d), local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas. Appropriate improvements should provide for more direct, convenient and safer bicycle or pedestrian travel within and between residential areas and neighborhood activity centers (i.e., schools, shopping, transit stops). Specific measures include, for example, constructing walkways between cul-de-sacs and adjacent roads, providing walkways between buildings, and providing direct access between adjacent uses.	The TSP update is expected to include a considerable update to the City's bicycle and pedestrian circulation plan, consistent with TPR -0020. This TPR requirement is currently implemented in City requirements as follows. Walkways between cul-de-sacs and adjacent roads – See response and recommendations related to cul-de-sacs, Section -0045(3)(b). Walkways between buildings – See response and recommendations related to accessways, Section -0045(3)(b). Access between adjacent uses – See response and recommendations related to accessways, Section -0045(3)(b). <u>Recommendation:</u> This requirement will be addressed by the TSP update planning process and can be implemented locally by requiring improvements in developing areas consistent with adopted code provisions.
(7) Local governments shall establish standards for local streets and accessways that minimize pavement width and total ROW consistent with the operational needs of the facility. The intent of this requirement is that local governments consider and reduce excessive standards for local streets and accessways in order to reduce the cost of construction, provide for more efficient use of urban land, provide for emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and which accommodate convenient pedestrian and bicycle circulation. Notwithstanding section (1) or (3) of this rule, local street	Section 17.42.040 includes right-of-way widths for streets **<u>Recommendation:</u>** The TSP update process provides the City with the opportunity to evaluate local streets standards to determine if modifications need to be made to both meet the current and future needs of the community and implement this TPR requirement.

TPR REQUIREMENT	MUNICIPAL CODE REFERENCES AND RECOMMENDATIONS
standards adopted to meet this requirement need not be adopted as land use regulations.	
OAR 660-12-0060	
Amendments to functional plans, acknowledged comprehensive plans, and land use regulations that significantly affect an existing or planned transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility.	in Section 17.42.130 TRAFFIC IMPACT STUDY outlines the requirements of traffic impact analyses. Findings of significant affect and consistency with the TSP are not explicitly mentioned in the development code. **Recommendation:** Update Section 17.42.130 to explicitly address the requirements of OAR 660-12-0060.

DKS

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TM#2 GOALS OBJECTIVES AND EVALUATION CRITERIA (DRAFT)

DATE: May 24, 2023

TO: Sweet Home TSP PMT

FROM: Garth Appanaitis | DKS Associates

SUBJECT: Sweet Home TSP Update and NSHA Project #20020-015

The purpose of this memorandum is to identify potential goals and objectives for the updated Sweet Home Transportation System Plan (TSP) and the North Sweet Home Area Plan (NSHA). The goal and supporting policies from the existing Sweet Home TSP will be expanded to incorporate additional areas of community interest.

The followings sections summarize the existing Sweet Home TSP goal and provide additional goal areas used by other communities for consideration. An initial draft set of goals and policies are provided that will be updated through review and coordination with the community.

EXISTING GOAL AND ADDITIONAL CONSIDERATIONS

The following section summarizes the existing Sweet Home transportation goal and policies and identifies other potential goal areas for consideration.

EXISTING TRANSPORTATION GOAL AND POLICIES

The Sweet Home Comprehensive Plan currently includes a transportation goal with nine policies. The existing policies primarily focus on maintaining the transportation system and setting appropriate standards.

Goal: The City of Sweet Home wants a well-planned, comprehensive transportation system that balances the needs of future land development with a system that serves all users.

- Policy 1 As a general guideline, all streets shall carry volumes and speeds at the appropriate range for all street classifications as described the Functional Classifications Guidelines.
- Policy 2 To achieve consistency in construction, operation, and maintenance within street classifications, Sweet Home shall classify streets according to their function.

- Policy 3 The roadway design standards in the Transportation System Plan shall be implemented in the land development and land division ordinances for the development of future roadway facilities.
- Policy 4 Private streets must be built to City standards as approved as part of the development plan.
- Policy 5 The Standards for Pedestrian and Bicycle System improvements listed in the Transportation System Plan, shall be implemented when reviewing new development.
- Policy 6 The City shall encourage access management actions that:
    - Minimize the number of potential conflicts among all users of the street system.
    - Minimize local cost for transportation improvements needed to provide additional capacity and/or access improvements along unimproved roadways.
- Policy 7 The City seeks to encourage transportation projects that enhance overall system continuity. Where ever possible, the City shall consider street connectivity when reviewing new street development.
- Policy 8 Many existing streets in Sweet Home do not meet the standards and it may not be possible to improve the streets to the maximum extent feasible to meet access conditions and "traffic feature" standards. It may be necessary in some circumstances to prohibit parking on one or both sides of the street, particularly on designated arterials and collectors.
- Policy 9 The City shall study and implement financing options for needed street improvements.

OPTIONAL GOALS FROM OTHER COMMUNITIES

The following transportation goals have been used in other communities to differentiate different aspects of the transportation system goals:

- **Safety** – Improve the safety of the transportation system for all users.
- **Active Transportation** – Complete safe networks of facilities that make walking and biking and attractive choice by people of all ages and abilities.
- **Mobility & Accessibility** – Promote efficient travel that provides access to goods, services, community facilities, homes, and employment to meet the daily needs of all users, as well as to local and regional activity centers.
- **Mobility & Connectivity** – Provide a transportation system that prioritizes mobility and connectivity for all users.
- **Equity** – Support and equitable transportation system that justly allocates the benefits and burdens of transportation projects, policies, plans, and processes.
- **Environmental** – Minimize environmental impacts on natural resources and encourage carbon-neutral or efficient transportation alternatives.
- **Economic Development** – Promote economic development and tourism.
- **Investments and Funding** – Promote cost effective investments to the transportation system.
- **Regional coordination** – Coordinate with other jurisdictions to plan and fund projects that better connect [the city] with the region and consistent with local, regional, and state plans.

- **Community Needs** – Provide a transportation system that supports specific community needs.
- **System Management** – Promote traffic management to achieve the efficient use of transportation infrastructure.
- **Transit** - Provide safe, efficient, high-quality transit service that gives [city] residents, employees, employers, and visitors more freedom to meet their needs within the city, region and state. Create a transit system that offers an alternative to private automobile use, supports efficient use of roadways and reduces air pollution and energy use.
- **Health** – Support options for exercise and healthy lifestyles to enhance the quality of life.
- **Quality of Life** – Enhance the city's quality of life by providing adequate access to residences, employment, services, social and recreational opportunities.
- **Coordination** – Collaborate and coordinate with state, county, and other agencies during long-range planning efforts, development review, design and construction of transportation projects, and any other land use or transportation programs, policies, or developments.

POTENTIAL GOALS AND OBJECTIVES

The following section provides a draft set of goals and objectives that build upon the existing transportation goal and incorporates other key interests of Sweet Home. Many of the existing policies are incorporated into Goal 5.

Note: These potential goals and objectives are provided as an initial starting point to generate discussion and will be revised based on feedback from the community.

GOAL 1 - MOBILITY, ACCESSIBILITY, AND CONNECTIVITY

Provide a system that is accessible and efficient for all travel modes and purposes.

Associated Objectives

- Develop an integrated transportation system that accommodates a wide range of transportation options.
- Provide access for all types of vehicles and equipment, including freight, emergency vehicles, and equipment.
- Address intersection capacity needs for present and future traffic volumes.
- Upgrade key intersection locations to meet Americans with Disabilities Act (ADA) requirements.
- Encourage active transportation through policy and engineering.
- Ensure the transportation system provides equitable access for all people.
- Provide connectivity within the city and identify and prioritize needed transportation connections.

GOAL 2 - SAFETY

Provide safe routes, corridors, and intersections for all modes of transportation.

Associated Objectives

- Identify and improve safe crossings for bicycles and pedestrians.
- Prioritize safe routes to school.
- Expand the sidewalk network throughout the city.
- Identify and implement bicycle corridors to navigate the city.
- Improve traffic safety though a comprehensive program of engineering, education, and enforcement.
- Identify and improve locations with high crash frequency.
- Design streets to serve their anticipated function and intended use.
- Improve lighting along pedestrian and bicycle corridors.

GOAL 3 – QUALITY OF LIFE

Provide a transportation network that preserves the character of the city and makes it more convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs.

Associated Objectives

- Preserve community identity through transportation design choices.
- Balance the needs and desires of a small city with a highway running through it. Value the simplicity of a small city.
- Minimize the impacts of transportation system improvements on existing land uses.
- Identify and seek funding for programs that encourage healthy transportation habits.
- Support improvements that make the downtown area safe and comfortable to walk.
- Support regional tourism and strategies to encourage stops by visitors.
- Connect the city through pedestrian and bicycle paths.
- Improve the transportation system that has direct access to employment.

GOAL 4 – ECONOMIC DEVELOPMENT

Promote economic development and tourism.

Associated Objectives

- Provide facilities to connect the public to downtown, parks, and other event locations and recreational opportunities.
- Manage arterials to support freight in the efficient movement of goods and services.
- Improve wayfinding and signage around the city to improve the ability to confidently navigate the transportation network by residents and visitors.
- Coordinate with state and regional partners to implement transportation strategies that support increased tourism.
- Improve walkability in the Downtown area to promote economic activity.

GOAL 5 – SYSTEM MANAGEMENT AND MAINTENANCE

Promote traffic management to achieve the efficient use of transportation infrastructure.

Associated Objectives

- Maintain a roadway functional classification system that prioritizes the purpose and design of each existing and future roadway. Classify streets according to function to achieve consistency in construction, operation, and maintenance.
- Streets should operate with the intended purpose and provide a combination of mobility and access consistent with the functional classification. Traffic volumes should align with the functional classification with higher classification facilities generally carrying higher traffic volumes.
- Street policies and design standards should be based on functional classification and other contextual considerations. Streets should be constructed to these standards unless exceptions are granted as approved by Public Works.
- Where existing streets do not meet standards or proposed streets are unable to meet standards, other management practices (such as parking prohibition) may be utilized to maintain safe operation.
- The City shall study and implement financing options for needed street improvements.
- Balance local access to US 20 with the need to serve regional and statewide traffic, while supporting adjacent land uses
- Plan for a transportation system that supports projected population and employment growth and maximize travel options by providing efficient routes for all modes of transportation.

TSP AND NSHA CONSIDERATIONS

The TSP and NSHA will likely incorporate the same or similar transportation goals and policies. However, there may be deviations to apply additional focus for considerations within the NSHA or other parts of Sweet Home. Potential considerations between variation in TSP (Citywide) and NSHA goals and policies may include:

- Location and context specific considerations
    - Presence of rail crossings within NSHA
    - NSHA connections to downtown
    - Many areas of Sweet Home are built out while NSHA has more space for right of way opportunities
- Intent-based considerations
    - Promotion of future development within NSHA

EVALUATION CRITERIA

As transportation improvement alternatives are developed, evaluation criteria based on the objectives will be used to assess the relative value of each project considered for inclusion in the TSP. This will include criteria that are both qualitative and quantitative in nature. While some goals include more objectives than others, all goals will be weighted equally unless the advisory committee decides that some are more important than others. Using the criteria, considered projects will be rated and categorized as high, medium, or low priorities according to their ability to meet a broad range of community objectives.

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TM#3 EXISTING CONDITIONS INVENTORY AND ANALYSIS (DRAFT)

DATE: September 12, 2023

TO: Project Management Team

FROM: Garth Appanaitis, PE | DKS
Dock Rosenthal, PE | DKS
Alex Haag | DKS

SUBJECT: Sweet Home TSP and NSHA Refinement
TM#3 Existing Conditions

Project #20020-015

INTRODUCTION

This memorandum summarizes the transportation inventory of existing conditions for the City of Sweet Home and analyzes the existing multimodal travel conditions. A review of the existing transportation conditions for walking, biking, transit, motor vehicles, freight, and safety is included in the inventory.

The purpose of this existing conditions inventory and analysis is to assess the current conditions of the transportation system in Sweet Home, including its physical infrastructure, operational characteristics, and usage patterns. This includes an inventory of the existing transportation network, including roadways, sidewalks, bike infrastructure, and transit facilities. The analysis also includes an assessment of existing traffic conditions and a review of historical crash rates. The inventory will help identify potential gaps and deficiencies in the transportation system.

BACKGROUND

Sweet Home is a small city located in Linn County, Oregon, United States. As of the 2020 census, the population was approximately 10,000 people. The community is situated in the foothills of the Cascade Mountains and is known for its outdoor recreation opportunities, including hiking, fishing, and camping. Sweet Home is located approximately 19 miles east of Interstate-5 (I-5). Sweet Home is approximately 80 miles south of Portland, 40 miles north of Eugene/Springfield, and 45 miles west of Santiam Pass. The area surrounding Sweet Home is primarily rural and has historically been served by a mostly agricultural and timber-based economy. Located within the

South Santiam Watershed, the city is situated along the South Fork of the Santiam River at an elevation of about 537 feet.

U.S. 20 (Santiam Highway) runs east-west through the city along Main Street and forms the major transportation link through the community. ORE 228 (Holley Road) enters Sweet Home from the west and curves north to terminate at U.S. 20 near the west end of the city.

Sweet Home is served by the Sweet Home School District. The district includes Sweet Home High School, a junior high school, and four elementary schools. The district covers Sweet Home, Cascadia, Crawfordsville, Holley, Liberty, Pleasant Valley, and other surrounding communities.

The study area boundary for this plan generally coincides with the Urban Growth Boundary (UGB), which is shown in **Figure 1** together with the city limits and street system, and key destinations identified within the city.

Figure 2 illustrates a zoning map of Sweet Home that shows how different land uses are oriented around the City. Most commercial land is found in the downtown area, and highway commercial along U.S. 20. High density residential is primarily located along Long Street or adjacent to the downtown area, and medium and low density radiating outward from the downtown area. In Fall 2022 the City updated the Development Code and added a Mixed Use Employment Zone (MUE) designation. This update was accompanied by an update to the Comprehensive Plan map and all the properties currently zoned RC had the Comprehensive Plan designation changed to MUE. While existing zoning in the area was not changed during this process, the modification enables flexibility by providing the benefits of the existing RC zoning while facilitating future transition to the MUE. **Figure 3** illustrates the City's 2022 Zoning Update.

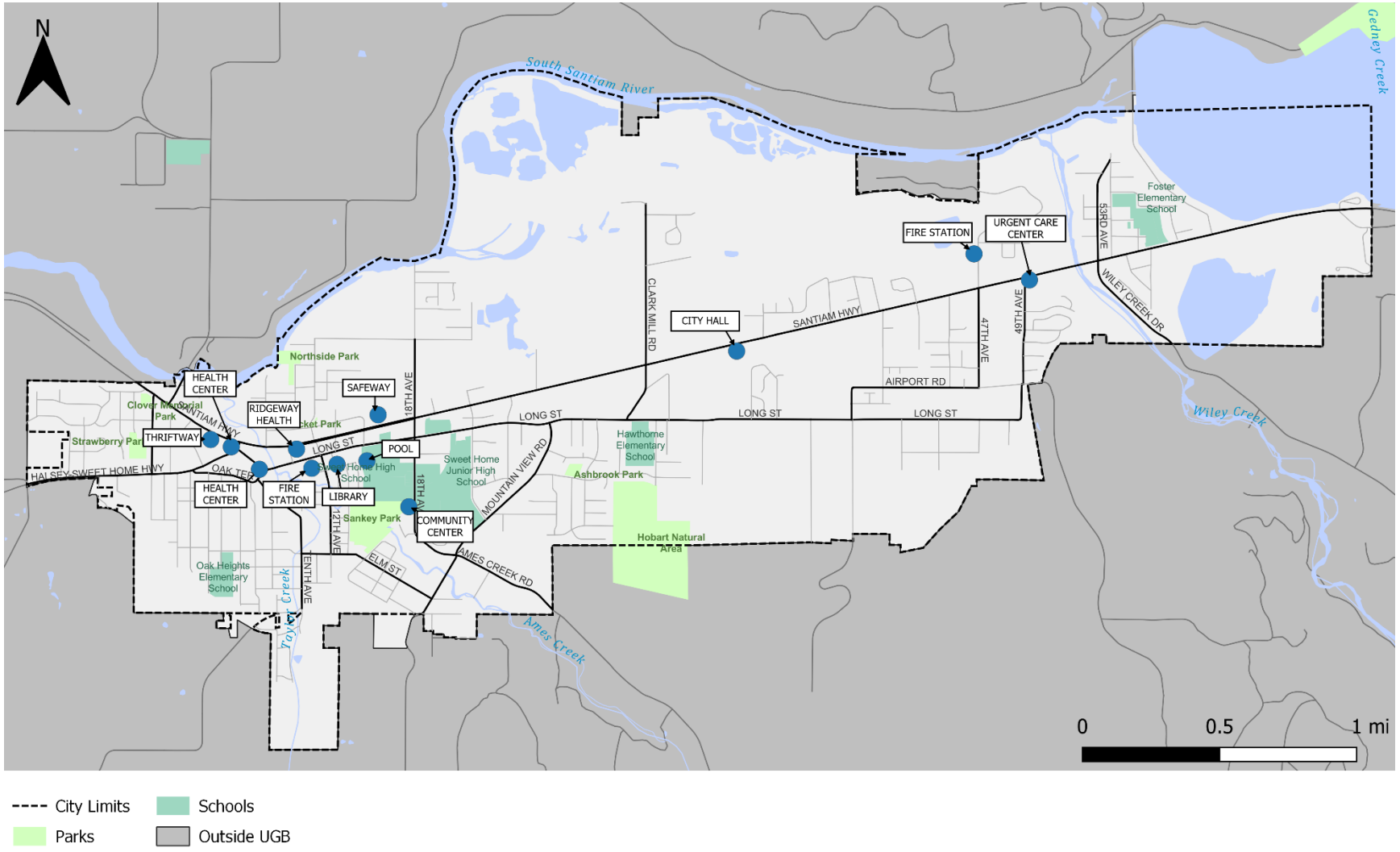


FIGURE 1: SWEET HOME AND KEY DESTINATIONS

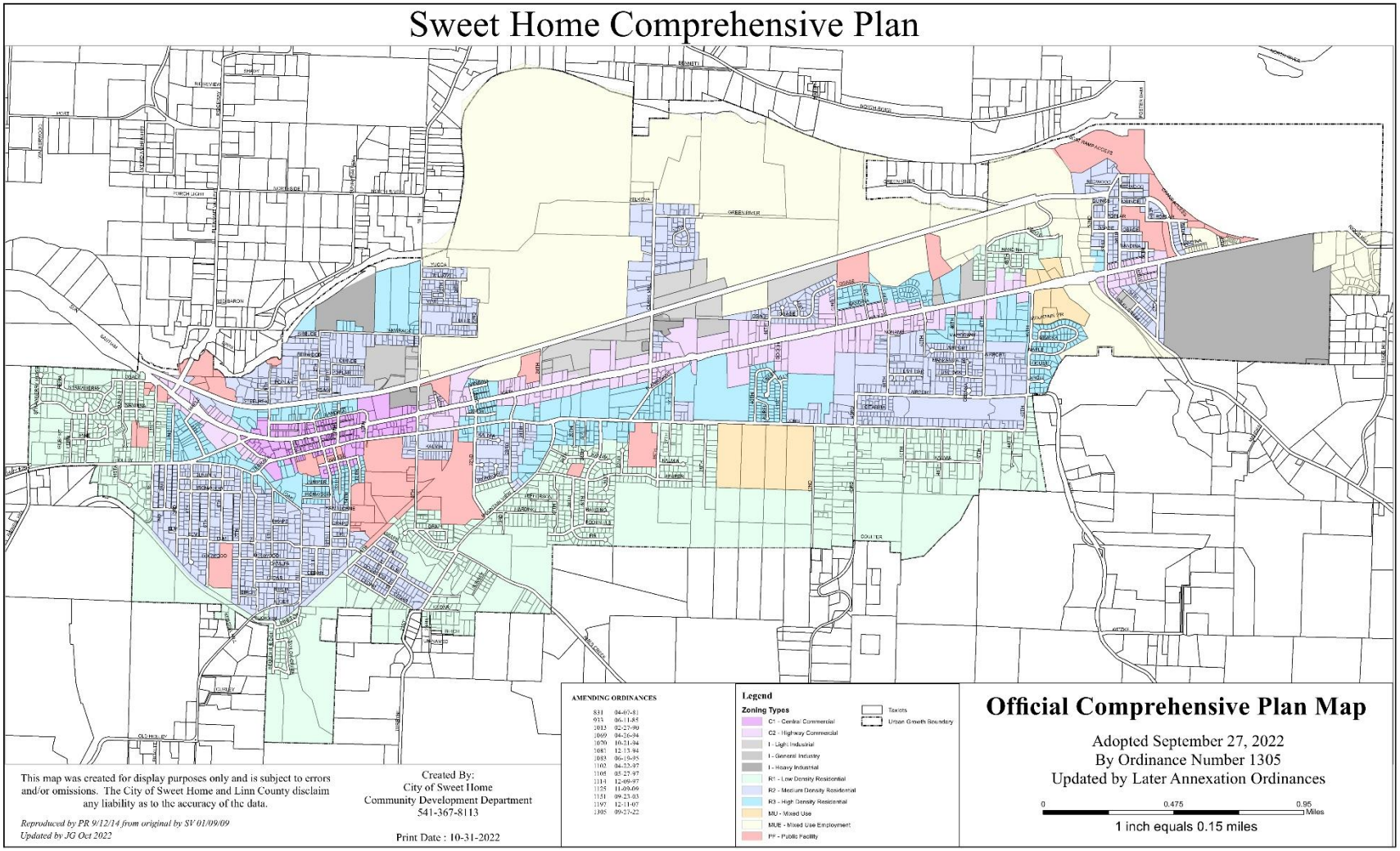


FIGURE 2: SWEET HOME COMPREHENSIVE PLAN (2022) LAND USE DESIGNATIONS

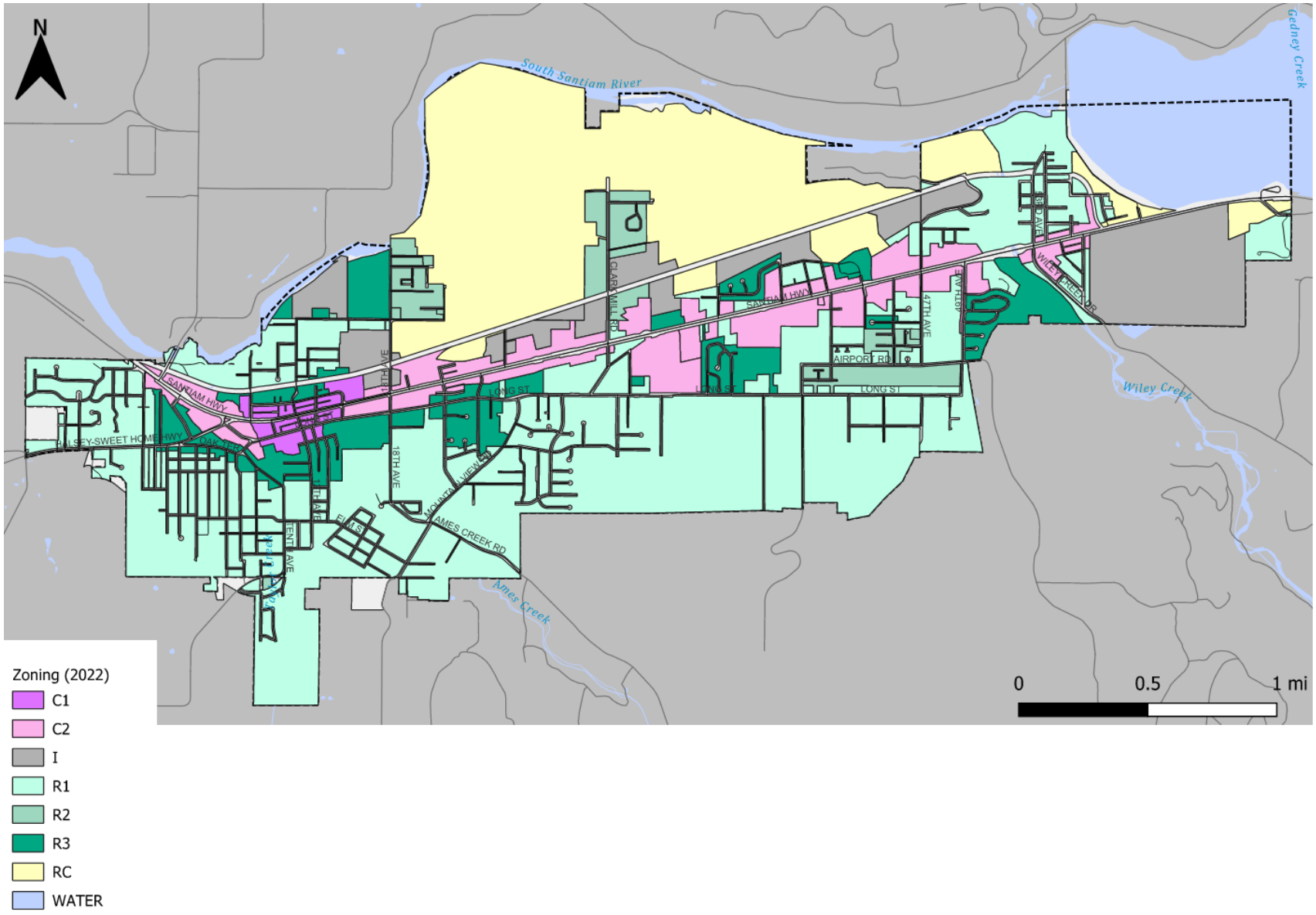


FIGURE 3: SWEET HOME ZONING UPDATE (2022)

WALKING AND BIKING CONDITIONS

Sweet Home is a compact city with many destinations located within a half-mile to three miles of each other. The system connectivity, density, and generally flat topography offer excellent pedestrian and cycling conditions in many areas of the city. Sweet Home's downtown area features a grid pattern of short blocks only interrupted by Ames Creek. Older areas in town also have a grid pattern, while newer areas transition to more suburban character with long blocks and cul-de-sacs.

The primary corridor through Sweet Home is U.S. 20 (Main Street/South Santiam Highway), which facilitates traffic flow between I-5 and Central Oregon. The high travel speeds of motor passing through the town to reach other destinations highlights the need for safe and highly visible pedestrian and bicycling facilities. Although improvements have been made, U.S. 20 still lacks adequate infrastructure for pedestrians and bicyclists along much of its length. However, the downtown stretch of the highway features a median with mid-block crosswalks, promoting enhanced visibility and safety for motorists, cyclists, and pedestrians.

While some streets in downtown provide satisfactory pedestrian amenities and can accommodate bicycles, many other streets in Sweet Home lack basic amenities such as sidewalks. Several barriers contribute to inefficient and less desirable pedestrian and bicycle travel, including the absence of walkways and challenges in crossing U.S. 20 outside of downtown, the lack of sidewalks and bike lanes or paths on collector streets, limited east-west connectivity (aside from Long Street and U.S. 20), and the absence of a connection between the newer and older parts of town via the street system, making it difficult to link the downtown core with the newer residential areas.

PEDESTRIAN NETWORK

Pedestrian facilities are a key aspect of a complete multimodal transportation system. Emphasizing pedestrian infrastructure not only promotes healthy lifestyles but also addresses social equity concerns by ensuring that individuals of all ages, including the young and elderly, as well as those without access to motorized transportation, can access essential goods, services, employment opportunities, public transit, and education.

Sidewalks are provided throughout the downtown core and some residential areas. Sidewalks are located in all of the commercial areas along Main Street and are well connected with most streets improved with curbs and sidewalks. Moving away from the downtown and nearby residential areas, the roads take on a more rural, unimproved character with the eastern part of the City having fewer sidewalks than the western and central areas.

Sidewalks are present on one or both sides of the street on arterials and collectors in streets, but there are deficiencies and gaps in multiple locations. Deficiencies are defined at locations where there is no sidewalk on either side of the street. Deficiencies exist on Long Street, Airport Road, 47th Avenue, 49th Avenue, 53rd Avenue and Wiley Creek Drive. Full sidewalks on both sides of the street are generally provided downtown and near the schools, as well as along Santiam Highway.

A map of existing pedestrian facilities can be found in **Figure 4**.

BICYCLE NETWORK

Bicycling plays a key role in the transportation system's ability to support healthy lifestyles and provide a variety of travel choices beyond the motor vehicle. Biking trips are an option for getting to and from school, shopping, commuting to work, and for travel to other activity generators in the City, as well as for recreational purposes. Currently, there are several designated bike routes and lanes within Sweet Home's downtown area, including portions of Main Street and Long Street.

Currently there are no separated cycling facilities in Sweet Home, however, painted bike lanes are present along a large portion of U.S. 20 and one segment of Long Street between 22nd Avenue and 35th Avenue. Sweet Home's existing bicycle facilities is shown in **Figure 5**.

BICYCLE LEVEL OF TRAFFIC STRESS

The Bicycle Level of Traffic Stress (LTS) is a measure used to assess the comfort and safety of bicycling conditions on different streets and routes. It quantifies the level of stress or discomfort experienced by cyclists when riding in proximity to motor vehicle traffic. The LTS methodology was developed to evaluate the suitability of streets and determine the need for bicycle infrastructure improvements.

LTS categorizes streets into four levels based on their traffic characteristics:

- LTS 1: Very Low Stress - These streets typically have minimal or no traffic, low vehicle speeds, and dedicated bicycle facilities such as bike lanes or separated paths. They are considered highly comfortable for cyclists.
- LTS 2: Low Stress - These streets have low traffic volumes and speeds, and they may have shared roadways or designated bicycle lanes. They are generally comfortable for most cyclists.
- LTS 3: Moderate Stress - These streets have moderate traffic volumes and speeds, often lacking dedicated bicycle facilities. Cyclists may have to share the road with vehicles, and there may be some challenges at intersections or other conflict points.
- LTS 4: High Stress - These streets are characterized by high traffic volumes, high vehicle speeds, and a lack of dedicated bicycle facilities. Cyclists face significant challenges sharing the road with fast-moving and heavy traffic, making these streets uncomfortable and potentially unsafe for biking.

By evaluating streets using the LTS framework, transportation planners and policymakers can identify areas where improvements are needed to create a more bicycle-friendly environment. This may include implementing bike lanes, protected bike facilities, traffic calming measures, or other infrastructure enhancements to reduce stress and enhance safety for cyclists.

Collector and Arterial streets in Sweet Home have been evaluated based on the BLTS methodology outlined in the *ODOT Analysis Procedures Manual Version 2 (2020).* Based on this methodology, the majority of Sweet Home's arterial and connector street network is BLTS level 3 or BLTS level 4, with the score primarily driven by the high travel speeds on these corridors. BLTS on Sweet Home's transportation network is summarized in **Figure 6**.

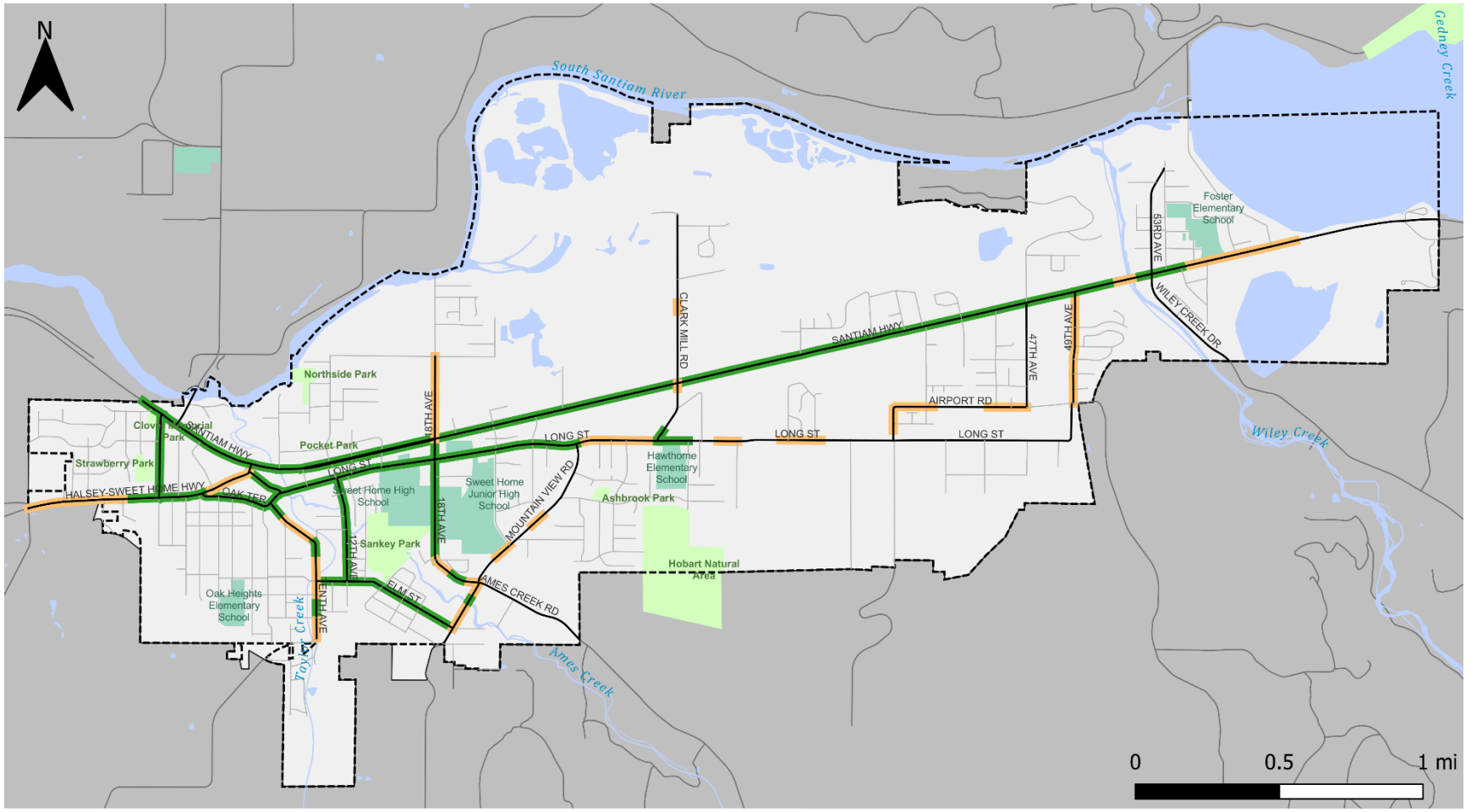


FIGURE 4: SIDEWALK INVENTORY

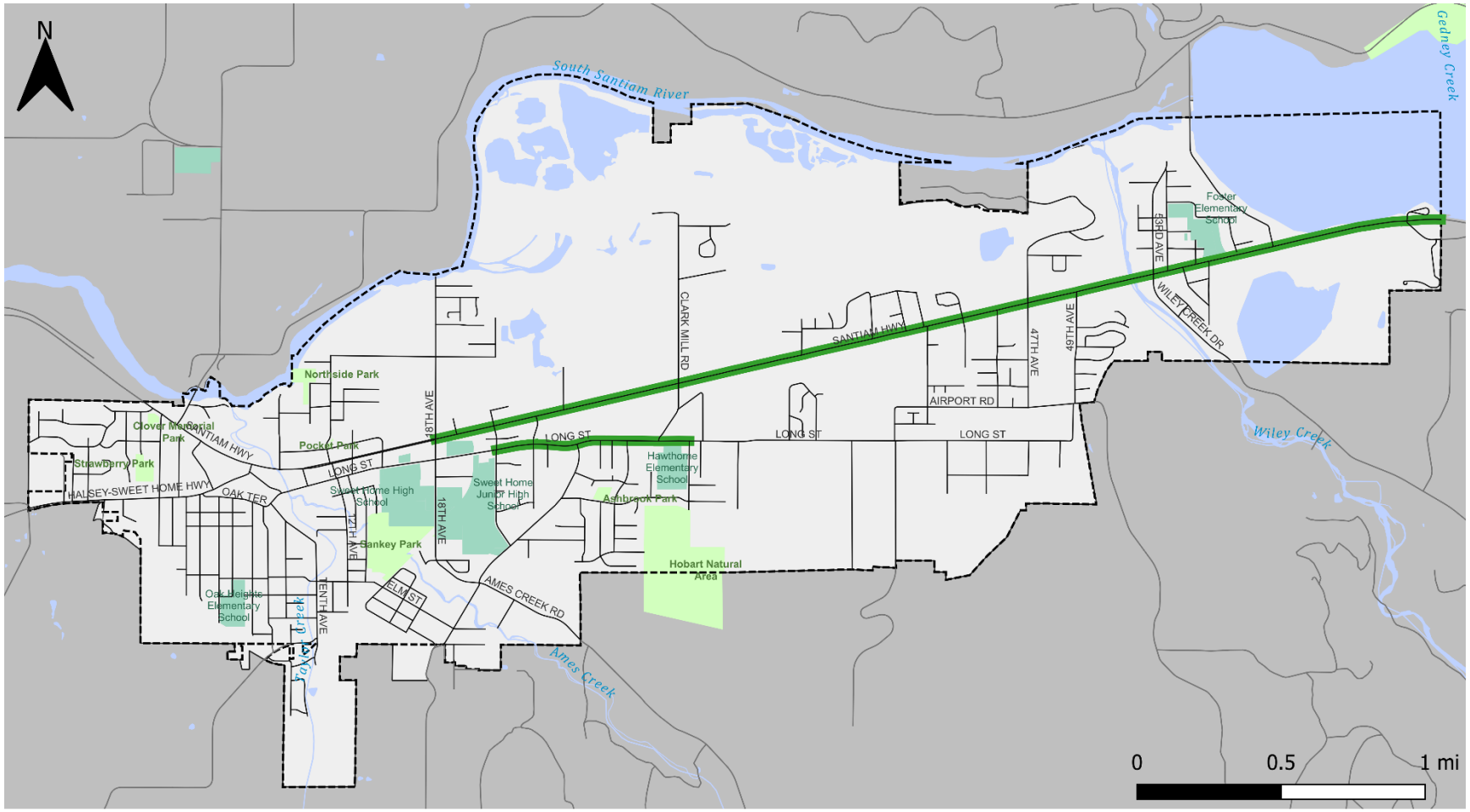


FIGURE 5: EXISTING BICYCLE FACILITIES

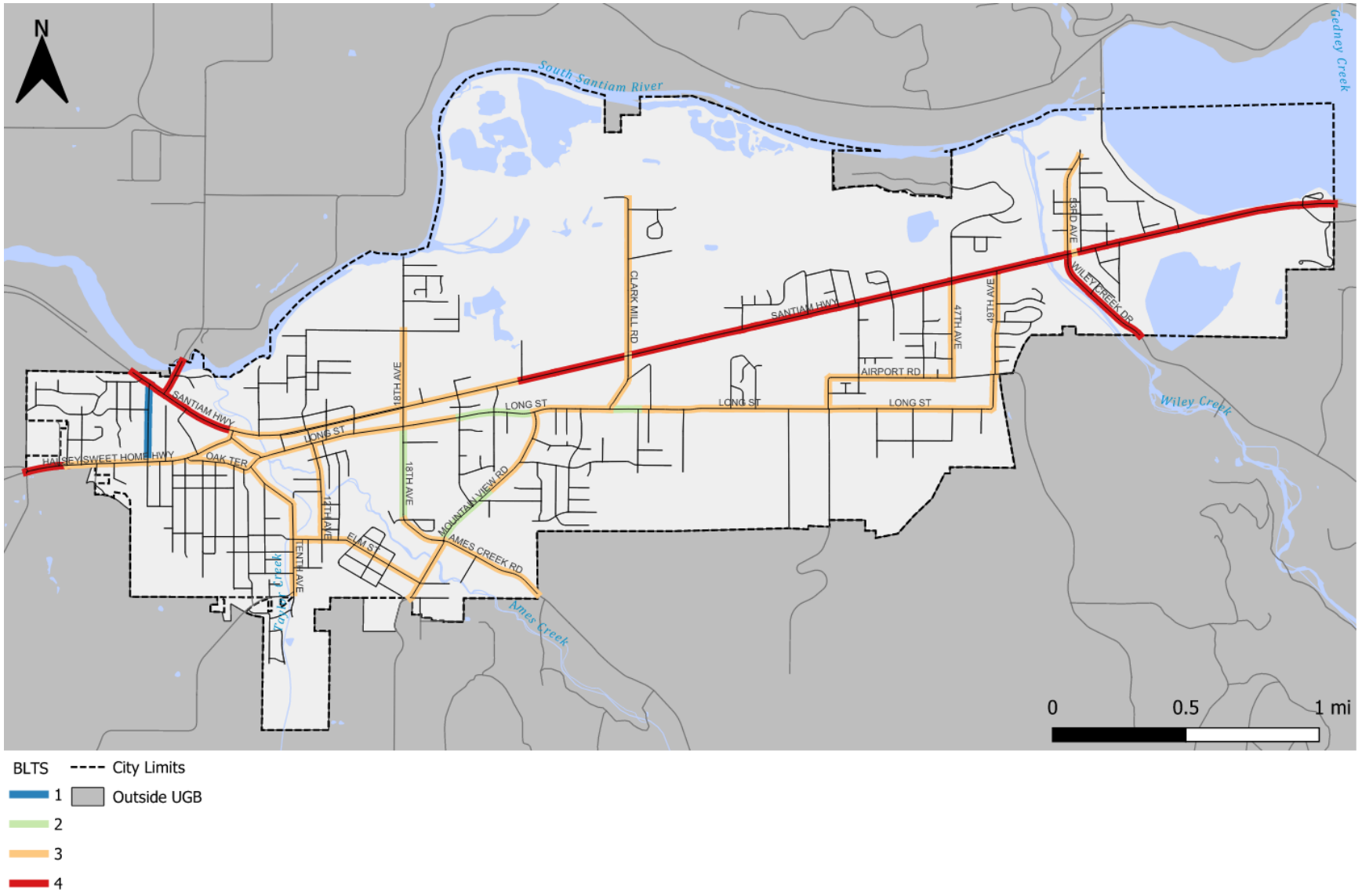


FIGURE 6: BLTS ON CITY COLLECTOR AND ARTERIAL STREETS

TRANSIT CONDITIONS

Transit service is provided in Sweet Home through three main routes. The Linn Shuttle, the Sweet Home Shopper, and Dial-A-Bus Service. A description of these three services is summarized in the following sections.

LINN SHUTTLE

The non-profit Senior Citizens of Sweet Home operates the Linn Shuttle fixed route service between Sweet Home-Lebanon-Albany. The Linn Shuttle connects with the Linn-Benton Loop (at the Linn- Benton Community College Albany Campus) to provide service to East Linn County residents who wish to travel to Albany or Corvallis. Seven round trips a day between Sweet Home-Lebanon-Albany with an additional 5 round trips between Lebanon and LBCC-Albany called the "LBCC-Lebanon Express". Service is available Monday-Friday between 6:30 a.m. and 7:30 p.m.

Funding for the Linn Shuttle comes from State Cigarette Tax funds allocated for elderly and handicapped transportation systems, as well as small cities and rural transportation funds from the Department of Transportation. Anyone can ride the Linn Shuttle. Linn-Benton Community College students and staff can ride for free by showing their ID cards. The shuttle operates on a scheduled route and the route is illustrated in **Figure 7**.

SWEET HOME SHOPPER

The Shopper is available to everyone, is wheelchair accessible, and buses are equipped with bike racks. The Shopper operates Monday Through Friday from 9:00 a.m. to 4:00 p.m. There are four trips from town out to Foster and back. On Tuesdays and Thursdays, the Shopper goes to Cascadia (stopping at Cascadia Short Bridge Rest Stop) with a trip in the morning and a return in the afternoon. The Sweet Home Shopper Route is illustrated in **Figure 8.**

DIAL-A-BUS

The non-profit Senior Citizens of Sweet Home operates the Sweet Home Dial-A-Bus which provides curb-to-curb service to older adults, people with disabilities and the general public within the boundaries of the Sweet Home School District. It also operates a limited "deviated fixed route" program within the boundaries of the City of Sweet Home. Dial-A-Bus Service is available Monday-Friday between 7:00 a.m. and 4:00 p.m. Rides must be scheduled in advance.

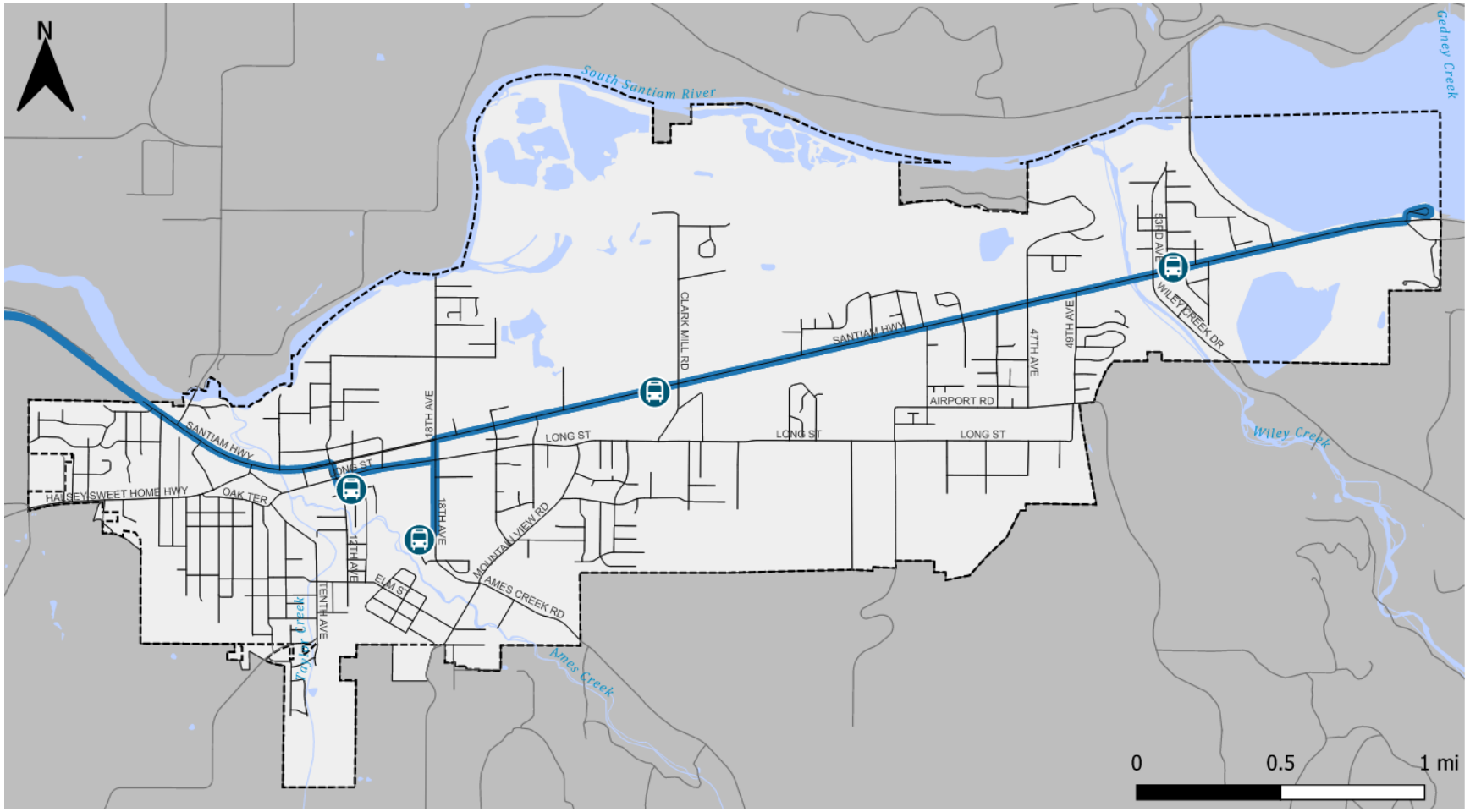


FIGURE 7: LINN SHUTTLE ROUTE

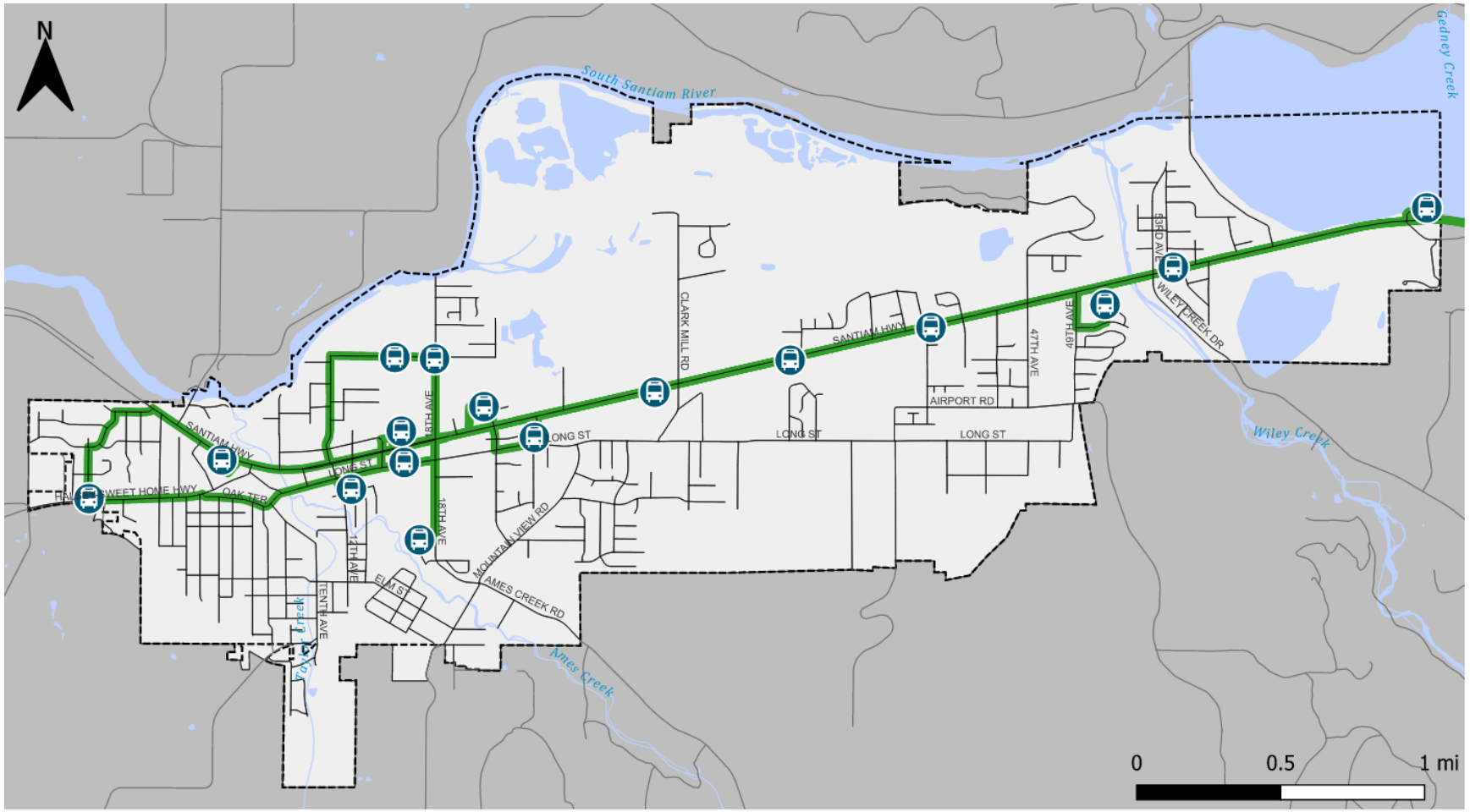


FIGURE 8: SWEET HOME SHOPPER ROUTE

SAFETY CONDITIONS

SAFETY ANALYSIS

Transportation infrastructure must be safe for everyone, whether walking, biking, rolling, or driving. Assessing historical collision data helps identify any shortcomings in the system and improve safety conditions for Sweet Home residents. Crash data from 2017 through 2021 (the most recent five years available) was obtained from the Oregon Department of Transportation (ODOT) and reviewed to identify any high-crash locations and trends involving people walking or biking who are typically the most vulnerable to serious injuries. All crashes within Sweet Home are mapped in **Figure 9**. Bicycle and pedestrian only crashes are mapped in **Figure 10**.

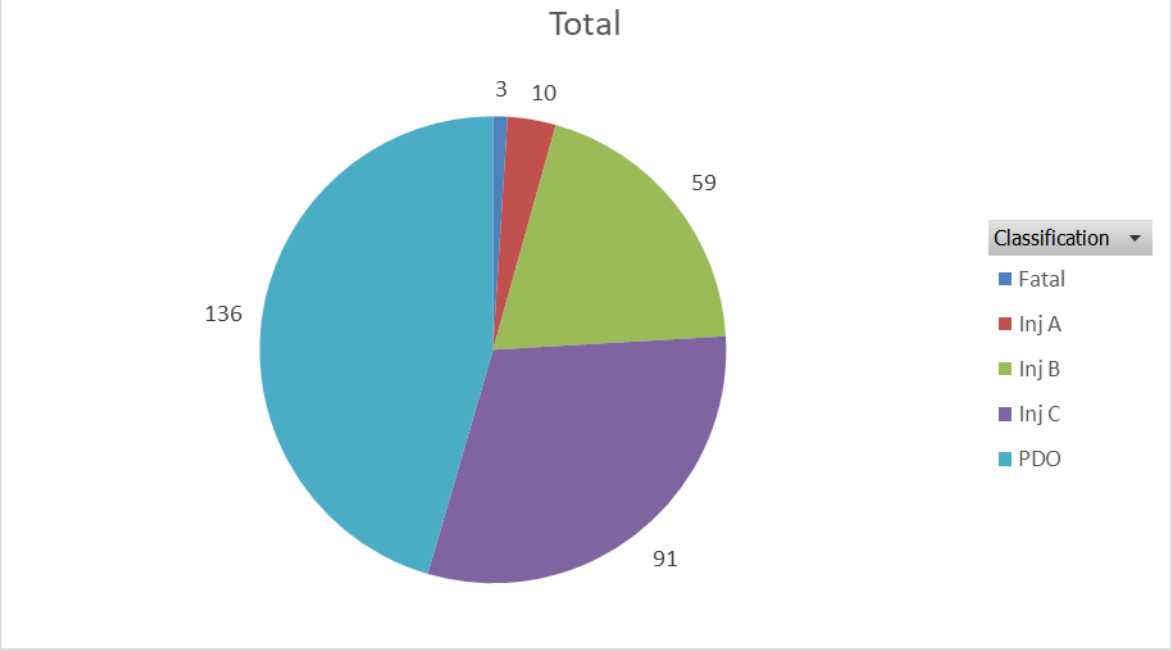
During this five-year period, there were a total of 299 crashes, 13 of which involved a pedestrian, and 9 involved a cyclist. 19 crashes were flagged for drug or alcohol involvement. As seen in Figure 13, there were three fatalities and 69 crashes that resulted in serious injuries during this period. These comprise almost of quarter of all crashes in Sweet Home.

Many crashes occurred along US 20 (Main Street), including 104 at study intersections for the Transportation System Plan. There was one Fatal crash on US 20 (Main Street) at 1st Avenue and four Injury A crashes occurred at the intersections with Holley Road, 12th Avenue, 15th Avenue and 22nd Avenue.

The two other fatal crashes occurred at the intersection of 12th Avenue/Hawthorne Street (involved pedestrian) and at the intersection of Ames Creek Road/Mountain View Road.

The most common collision types, in order of frequency, include turning vehicles, rear-end crashes, crashes with fixed objects and angle crashes (often referred to as "T-bone" crashes). Thirty-one percent of crashes involved turning movements. Over half of these turning crashes resulted in injury. Most of these crashes were caused by a failure to yield at a stop sign. There were 71 rear end collisions, 34 of which resulted in only property damage. There were 50 fixed-object crashes and 33 angle collisions. Many of these crashes occurred at stop-controlled intersections.

FIGURE 13: SEVERITY OF CRASHES IN SWEET HOME (2017-2021)



Of the nine pedestrian crashes most were caused by a failure to yield, one of these resulted in a pedestrian fatality. The fatality occurred at the intersection of Hawthorne Street and 12th Avenue in dry conditions during the day. Of the nine bicycle involved crashes there were no serious injuries.

The crash analysis was supplemented by a review of ODOT's Safety Priority Index System listings for locations in the City that ranked among the state's top ten percent of hazardous locations. The Safety Priority Index System (SPIS) is a method developed by ODOT for identifying hazardous locations on state highways, with the score based on three years of crash data, considering crash frequency, rate, and severity. ODOT bases its SPIS on 0.10-mile segments to account for variances in how crash locations are reported. This rating provides a general comparison of the overall safety of the highway based on crash information for all highway segments throughout the state. According to ODOT 2020 SPIS ratings (data reported between 2017 and 2019), the only location within Sweet Home in the top ten percent of segments is along US 20 (Main Street) just east of 9th Avenue.

TABLE: COLLISION TYPE FOR STUDY INTERSECTIONS

STUDY INTERSECTION	ANGLE	BACK	FIXED OBJECT	NCOL	OTHER	PEDESTRIAN	REAR END	SIDE SWIPE OPPOSITE	TURNING
1. MAIN STREET (U.S. 20) AND PLEASANT VALLEY ROAD			2					1	3
2. MAIN STREET (U.S. 20) AND HOLLEY ROAD (HWY 228)							6	1	10
3. MAIN STREET (U.S. 20) AND 12TH AVENUE	5	1	2				1	2	3
4. MAIN STREET (U.S. 20) AND 15TH AVENUE	3						1	1	5
5. MAIN STREET (U.S. 20) AND 18TH AVENUE	2		2			2	3		3
6. MAIN STREET (U.S. 20) AND 22ND AVENUE	5			1		2	4	1	7
7. MAIN STREET (U.S. 20) AND 24TH AVENUE			1				1	1	3
8. MAIN STREET (U.S. 20) AND CLARK MILL ROAD	3		1		1		2	1	5
9. MAIN STREET (U.S. 20) AND 44TH AVENUE			3						3
10. MAIN STREET (U.S. 20) AND 47TH AVENUE			1						1

STUDY INTERSECTION	ANGLE	BACK	FIXED OBJECT	NCOL	OTHER	PEDESTRIAN	REAR END	SIDE SWIPE OPPOSITE	TURNING
11. MAIN STREET (U.S. 20) AND 49TH AVENUE								1	3
12. MAIN STREET (U.S. 20) AND 53RD AVENUE	1		1				1		2
14. MAIN STREET (U.S. 20) AND 60TH AVENUE (FOSTER DAM ROAD)			3				1		1
15. HOLLEY ROAD (HWY 228) AND 1ST AVENUE			1				3	1	
16. HOLLEY ROAD (HWY 228) AND OAK TERRACE									1
17. LONG STREET AND 18TH AVENUE	4		1			1	1		2
TOTAL	**23**	**1**	**18**	**1**	**1**	**5**	**24**	**10**	**52**

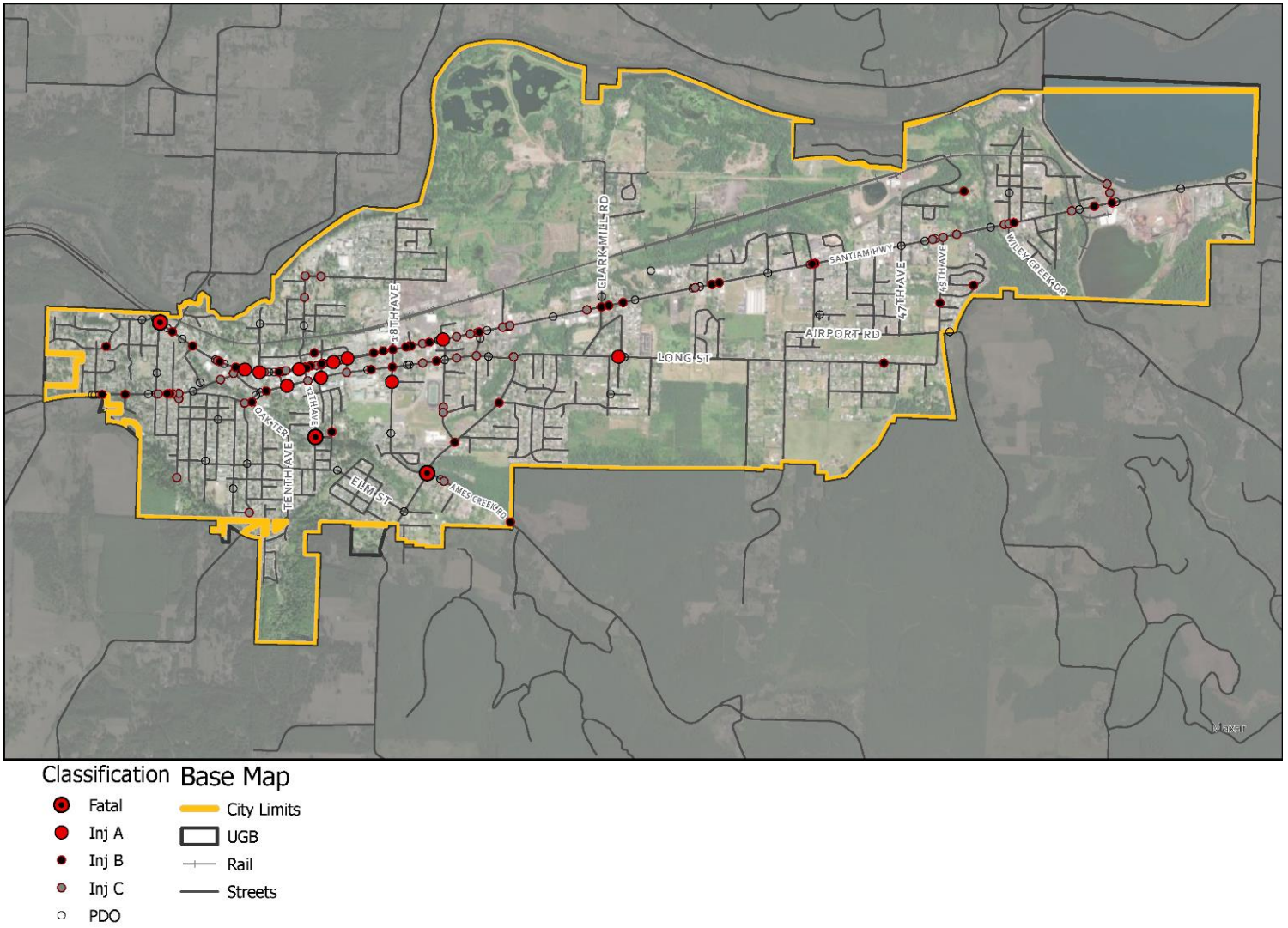


FIGURE 9: 2017 TO 2021 CRASH MAP BY SEVERITY

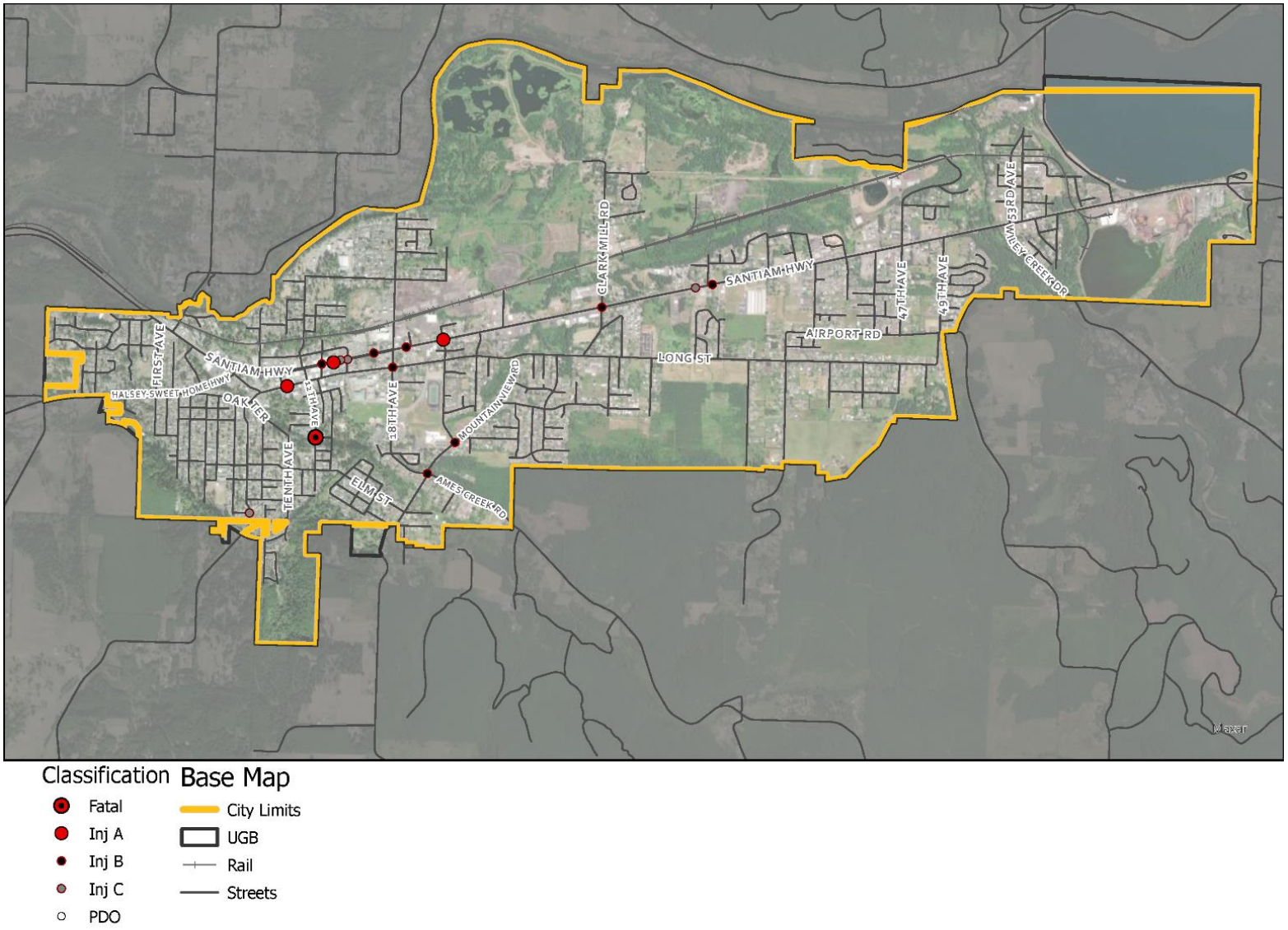


FIGURE 10: 2017 TO 2021 BICYCLE AND PEDESTRIAN CRASHES BY SEVERITY

MOTOR VEHICLE CONDITIONS

KEY CORRIDORS

U.S. 20 and Highway 228 are the key arterials in Sweet Home. U.S. 20 is a major east-west highway that runs through Sweet Home. It begins at the Oregon Coast in Newport and travels eastward through the Willamette National Forest before eventually reaching the Idaho border. In Sweet Home, U.S. 20 runs through the center of town along Main Street. It is an important transportation route for local residents, as well as for travelers passing through the area. Highway 228 is a shorter highway that runs north-south through Sweet Home. It begins at U.S. 20 near the eastern edge of town and travels southward through the Willamette National Forest before eventually reaching the city of Brownsville. In Sweet Home, Highway 228 provides access to several recreational areas and natural attractions, including Quartzville Creek and Green Peter Lake.

In addition to the two highways, Long Street serves as the primary east-west arterial in Sweet Home. Long Street begins at Highway 228 to the west, and eventually terminates at Airport Road and connects to U.S. 20 via 47th Avenue.

The arterial and collector road network in Sweet Home is illustrated in **Figure** 11**11**. The posted speeds on this study road network is illustrated in **Figure** 12**12**.

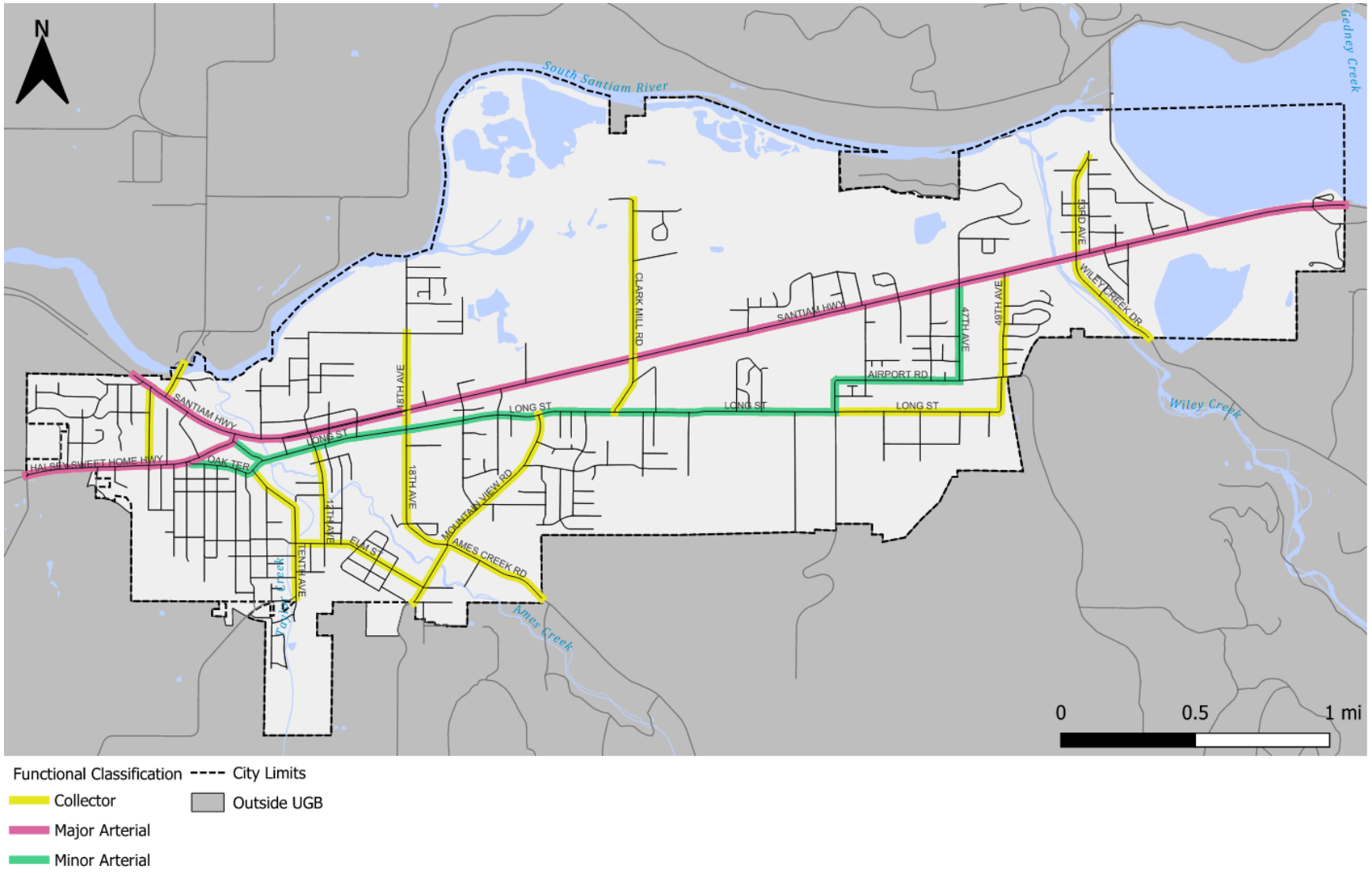


FIGURE 11: ARTERIAL AND COLLECTOR ROAD NETWORK

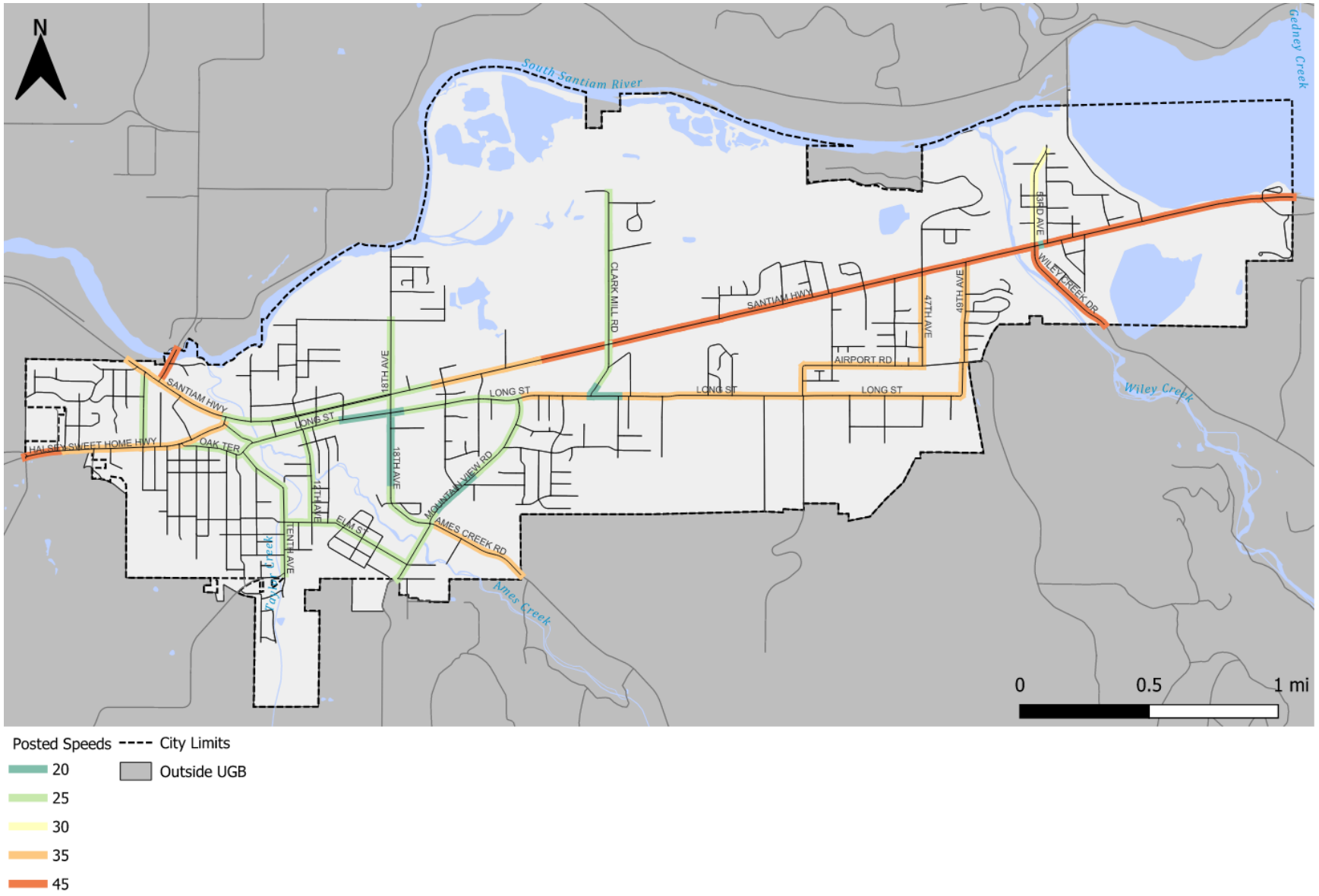


FIGURE 12: POSTED SPEEDS ON ARTERIAL AND COLLECTOR ROAD NETWORK

EXISTING TRAFFIC CONDITIONS AT STUDY INTERSECTIONS

Congestion levels at a selection of key intersections (**Figure 9**) in Sweet Home were evaluated to understand where motorists experience higher delays. The study intersections include five signalized intersections, 12 two-way stop-controlled (TWSC) intersections, and two all-way stop-controlled (AWSC) intersections.

Traffic counts were collected in June 2021 and existing conditions analysis has assumed a base year of 2021. Study intersection traffic operations have been analyzed using estimated 30th highest hour traffic volume (30 HV) conditions. A singular system peak hour has been used to derive intersection traffic volumes for traffic analysis. The peak hour for the study intersections was identified using the Oregon Traffic Monitoring System MS2 platform, which determined the system p.m. peak hour to be 4:15 to 5:15 p.m. A seasonal adjustment factor of 1.04 has been applied to the volumes based on the methodology described in **Task 3.1 Existing Conditions Inventory and Analysis**. Traffic volumes for the weekday p.m. peak hour are shown in **Figures 12 and 13**.

The County and City have adopted vehicle mobility standards. These standards provide a benchmark to measure intersection congestion against and ensure that the transportation system will have adequate capacity to support planned growth. These standards are either measured with level of service (LOS) or volume-to-capacity ratio (v/c ratio). The LOS is an A to F rating of the level of delay the average vehicle will experience at an intersection (similar to a report card, where LOS A has very little delay and LOS F has a lot of delay). The v/c ratio is a proportion from zero to one that measures the approximate amount of an intersection's capacity to move traffic that is being used. For example, a v/c ratio of 0.90 indicates that 90 percent of an intersection's capacity to move traffic is being used Existing Peak Hour traffic conditions have been compared to ODOT

and City mobility targets/operating standards in

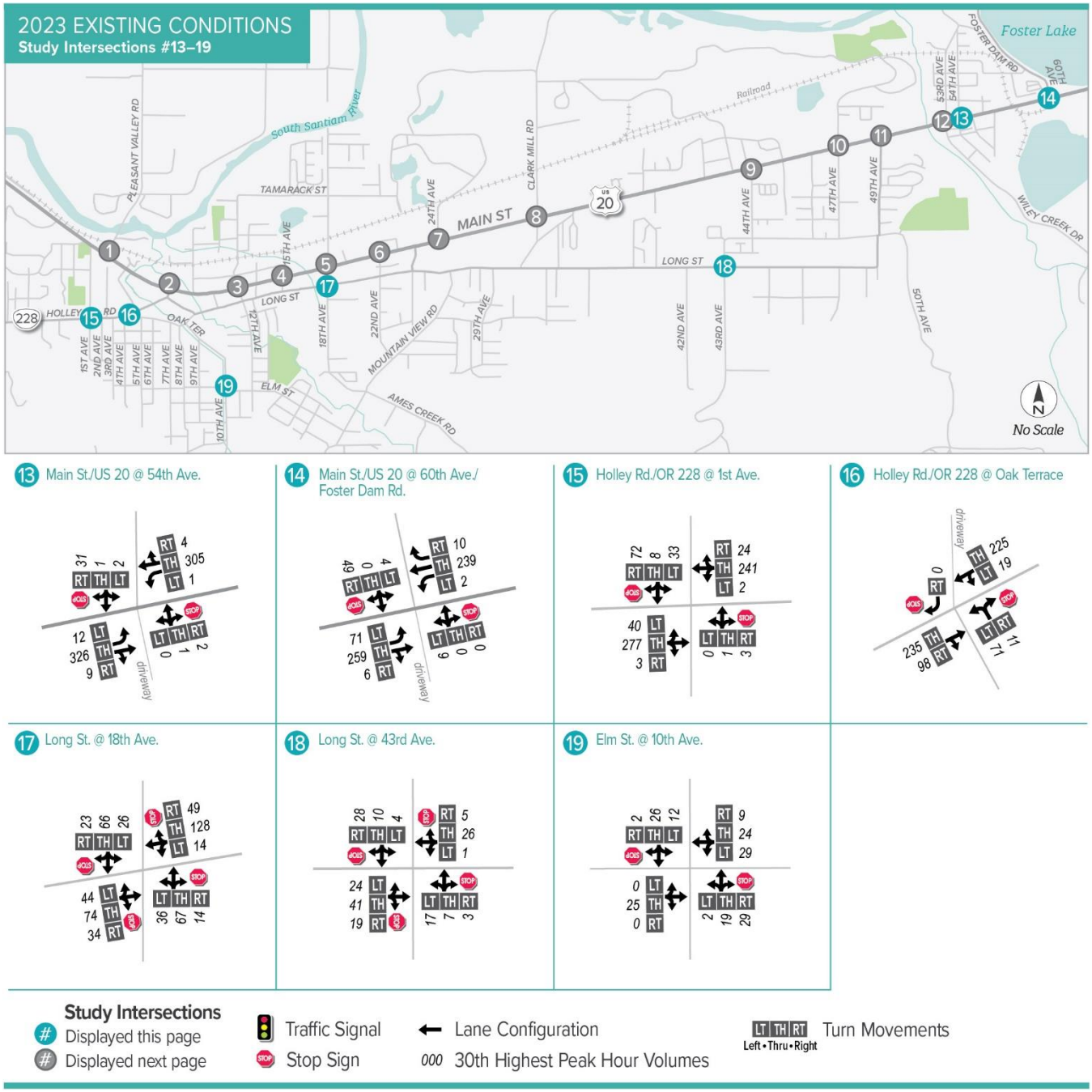


Figure 14: Study Intersetion Lane Configuration and Traffic Volume (Part 2)

Table 1.

Results of the traffic operations analysis indicate that all study intersections are operating within analysis thresholds. Results of the traffic operations analysis are summarized in

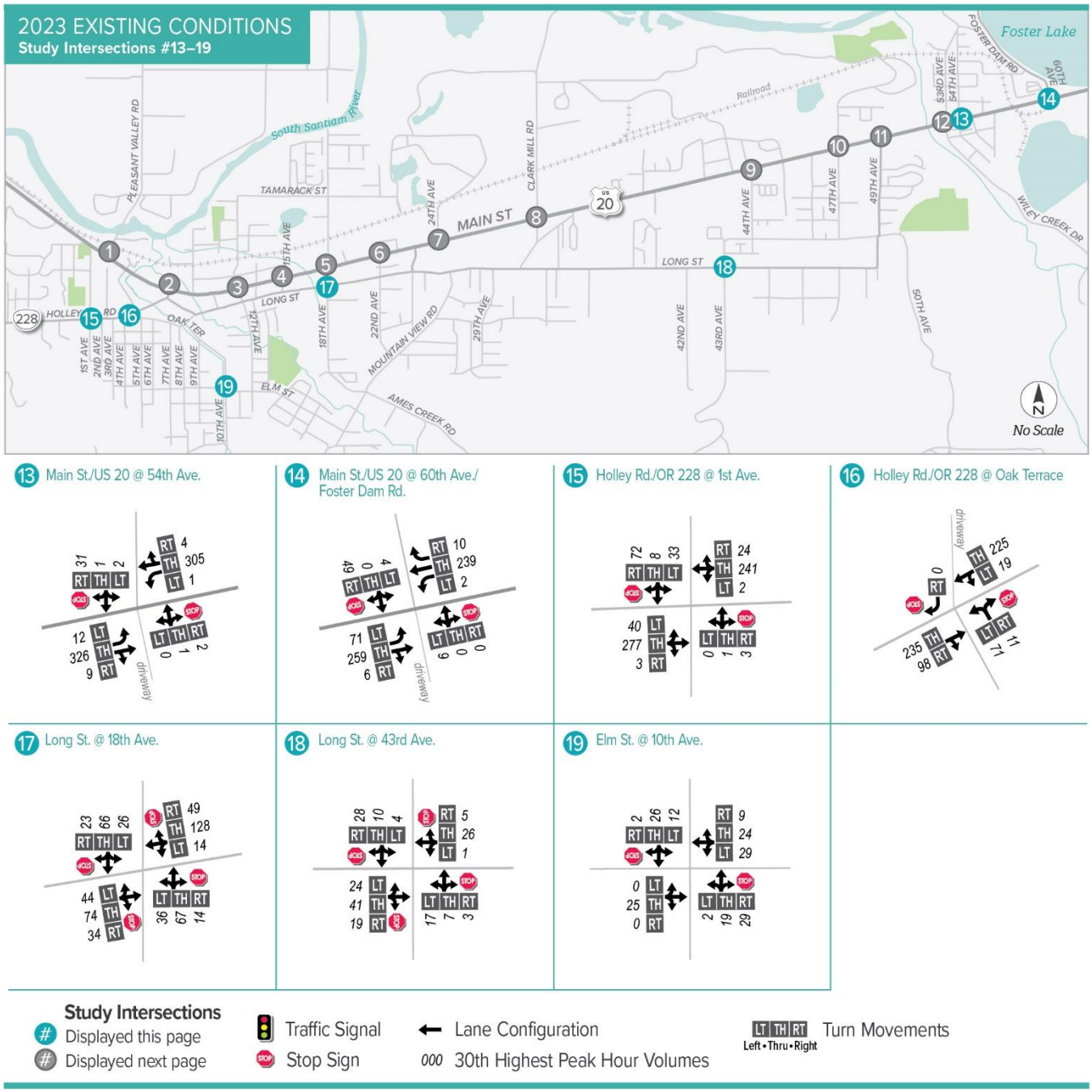


Figure 14: Study Intersetion Lane Configuration and Traffic Volume (Part 2)

Table 1.

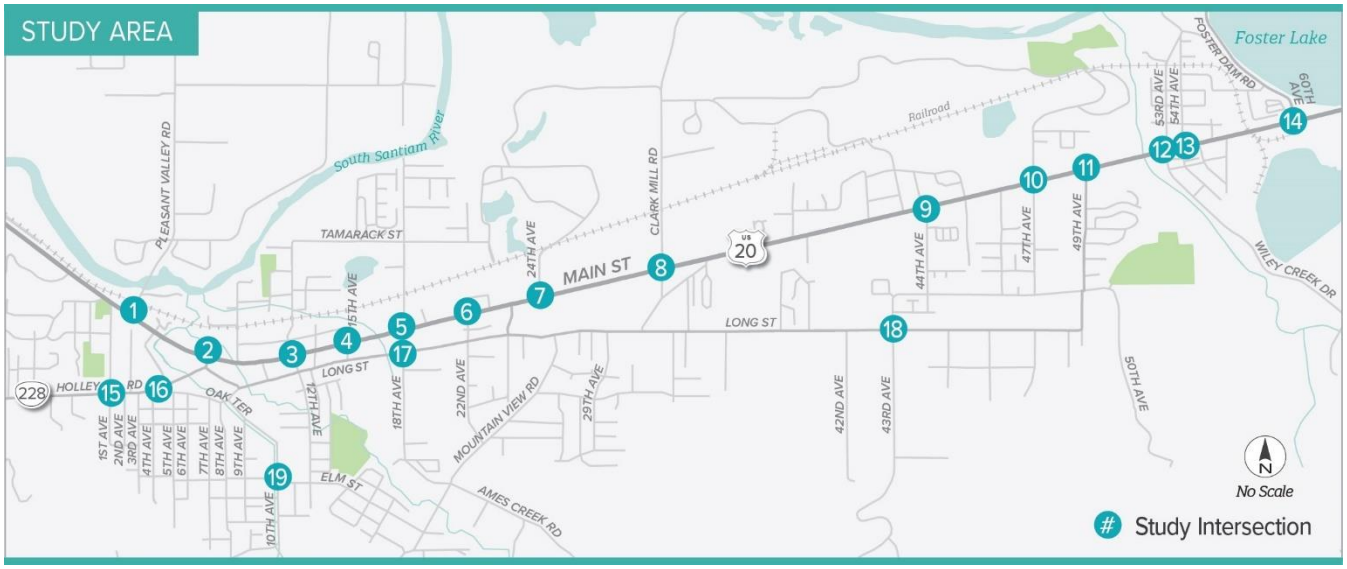


FIGURE 9: STUDY INTERSECTIONS

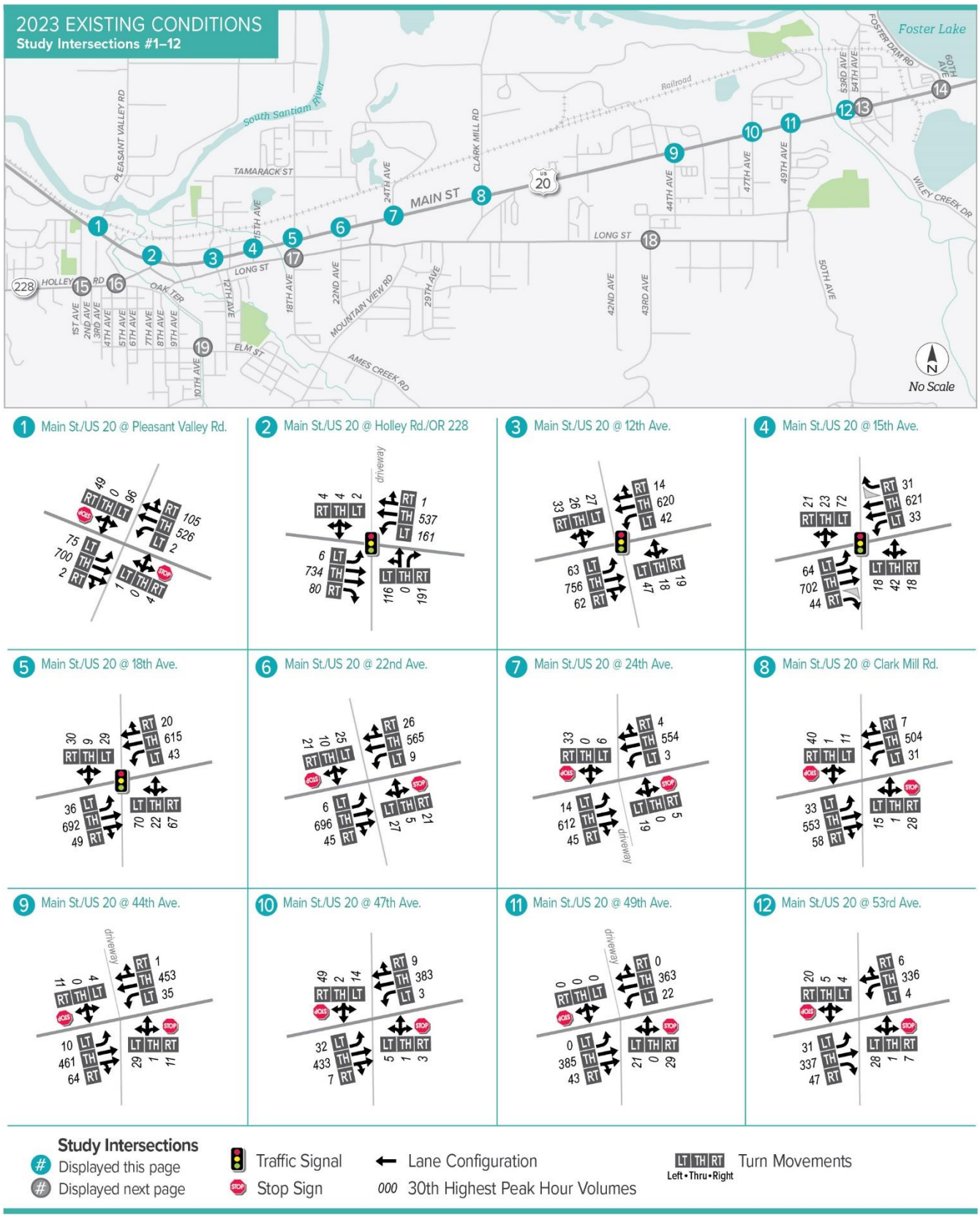


FIGURE 13: STUDY INTERSETION LANE CONFIGURATION AND TRAFFIC VOLUME (PART 1)

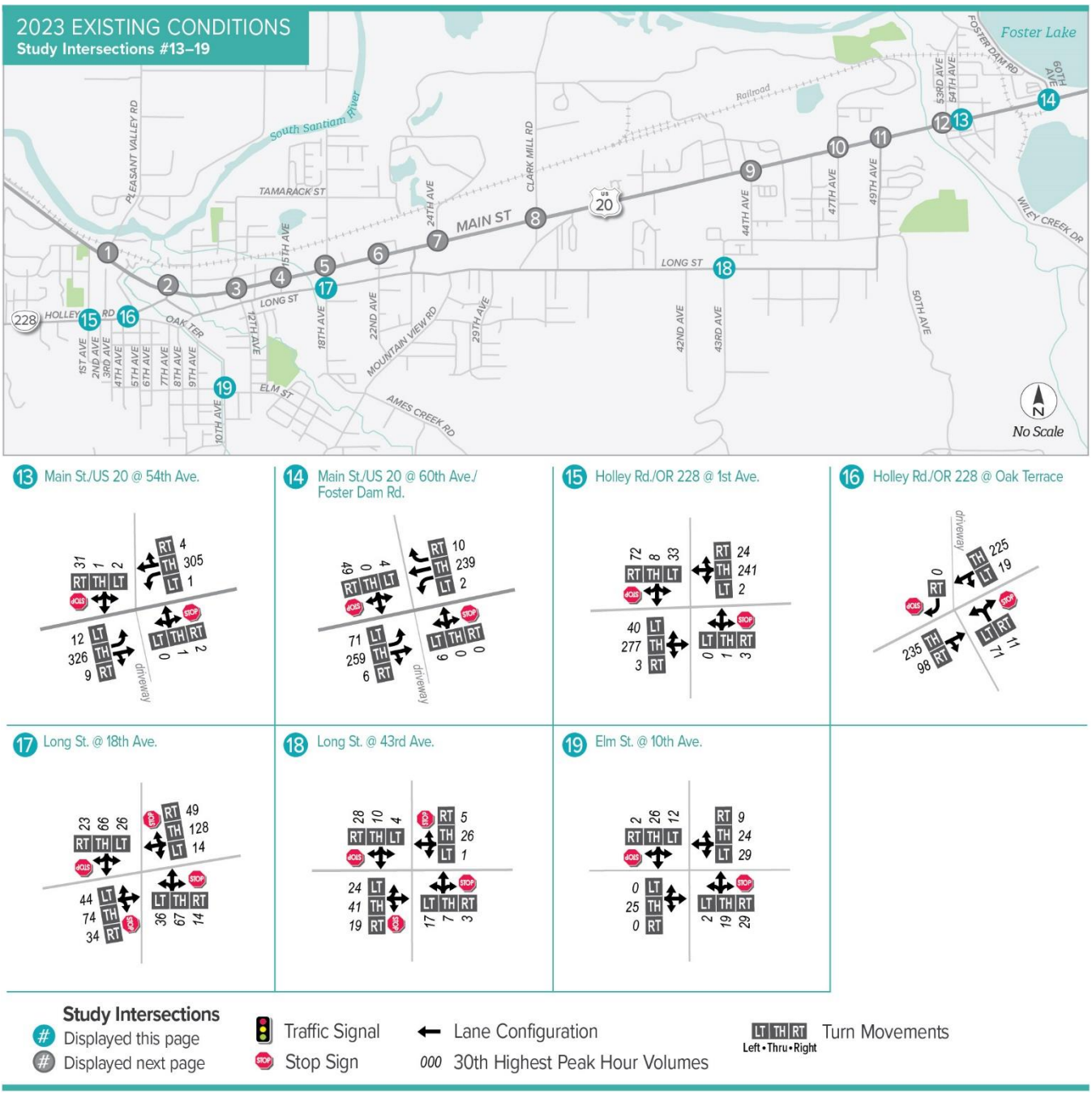


FIGURE 14: STUDY INTERSETION LANE CONFIGURATION AND TRAFFIC VOLUME (PART 2)

TABLE 1: EXISTING (2021) TRAFFIC OPERATIONS AT STUDY INTERSECTIONS – WEEKDAY PM PEAK HOUR

INTERSECTION	CONTROL TYPE	MOBILITY STANDARD	LOS	DELAY (SECONDS)	V/C RATIO
1. **MAIN STREET (U.S. 20) AND PLEASANT VALLEY ROAD**	TWSC	v/c ≤ 0.85	A/F	1/97	0.02/0.91
2. MAIN STREET (U.S. 20) AND HOLLEY ROAD (HWY 228)	Signal	v/c ≤ 0.90	B	12	0.78
3. MAIN STREET (U.S. 20) AND 12TH AVENUE	Signal	v/c ≤ 0.90	A	5	0.43
4. MAIN STREET (U.S. 20) AND 15TH AVENUE	Signal	v/c ≤ 0.90	A	5	0.4
5. MAIN STREET (U.S. 20) AND 18TH AVENUE	Signal	v/c ≤ 0.90	A	6	0.44
6. MAIN STREET (U.S. 20) AND 22ND AVENUE	Two-Way Stop	v/c ≤ 0.90	A/E	0.2/35	0.01/35
7. MAIN STREET (U.S. 20) AND 24TH AVENUE	Two-Way Stop	v/c ≤ 0.90	A/D	0.2/27	0.02/0.15
8. MAIN STREET (U.S. 20) AND CLARK MILL ROAD	Two-Way Stop	v/c ≤ 0.85	A/C	0.5/19	0.04/0.16
9. MAIN STREET (U.S. 20) AND 44TH AVENUE	Two-Way Stop	v/c ≤ 0.85	A/C	0.6/22	0.04/0.18
10. MAIN STREET (U.S. 20) AND 47TH AVENUE	Two-Way Stop	v/c ≤ 0.85	A/C	0.6/19	0.04/0.16
11. MAIN STREET (U.S. 20) AND 49TH AVENUE	Two-Way Stop	v/c ≤ 0.85	A/B	0.5/14	0.02/0.16
12. MAIN STREET (U.S. 20) AND 53RD AVENUE	Two-Way Stop	v/c ≤ 0.85	A/C	0.6/20	0.03/0.15
13. MAIN STREET (U.S. 20) AND 54TH AVENUE	Two-Way Stop	v/c ≤ 0.85	A/B	0.3/13	0.01/0.07
14. MAIN STREET (U.S. 20) AND 60TH AVENUE (FOSTER DAM ROAD)	Two-Way Stop	v/c ≤ 0.85	A/C	2/19	0.07/0.09
15. HOLLEY ROAD (HWY 228) AND 1ST AVENUE	Two-Way Stop	v/c ≤ 0.95	A/C	1/16	0.04/0.29
16. HOLLEY ROAD (HWY 228) AND OAK TERRACE	Two-Way Stop	v/c ≤ 0.95	A/C	1/16	0.02/0.23

INTERSECTION	CONTROL TYPE	MOBILITY STANDARD	LOS	DELAY (SECONDS)	V/C RATIO
17. LONG STREET AND 18TH AVENUE	AWSC	LOS D	A	10	0.32
18. LONG STREET AND 43RD AVENUE	AWSC	LOS D	A	8	0.11
19. ELM STREET AND 10TH AVENUE	Two-Way Stop	LOS D	A/B	3/11	0.03/0.08

[a] Note: Overall intersection measures reported for signal and AWSC intersections. The worst approach for major/minor approaches is reported for TWSC intersections.

FREIGHT NETWORK

The existing freight network, railways and rail crossing locations are shown in **Figure 15**. U.S. 20 is part of the National Highway System and handles moderate truck volumes between Sweet Home and I-5 to the west, with an average daily traffic (ADT) range between 500 and 14,999.

One rail line serves Sweet Home from the west terminating at the Foster Mill site on the east side of the City. The line is operated by Albany and Eastern Railroad Company and connects Sweet Home to Albany. Within the City limits the line is located roughly one block north of U.S. 20 running roughly parallel thereto.

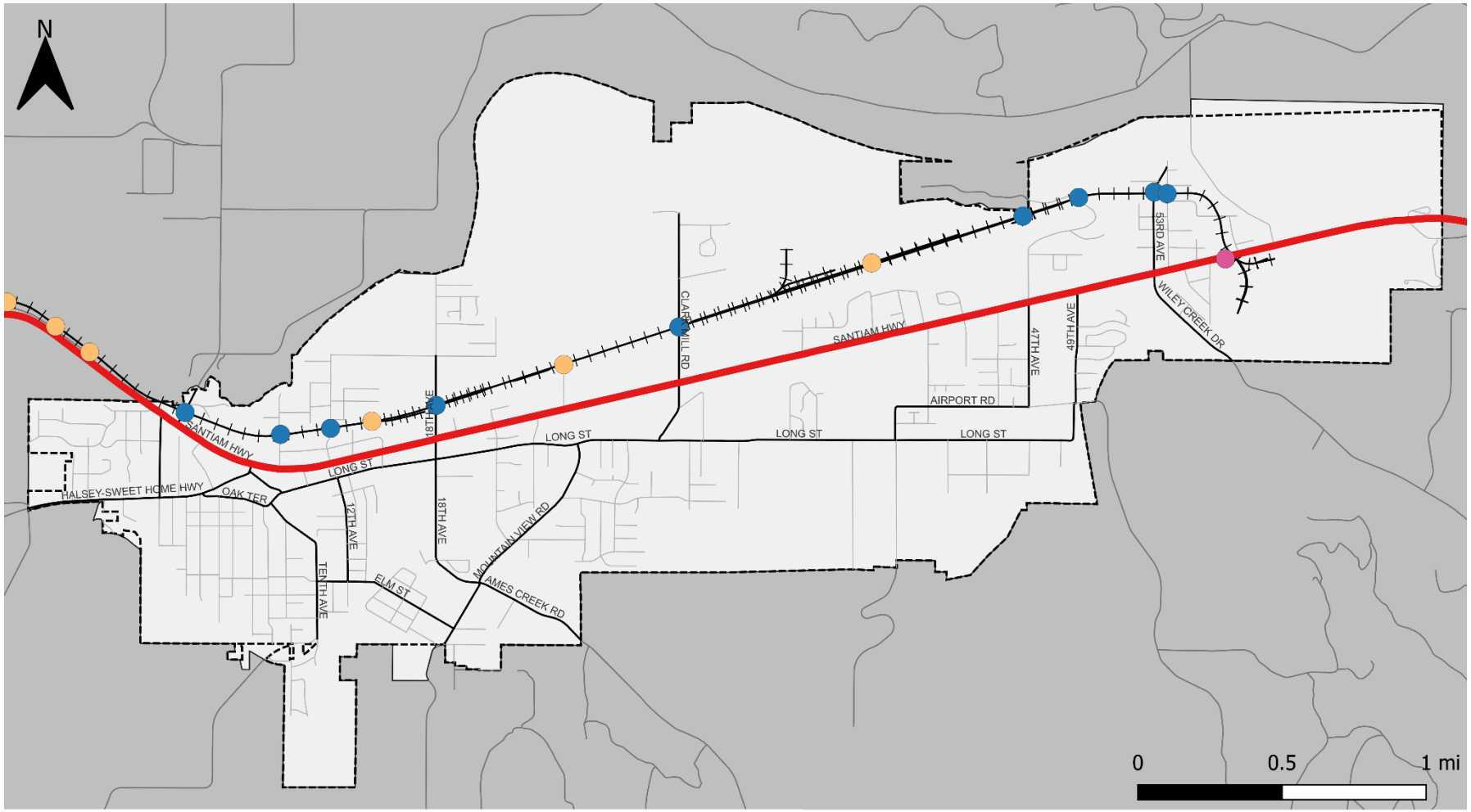


FIGURE 105: EXISTING FREIGHT NETWORK

APPENDIX A: EXISTING TRAFFIC OPERATIONS ANALYSIS RESULTS

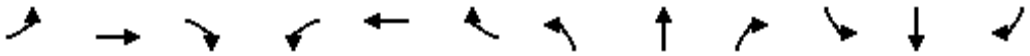
Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	700	2	2	526	105	1	0	4	96	0	49
Future Vol, veh/h	75	700	2	2	526	105	1	0	4	96	0	49
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	4	4	4	0	0	0	1	1	1
Mvmt Flow	83	778	2	2	584	117	1	0	4	107	0	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	702	0	0	781	0	0	1242	1652	391	1203	1595	352
Stage 1	-	-	-	-	-	-	946	946	-	648	648	-
Stage 2	-	-	-	-	-	-	296	706	-	555	947	-
Critical Hdwy	4.14	-	-	4.18	-	-	7.5	6.5	6.9	7.52	6.52	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.52	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.52	5.52	-
Follow-up Hdwy	2.22	-	-	2.24	-	-	3.5	4	3.3	3.51	4.01	3.31
Pot Cap-1 Maneuver	891	-	-	819	-	-	133	100	614	141	107	647
Stage 1	-	-	-	-	-	-	285	343	-	428	467	-
Stage 2	-	-	-	-	-	-	694	442	-	486	340	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	890	-	-	818	-	-	113	90	613	130	97	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	90	-	130	97	-
Stage 1	-	-	-	-	-	-	258	311	-	388	466	-
Stage 2	-	-	-	-	-	-	634	441	-	437	308	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	16.3	97.1
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	325	890	-	-	818	-	-	178
HCM Lane V/C Ratio	0.017	0.094	-	-	0.003	-	-	0.905
HCM Control Delay (s)	16.3	9.5	-	-	9.4	-	-	97.1
HCM Lane LOS	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	6.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	734	80	161	537	1	116	0	191	2	4	4
Future Volume (veh/h)	6	734	80	161	537	1	116	0	191	2	4	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1709	1709	1709	1750	1750	1750
Adj Flow Rate, veh/h	7	807	88	177	590	1	127	0	210	2	4	4
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	0	0	0
Cap, veh/h	9	1497	666	232	1989	3	375	0	454	104	139	108
Arrive On Green	0.01	0.46	0.46	0.14	0.60	0.59	0.17	0.00	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1628	3247	1445	1628	3326	6	1403	0	1448	132	813	630
Grp Volume(v), veh/h	7	807	88	177	288	303	127	0	210	10	0	0
Grp Sat Flow(s),veh/h/ln	1628	1624	1445	1628	1624	1708	1403	0	1448	1575	0	0
Q Serve(g_s), s	0.2	9.5	1.9	5.6	4.6	4.6	4.1	0.0	6.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	9.5	1.9	5.6	4.6	4.6	4.4	0.0	6.2	0.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.20		0.40
Lane Grp Cap(c), veh/h	9	1497	666	232	971	1022	375	0	454	350	0	0
V/C Ratio(X)	0.78	0.54	0.13	0.76	0.30	0.30	0.34	0.00	0.46	0.03	0.00	0.00
Avail Cap(c_a), veh/h	367	2472	1100	765	1236	1300	793	0	887	432	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	10.3	8.2	21.9	5.2	5.2	20.1	0.0	14.7	18.4	0.0	0.0
Incr Delay (d2), s/veh	39.8	0.4	0.1	3.9	0.2	0.2	0.4	0.0	0.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.9	0.5	2.2	1.2	1.3	1.4	0.0	1.9	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	10.7	8.4	25.8	5.5	5.5	20.5	0.0	15.2	18.4	0.0	0.0
LnGrp LOS	E	B	A	C	A	A	C	A	B	B	A	A
Approach Vol, veh/h		902			768			337			10	
Approach Delay, s/veh		10.9			10.1			17.2			18.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.6	28.5		13.1	4.3	35.8		13.1				
Change Period (Y+Rc), s	4.0	4.5		4.0	4.0	4.5		4.0				
Max Green Setting (Gmax), s	25.0	40.0		12.0	12.0	40.0		25.0				
Max Q Clear Time (g_c+I1), s	7.6	11.5		2.3	2.2	6.6		8.2				
Green Ext Time (p_c), s	0.6	12.5		0.0	0.0	8.3		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		11.7	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	756	62	42	620	14	47	18	19	27	26	33
Future Volume (veh/h)	63	756	62	42	620	14	47	18	19	27	26	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1695	1695	1695	1668	1668	1668	1723	1723	1723	1736	1736	1736
Adj Flow Rate, veh/h	70	840	69	47	689	16	52	20	21	30	29	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	1	1	1
Cap, veh/h	604	1952	160	506	2050	48	242	50	39	181	75	77
Arrive On Green	0.65	0.65	0.63	0.65	0.65	0.63	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	731	3013	248	594	3166	73	661	397	308	376	588	604
Grp Volume(v), veh/h	70	449	460	47	345	360	93	0	0	96	0	0
Grp Sat Flow(s),veh/h/ln	731	1611	1650	594	1585	1655	1366	0	0	1568	0	0
Q Serve(g_s), s	1.7	4.8	4.9	1.5	3.5	3.5	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.2	4.8	4.9	6.3	3.5	3.5	2.1	0.0	0.0	1.9	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.04	0.56		0.23	0.31		0.39
Lane Grp Cap(c), veh/h	604	1043	1069	506	1026	1072	332	0	0	332	0	0
V/C Ratio(X)	0.12	0.43	0.43	0.09	0.34	0.34	0.28	0.00	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	965	1838	1884	800	1809	1888	708	0	0	773	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.0	3.1	3.1	4.6	2.8	2.8	14.4	0.0	0.0	14.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.4	0.1	0.3	0.3	0.3	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.6	0.1	0.4	0.5	0.6	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.1	3.5	3.5	4.7	3.1	3.1	14.8	0.0	0.0	14.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		979			752			93			96	
Approach Delay, s/veh		3.5			3.2			14.8			14.7	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	27.0	8.5	27.0	8.5
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	40.0	15.0	40.0	15.0
Max Q Clear Time (g_c+I1), s	7.2	3.9	8.3	4.1
Green Ext Time (p_c), s	15.3	0.2	11.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	702	44	33	621	31	18	42	18	72	23	21
Future Volume (veh/h)	64	702	44	33	621	31	18	42	18	72	23	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.98		0.97	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1695	1695	1695	1736	1736	1736	1736	1736	1736
Adj Flow Rate, veh/h	74	807	0	38	714	0	21	48	21	83	26	24
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	4	4	4	1	1	1	1	1	1
Cap, veh/h	561	1998		515	1966		154	158	59	279	69	42
Arrive On Green	0.61	0.61	0.00	0.61	0.61	0.00	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	734	3273	1460	663	3221	1437	196	914	338	695	399	241
Grp Volume(v), veh/h	74	807	0	38	714	0	90	0	0	133	0	0
Grp Sat Flow(s),veh/h/ln	734	1637	1460	663	1611	1437	1447	0	0	1336	0	0
Q Serve(g_s), s	2.1	4.7	0.0	1.2	4.1	0.0	0.0	0.0	0.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s	6.2	4.7	0.0	5.9	4.1	0.0	2.0	0.0	0.0	3.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.23		0.23	0.62		0.18
Lane Grp Cap(c), veh/h	561	1998		515	1966		371	0	0	390	0	0
V/C Ratio(X)	0.13	0.40		0.07	0.36		0.24	0.00	0.00	0.34	0.00	0.00
Avail Cap(c_a), veh/h	917	3583		836	3527		695	0	0	683	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	3.7	0.0	5.2	3.6	0.0	13.5	0.0	0.0	13.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.1	0.2	0.0	0.2	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.8	0.0	0.1	0.7	0.0	0.6	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.3	3.9	0.0	5.3	3.8	0.0	13.7	0.0	0.0	14.3	0.0	0.0
LnGrp LOS	A	A		A	A		B	A	A	B	A	A
Approach Vol, veh/h		881	A		752	A		90			133	
Approach Delay, s/veh		4.0			3.8			13.7			14.3	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	26.6	10.4	26.6	10.4
Change Period (Y+Rc), s	4.5	4.0	4.5	4.0
Max Green Setting (Gmax), s	40.0	15.0	40.0	15.0
Max Q Clear Time (g_c+I1), s	8.2	5.2	7.9	4.0
Green Ext Time (p_c), s	13.9	0.3	11.7	0.2

Intersection Summary	
HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	692	49	43	615	20	70	22	67	29	9	30
Future Volume (veh/h)	36	692	49	43	615	20	70	22	67	29	9	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1695	1695	1695	1668	1668	1668	1668	1668	1668	1668	1668	1668
Adj Flow Rate, veh/h	40	778	55	48	691	22	79	25	75	33	10	34
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	6	6	6	6	6	6	6	6	6
Cap, veh/h	527	1764	125	471	1812	58	244	67	123	226	84	135
Arrive On Green	0.58	0.58	0.56	0.58	0.58	0.56	0.19	0.21	0.19	0.19	0.21	0.19
Sat Flow, veh/h	725	3051	216	638	3135	100	503	328	599	425	408	659
Grp Volume(v), veh/h	40	411	422	48	349	364	179	0	0	77	0	0
Grp Sat Flow(s),veh/h/ln	725	1611	1656	638	1585	1650	1431	0	0	1492	0	0
Q Serve(g_s), s	1.2	5.3	5.4	1.7	4.4	4.4	2.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.6	5.3	5.4	7.1	4.4	4.4	4.2	0.0	0.0	1.6	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.06	0.44		0.42	0.43		0.44
Lane Grp Cap(c), veh/h	527	931	957	471	916	954	415	0	0	425	0	0
V/C Ratio(X)	0.08	0.44	0.44	0.10	0.38	0.38	0.43	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	904	1767	1817	802	1738	1810	903	0	0	902	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.7	4.4	4.4	6.4	4.2	4.2	13.5	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.1	0.4	0.4	1.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.0	1.1	0.2	0.8	0.9	1.3	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.8	4.9	4.9	6.5	4.6	4.6	14.5	0.0	0.0	12.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		873			761			179			77	
Approach Delay, s/veh		4.9			4.7			14.5			12.8	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	25.3	11.6	25.3	11.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	40.0	20.0	40.0	20.0
Max Q Clear Time (g_c+I1), s	7.6	3.6	9.1	6.2
Green Ext Time (p_c), s	13.3	0.4	11.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	696	45	9	565	26	27	5	21	25	10	21
Future Vol, veh/h	6	696	45	9	565	26	27	5	21	25	10	21
Conflicting Peds, #/hr	0	0	4	4	0	0	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	4	4	4	6	6	6	0	0	0
Mvmt Flow	7	782	51	10	635	29	30	6	24	28	11	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	664	0	0	837	0	0	1171	1510	421	1078	1521	334
Stage 1	-	-	-	-	-	-	826	826	-	670	670	-
Stage 2	-	-	-	-	-	-	345	684	-	408	851	-
Critical Hdwy	4.16	-	-	4.18	-	-	7.62	6.62	7.02	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.62	5.62	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.62	5.62	-	6.5	5.5	-
Follow-up Hdwy	2.23	-	-	2.24	-	-	3.56	4.06	3.36	3.5	4	3.3
Pot Cap-1 Maneuver	914	-	-	780	-	-	143	115	570	176	120	668
Stage 1	-	-	-	-	-	-	324	375	-	417	459	-
Stage 2	-	-	-	-	-	-	633	437	-	596	379	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	914	-	-	777	-	-	124	111	568	159	116	667
Mov Cap-2 Maneuver	-	-	-	-	-	-	124	111	-	159	116	-
Stage 1	-	-	-	-	-	-	318	368	-	411	453	-
Stage 2	-	-	-	-	-	-	587	431	-	555	372	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	35.3	30.3
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	177	914	-	-	777	-	-	204
HCM Lane V/C Ratio	0.336	0.007	-	-	0.013	-	-	0.308
HCM Control Delay (s)	35.3	9	0.1	-	9.7	-	-	30.3
HCM Lane LOS	E	A	A	-	A	-	-	D
HCM 95th %tile Q(veh)	1.4	0	-	-	0	-	-	1.2

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	612	45	3	554	4	19	0	5	6	0	33
Future Vol, veh/h	14	612	45	3	554	4	19	0	5	6	0	33
Conflicting Peds, #/hr	0	0	6	6	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	5	5	5	4	4	4	0	0	0	3	3	3
Mvmt Flow	16	703	52	3	637	5	22	0	6	7	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	642	0	0	761	0	0	1092	1415	384	1030	1439	321
Stage 1	-	-	-	-	-	-	767	767	-	646	646	-
Stage 2	-	-	-	-	-	-	325	648	-	384	793	-
Critical Hdwy	4.2	-	-	4.18	-	-	7.5	6.5	6.9	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Follow-up Hdwy	2.25	-	-	2.24	-	-	3.5	4	3.3	3.53	4.03	3.33
Pot Cap-1 Maneuver	918	-	-	834	-	-	172	139	620	186	131	672
Stage 1	-	-	-	-	-	-	365	414	-	424	463	-
Stage 2	-	-	-	-	-	-	667	469	-	608	396	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	918	-	-	829	-	-	159	135	616	181	127	672
Mov Cap-2 Maneuver	-	-	-	-	-	-	159	135	-	181	127	-
Stage 1	-	-	-	-	-	-	357	404	-	417	461	-
Stage 2	-	-	-	-	-	-	627	467	-	592	387	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	27.4	13.4
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	188	918	-	-	829	-	-	474
HCM Lane V/C Ratio	0.147	0.018	-	-	0.004	-	-	0.095
HCM Control Delay (s)	27.4	9	-	-	9.4	-	-	13.4
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	553	58	31	504	7	15	1	28	11	1	40
Future Vol, veh/h	33	553	58	31	504	7	15	1	28	11	1	40
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	4	4	4	2	2	2	2	2	2	6	6	6
Mvmt Flow	36	608	64	34	554	8	16	1	31	12	1	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	563	0	0	672	0	0	1058	1343	336	1004	1371	282
Stage 1	-	-	-	-	-	-	712	712	-	627	627	-
Stage 2	-	-	-	-	-	-	346	631	-	377	744	-
Critical Hdwy	4.18	-	-	4.14	-	-	7.54	6.54	6.94	7.62	6.62	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.62	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.62	5.62	-
Follow-up Hdwy	2.24	-	-	2.22	-	-	3.52	4.02	3.32	3.56	4.06	3.36
Pot Cap-1 Maneuver	991	-	-	915	-	-	179	151	660	190	140	703
Stage 1	-	-	-	-	-	-	389	434	-	428	465	-
Stage 2	-	-	-	-	-	-	643	473	-	606	410	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	990	-	-	915	-	-	158	140	660	170	130	702
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	140	-	170	130	-
Stage 1	-	-	-	-	-	-	375	418	-	412	447	-
Stage 2	-	-	-	-	-	-	579	455	-	555	395	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.5	19.1	15.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	304	990	-	-	915	-	-	402
HCM Lane V/C Ratio	0.159	0.037	-	-	0.037	-	-	0.142
HCM Control Delay (s)	19.1	8.8	-	-	9.1	-	-	15.4
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.1	-	-	0.5

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	461	64	35	453	1	29	1	11	4	0	11
Future Vol, veh/h	10	461	64	35	453	1	29	1	11	4	0	11
Conflicting Peds, #/hr	2	0	1	1	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	4	4	4	4	4	4	0	0	0	0	0	0
Mvmt Flow	11	530	74	40	521	1	33	1	13	5	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	605	0	0	931	1194	303	892	1231	263
Stage 1	-	-	-	-	-	-	590	590	-	604	604	-
Stage 2	-	-	-	-	-	-	341	604	-	288	627	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.24	-	-	2.24	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1025	-	-	955	-	-	225	188	699	240	179	742
Stage 1	-	-	-	-	-	-	466	498	-	457	491	-
Stage 2	-	-	-	-	-	-	653	491	-	701	479	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1023	-	-	954	-	-	212	178	698	225	169	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	178	-	225	169	-
Stage 1	-	-	-	-	-	-	460	492	-	451	469	-
Stage 2	-	-	-	-	-	-	615	469	-	679	473	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.6	22	13.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	259	1023	-	-	954	-	-	460
HCM Lane V/C Ratio	0.182	0.011	-	-	0.042	-	-	0.037
HCM Control Delay (s)	22	8.6	-	-	8.9	-	-	13.1
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	433	7	3	383	9	5	1	3	14	2	49
Future Vol, veh/h	32	433	7	3	383	9	5	1	3	14	2	49
Conflicting Peds, #/hr	4	0	6	6	0	4	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	4	4	4	11	11	11	2	2	2
Mvmt Flow	39	522	8	4	461	11	6	1	4	17	2	59

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	476	0	0	536	0	0	850	1094	271	819	1093	240
Stage 1	-	-	-	-	-	-	610	610	-	479	479	-
Stage 2	-	-	-	-	-	-	240	484	-	340	614	-
Critical Hdwy	4.16	-	-	4.18	-	-	7.72	6.72	7.12	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.72	5.72	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.72	5.72	-	6.54	5.54	-
Follow-up Hdwy	2.23	-	-	2.24	-	-	3.61	4.11	3.41	3.52	4.02	3.32
Pot Cap-1 Maneuver	1075	-	-	1014	-	-	239	199	700	267	213	761
Stage 1	-	-	-	-	-	-	427	461	-	537	553	-
Stage 2	-	-	-	-	-	-	717	528	-	648	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	1008	-	-	211	189	696	255	203	758
Mov Cap-2 Maneuver	-	-	-	-	-	-	211	189	-	255	203	-
Stage 1	-	-	-	-	-	-	409	442	-	516	549	-
Stage 2	-	-	-	-	-	-	656	524	-	619	461	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	18.9	13.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	270	1071	-	-	1008	-	-	502
HCM Lane V/C Ratio	0.04	0.036	-	-	0.004	-	-	0.156
HCM Control Delay (s)	18.9	8.5	-	-	8.6	-	-	13.5
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	385	43	22	363	0	21	0	29	0	0	0
Future Vol, veh/h	0	385	43	22	363	0	21	0	29	0	0	0
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	5	5	5	6	6	6	9	9	9	0	0	0
Mvmt Flow	0	438	49	25	413	0	24	0	33	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	487	0	0	720	927	244	683	951	208
Stage 1	-	-	-	-	-	-	463	463	-	464	464	-
Stage 2	-	-	-	-	-	-	257	464	-	219	487	-
Critical Hdwy	4.2	-	-	4.22	-	-	7.68	6.68	7.08	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.68	5.68	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.68	5.68	-	6.5	5.5	-
Follow-up Hdwy	2.25	-	-	2.26	-	-	3.59	4.09	3.39	3.5	4	3.3
Pot Cap-1 Maneuver	1120	-	-	1045	-	-	303	255	736	339	262	804
Stage 1	-	-	-	-	-	-	530	545	-	553	567	-
Stage 2	-	-	-	-	-	-	706	545	-	769	554	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1119	-	-	1045	-	-	298	249	736	318	255	803
Mov Cap-2 Maneuver	-	-	-	-	-	-	298	249	-	318	255	-
Stage 1	-	-	-	-	-	-	530	545	-	552	553	-
Stage 2	-	-	-	-	-	-	689	531	-	735	554	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	14	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	455	1119	-	-	1045	-	-	-
HCM Lane V/C Ratio	0.125	-	-	-	0.024	-	-	-
HCM Control Delay (s)	14	0	-	-	8.5	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	337	47	4	336	6	28	1	7	4	5	20
Future Vol, veh/h	31	337	47	4	336	6	28	1	7	4	5	20
Conflicting Peds, #/hr	1	0	3	3	0	1	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	100	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	5	5	5	7	7	7	3	3	3	7	7	7
Mvmt Flow	36	387	54	5	386	7	32	1	8	5	6	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	394	0	0	444	0	0	876	866	391	893	917	391
Stage 1	-	-	-	-	-	-	462	462	-	401	401	-
Stage 2	-	-	-	-	-	-	414	404	-	492	516	-
Critical Hdwy	4.15	-	-	4.17	-	-	7.13	6.53	6.23	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.17	5.57	-
Follow-up Hdwy	2.245	-	-	2.263	-	-	3.527	4.027	3.327	3.563	4.063	3.363
Pot Cap-1 Maneuver	1148	-	-	1090	-	-	268	290	655	257	267	647
Stage 1	-	-	-	-	-	-	578	563	-	616	592	-
Stage 2	-	-	-	-	-	-	614	597	-	549	526	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1147	-	-	1087	-	-	246	278	653	246	256	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	246	278	-	246	256	-
Stage 1	-	-	-	-	-	-	558	544	-	596	588	-
Stage 2	-	-	-	-	-	-	584	593	-	524	508	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	20	14
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	281	1147	-	-	1087	-	-	434
HCM Lane V/C Ratio	0.147	0.031	-	-	0.004	-	-	0.077
HCM Control Delay (s)	20	8.2	-	-	8.3	-	-	14
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	326	9	1	305	4	0	1	2	2	1	31
Future Vol, veh/h	12	326	9	1	305	4	0	1	2	2	1	31
Conflicting Peds, #/hr	9	0	4	4	0	9	14	0	0	0	0	14
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	4	4	4	6	6	6	0	0	0	0	0	0
Mvmt Flow	15	408	11	1	381	5	0	1	3	3	1	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	395	0	0	423	0	0	868	845	418	841	848	407
Stage 1	-	-	-	-	-	-	448	448	-	395	395	-
Stage 2	-	-	-	-	-	-	420	397	-	446	453	-
Critical Hdwy	4.14	-	-	4.16	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.236	-	-	2.254	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1153	-	-	1115	-	-	275	302	639	287	301	648
Stage 1	-	-	-	-	-	-	594	576	-	634	608	-
Stage 2	-	-	-	-	-	-	615	607	-	595	573	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1143	-	-	1111	-	-	250	294	637	280	293	634
Mov Cap-2 Maneuver	-	-	-	-	-	-	250	294	-	280	293	-
Stage 1	-	-	-	-	-	-	584	566	-	620	602	-
Stage 2	-	-	-	-	-	-	568	601	-	584	563	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	12.9	11.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	459	1143	-	-	1111	-	-	572
HCM Lane V/C Ratio	0.008	0.013	-	-	0.001	-	-	0.074
HCM Control Delay (s)	12.9	8.2	-	-	8.2	-	-	11.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	259	6	2	239	10	9	0	0	4	0	49
Future Vol, veh/h	71	259	6	2	239	10	9	0	0	4	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	125	-	125	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	7	7	7	0	0	0	4	4	4
Mvmt Flow	83	301	7	2	278	12	10	0	0	5	0	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	290	0	0	308	0	0	788	765	305	753	756	278
Stage 1	-	-	-	-	-	-	471	471	-	282	282	-
Stage 2	-	-	-	-	-	-	317	294	-	471	474	-
Critical Hdwy	4.15	-	-	4.17	-	-	7.1	6.5	6.2	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.14	5.54	-
Follow-up Hdwy	2.245	-	-	2.263	-	-	3.5	4	3.3	3.536	4.036	3.336
Pot Cap-1 Maneuver	1255	-	-	1225	-	-	311	336	740	324	335	756
Stage 1	-	-	-	-	-	-	577	563	-	721	674	-
Stage 2	-	-	-	-	-	-	698	673	-	570	554	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1255	-	-	1225	-	-	273	313	740	307	312	756
Mov Cap-2 Maneuver	-	-	-	-	-	-	273	313	-	307	312	-
Stage 1	-	-	-	-	-	-	539	526	-	673	673	-
Stage 2	-	-	-	-	-	-	644	672	-	532	517	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.1	18.7	10.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	273	1255	-	-	1225	-	-	681
HCM Lane V/C Ratio	0.038	0.066	-	-	0.002	-	-	0.09
HCM Control Delay (s)	18.7	8.1	-	-	7.9	-	-	10.8
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	40	277	3	2	241	24	0	1	3	33	8	72
Future Vol, veh/h	40	277	3	2	241	24	0	1	3	33	8	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	4	4	4	3	3	3	0	0	0	1	1	1
Mvmt Flow	50	346	4	3	301	30	0	1	4	41	10	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	331	0	0	350	0	0	820	785	348	773	772	316
Stage 1	-	-	-	-	-	-	448	448	-	322	322	-
Stage 2	-	-	-	-	-	-	372	337	-	451	450	-
Critical Hdwy	4.14	-	-	4.13	-	-	7.1	6.5	6.2	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.11	5.51	-
Follow-up Hdwy	2.236	-	-	2.227	-	-	3.5	4	3.3	3.509	4.009	3.309
Pot Cap-1 Maneuver	1217	-	-	1203	-	-	296	327	700	317	331	727
Stage 1	-	-	-	-	-	-	594	576	-	692	653	-
Stage 2	-	-	-	-	-	-	653	645	-	590	573	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1217	-	-	1203	-	-	243	309	700	301	313	727
Mov Cap-2 Maneuver	-	-	-	-	-	-	243	309	-	301	313	-
Stage 1	-	-	-	-	-	-	564	547	-	657	651	-
Stage 2	-	-	-	-	-	-	562	643	-	556	544	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	11.8	15.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	532	1217	-	-	1203	-	-	482
HCM Lane V/C Ratio	0.009	0.041	-	-	0.002	-	-	0.293
HCM Control Delay (s)	11.8	8.1	0	-	8	0	-	15.5
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	1.2

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	235	98	19	225	0	71	0	11	0	0	0
Future Vol, veh/h	0	235	98	19	225	0	71	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	5	5	5	4	4	4	0	0	0	0	0	0
Mvmt Flow	0	270	113	22	259	0	82	0	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	383	0	0	630	630	328	-	-	259
Stage 1	-	-	-	-	-	-	327	327	-	-	-	-
Stage 2	-	-	-	-	-	-	303	303	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	7.1	6.5	6.2	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	2.236	-	-	3.5	4	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	1165	-	0	397	401	718	0	0	785
Stage 1	0	-	-	-	-	0	690	651	-	0	0	-
Stage 2	0	-	-	-	-	0	711	667	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1165	-	-	390	392	717	-	-	785
Mov Cap-2 Maneuver	-	-	-	-	-	-	390	392	-	-	-	-
Stage 1	-	-	-	-	-	-	690	651	-	-	-	-
Stage 2	-	-	-	-	-	-	695	652	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	16.2	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	415	-	-	1165	-	-
HCM Lane V/C Ratio	0.227	-	-	0.019	-	-
HCM Control Delay (s)	16.2	-	-	8.1	0	0
HCM Lane LOS	C	-	-	A	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	25	0	29	24	9	2	19	29	12	26	2
Future Vol, veh/h	0	25	0	29	24	9	2	19	29	12	26	2
Conflicting Peds, #/hr	3	0	1	1	0	3	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	69	69	69	69	69	69	69	69	69
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	3	3	3
Mvmt Flow	0	36	0	42	35	13	3	28	42	17	38	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	51	0	0	37	0	0	185	172	38	201	166	47
Stage 1	-	-	-	-	-	-	37	37	-	129	129	-
Stage 2	-	-	-	-	-	-	148	135	-	72	37	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.2	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.13	5.53	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.3	3.527	4.027	3.327
Pot Cap-1 Maneuver	1568	-	-	1574	-	-	780	725	1040	755	725	1019
Stage 1	-	-	-	-	-	-	984	868	-	872	787	-
Stage 2	-	-	-	-	-	-	859	789	-	935	862	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1564	-	-	1573	-	-	729	703	1038	686	703	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	729	703	-	686	703	-
Stage 1	-	-	-	-	-	-	983	867	-	869	763	-
Stage 2	-	-	-	-	-	-	791	765	-	868	861	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.4	9.5	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	866	1564	-	-	1573	-	-	709
HCM Lane V/C Ratio	0.084	-	-	-	0.027	-	-	0.082
HCM Control Delay (s)	9.5	0	-	-	7.4	0	-	10.5
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.3

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	74	34	14	128	49	36	67	14	26	66	23
Future Vol, veh/h	44	74	34	14	128	49	36	67	14	26	66	23
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	14	14	14
Mvmt Flow	54	91	42	17	158	60	44	83	17	32	81	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	10.1	9.6	9.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	29%	7%	23%
Vol Thru, %	57%	49%	67%	57%
Vol Right, %	12%	22%	26%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	152	191	115
LT Vol	36	44	14	26
Through Vol	67	74	128	66
RT Vol	14	34	49	23
Lane Flow Rate	144	188	236	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.206	0.256	0.314	0.208
Departure Headway (Hd)	5.134	4.906	4.787	5.272
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	690	724	743	673
Service Time	3.227	2.987	2.863	3.366
HCM Lane V/C Ratio	0.209	0.26	0.318	0.211
HCM Control Delay	9.6	9.7	10.1	9.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.8	1	1.3	0.8

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	41	19	1	26	5	17	7	3	4	10	28
Future Vol, veh/h	24	41	19	1	26	5	17	7	3	4	10	28
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	3	3	3	6	6	6	12	12	12	3	3	3
Mvmt Flow	28	47	22	1	30	6	20	8	3	5	11	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.4	7.7	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	63%	29%	3%	10%
Vol Thru, %	26%	49%	81%	24%
Vol Right, %	11%	23%	16%	67%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	84	32	42
LT Vol	17	24	1	4
Through Vol	7	41	26	10
RT Vol	3	19	5	28
Lane Flow Rate	31	97	37	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.038	0.108	0.042	0.051
Departure Headway (Hd)	4.433	4.039	4.127	3.825
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	800	883	861	925
Service Time	2.501	2.082	2.182	1.894
HCM Lane V/C Ratio	0.039	0.11	0.043	0.052
HCM Control Delay	7.7	7.6	7.4	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.4	0.1	0.2

APPENDIX D

FUTURE FORECASTING -TECHNICAL MEMORANDUM #5 (DRAFT)

DATE: June 28, 2023

TO: Project Management Team

FROM: Garth Appanaitis | DKS Associates
Eileen Chai l DKS Associates
Emilio Calderon | DKS Associates

SUBJECT: Sweet Home TSP and NSHA Refinement Plan
TM#5 Future Forecasting

Project #P20020-015

INTRODUCTION

Future traffic forecasting is an important step in the transportation planning process and provides estimates of future travel demand. This memorandum documents the traffic forecasting methodology and results associated with the small community model developed for the Sweet Home Transportation System Plan (TSP) Update. The small community modeling approach, in conjunction with post-processing, provides study intersection turn movement forecasts for the 2045 TSP horizon year. These traffic volumes will be analyzed during future steps in the TSP update to identify future traffic needs.

METHODOLOGY OVERVIEW

The forecasting methodology associated with the small community model (also referred as enhanced zonal cumulative analysis or EZCA) expands upon a cumulative analysis approach, as defined in the Oregon Department of Transportation (ODOT) Transportation Planning Analysis Unit's (TPAU's) *Analysis Procedures Manual Version 2 (APM V2)*. In the context of the traditional 4-step travel demand model approach, the typical cumulative analysis is used for trip generation and trip distribution purposes only. The result is a trip table (for growth increment only) that is used as an input into traffic assignment where analysis is completed by manually assigning the new trips to a street network and then adding them to existing traffic volumes to estimate future volumes.

The enhanced zonal cumulative analysis tool uses the same trip generation and trip distribution methodology as the typical cumulative analysis, but it applies the methodology to all land uses within the city (i.e., both existing uses as well as any future development based on a land use inventory). The enhanced tool then uses Visum modeling software and incorporates intersection node delay to complete the equilibrium trip assignment. The result is an improved traffic volume forecasting tool that dynamically assigns both new and existing trips to the transportation network using an equilibrium assignment procedure that represents routing choice more accurately than manual assignment because it is responsive to varying levels of congestion and delay as traffic

patterns change. This tool enables a more comprehensive analysis of future conditions and potential TSP alternatives.

The following sections of this memorandum detail each component of the travel forecast methodology associated with the small community model including: the roadway network, transportation analysis zones (TAZs), land use, and travel demand. The resulting 2045 future projected volumes are also provided.

FORECAST TOOL COMPONENTS

The following sections summarize the forecast tool components that are used to forecast the future traffic volumes.

ROADWAY NETWORK

The roadway network included in the Sweet Home TSP Visum forecast tool consists of the arterial and collector roadways along with most local public streets within the Sweet Home Urban Growth Boundary (UGB). The roadway network is also extended beyond the UGB to capture potential regional routing decisions that could result from future trips to/from Sweet Home and/or conditions in the local street system. These areas outside the UGB included in the model for routing potential routing purposes include:

- N River Drive (north side of model area)
- Wiley Creek Road (east side of model area)
- Shea Hill Drive (east side of model area)

An existing roadway network was created using centerline data from Open Street Map. Additional roadway attributes were added based on an existing conditions inventory that included posted speeds, traffic control, lane geometries, and number of travel lanes. The purpose of the existing conditions network was to configure the forecast tool and act as a base in the development of the future tool.

The 2045 future year baseline roadway network was then developed to represent the 2045 No-Build conditions. No committed transportation improvements were identified within the model area that are expected to influence traffic routing. Therefore, the 2045 No Build network is identical to the 2021 network. The 2045 future year network will be further refined as it is used to perform analysis of the various transportation alternatives and improvements to be analyzed for the Sweet Home TSP Update.

TRANSPORTATION ANALYSIS ZONES

For transportation forecasting purposes, the Sweet Home UGB was divided into 40 transportation analysis zones (TAZs), which represent the location of various land uses and sources of vehicle trip generation within the city. These TAZ boundaries were determined based on geographical and physical features allowing the best representation of access for an area, along with maintaining homogenous land use types as much as possible (e.g. residential, commercial, etc.). Centroid

connectors were located to best represent access to the street network and major parking facilities. Additionally, there are 4 rural zones that are located to the north of Sweet Home. These rural zones are included to capture land use and trip patterns interactions with areas inside the UGB. The internal TAZs are shown in Figure 1.

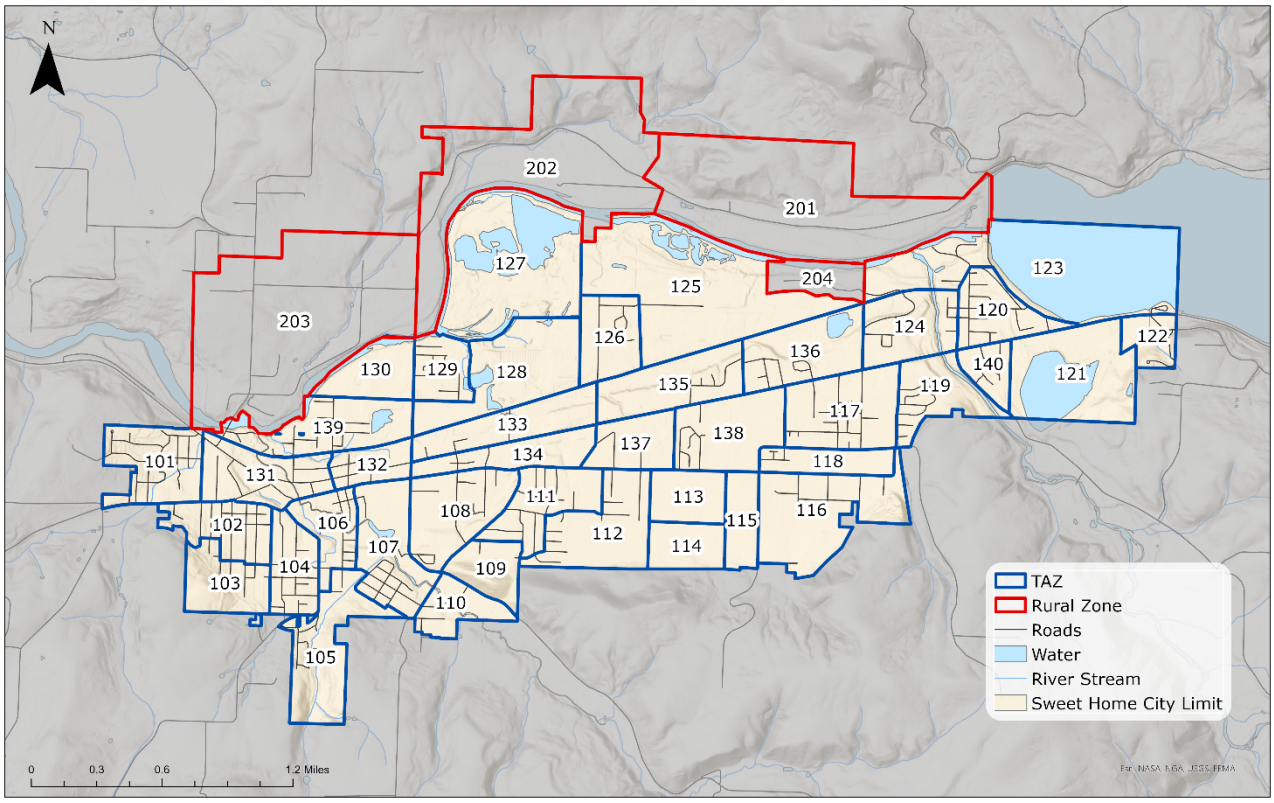


FIGURE 1: SWEET HOME TAZ MAP

LAND USE

Land use is a key factor affecting travel demands placed on Sweet Home's transportation system. The location, density, type, and mix of land uses have a direct impact on traffic levels and patterns. An existing 2021 land use inventory and future 2045 land use projection were performed for each TAZ in the Sweet Home UGB based on existing uses, zoning, and anticipated development patterns.

The housing and employment forecasts used for this TSP analysis relied heavily on three key sources of data:

- The Portland State University Population Research Center prepared the *Coordinated Population Forecast, 2015 through 2065, for Sweet Home County Urban Growth Boundaries (UGB) and Area Outside UGBs,* which provided the population forecast data.

- The *2021 American Community Survey*, which provided average persons per household data.
- Oregon Employment Department inventory of Covered Employers and Employment that summarizes the job type and location of employers

The base 2021 land use inventory approximated the number of households and the amount of retail employment, service employment, educational employment, and other employment that currently exist in each TAZ. Existing employment land uses within Sweet Home were obtained from Oregon Employment Department data and a review of other data sources (tax assessor data, census data, and zoning data and compared with existing aerial photography). The existing land uses correspond to a population of 9,461 residents, which is based on Portland State University Population Research Center estimates. This corresponds to approximately 3,931 households based on an average household size of 2.46 (US Census data).

The future 2045 land use projection is an estimate of the amount of each land use (household and employment) that the TAZ could reasonably accommodate given market conditions and current build-out of vacant or underdeveloped lands assuming Comprehensive Plan zoning. The projected land uses correspond to a year 2045 population projection of approximately 11,246 residents, which corresponds to a 19 percent growth through the planning horizon.

A summary of the existing land use estimates and future projections for the entire Sweet Home UGB is listed in Table 1.

Table 1. Sweet Home UGB Land Use Summary

Land Use / Growth Category	Existing 2020 Quantities	Total Growth 2020 to 2044	Future 2045 Quantities
Population	9,461	1,785 (+19%)	11,246
Households	3,931	641 (+16%)	4,572
Employees			
Retail	x	x	x
Service	x	x	x
Education	x	x	x
Other	x	x	x
Total	x	x	x

TRAVEL DEMANDS

Travel demand on roadways and at intersections in Sweet Home was estimated using the ODOT APM V2 methodology for the EZCA method. This methodology included estimating all vehicle trips (not just growth increment), adjusting the trip distribution to reduce household-to-household trips, and using Visum modeling software to perform the trip assignment. Travel forecasting was performed for the 30th highest hour conditions for both 2021 and 2045. The purpose of the 2021 forecast tool was to calibrate the network in preparation for developing the 2045 network, which would then be used for future analysis.

The travel demand analysis includes the translation of City land use information into motor vehicle trips. This was done for each of the TAZs based on the existing and projected land uses described previously in the Land Use section of this memorandum. Trips traveling to and from the external TAZs were also estimated for both the 2021 and 2045 analysis years. This section of the memorandum describes the methodology used to determine the different trip types and how the trips were distributed and assigned to the roadway network.

TRIP TYPES

Travel forecast projections involve the determination of three distinct types of trips, which are categorized based on whether their origin and/or destination (i.e., the trip ends) are internal or external to the Sweet Home UGB. The three trip types and how they apply to Sweet Home are:

- **External-External (E-E) Trips** do not have an origin or destination in Sweet Home and either do not stop or only make a very minor stop while passing through the Sweet Home UGB. These trips are typically referred to as "through traffic." An example would be a person from Corvallis traveling on US 20 while heading to Bend.
- **Internal-External (I-E) Trips** originate in Sweet Home and are traveling to a location outside of the Sweet Home UGB (e.g., someone working in Sweet Home that returns north to Lebanon in the evening), while **External-Internal (E-I) Trips** originate outside of the Sweet Home UGB and are traveling to a location within Sweet Home (e.g., someone from Lebanon traveling into Sweet Home for shopping).
- **Internal-Internal (I-I) Trips** travel from one location within the Sweet Home UGB to another location within the UGB. An example would be a person traveling between their office and home within Sweet Home.

EXTERNAL TRIP ENDS

External trip ends are the origin and/or destination of E-E, I-E, or E-I trips and were estimated for both 2021 and 2045 and for 30th highest hour conditions at each of the gateways.

The number of 2021 external trip ends was based on existing traffic volumes at key gateways to the city:

- North: US 20 north of Osage St

- East: Oregon 228 (Halsey-Sweet Home Highway) east of Fern Ridge Rd/Rowell Hill Rd
- South: Old Holley Road east of Elkhorn St
- South: 21st Avenue southwest of Cedar St
- South: Ames Creek Road west of Surrey Ln
- South: 43rd Avenue south of Coulter Ln
- South: 50th Ave to the south of Airport Rd
- South: Wiley Creek Road east of Riggs Hill Rd
- East: Shea Hill Drive east Riggs Hill Rd
- East: US 20 east of Riggs Hill Rd/Shea Viewpoint
- North: N River Drive east of Foster Dam Rd
- North: Pleasant Valley Road north of Northside Drive

Replica[1], a web-based data model that includes travel estimation, was used to estimate the portion of through traffic compared to the portion of traffic with either an origin or destination within Sweet Home. The Replica data model is based on "big data" (mobile network) sources and reflects travel trends experienced over a duration of time. The datasets provides an estimate of travel behavior based on sampled conditions. The regional travel patterns and trip types are summarized in Table 2.

Table 2. Regional Travel Patterns Observed at External Gateways

	Percent Entering Traffic		Percent Exiting Traffic	
Gateway	With a Destination in Sweet Home	With an External Destination	With an Origin in Sweet Home	With an External Origin
North: US 20 north of Osage St	72%	28%	87%	13%
East: Oregon 228 east of Fern Ridge Rd/Rowell Hill Rd	78%	22%	72%	28%
South: Old Holley Road east of Elkhorn St	78%	22%	83%	17%
South: 21st Avenue southwest of Cedar St	39%	61%	35%	65%
South: Ames Creek Road west of Surrey Ln	51%	49%	40%	60%
South: 43rd Avenue south of Coulter Ln	57%	43%	50%	50%
South: 50th Ave to the south of Airport Rd	50%	50%	55%	45%

[1] https://www.replicahq.com/

South: Wiley Creek Road east of Riggs Hill Rd	40%	60%	52%	49%
East: Shea Hill Drive east Riggs Hill Rd	50%	50%	25%	75%
East: US 20 east of Riggs Hill Rd/Shea Viewpoint	20%	80%	17%	83%
North: N River Drive east of Foster Dam Rd	45%	55%	35%	65%
North: Pleasant Valley Road north of Northside Drive	67%	33%	65%	35%
Average of All Gateways	**54%**	**46%**	**51%**	**49%**

Source: Replica Trip Count Data taken from 3:00-7:00pm

Table 2 indicates that the majority of external gateways have a trip end (origin or destination) in Sweet Home. Approximately 20 to 60 percent of external trips (varies by location) are also destined to another external location as a "through trip." The east end of US 20 includes the highest portion of external trips – approximately 80 percent of these trips travel through Sweet Home.

The external trip ends that have an internal pair are modeled to pair with the internal trip ends of corresponding land uses within the city (e.g., housing and employment). This modeling process is explained further in the "Trip Distribution" section of this memorandum.

Growth estimates were applied to each gateway to determine 2045 external trip ends for through traffic. The ODOT Future Projected Annual Average Daily Traffic Tables provided data for estimating future growth. The annual growth rates and associated growth factors for each external gateway are shown in Table 3.

Table 3. External Gateway Growth Forecasts for Sweet Home

Gateway	2021 AADT	2041 AADT	Annual Growth Rate	Growth Factor (From 2021 to 2041)
US 20, east of Osage St	10614	11000	0.18%	1.04
OR 228, east of Fern Ridge Rd	4318	4500	0.21%	1.04
US 20, east if Riggs Hill Rd	2262	2400	0.31%	1.06

Source: ODOT Future Projected Annual Average Daily Traffic Tables, Calculated annual growth forecasts

As listed in Table 3, traffic volumes at external gateways are expected to grow by four to six percent total over the 20 year period of 2021 to 2041.

INTERNAL TRIP ENDS

The number of internal trip ends in Sweet Home was determined using a land use-based trip generation methodology, which translates land use quantities (number of dwelling units or number of employees) into vehicle trip ends (number of vehicles entering or leaving a TAZ) based on empirically-derived trip generation rates. Weekday PM peak hour trip generation rates used in the forecast tool are listed in Table 4 for the applicable land uses. These rates were generally developed based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual* and calibrated to observed traffic counts in Sweet Home.

Table 4. Average Weekday PM Peak Hour Trip Generation Rates by Land Use

Land Use	Trips In	Trips Out	Total Trip Ends
Single-family households (per dwelling unit)	0.50	0.30	0.80
Multi-family households (per dwelling unit)	0.40	0.20	0.60
Retail (per employee)	1.88	2.12	4.00
Service (per employee)	0.66	0.84	1.50
Education (per employee)	1.44	1.56	3.00
Other (per employee)	0.05	0.25	0.30

Source: Institute of Transportation Engineers Trip Generation Manual and local traffic counts

By applying these trip generation rates to the TAZ land uses, the number of trips entering and exiting each TAZ in Sweet Home was estimated. Internal trip estimates were obtained for both the existing 2021 land uses and the projected 2045 land uses.

TRIP DISTRIBUTION

Trip distribution was performed to estimate how many trips travel between each of the internal TAZs. Distribution for trips traveling to and from internal zones (i.e., trips having at least one internal trip end) was based on weighting the attractiveness of each zone, as measured by the number of trip ends generated by the zone.

The forecasting model is based on a trip table that describes the internal and external trip ends for each trip within the network. To develop this trip table, External-to-External (E-E) trips are

matched based on the external trip probabilities. Next, all remaining external trips (I-E and E-I) are paired with appropriate internal trip ends. These trips represent the inbound and outbound travel for Sweet Home residents and employees, respectively. Finally, the Internal-Internal (I-I) trip pairs are determined based on the land uses within Sweet Home. Note that the rural zones adjacent to Sweet Home (but outside the UGB) were also considered for I-I trip purposes.

TRIP ASSIGNMENT

Trip assignment involves the determination of the specific travel routes taken by the trips within the transportation network. This step was performed using Visum modeling software. Forecast tool inputs included the transportation network (i.e., road and intersection locations and characteristics, as determined from maps and field inventories) and a trip distribution table (described in prior sections). Iterated equilibrium assignment was then performed using estimated travel times along roadways and delays at intersection movements. The path choice for each trip was based on minimal travel times between locations. Forecast tool outputs include traffic volumes on roadway segments and at intersections.

CALIBRATION

Calibration will be performed on the 2021 base year forecast tools by comparing forecast tool turn volumes at the Sweet Home TSP study intersections with actual counted (measured) 2021 traffic volumes. A plot comparing the measured traffic volumes and the base year forecast tool volumes for all study intersection turn movements will be analyzed to evaluate the accuracy of each forecast tool.

FORECAST TOOL VOLUMES AND POST-PROCESSING

Forecast tool traffic growth plots (2045 minus 2021) for the design hour forecast tool will be included in the appendix. While the travel demand forecast tools were calibrated to local conditions and volumes, raw volumes from the tools are not used for capacity analysis. Rather, motor vehicle turn movement volume forecasts will be developed using post-processing methods consistent with the ODOT APM V2. This approach is derived from methodologies outlined in the National Cooperative Highway Research Program (NCHRP) Report 765, *Analytical Travel Forecasting Approaches for Project-Level Planning and Design*.

The post-processing methodology involves estimating trip growth at the intersection approach level (i.e., volume differences between base and future forecast tools), scaling the growth by the number of forecast years (i.e., forecast years divided by difference in forecast tool years), and adding these volumes to existing traffic counts. Engineering judgment is used as part of the post-processing methodology, with the routing decisions identified by the forecasting tool serving as a reference for making volume adjustments. The results of this process are future year forecasts derived from the Sweet Home enhanced cumulative analysis forecasting tool that are calibrated to observed data. The year 2045 traffic volume forecasts will serve as a future base volume forecast from which future conditions will be evaluated in subsequent memoranda.

Attachments:

- Figure A1 – Household Growth by TAZ

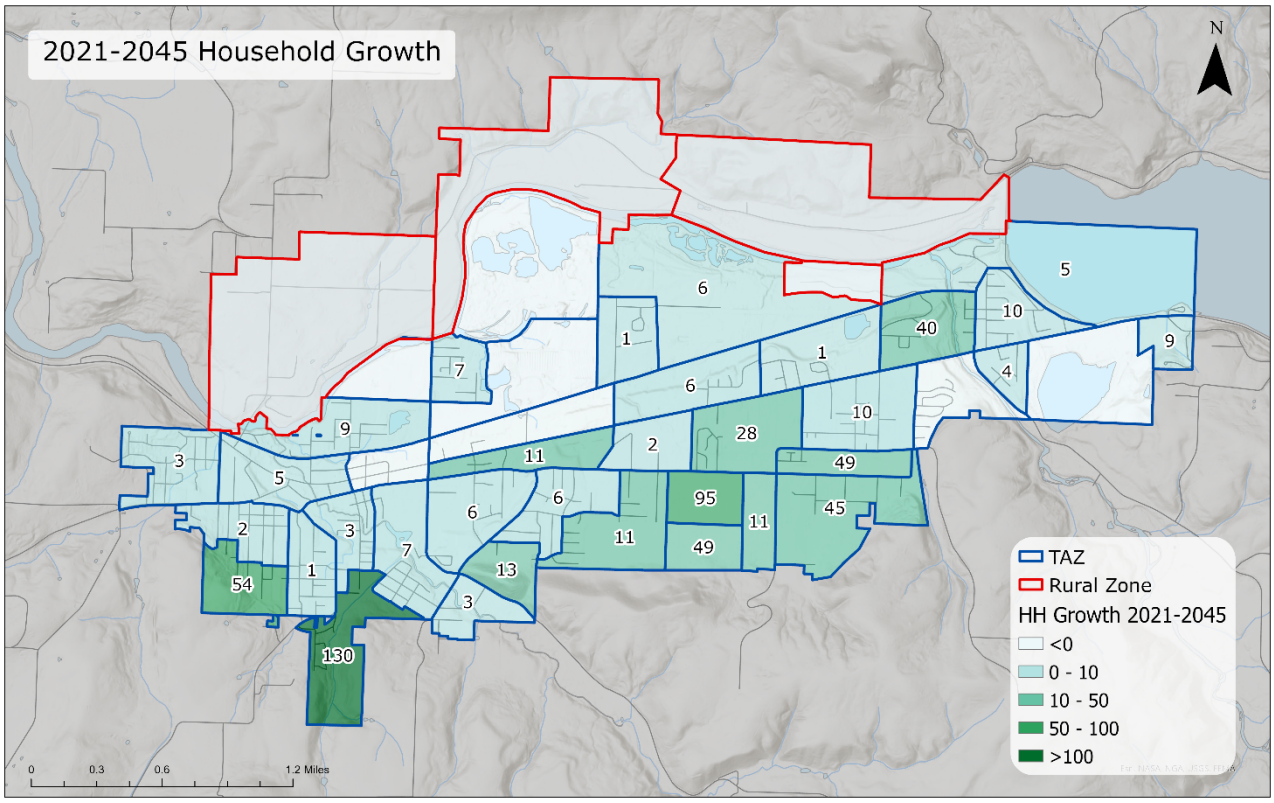


FIGURE A1: SWEET HOME 2021-2045 HOUSEHOLD GROWTH

APPENDIX E

North Sweet Home Area Plan

Technical Memo 10
Preferred Land Use Concept

Task 5.2

Draft

February 2025

The North Sweet Home Area

The City of Sweet Home is in the process of updating its Transportation System Plan (TSP) and preparing an area plan for the land in the northern part of the City limits, called the North Sweet Home Area.

This area planning effort includes the following steps: 1) an analysis of existing conditions; 2) creation and evaluation of land use/transportation options; 3) selection of a preferred alternative; and 4) potential changes to comprehensive plan and zoning designations as well as policies and transportation projects identified in the updated TSP.

This memo aims to provide information about the preferred alternative for the North Sweet Home Area, along with a preliminary transportation analysis of this alternative.

Goals & Objectives

Housing

The Preferred Alternative aims to provide land that can accommodate a variety of housing types needed in Sweet Home in the long term, including lodging in a riverfront hospitality district.

Economic Development

The Preferred Alternative provides land for a range of industrial and commercial uses, in areas to the SW of the study area, closest to existing downtown uses and activity.

Natural Resources & Recreation

This Plan will protect water quality resources and wetlands as required by law and provides land available to riverfront hospitality uses along the South Santiam River, which will continue to be protected through riparian area regulations.

Connectivity

A robust and connected transportation network is proposed in this area, for those walking, rolling, and driving.

The Preferred Alternarive has been designed with principles of...

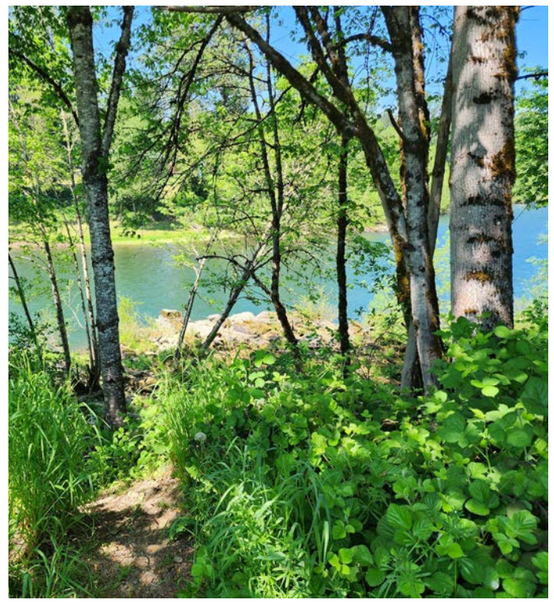
Great Neighborhood Design

+ Natural feature preservation
+ Scenic views
+ Parks, riverfront trails, & open spaces
+ Pedestrian & bike friendly
+ Connected streets
+ Mix of activities
+ Housing for diverse incomes
+ Housing variety

Draft Alternative Review

Draft alternatives were presented to the PMT in a series of meetings in Summer 2024, and in a public meeting on June 3, 2024.

- Meetings were open to the public and took place at Sweet Home City Hall. The project team described the goals of the North Sweet Home Area plan and existing conditions in the area, followed by presentation of three land use alternatives and two transportation concepts.
- All alternatives supported a multi-modal transportation system, new neighborhoods in North Sweet Home, and a parks and trails system that takes advantage of the area's natural resources. The land use alternatives differed in their emphasis on industrial, commercial, and residential uses. The transportation concepts differed in the "main entrance" to North Sweet Home - Clark Mill versus a new connection on 24th Ave - plus differences in the alignment and connections of the primary east-west street.
- Alternatives were presented to the Sweet Home City Council on January 28, 2025. Feedback indicated general support for Alternative 3, "Riverfront Hospitality" which forms the basis for the Preferred Alternative.
- Property owners and others indicated a desire for flexibility in the allowed uses of land.
- The owner of a large parcel within the "Recreational Commercial" area indicated he is having difficulty in developing large speculative projects in the current market environment. This Preferred Alternative plan should therefore assume that development will occur in smaller, incremental phases.



Preferred Alternative

Riverfront Hospitality

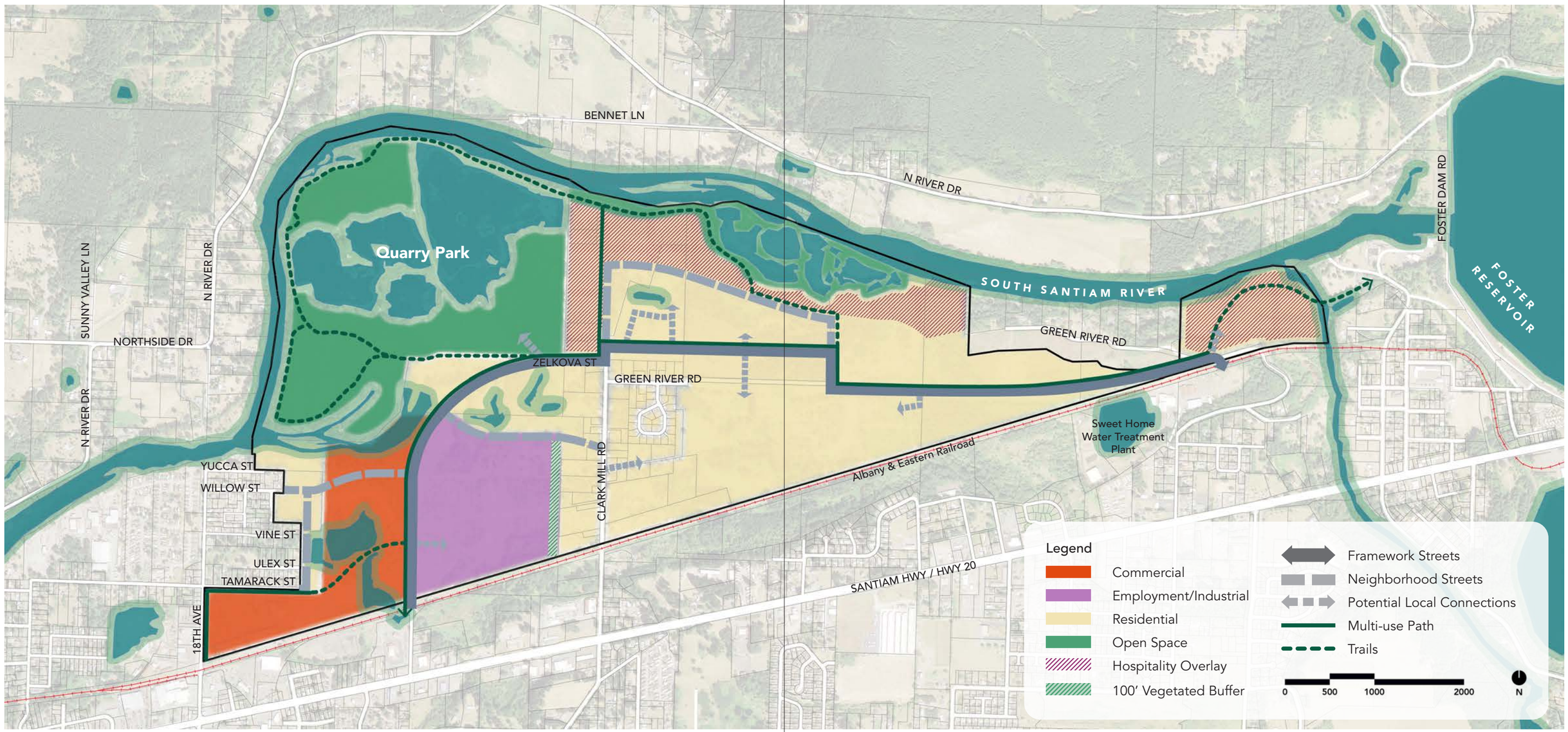


Figure 1

This alternative contains a balance of smaller industrial and commercial uses in the Southwest of the NSHA to take advantage of transportation connections and proximity to downtown Sweet Home, and residential uses in the remainder of the area. A "Riverfront Hospitality Zone" on land (with residential base zoning) in the vicinity of the South Santiam River would allow for uses catering to a visiting public, including hotels, restaurants, equipment rentals, and similar uses.

Hospitality uses could range in scale but the plan envisions a residential/rustic aesthetic. Less intensive hospitality uses could include rental cabins, campsites, yurts, or RV sites with access to the river or nearby riverfront trails. More intensive hospitality uses could include a small resort.

Nearby commercial and employment lands could also provide services related to tourism, like outdoor recreation equipment rentals or venue/ restaurant space.

Preferred Alternative

Riverfront Hospitality: Aerial Perspective

A view looking NE across the North Sweet Home area towards Foster Reservoir and the Cascade Mountains, showing one potential buildout of the Preferred Alternative in the next 20-30 years, integrating a new neighborhood into this beautiful riverfront next to downtown Sweet Home. The ultimate eventual developed neighborhood will be shaped by this plan, with flexibility for individual design decisions from property owners and developers.

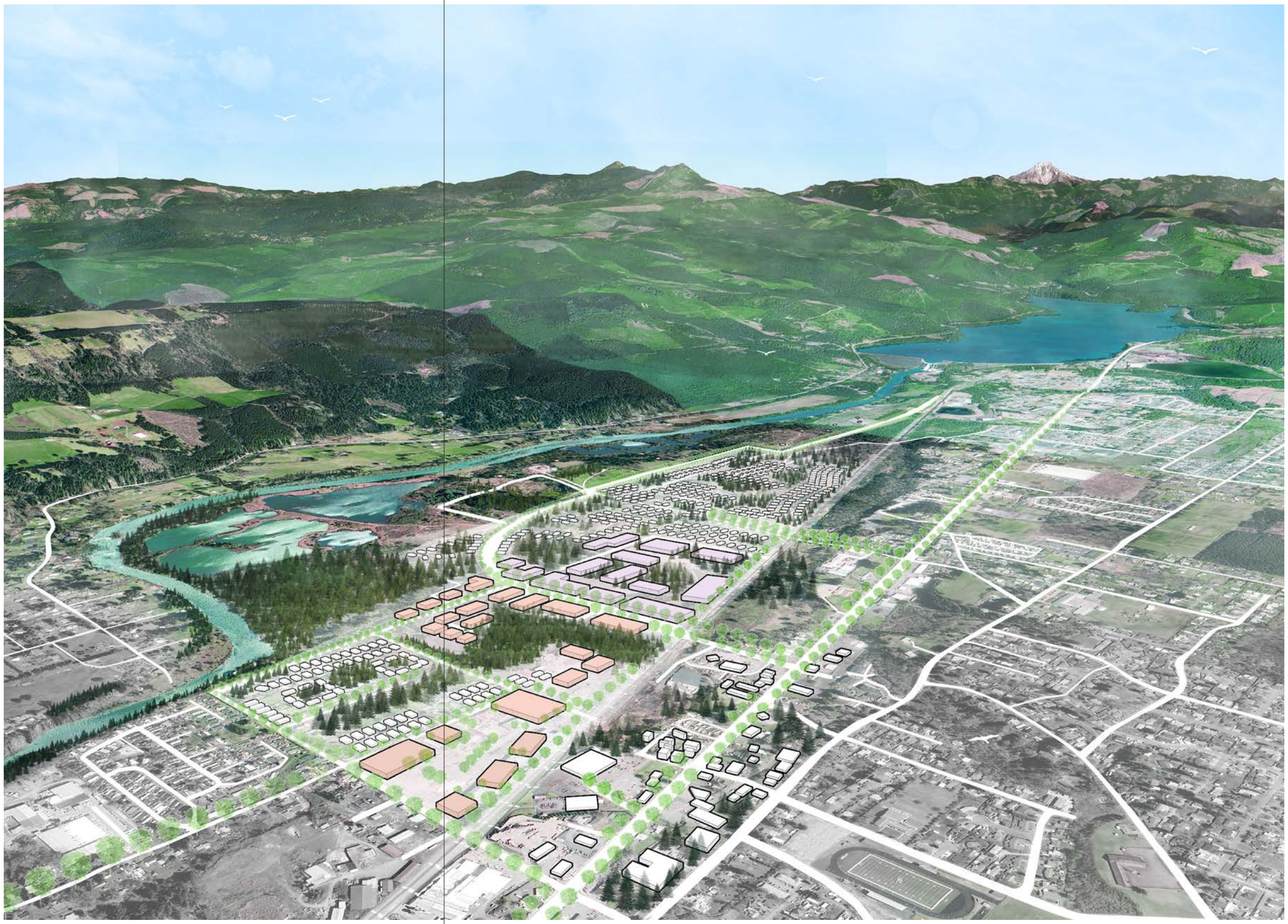
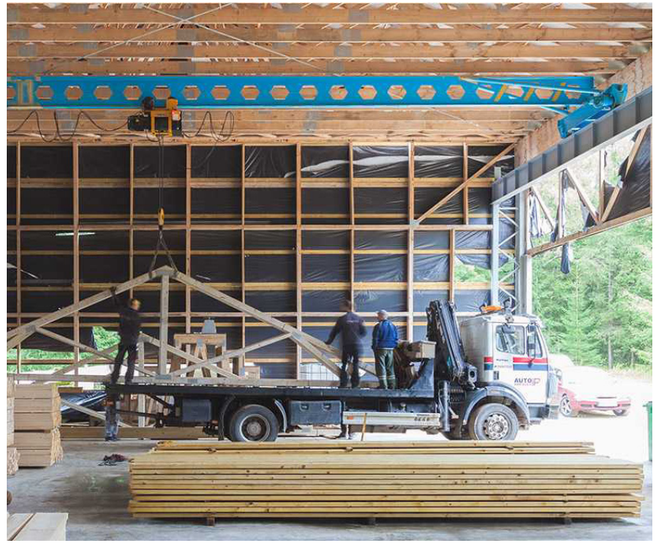


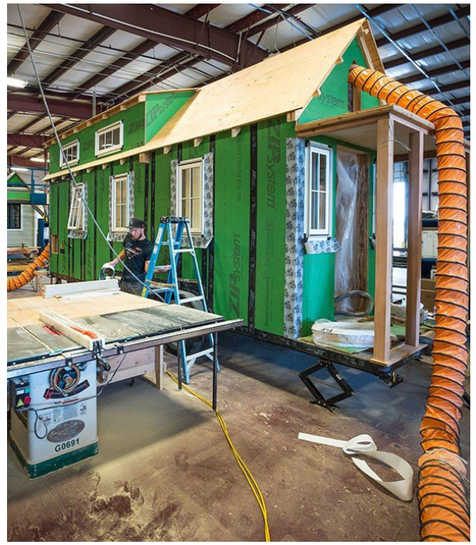
Figure 2

Industrial Employment

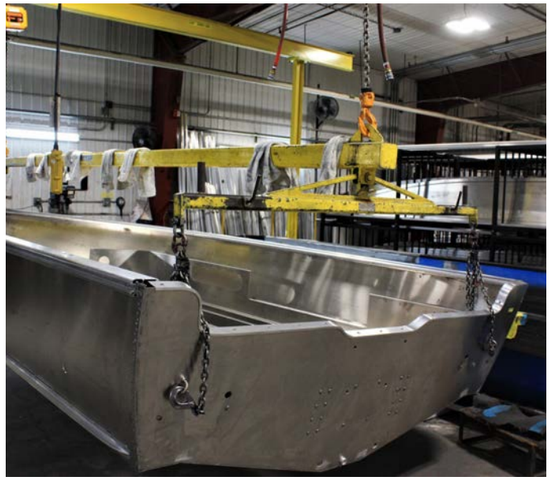
Employment areas could include pedestrian and bike connections for both workers and residents to access the river and downtown.

Commercial greenhouses could make use of nearby rail and expansive sites with solar access.



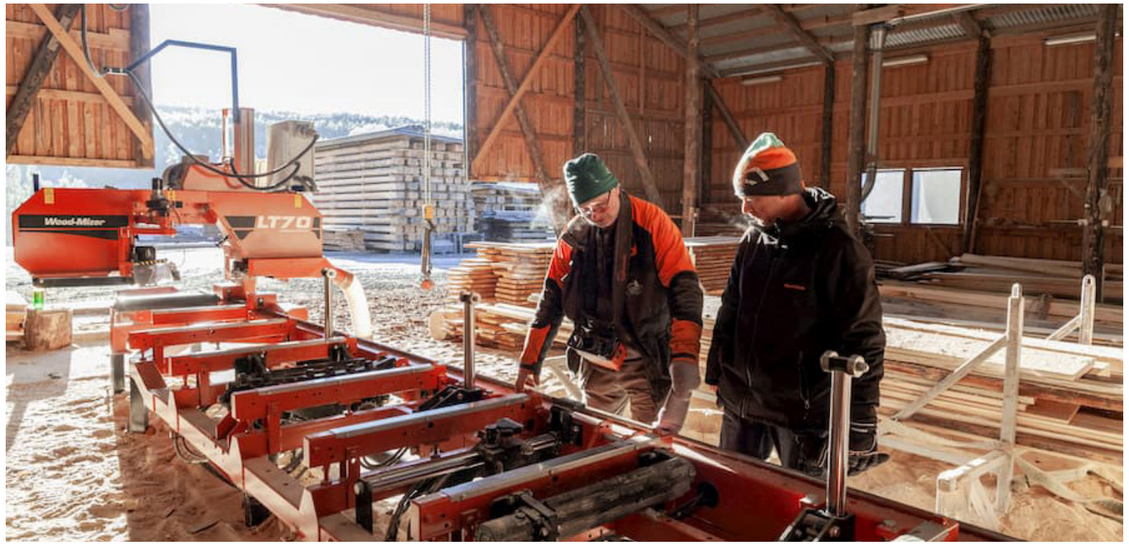


Manufacturers of prefabricated buildings or prefabricated wood components could take advantage of nearby timber resources and trained workforce.



Small scale "craft" manufacturing related to nearby tourism industries (eg, boating, snow sports, hiking, etc), could locate manufacturing and show-room space within the NSHA in this option.

A brewery or food-related manufacturer could locate their facility within employment industrial areas.

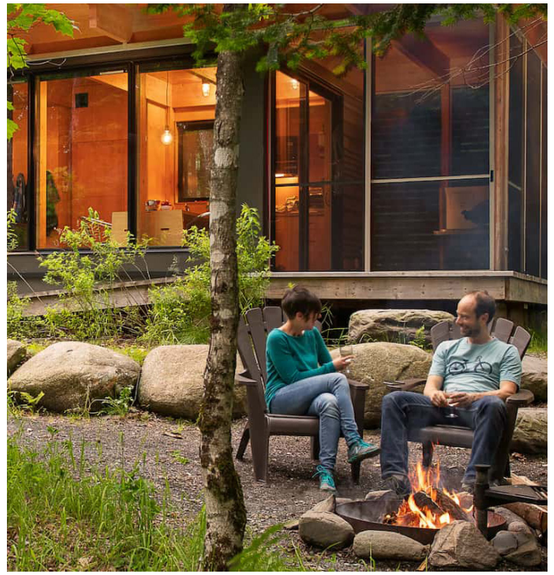


Timber-related industry would be well situated on this railroad-adjacent site in the NSHA.

Riverfront Hospitality & Residential

A resort could design around unique site features and take advantage of views of the river and mountain landscape.

Hospitality uses including short term rentals, campsites, yurts, or RV resorts could be located within hospitality zones.



A small resort or lodge sited adjacent to neighborhoods could be residential in character.

Riverfront hospitality uses like cabins and campgrounds could be built in harmony with natural features within the NSHA.

Neighborhoods could include pedestrian-friendly streets and homes with garages placed to the side or rear of street frontages.

Housing options could include single family residences and a variety of middle housing types.

Commercial, Retail, & Event

Interim uses in commercial zones could include pop-up food and drink vendors, potentially serving tourism during the Oregon Jamboree.

Incubator space related to tourism could be located within NSHA hospitality zones, like this photo of incubator wineries at the Port of Walla Walla.

Small retail could serve locals as well as tourists passing through town.

A covered stage area could be located within Quarry Park.

A commercial node near hospitality overlay could include outdoor equipment rentals.

Open space within the NSHA could be used to host events like the Oregon Jamboree.

Proposed Street Network

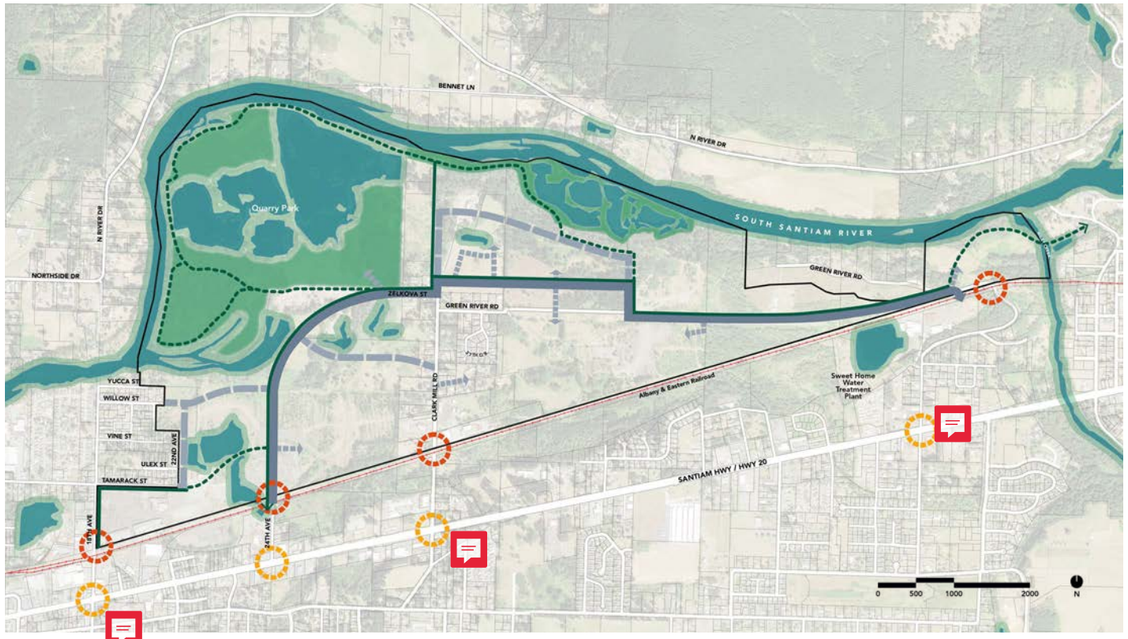


Figure 3

The Proposed Street Network (based on Option 2 evaluated in TM #8), proposes a main vehicular entrance into the study area along 24th Ave, and a connection to the east that stays as close to city limits as possible. The City has received approval of a new rail crossing at 24th Avenue.

New transportation facilities could support and be supported by redevelopment of the mill site. Pedestrian and bike infrastructure improvements are proposed throughout the study area, including improved crossings along the framework street, 24th Avenue/Zelkova Street, at the following intersections: 18th Avenue, 24th Avenue, Clark Mill Road, and 47th Avenue. Recreational paths are also proposed through Quarry Park and along the Riverfront, including a pedestrian footbridge across Wiley Creek at the eastern edge of the NSHA.

Legend

- **Framework Streets** *Include Sidewalks & Bike Lanes
- **Neighborhood Streets** *Include Sidewalks
- **Potential Local Streets** *Include Sidewalks Where Feasible
- **Improved Hwy Crossing**
- **Improved RR Crossing**
- **Multi-Use Path**
- **Trails**

Transportation Analysis

The proposed street network (Figure 3) addresses the transportation-related needs for the North Sweet Home Area by emphasizing connectivity for bikes and pedestrians in/around the North Sweet Home Area. As the area grows and develops, impacts to the city and regional transportation system that can be mitigated with reasonable projects that emphasize the efficiency and safety of auto travelers, pedestrians, and cyclists alike.

A list of projects was developed that supports the preferred land use and street network. Projects were divided into three categories Corridor (C), Spot (S), and Multi-modal (M) improvements projects. These projects were identified based on previous analyses documented in Technical Memorandum 8. **Table 1 on the following page shows each proposed project and its associated cost, which includes a new roadway and path system.** The total cost of transportation projects supportive of the NSHA Preferred Scenario is approximately $120 million.

The Corridor (C) projects focus on providing connectivity through the North Sweet Home Area by providing a parallel collector street to Main Street (US20) that also supports development and re-development of parcels abutting the new framework street. New street extensions and new neighborhood streets stemming from the framework street will help serve the new developments that arise in the North Sweet Home Area and further enhance connectivity for pedestrians and cyclists. The corridor projects form the backbone of the transportation network that the Spot (S) projects and Multimodal (M) projects enhance.

The Framework Streets (Projects C-1 and C-2) will be built to the cross-section standards outlined in this memorandum (Fig. 6), however there is potential that this project could be modified to have a wider cross section on 24th Avenue (project C-1). The City of Sweet Home in coordination with ODOT rail have determined that a 4 to 5 lane section could be allowable along this alignment. While traffic is not anticipated to reach levels that would require 4 to 5 travel lanes, the City may choose to develop with flexibility in mind in case dense development takes place in the North Sweet Home Area. Doing so would require the 3 lane framework street to include larger on-street bike lane buffers that allows for future conversion to a 5 lane section without any full-deep pavement construction (i.e. dedicate 22 feet between the curbs to bike lanes and buffers) and without relocating existing curblines. This is not anticipated to take place within the planning horizon, and project C-1 does not assume this to take place.

Index	Project Name	Project Description	Planning Level Cost Estimate
C-1	24th Ave Improvements	Widen 24th Ave with Framework Street cross section from US20 to railroad. Extend 24th Avenue north of railroad to to Zelkova St.	$21,450,000
C-2	Zelkova St Improvements	Extend Zelkova Street east of 24th Avenue to Zelkova Street.	$43,550,000
C-3	New Neighborhood Street 1	Construct new neighborhood street connecting 24th Avenue to Clark Hill Road.	$9,005,000
C-4	New Neighborhood Street 2	Construct new neighborhood street connecting Zelkova Street to proposed hospitality district.	$18,005,000
C-5	Willow St Extension	Extend Willow Street east of 20th Avenue to 24th Avenue.	$9,000,000
C-6	22nd Ave Extension	Extend 22nd Avenue from Tamarack Street to Willow Street.	$9,000,000
S-1	US20/18th Ave Improvements	Modify existing signal to meet capacity needs, including potential addition of protected left turns on US20.	$150,000
S-2	US20/24th Ave Improvements	Install signal at existing intersection.	$1,000,000
S-3	US20/Clark Mill Rd Improvements	Install signal at existing intersection.	$1,000,000
S-4	US20/47th Ave Improvements	Install signal at existing intersection.	$1,000,000
S-5	Zelkova St/Clark Mill Rd Improvements	Install signal at existing intersection.	$1,000,000
S-6	18th Ave Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000
S-7	24th Ave Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000
S-8	Clark Mill Rd Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000
S-9	47th Ave Railroad Crossing Improvements	Upgrade signing and striping, install railroad crossing gates, and install ADA-accessible improvements to align with current railroad safety guidelines	$600,000
M-1	18th Avenue Multiuse Path	Install multiuse path along 18th Avenue and Tamarack Street.	$360,000
M-2	New Neighborhood Street 2 MUP	Install multiuse path along New Neighborhood Street 2	$260,000
M-3	Quarry Park Trail	Install new trail route through Quarry Park.	$1,440,000
M-4	Tamarack Street Pedestrian Trail	Install new trail route between Tamarack Street and 24th Avenue, including pedestrian bridge over existing body of water.	$1,650,000
M-5	24th Ave/Neighborhood St 1 Crossing	Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.	$50,000
M-6	24th Ave/Neighborhood St 2 Crossing	Install pedestrian crossing at 24th Ave/New Neighborhood Street 1 intersection. Type of crossing to be identified following engineering study.	$50,000
M-7	25th Ave/Willow St Crossing	Install pedestrian crossing at 24th Ave/Willow Street intersection. Type of crossing to be identified following engineering study.	$50,000
		Total:	**$120,420,000**

Table 1: Project List

The Spot (S) projects focus on intersections that will require operational and safety upgrades based on the new street network. For example, additional side street traffic is expected at the existing intersections with US20, including: 18th Avenue, 24th Avenue, Clark Mill Road, and 47th Avenue due to additional trip demand in the North Sweet Home Area. As development takes place, this additional trip demand will cause operational deficiencies at these existing intersections that need to be mediated with intersection control upgrades. Similarly, additional traffic using the existing rail crossings will spur the need to update existing rail crossing orders and upgrade the existing rail crossings. Today, some of the existing rail crossings do not include pedestrian or bicycle facilities to safely cross the rail, and some of the crossings do not include any treatment other than signing and striping for motor vehicles. See Figures 4 and 5.

The Multimodal (M) projects focus on safety and connectivity specific to cyclist and pedestrian modes, including the installation of new multiuse paths that enhance pedestrian connectivity, and improvements to the trail system that provide a recreational aspect to the walking and biking previously unavailable in the North Sweet Home Area. Pedestrian crossing installations are also included at some strategic locations to enhance the pedestrian network. Additional street crossings should be considered as development occurs to include crossings at/near schools or neighborhoods. Street crossing treatment types should be determined with an engineering study to identify the appropriate treatments based on vehicle traffic volumes and speeds as growth occurs.

Project costs for some projects, especially those constructing new roadways, trend on the higher end due to the expectation that the terrain will be difficult to build on due to variable grades, wetlands, and anticipated impacts to existing parcels. The Preferred Street Network may require changes to alignment to conform to the natural environment and to maneuver other obstacles, such as the area the encompasses much of Green River Road that is not within the City urban growth boundary (UGB).

Figure 4: Rail crossing at 47th Avenue (Google Maps, 2022)

Figure 5: Rail crossing at 18th Avenue (Google Maps, 2022)

Street Network:

Pedestrian and Bike Connections

A multi-use path along the edges of employment areas could provide easy connectivity from the NSHA to Foster Reservoir and into town.

Trails could weave through neighborhood open space, providing pedestrian connectivity to natural resources, and access to passive recreation.

A multi-use path along the river could serve the community and tourists. This could alternatively be a soft surface trail.

Street Network:

Framework Streets

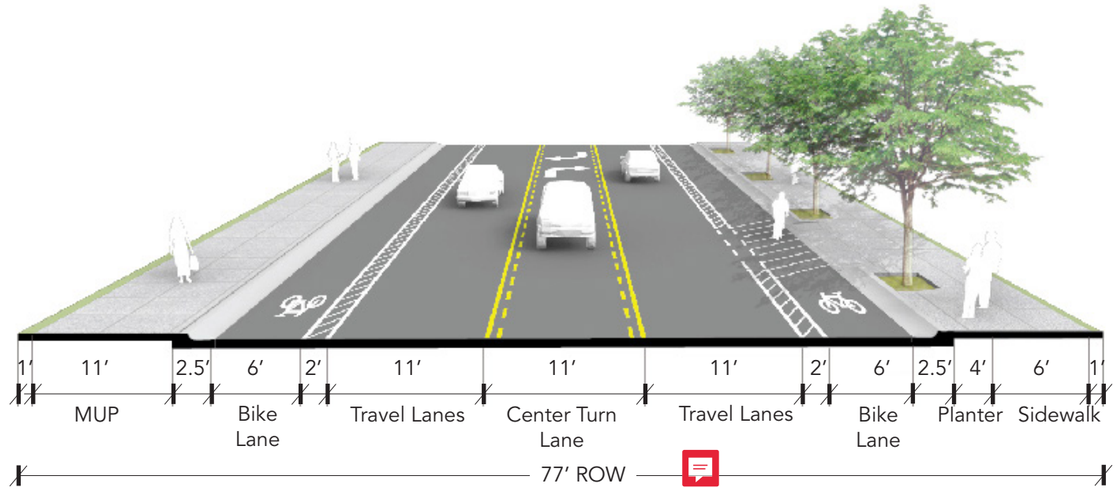


Figure 6: Framework Street with adjacent Multi-use Path (MUP)

Example of Framework Street with adjacent multi-use path in Bend, OR.

Street Network:
Neighborhood and Local Streets

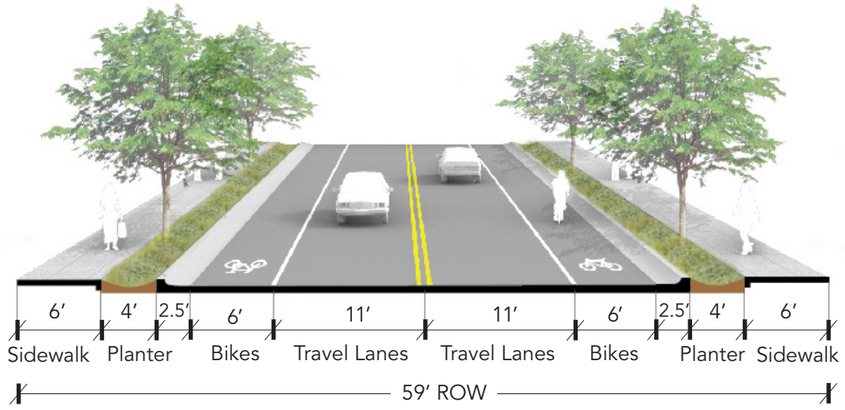


Figure 7: Neighborhood Street

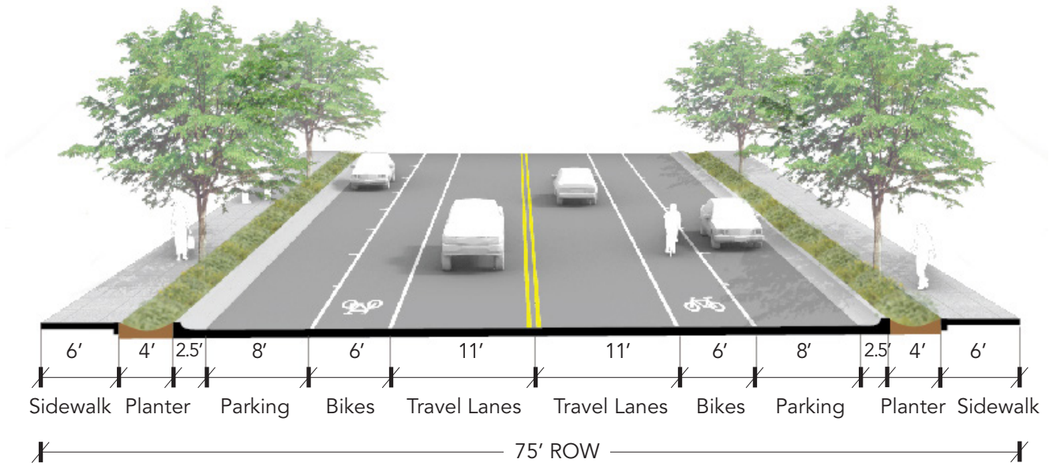


Figure 8: Neighborhood Street with Parking

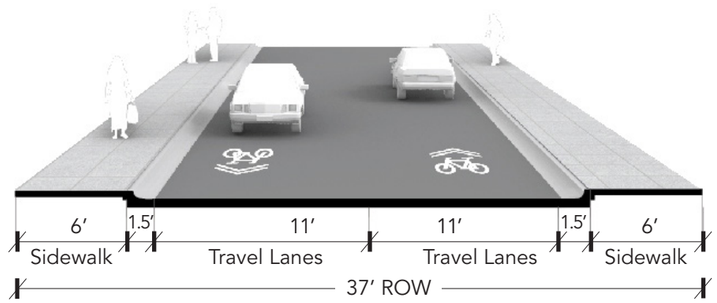


Figure 9: Local Street

Implementing Actions

Implementation of the Preferred Alternative's land use and transportation elements will require the following planning policies or actions:

- Addition of conceptual roadways, functional classifications, and other features to the City's updated Transportation System Plan.
- Changes to the comprehensive plan and zoning designations of the North Sweet Home Area, which currently has a combination of Recreation Commercial (RC), Industrial (M) and Residential Industrial Transition (RMT) designations, as well as Natural Resources Overlay and Planned Development Overlay designations.
- Potential recommendations may include the creation of new commercial, industrial, residential, and overlay designations to foster the desired outcomes for the NSHA.


Sweet Home
Oregon
at its best!

APPENDIX F

Comprehensive Plan and Development Code Amendments

City of Sweet Home – North Sweet Home Area Plan

DATE February 28, 2025

TO City of Sweet Home

FROM Andrew Parish, AICP and Matt Hastie, AICP

CC

INTRODUCTION

This document provides DRAFT recommendations for Comprehensive Plan and Zoning Code changes to implement the North Sweet Home Area Plan (NSHAP)

Additional text changes related to the implementation of the City of Sweet Home's Transportation System Plan (TSP) can be found in the separate "TSP Implementing Ordinances" document.

This draft provides underline/~~strikethrough~~ language for specific edits to code language. Notes and questions for reviewers are provided in-line below in blue boxes.

Part 1. Comprehensive Plan Amendments

Changes to City of Sweet Home Comprehensive Plan Map

The adopted Comprehensive Plan map is shown below. The North Sweet Home Area consists primarily of the Mixed Use Employment Comprehensive Plan designation.

Changes to Comprehensive Plan designations are proposed consistent with the land use map on Figure 1. Discussion follows:

1. The City's R-2 designation is intended to provide areas suitable and desirable for single-family homes, duplexes, condominiums, town houses and appropriate community facilities. Multifamily uses are allowed as a conditional use. The significant infrastructure investments and natural resources needed to develop in the North Sweet Home area would likely require densities and development types consistent with the R-2 zone.
2. The Mixed Use Employment designation is applied to commercial areas. This designation allows a broad range of commercial and industrial uses, as well as residential uses.
3. The I – General Industrial designation is applied to Industrial areas on the land use map.

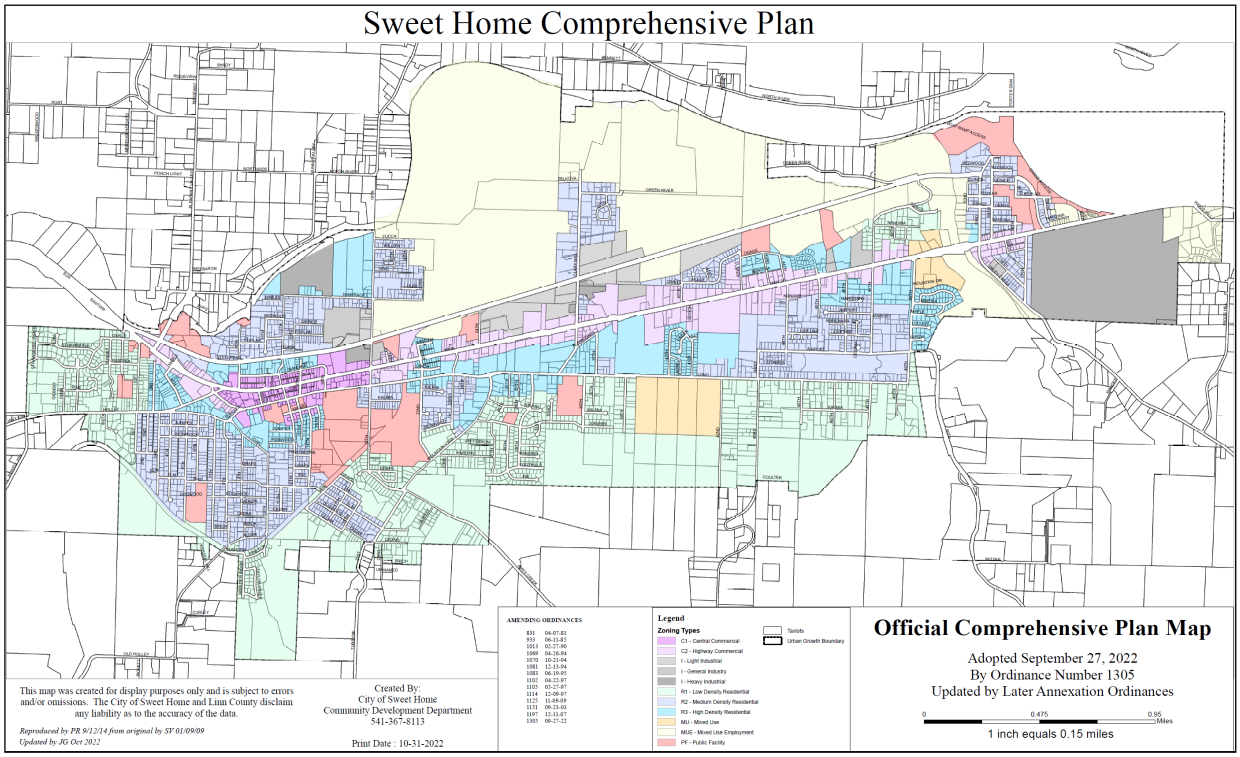
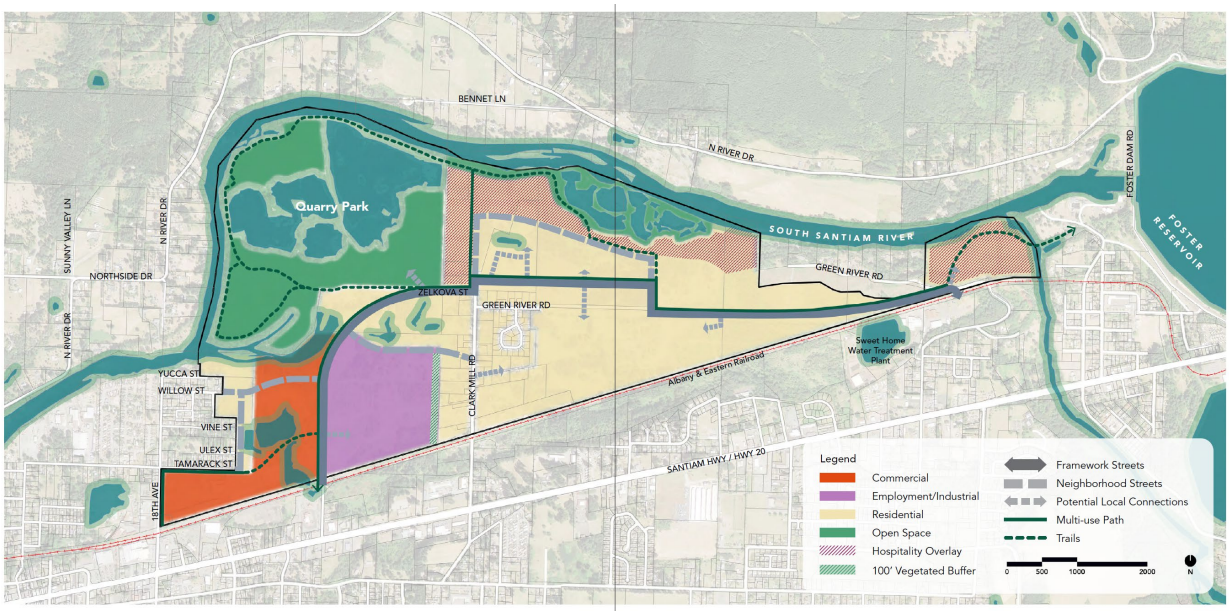


Figure 1: NSHA Comprehensive Plan Designations

Subsequent drafts will include detailed Comprehensive Plan map.



Changes to City of Sweet Home Comprehensive Plan Document

Note the recommendation below – to adopt the Area Plan as an ancillary document to the Comprehensive Plan. This is a common approach in other jurisdictions.

The North Sweet Home Area Plan shall be adopted as an ancillary document to the Comprehensive Plan, providing policy guidance for future land use activity, infrastructure provision, and transportation facilities in the area. The following policies shall apply to the North Sweet Home Area:

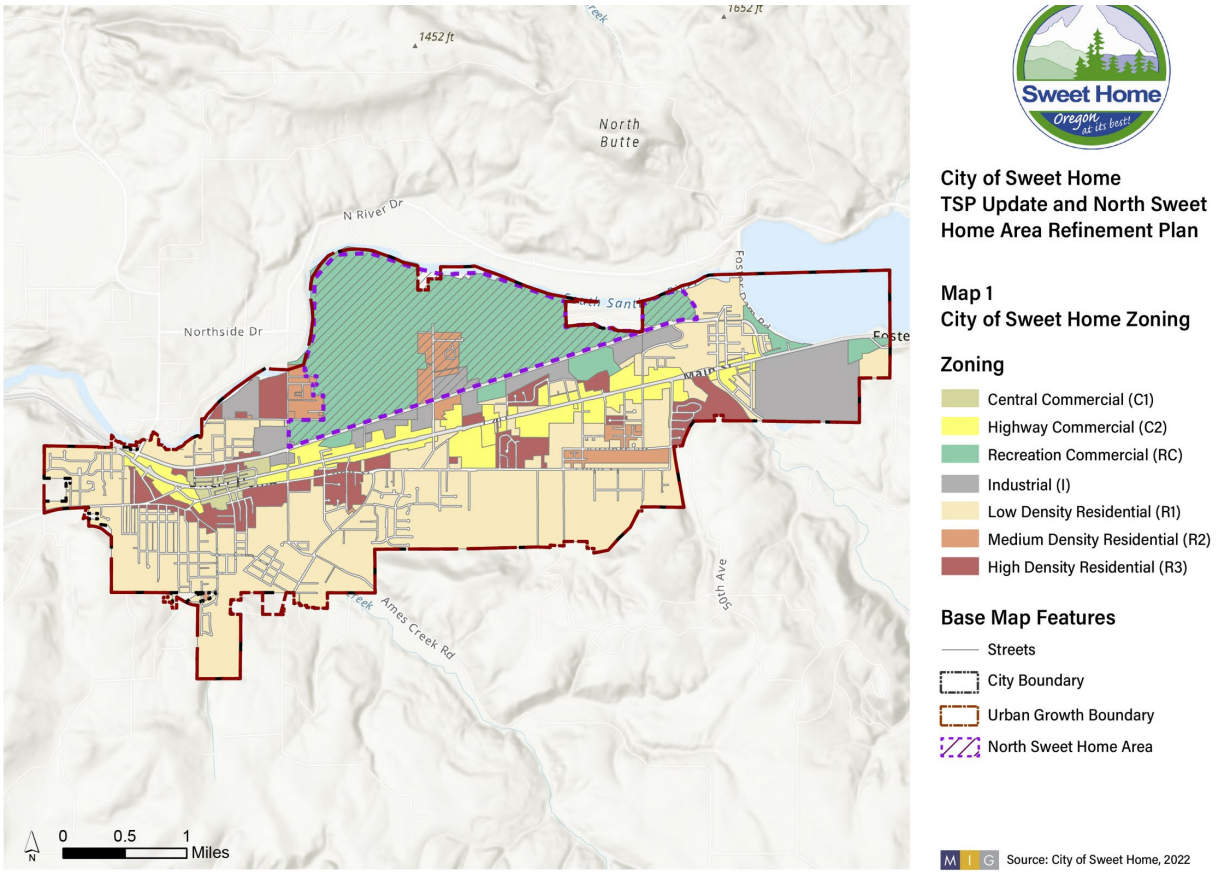
Policies from the NSHA Plan Document

1. Housing. The North Sweet Home Area will provide a variety of housing types to help accommodate the long-term growth of the City.
2. Economic Development. The North Sweet Home Area will provide opportunities for industrial, commercial, and service jobs. New employment areas will be focused in the vicinity of 24th Avenue and within the Hospitality Overlay zone.
3. Connectivity. The North Sweet Home Area will be served by a connected and multi-modal transportation system built consistent with the standards in the City's Transportation System Plan.
4. Parks and Trails. The existing Quarry Park, riverfront amenities, and new parks and open spaces will be connected by a system of trails and pathways, including a mixed use path along the area's framework streets.
5. Natural Resources. The North Sweet Home Area contains significant river frontage, riparian areas, wetland features, scenic views, and other natural resources that will be protected and enhanced as the area develops.

Part 2. Development Code Amendments

Zoning Map

Current City of Sweet Home zoning designations are shown in the following figure. The area is predominantly within the "Recreation Commercial" zone and also subject to Planned Development and Natural Resources overlay zones.



The following zoning map amendments are recommended to implement the Preferred Land Use Plan:

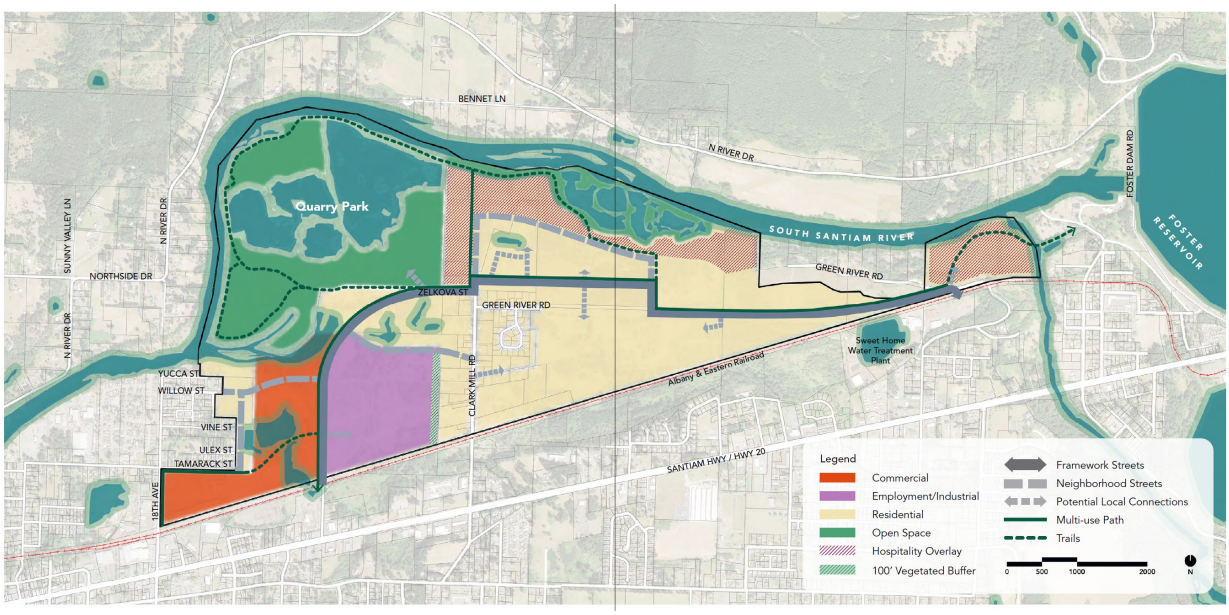
1. Amend base zoning designations in the NSHA consistent with Figure 2 below.
    a. The City's R-2 zone is intended to" provide areas suitable and desirable for single-family homes, duplexes, condominiums, town houses and appropriate community facilities." Multifamily uses are allowed as a conditional use. The significant infrastructure investments and natural resources needed to develop in the North Sweet Home area would likely require densities and development types consistent with the R-2 zone.
    b. The Mixed Use Employment designation is applied to commercial areas. This zone allows a broad range of commercial and industrial uses, as well as residential uses. Developments greater than one acre in size must be developed through the City's Planned Development process.

c. The City has one industrial zone, which is applied to Industrial areas on the land use map.

2. Amend overlay zoning designations as follows:
   a. Remove “Planned Development” overlay.
   b. Add new “Hospitality Overlay” zone (see next section for text changes).

Figure 2: NSHA Zoning Designations

Subsequent drafts will include detailed zoning map.



Zoning Text Amendments

The following zoning code text changes are recommended. They impact code areas related to the establishment of zoning districts and creation of a new Hospitality Overlay zone.

17.06.020 CLASSIFICATION OF ZONES

For the purposes of this title, the following zones are established:

Zone	**Abbreviation**
Residential Low-Density	R-1
Residential Medium-Density	R-2
Residential High-Density	R-3
Mixed Use	MU
Commercial Central	C-1
Commercial Highway	C-2
Industrial	I

Public Facility	PF
Recreation Commercial	RC
Mixed Use Employment	MUE
Natural Resources Overlay	NRO
Flood Hazard Overlay	FHO
Historic Property Overlay	HPO
Hospitality Overlay	HO

17.35 HOSPITALITY OVERLAY ZONE

17.35.10 PURPOSE

1. The purpose of the Hospitality Overlay Zone is to provide and maintain areas which take advantage of the natural features in the North Sweet Home Area in order to create a vibrant and cohesive mix of uses centered around hospitality, recreation, and natural areas.

17.35.020 ALLOWED USES

Use list from existing RC zone

In the Hospitality Overlay zone, the following uses and their accessory uses are permitted outright in addition to the uses permitted by the base zone:

A. Motel, hotel or resort.

B. Recreational vehicle park.

C. Recreational vehicle park with owner time share.

D. Museum or art gallery.

E. Community center, meeting facility, convention center or similar use.

F. Residential uses related to or in conjunction with a recreational development.

G. Eating and drinking establishment, not including adult-oriented uses.

H. Recreational retail, such as ski, hiking, climbing or similar equipment.

I. Arts and crafts workshops and retail sales.

J. Amusement or recreation services.

K. Recreational teaching facilities.

L. Single-family and duplex dwellings, including those duplexes created through conversion of an existing detached single-family dwelling, on legal lots of record at the time of enactment of this Chapter.

M. Mobile Food Unit or Mobile Food Pod, Subject to SHMC Chapter 17.75.

17.35.030 SPECIAL USES

Special uses list from existing RC zone

The following uses, when developed under the applicable development standards of this Development Code and special development requirements, are permitted in the Hospitality Overlay Zone:

A. Property line adjustments, subject to provisions in Chapter 17.92.
B. Partitions, subject to provisions in Chapter 17.58.
C. Subdivisions subject to provisions in Chapter 17.58.
D. Planned development, subject to the provisions of Chapter 17.60.
E. Home occupations within a pre-existing residence, subject to the provisions of Chapter 17.68.
F. Residential accessory dwellings, subject to provisions of Chapter 17.72.
G. Bed and breakfast within a pre-existing residence, subject to the provisions of Chapter 17.76.
H. Temporary uses, subject to provisions in Chapter 17.74.
I. Lot Division for Middle Housing, subject to provisions in Chapter 17.72.

17.35.030 REVIEW PROCESS

References other development code section; update from City's RC zone.

In the Hospitality Overlay Zone, submittal of a plan for development on a specific piece of property shall comply with the requirements of SHDC 17.102.050.