



Land Use and Transportation Facility Options and Evaluation McMinnville Three Mile Lane Area Plan

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INTRODUCTION

Purpose

The goal of the McMinnville Three Mile Lane Area Plan planning project is to create a long-range, 20-year+ plan guiding future growth in the eastern-most area of the City. This memorandum introduces and evaluates three land use concepts for the McMinnville Three Mile Lane area. These land use concepts are the result of several rounds of public outreach, meetings of the project's advisory committees, and discussions between City staff and the consultant team. They are informed by a series of technical memoranda that are available on the project website, www.threemilelane.com. The concepts provide three distinct approaches for the buildout of new land uses, local street networks, and amenities.

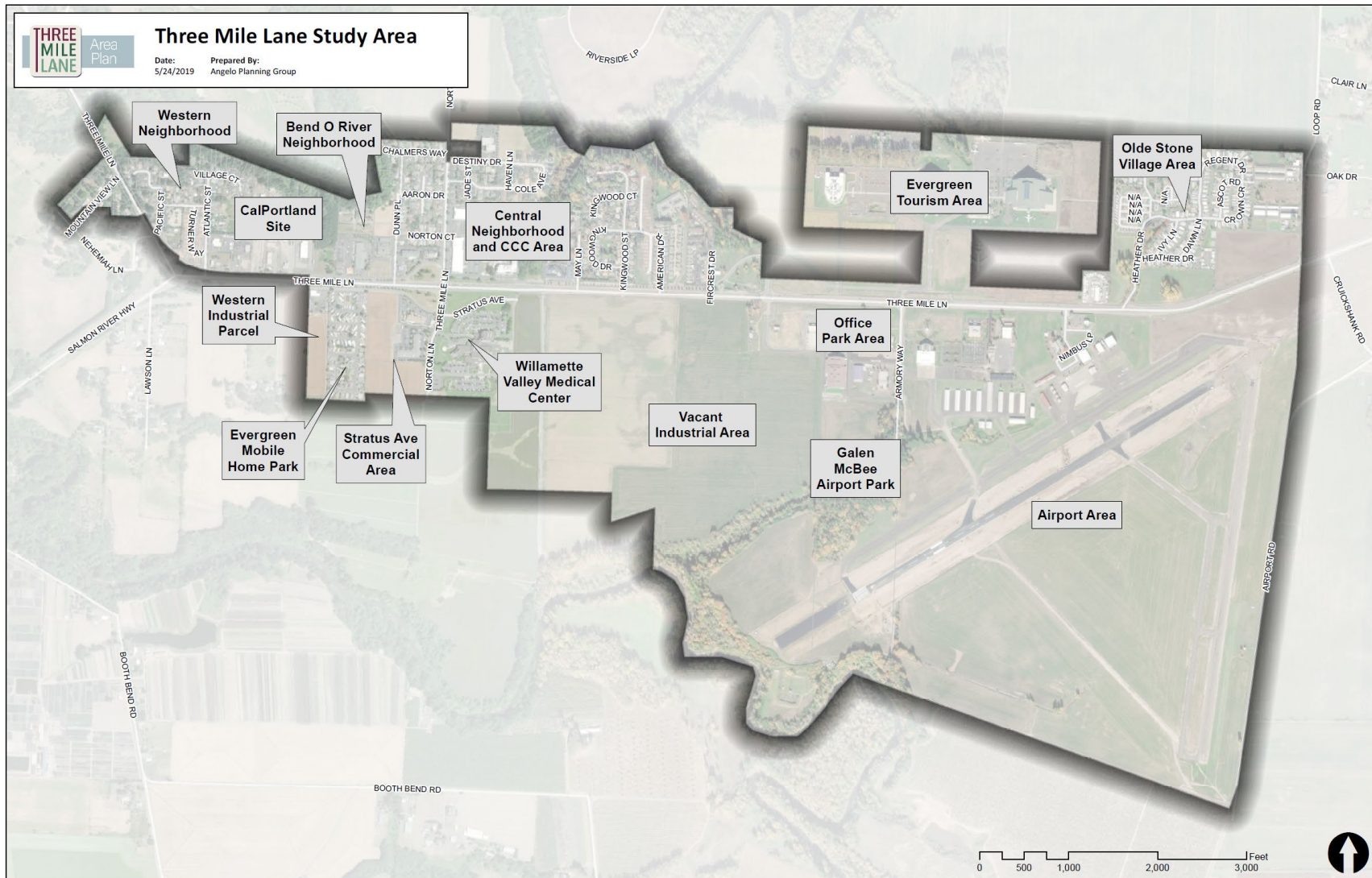
The purpose of this evaluation is to identify benefits and drawbacks of these alternatives, rather than to simply pick the highest-scoring concept. After review from the project advisory committees and broader public, it is likely that the best-performing attributes from all three concepts will make their way into a hybrid, preferred land use option.

Exploring alternatives for the future design of Three Mile Lane (OR 18) is also part of this evaluation effort. The Facility Design Options section of this report describes two design options for OR 18. Both facility design options are expected to service and support any of the three land use concepts, including connectivity with the local street networks contained within each concept.

Project Area and Existing Conditions

The Three Mile Lane area is shown in Figure 1. The study area includes a wide range of land uses. South of Three Mile Lane, the study area is dominated by the McMinnville Municipal Airport, the Willamette Valley Medical Center, and vacant industrially-zoned land. A few commercial and manufactured home uses are also identified to the west. North of Three Mile Lane, the uses are more mixed, with fewer large parcels except for the Evergreen Aviation & Space Museum complex. The north side includes single-family and multi-family uses, mobile homes, and commercial, industrial, and vacant uses.

Figure 1. Three Mile Lane Study Area



The City of McMinnville owns a significant portion of the study area—mostly around the airport, but also the two vacant properties at the east end of Three Mile Lane, as well as the public parks. The two large vacant sites to the west of the airport are privately owned. Chemeketa Community College owns the commercial center in which its campus sits. The Falls at McMinnville LLC owns the Wings & Waves Waterpark and The Falls Event Center sites, but the Evergreen Aviation & Space Museum site is owned by Affordable Mid Coast Housing LLC. The museum itself is a nonprofit, and leases out the buildings. Other major landowners include Olde Stone Village, Baker Rock Resources West LLC (CalPortland site), and Habitat for Humanity, which owns the Aspire Subdivision in the Western Neighborhood Subarea.

Existing conditions are discussed in greater detail in the Existing Conditions Booklet and Technical Memorandum #1.

Project Goals and Evaluation Criteria

An aspirational vision statement, community goals and objectives, and potential criteria to evaluate land use and transportation options for the Three Mile Lane area were developed early in the project.¹ They were created in order to articulate the Three Mile Lane Area Plan’s desired outcomes and help in the evaluation of options for the area. These materials were discussed in project advisory committee meetings and the subject of an online survey and a public open house.²

A revised set of evaluation criteria tied to the goals and objectives was used to evaluate the options in this report, as detailed in Appendix A. The evaluation criteria used to test the three land use concepts are derived from the project’s goals and objectives; the project goals are described below.

GOAL 1: Support and enhance the district's economic vitality and marketability

This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism. Alternatives will be evaluated qualitatively for how well they address the area's development/redevelopment potential.

¹ See Memorandum #4 Evaluation Criteria.

² See Memorandum #5 for an overview of project public involvement to date and feedback received on content in Memorandum #4.

GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.

The study area contains several existing residential neighborhoods, including assisted-living and manufactured home residences, as well as major employers and tourism destinations. This plan aims to provide a mix of land uses that support one another to create a unique part of the city. McMinnville has recently adopted a set of “Great Neighborhood Principles” that have been used to evaluate land use concepts for the Three Mile Lane area.

GOAL 3: Enhance multi-modal connections throughout the district

This plan aims to create a complete, multimodal transportation network that serves the north and south sides of Three Mile Lane within the district, and that connects the business community, the hospital, residential neighborhoods and tourism amenities to each other and to the city center. Alternatives will be evaluated through criteria measuring transportation safety and performance for all modes of travel: pedestrian, bicycle, transit, freight, and personal vehicles.

McMinnville’s Great Neighborhood Principles

- 1. Natural Feature Preservation.** Great neighborhoods are sensitive to the natural conditions and features of the land.
- 2. Scenic Views.** Great neighborhoods preserve scenic views in areas that everyone can access.
- 3. Parks and Open Spaces.** Great Neighborhoods have open and recreational spaces to walk, play, gather, and commune as a neighborhood.
- 4. Pedestrian Friendly.** Great Neighborhoods are pedestrian people for people of all ages and abilities.
- 5. Bike Friendly.** Great Neighborhoods are bike friendly for people of all ages and abilities.
- 6. Connected Streets.** Great Neighborhoods have interconnected streets that provide safe travel route options, increased connectivity between places and destinations, and easy pedestrian and bike use.
- 7. Accessibility.** Great Neighborhoods are designed to be accessible and allow for ease of use for people of all ages and abilities.
- 8. Human Scale Design.** Great neighborhoods have buildings and spaces that are designed to be comfortable at a human scale and that foster human interaction with the built environment.
- 9. Mix of Activities.** Great Neighborhoods provide easy and convenient access to many of the destinations, activities, and local services that residents use on a daily basis.
- 10. Urban-Rural Interface.** Great Neighborhoods complement adjacent rural areas and transition between urban and rural uses.
- 11. Housing for Diverse Incomes and Generations.** Great Neighborhoods provide housing opportunities for people and families with a wide range of incomes, and for people and families in all stages of life.
- 12. Housing Variety.** Great Neighborhoods have a variety of building forms and architectural variety to avoid monoculture design.
- 13. Unique and Integrated Design Elements.** Great Neighborhoods have unique features, designs, and focal points to create a neighborhood character and identity.

GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville

The study area is a primary gateway to the City of McMinnville. Alternatives will be evaluated qualitatively for how well they provide an identity for the district, reflect McMinnville’s intrinsic character, and highlight the landscape features of the district. Because the land use concepts are fairly high-level, urban design considerations explore aesthetic elements that could be applied in the area. Later stages of this project will also present options for an actual gateway feature or monument to further highlight the entry to the City.

Alternatives Creation and Evaluation Process

The creation of the land use concepts and the criteria by which they are evaluated are the result of a public process that has included:

- Participation of the Three Mile Lane Area Plan’s Advisory Committees, which consist of technical and agency members as well as landowners, members of the public, and others.
- A series of stakeholder interviews and hands-on workshops with property owners to discuss options for large vacant parcels within the study area.
- Creation of project goals and objectives, and an online survey to evaluate them.
- Market analysis and case studies prepared by the project’s consultant team, focusing on large vacant parcels in the study area.
- An open house held on April 10, 2019 at Chemeketa Community College to provide information to the public on existing conditions and gather feedback regarding the project’s goals and objectives.

Additional detail about this process is provided below.

Market Analysis

Early in the project, a market analysis was conducted to assess regional conditions for residential, commercial, office, and industrial development and to identify specific development opportunities within the Three Mile Lane corridor by leveraging the land assets to their highest and best use. The market analysis identified significant household and employment growth in the region over the next 20 years, which will drive demand for new housing, commercial, and industrial construction. The area is positioned to capture a significant share of this regional demand given the presence of large greenfield sites within the area—a situation which is relatively rare in the broader region.

The market analysis highlighted the most feasible development typologies based on rents and development trends. Generally, these typologies share similar characteristics, such as surface parking and a low-rise scale. Higher density development—such as mid-rise buildings—may face feasibility challenges and are not expected to be developed in the Three Mile Lane area during the planning horizon.

- **Residential demand** is strong for both single-family and multifamily housing, with rising home values, household incomes, sales volumes, absorption, and construction activity throughout McMinnville. The quantity of what would be built in the study area depends largely on the City’s vision for the area, applicable zoning, infrastructure capacity (and the ability for new development to pay for new infrastructure), and buildable land. Townhomes,

apartments up to four stories, single-family homes, and multiplexes are all residential development types that would likely be feasible in the study area.

- **Retail demand** is also strong, particularly for general merchandise—which is typically large-format retail—and neighborhood-serving retailers that will support existing and future households and tourism. The changing market for retail development due to e-commerce may present both challenges and opportunities for novel development in the area.
- **Lodging demand** exists due to the burgeoning tourism industry, potential airport activity, and existing needs for meeting space, although the limited office market means the bulk of lodging demand will fall during the summer months when tourism activity is highest.
- Market conditions reflect strong **industrial demand** due to the growth of agriculture, food and beverage production, and manufacturing, with potential pent-up demand because of the lack of appropriate—particularly large—industrial sites. The Three Mile Lane area is poised to accommodate large industrial users, but heavy industrial may negatively impact prospects for other land uses such as lodging and multifamily. However, the area could also capture a proportion of regional demand by focusing on “craft” or light industrial users, which may or may not include retail components.
- The **office market** is potentially strong but limited. Opportunities may arise because of McMinnville’s high quality of life and the corridor’s proximity to the airport and institutional users such as healthcare and education.

Case Study

In order to refine the feasibility of the market study findings on a real-world site, a redevelopment analysis for three largely vacant properties in the Three Mile Lane study area totaling approximately 180 acres was conducted. Referred to as a “case study,” this analysis involved an evaluation of site conditions for these properties and the surrounding area, an assessment of opportunities and constraints, the development of three building programs based on the market analysis, conceptual graphics of each program alternative, and an economic analysis that assesses the impact of each alternative on jobs, assessed property value, and other key indicators.³

Each case study scenario represents a different exploration of how the market-driven land uses could be arrayed across the sites in ways that support the community’s values and the goals, objectives, and criteria developed through the planning process. A property owner workshop was held to review findings and background information collected to date—including the market analysis—and included a broader discussion of visions, criteria, and principles.

The three case study scenarios illustrated distinct opportunities for large vacant parcels in the south side of the Three Mile Lane area to develop with new uses and new public infrastructure. They show that a wide range of opportunities is possible, allowing property owners and developers to react to changing market conditions. The concepts would significantly add jobs and tax base to McMinnville, ranging from 1,100 to 5,800 jobs and \$128 to \$386 million in added taxable value. Given the strong growth occurring throughout the region and McMinnville’s constrained land

³ The Case Study Report is available on the project website, www.threemilelane.com.

supply, this is a unique opportunity for McMinnville to capture economic growth while simultaneously providing needed community services, housing, and jobs.

Based on this information and input, and building from the case study land use alternatives, the consultant team created three land use concepts for the wider Three Mile Lane study area. The Concepts described in this report are intended to explore and evaluate different use mixes, urban design options, and transportation improvements across the entire study area.

LAND USE CONCEPTS

Three land use concepts were developed to illustrate how the goals and objectives for the Three Mile Lane area could be achieved. They have their origins in the development scenarios created for the case study focused on large, vacant parcels south of OR 18. The major elements of the case study scenarios logically have implications for the viability of land uses and transportation networks throughout the study area, and the land use concepts for the wider area were crafted to compliment the outcomes envisioned through the case study process.

Elements common to all three of the land use concepts, followed by a description of significant differences, are described in this section.

Common Elements

There are notable elements common to all three concepts. These include several transportation improvements and other items as discussed below.

- **Urban Growth Boundary (UGB).** No change is assumed to the City of McMinnville UGB, which surrounds the study area. For the purposes of this planning study, the agricultural uses and rural residential uses outside of the UGB are assumed to remain, while land within the UGB is assumed to eventually develop with urban uses and at urban densities.
- **Developable Land.** There is roughly 400 acres of developable land in each option⁴. Most of the existing employment land uses are expected to remain and the fundamental structure of built-out neighborhoods north of Three Mile Lane are not expected to change within the planning horizon. Constant in all three concepts is the assumption that there is some opportunity for higher density residential south of the highway, in the southwest corner of the study area.
- **Three Mile Lane (OR 18).** This evaluation looks at the long-term transportation needs of people traveling within and through the study area. The second half of this report contains a specific evaluation of two facility design options for Three Mile Lane, each of which would support the three land use concepts.
- **Local Transportation Network.** Needed transportation connections on the City's arterial and collector network are common between the alternatives, including:
 - Connecting Cumulus Avenue to SW Norton Lane through or adjacent to the Chemeketa Community College campus.

⁴ This figure does not include potential developable area near the McMinnville Municipal Airport.

- Collector and conceptual local street connections through new developments south of Three Mile Lane.
- An improved Three Mile Lane bridge with better bicycle and pedestrian facilities.
- New and improved bicycle and pedestrian connections throughout the study area.
- **Urban Design.** As part of this process, the City is considering updating the Three Mile Lane overlay to include design requirements that ensure new development has a cohesive, context-sensitive and sustainable aesthetic. These requirements may address tree planting/landscape design, pedestrian- and bike-friendly site design, views, protection of natural resources, and off-street parking, including others. This memorandum describes some of the elements expected to be incorporated into the Three Mile Lane Area Plan, but they are not distinguishing factors between the concepts presented.
- **Airport.** Airport-related uses are expected to be permitted according to existing City code requirements. The area adjacent to the airport is expected to continue to develop as an airport-oriented commercial and industrial center in all options, reflecting the economic value and potential of this infrastructure. The vacant property on the north side of Three Mile Lane at the eastern edge of the study area is within the Airport Approach zone and will remain undeveloped.
- **Natural Areas.** The northern and southern edges of the study area feature the riparian corridor and floodplain for the South Yamhill River, which provides a natural transition to current and future development, adding a sense of place and potential recreational access. In all concepts these natural features are intended to be preserved and enhanced for the enjoyment and benefit of all.
- **Gateways.** Each alternative proposes different locations for the consistent idea of new gateway elements or treatments, whose design will be determined at a later date. Conceptually, these elements could include large-scale welcome signage, vertical art pieces or sculptural elements or significant landscape designs or patterns.
- **Vehicle Trip Generation.** Each of the alternatives represent a change in land use that increases the number of future trips using and crossing OR 18. A Trip Generation Evaluation was performed to identify the level and location of new trip generators within the study area, comparing and contrasting the three land use concepts. The results of the assessment are summarized for each land use concept and detailed in Appendix A.
- **Facility Design Options.** Two options for the design of Three Mile Lane are discussed later in this memorandum, which have implications for multimodal connectivity through and across the highway. These options are separate from the three land use concepts.

Land Use Concept 1 – Industrial Campus

This concept is most similar to existing zoning south of Three Mile Lane. It allows for a large industrial user, potentially engaged in manufacturing or warehousing, in close proximity to retail services, Three Mile Lane, and other supportive or ancillary uses to the primary industrial employment use. Large flat ‘greenfield’ parcels may be very attractive to industrial users seeking space for large buildings and associated parking and loading.

Due to the emphasis on industrial development, Concept 1 is likely to result in the largest overall building square footage of the options. However, the overall economic impact of the plan area is contingent on the types of industrial uses that ultimately locate in the area. Low-intensity uses such as warehousing would generate fewer jobs, lower tax revenue, and less opportunity for high-quality amenities than high-intensity uses such as manufacturing and flex space.

Gateways. This concept includes specific gateway features for westbound traffic on Three Mile Lane associated with a future interchange at Cumulus Avenue, and at the western edge of the study area for eastbound traffic on 18.

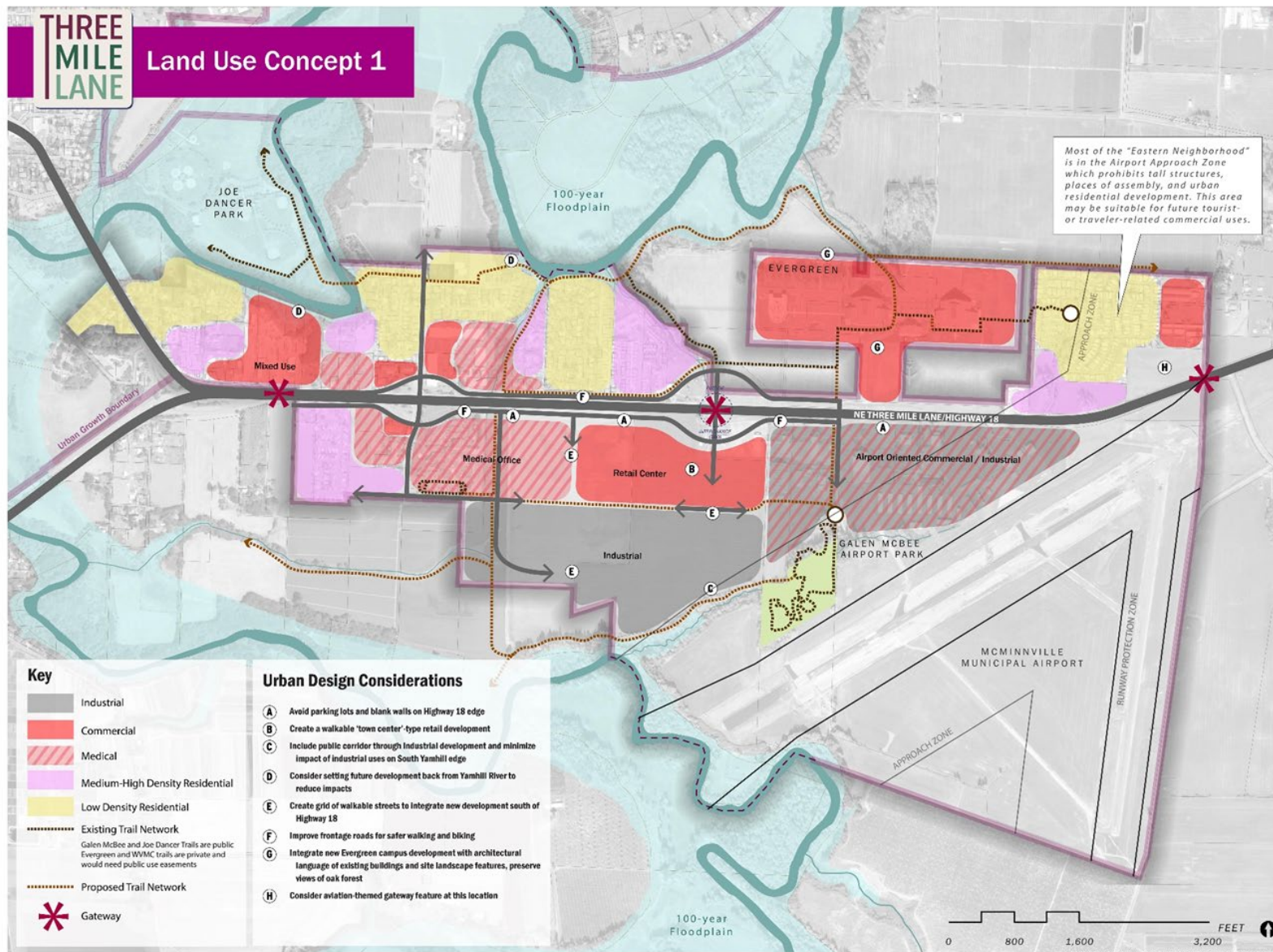
Parks and Trails. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. New connections to McBee Airport Park will be provided primarily via roadways and sidewalks as properties south of Three Mile Lane develop. North of OR 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond.

Evergreen Tourism Site. No changes to the site from existing conditions are assumed for Concept 1, other than the establishment of a more formalized trail loop network.

Willamette Valley Medical Center Area. This concept envisions a cluster of new medical office space near Norton Lane on both sides of Three Mile Lane, building off the central attractor of the Medical Center. This could include space for expansion of the Medical Center.

Cal-Portland Site. In this concept, the Cal Portland site is changed from its current industrial designation to a mixed-use designation, allowing for a mix of commercial and residential development. On the north side of this parcel, protection of the South Yamhill river edge, potentially with public access, is a key urban design goal.

Figure 2. Land Use Concept 1



Retail “Town Center.” This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process.⁵ Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville’s downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development.

Eastern Neighborhood. In this concept, a mix of new housing in the R-4 designation and commercial development is added in the eastern portion of the study area, including a Crossroads Commercial development at the corner of SE Loop Road and OR 18, designed to recognize its position at the eastern gateway to McMinnville, with significant landscape, gateway signage and context-appropriate buildings.⁶

CCC Campus. Potential for infill commercial uses to replace existing inward-facing buildings, in new buildings or renovated retail structures that have more of an active street presence on the visible Norton Lane frontage.

Vehicle Trip Generation. The greatest number of new vehicle trips in Option 1 are generated by planned commercial and multi-story medical office developments on the south side of OR 18, between the Willamette Valley Medical Center and Cumulus Avenue. New commercial lands at the eastern end of the study area and along Cumulus Avenue (Baker Rock site) will also generate significant vehicle trips. Industrial land at the southern edge of the study area is not expected to generate significant vehicle traffic.

⁵ Early design considerations have been provided. Design standards should be applied to this development to ensure that the architectural language is consistent with and respectful of regional agricultural and historic forms and scale. The entire retail center should include shade trees and lush landscape, which is consistent with other high-quality retail centers. The design of the edges of the center should also be carefully considered, so that travelers on Three Mile Lane are not viewing the loading docks and blank walls of an internally-focused center.

⁶ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

Land Use Concept 2 – Corporate Campus

The most significant feature of this concept is a sizable commercially-zoned “corporate campus” and a mix of office/industrial uses south of Three Mile Lane, which would add a significant amount of new office space. The balance between housing, commercial, and office) development in Land Use Concept 2 makes this scenario less dependent on one particular land use type. In this scenario, much of the job and development growth is driven by the corporate campus, so finding a good user for this space is key.

Gateways. This concept includes three gateway features; at the eastern edge of the Evergreen Campus, , and at the future interchanges of SW Cumulus and SW Norton Lane.

Evergreen Tourism Site. The Evergreen Tourism Site is envisioned to include a new hotel, retail, and event space in this concept, as infill development on undeveloped land within the current boundaries of the campus.

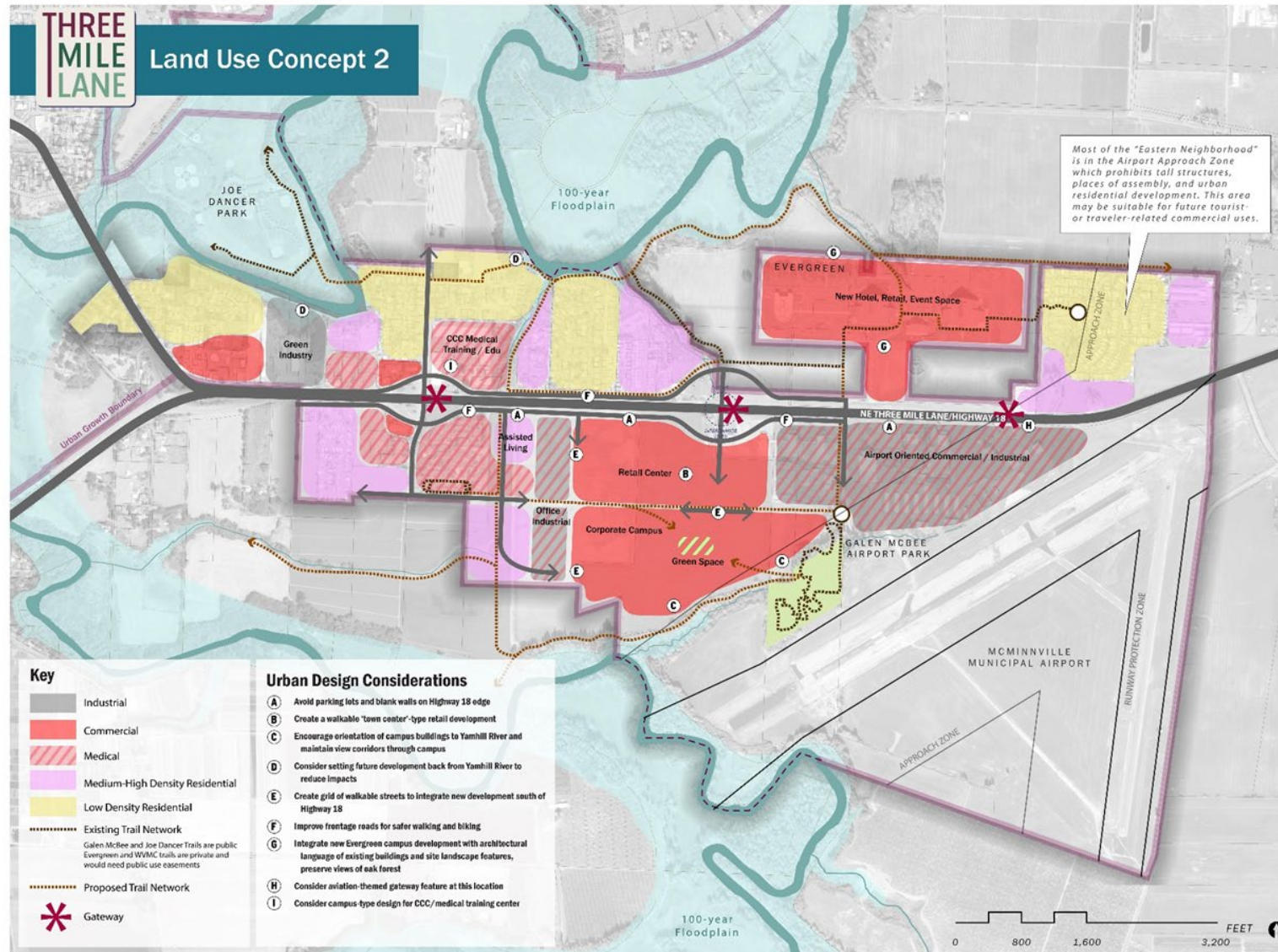
Parks and Trails. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. New connections to McBee Airport Park will be provided primarily via roadways and sidewalks as properties south of Three Mile Lane develop. North of 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond. This concept includes a new park as a central gathering space for the corporate campus area, connected to Galen McBee Airport Park via a trail system.

Willamette Valley Medical Center Area. This concept includes new medical office space near Norton Lane on both sides of Three Mile Lane. This concept also includes additional R-4 land for assisted living facilities near the Willamette Valley Medical Center—these two uses are complementary and can benefit from co-location. Chemeketa Community College’s focus on health and medical-related education is strengthened with complementary uses, including potential out-patient clinics that include training for students.

Retail “Town Center.” This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR 18 with additional smaller retail uses. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process.⁷ Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville’s downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development.

⁷ Design considerations are similar to those of Land Use Concept 1.

Figure 3. Land Use Concept 2



Corporate Campus. A roughly 90-acre corporate campus is proposed in the southern portion of the study area, which could take advantage of highway access and the nearby municipal airport. The scale of this parcel could make it attractive to a growing tech company that seeks to attract employees to a more affordable community with great natural amenities as well as access to an airport with corporate jet capacity. This campus would be a walkable hub of activity for many employees and could drive demand for additional business services in the surrounding retail and industrial areas. As part of this campus, a new public park is proposed with trail connections to the Galen McBee Airport Park and the campus could be oriented south to the river, to mountain views and the scenic backdrop of agricultural lands beyond. A ‘layer’ of office/industrial use to the west of this corporate campus could be a complementary use for smaller office development that seeks to be close to the larger company campus.

Cal-Portland Site. In this concept, the Cal Portland site remains in an industrial zoning designation but transitions to a greener industry that is a better neighbor to residential uses with a green edge to the South Yamhill River to the north.

Eastern Neighborhood. In this concept, a mix of new housing in the R-4 designation is added in the eastern portion of the study area.⁸

Vehicle Trip Generation. The total new vehicle trip generation is slightly larger in Option 2 than it is in Option 1, though more of the traffic is generated by commercial lands, located near (north and south of OR 18) and focused on Cumulus Avenue. Residential land at the eastern end of the study area will also generate new vehicle trips.

⁸ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

Land Use Concept 3 – South Yamhill Neighborhood

The most significant feature of Concept 3 is the inclusion of residential land in the southern portion of the study area. Along with a greater number of housing units comes a greater need for amenities such as parks, trails, and services to serve the population. Concept 3 provides the most diverse mix of uses in all parts of the study area. The City's Housing Needs Analysis (HNA) emphasized housing affordability as a challenge in the city. Providing a range of housing types and densities, as envisioned in this option's South Yamhill Neighborhood, is one way of addressing this need.

Gateways. Four potential gateway locations are included in this concept; at the eastern entrance to the study area and city, at the SW Cumulus and SW Norton overpasses and at the western end of the study area, where Three Mile Lane splits north from OR 18.

Parks and Trails. This concept includes an expanded Airport Park to serve residences throughout the study area, with new trail connections west to new residential development. Sports fields and active play space are envisioned. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. North of 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond.

New connections to Galen McBee Airport Park will be provided via roadways and sidewalks as properties south of Three Mile Lane develop, as well as a "greenway" trail through the south of the Three Mile Lane area.

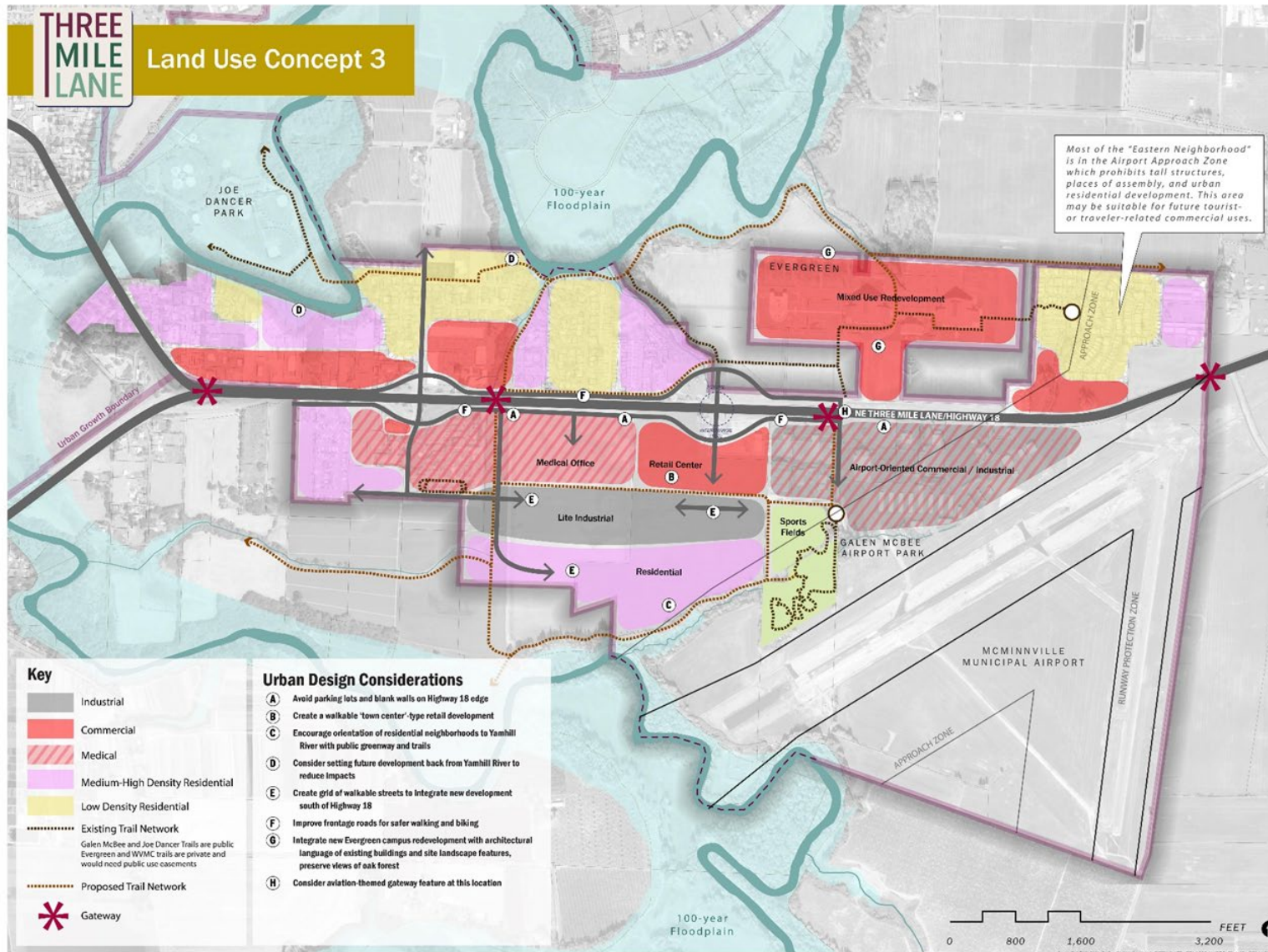
Willamette Valley Medical Center Area. This concept roughly doubles the area for medical office space and potentially new hospital facilities near the Willamette Valley Medical Center south of Three Mile Lane.

Evergreen Tourism Site. A mixed-use redevelopment of the Evergreen Tourism Site is envisioned in this scenario, including a mix of residential uses (likely multifamily or townhomes), office uses, and retail. This differs from Concept 2 in the sense that redevelopment is envisioned to be uses that are less determined by the actual Evergreen destination.

Cal-Portland Site. In this concept the Cal Portland site is redeveloped with commercial frontage on Cumulus Ave and residential uses to the north along the Yamhill River, matching the overall pattern of the rest of the neighborhood north of Three Mile Lane.

Retail "Town Center." This concept includes a somewhat smaller (~28 acre) retail center south of Three Mile Lane at Cumulus Avenue, but retail center design considerations similar to Concepts 1 and 2 should be applied where possible.

Figure 4. Land Use Concept 3



Light Industrial Area. This concept includes a light industrial area south of Three Mile Lane that could include warehousing, food and beverage-related industry, light manufacturing, or other uses. It could take advantage of nearby medical offices, the airport, and highway access. A grid of walkable streets through this area is important for overall connectivity south of the highway. The southern edge of this area will abut a new residential neighborhood (see below) so the southern edge should include buffer landscape and uses that minimize noise, traffic and night-time activity. As an employment base, there should also be walking and biking links to the residential uses.

New South Yamhill Neighborhood. This concept includes a 55-acre new neighborhood at the southern end of the study area, capitalizing on access to the river, nearby employment, and amenities. With the potential for several hundred homes, it would likely include a mix of attached and detached housing types such as single-family homes, townhomes, and apartments at a range of price points. Parts of the neighborhood could include elements that honor the agricultural heritage of McMinnville, with ‘agrihood’ features including community gardens or barns serving as central community space. The new neighborhood could include a grid of low-speed, walkable and bikeable streets, with homes served by rear alleyways to foster a more cohesive, walkable streetscape. While the neighborhood will be adjacent to an expanded McBee Airport Park, there could be additional smaller pocket parks dispersed through the neighborhood, including some that serve as overlooks or trailheads adjacent to the South Yamhill River.

Eastern Neighborhood. In this concept, the southern edge of the eastern neighborhood is developed with commercial uses.⁹

Vehicle Trip Generation. Concept 3 focuses more on retail-related lands within the Evergreen Aviation site, and eastern end of the study area (north of OR 18) and along Cumulus Avenue west of Norton Lane. New trip generation by medical office use near Willamette Valley Medical Center is the largest under Concept 3. Residential lands at the southern edge of the study near the airport will also generate a sizeable number of new vehicle trips. Concept 3 presents a higher total new vehicle trip generation than Concepts 1 or 2.




⁹ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

EVALUATION OF LAND USE CONCEPTS




The three land use concepts described in this memorandum represent high-level concepts for potential future land use, transportation, and design elements in the Three Mile Lane area. The goals for the area, included earlier in this memorandum, and specific objectives associated with each, are met in each of the land use concepts to a greater or lesser degree. To help assess how alternatives meets community goals and objectives, evaluation criteria were suggested earlier in the planning process.¹⁰ These are included in Appendix A, as well as a preliminary assessment of how the alternatives address each criterion.




The Concept Evaluation table included in this section mines from this larger comparison exercise and focuses on criteria that can help evaluate the merits of each of the land use concepts as compared to each other. The table includes specific objectives related to individual project goals and indicates how the land use concept performs, relative to the other concepts. The table is not exhaustive but is intended to include criteria that present notable differences in the concepts in order to help the project’s advisory committees and broader community evaluate the three options.




Table 1: Concept Evaluation

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
<i>GOAL 1: Support and enhance the district's economic vitality and marketability</i>			
Amount and Type of Employment Land	A greater amount of industrial land	Large amount of commercial land south of Three Mile Lane	A smaller amount of commercial land on the south side of Three Mile Lane.
Opportunities for Additional Goods and Services in the Area	Mixed use area in NW, new retail center may provide goods and services.	Retail center, Evergreen Site provide goods and services	Evergreen site, commercial in NW, and smaller retail center provide goods and services
Relationship with and Impacts To the McMinnville Municipal Airport	Potential large industrial user of airport	Potential commercial campus user of airport	No single dominating user of airport – but an increased use compared to today due to greater activity

¹⁰ See Memorandum 4.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
Compatibility of uses adjacent to airport	Moderate amount of residential use near airport	Significant amount of medium-density residential in NE portion of study area (near end of runway)	Significant amount of new residential in southern portion of the study area, potential conflict.
Support for existing and new tourism opportunities	Preserves aviation complex. No significant increase of tourism capacity elsewhere	Significant commercial opportunities throughout district, and tourism-focused development of Evergreen site	Smallest amount of land for commercial of the three, but preserves aviation complex for continued tourism growth
<i>GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.</i>			
McMinnville Great Neighborhood Principles	New residential uses are limited primarily to infill development in this option.	This option includes smaller amounts of new residential uses focusing on assisted living. These pockets may be less able to utilize the great neighborhood principles purely due to their size and specialized purpose.	This option includes a large new residential neighborhood, which should be designed with McMinnville’s Great Neighborhood Principles in mind.
Residential uses, mix, and location	~1,400 new units, primarily in mixed use and multi-level mid-rise areas	~1,900 new units, located primarily in the far eastern and southern portions of the study area.	~2,500 new units, located primarily in the southern portions of the study area.
Transit-supportive land uses	Major new job and retail centers and high-density housing can help support transit.	Major new retail, corporate campus, and tourism areas, as well as high-density housing, can help support transit.	New residential neighborhood, Evergreen redevelopment, and medical office areas can help support transit.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
GOAL 3: Enhance multi-modal connections throughout the district			
Impacts to OR 18 as a key intercity/freight route.	<i>Specific impacts to OR 18 will be evaluated as part of more detailed analysis for the preferred land use alternative.</i>		
Vehicular connectivity through land use types (street density)	<i>Each of the alternatives can accommodate vehicular connectivity on the local street system through the study area. See DESCRIPTION OF LAND USE OPTIONS in this memorandum.</i>		
Bicycle/pedestrian connections to key locations outside of the study area	<i>Each of the alternatives accommodate enhanced bicycle and pedestrian through the study area. See DESCRIPTION OF LAND USE OPTIONS in this memorandum.</i>		
GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville			
Gateway features	One gateway feature located in interchange area, where it is likely to be auto-oriented in nature. Two others have the potential to be oriented toward other modes.	Two gateway features are located within interchange areas, which are more likely to be auto-oriented in nature. One other has the potential to be oriented toward other modes, but it is located at the edge of the study area away from much of the likely pedestrian/bicycle activity.	All gateway features are located outside of interchange areas, making them more likely to have human-scale design and orientation.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)	<p>All concepts have the potential for design requirements to be implemented through an overlay zone, however industrial structures tend to have lower values and special industrial needs that can conflict with these requirements.</p>	<p>Due to a lesser amount of industrial land in this concept, it may be able to better implement specific building design requirements.</p>	<p>Similar to Concept 1, industrial areas may be less able to incorporate some design requirements; however the new residential neighborhood may make these requirements even more important and be able to improve the aesthetics of the area generally through good neighborhood design.</p>
<p>Landscaping and Street Trees</p>	<p>Similar to the above topic, industrial land is less likely to provide high-quality street trees and other landscaping elements than other use types.</p>	<p>The corporate campus, retail center, and other uses are very compatible with high-quality landscaping.</p>	<p>New residential areas are envisioned to have a high quality network of street trees and other landscaping. The light industrial area may also be required to provide quality landscaping.</p>

FACILITY DESIGN OPTIONS

The consultant team developed two alternative facility designs for the section of Highway 18 within the study area to support the land use concepts. The study evaluation for OR 18 defines two distinctive facility design options:

- **Facility Option 1 - Interchanges** - focuses local access through two major interchanges, and one roundabout
- **Facility Option 2 - Roundabouts** - provides access through one interchange and three roundabouts

Both facility design options are expected to service and support the three land use options, including connectivity with the local street networks contained within each land use option (see Description of Land Use Concepts). The typical cross-sections of OR 18 described under each facility design option meet Oregon Highway Design Manual guidance for median, travel, and shoulder lane widths. Under both facility design options, notable design features or issues that may require further consideration are also described.

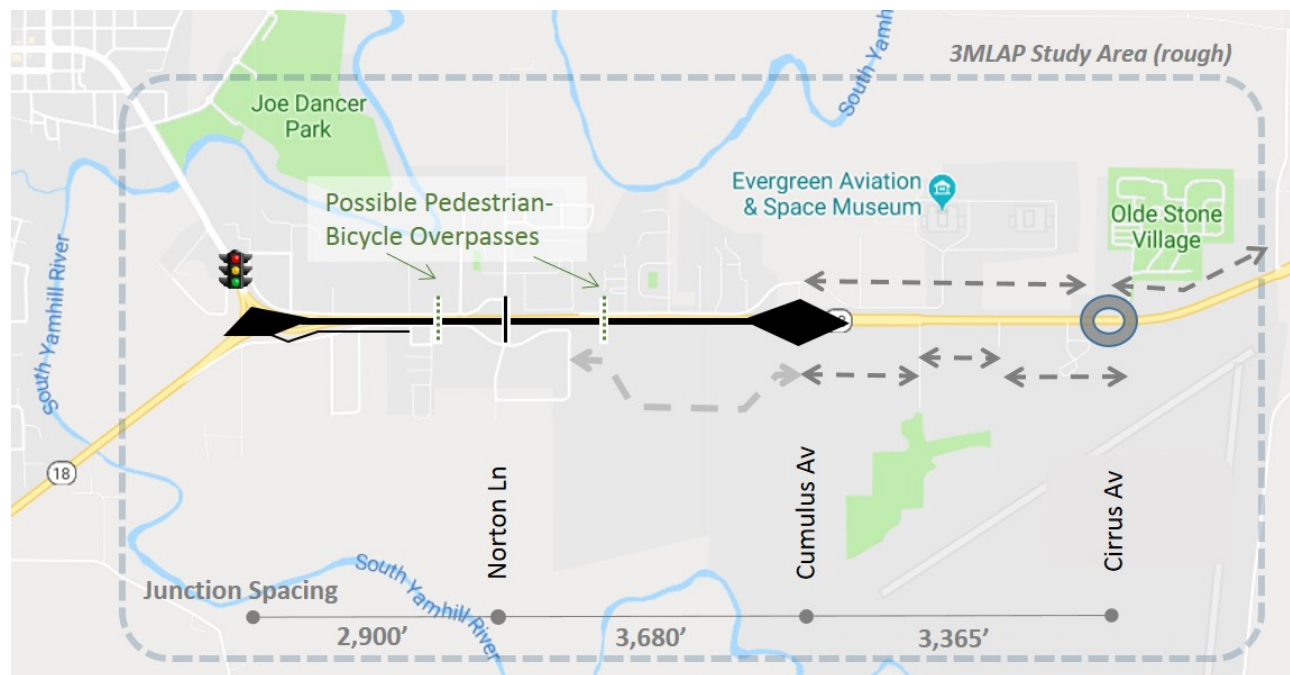
Facility Option 1 - Interchanges

Option 1 generally assumes that major interchanges on OR 18 are the primary junction design intended to balance local area access, circulation, and regional highway through-movement mobility. The interchanges and roundabout in Option 1 are connected by a series of parallel frontage streets. The Option 1 interchange location and spacing is similar to the 1996 Corridor Refinement Plan.

Long-Term Capacity Enhancements

Option 1 assumes that at some time in the future, more significant capacity improvements will be needed to provide local land access in the study area and maintain OR 18 mobility targets. Figure 5 illustrates this long-range interchange facility design option and depicts a series of interim intersection enhancements that could be constructed in advance of major interchange development. Option 1 also includes possible pedestrian-bicycle overpasses of OR 18 (east or west of Norton Lane) to better link study area neighborhoods.

Figure 5. OR 18 Interchange Facility Design Option 1 – Sketch Map



As shown, the interchange facility design option includes the following features:

- Replacement of the OR 18/Three Mile Lane interchange, including a new connection from Stratus Avenue¹¹, providing a more direct, local street (vehicle, bicycle and pedestrian) connection from the south study area to downtown McMinnville.
- Lowering the grade of OR 18 to better facilitate north-south street connectivity.
- New Norton Lane bridge over OR 18 (replacing the existing traffic signal), and possible pedestrian-bicycle bridges either east and/or west of Norton Lane.
- New OR 18 interchange at Cumulus Avenue (replacing the existing traffic signal).
- Possible pedestrian-bicycle only bridges over OR 18, located either east and/or west of Norton lane, providing greater study area connectivity.
- New roundabout on OR 18 at Cirrus Avenue, providing local land access in lieu of driveway closures.
- A series of parallel, east-west local access streets with connections to the future Cumulus interchange, Cirrus roundabout and Norton Lane. Loop Road is re-aligned to the Cirrus roundabout. The existing Loop Road and other local driveway connections to OR 18 in the study area are closed.

The plan view of the OR 18 interchange facility design option is illustrated in Figure 6. The reconstructed OR 18/Three Mile Lane interchange includes a direct connection to Stratus Avenue.

¹¹ Reconstruction of interchange and new Stratus Avenue connection will require a minor adjustment to the Urban Growth Boundary – for transportation facilities only.

As an alternative to OR 18 and Cumulus Avenue, the new Stratus Avenue link provides more direct connectivity between areas south of OR 18 and downtown McMinnville.

Two-way cycle tracks are added to Cumulus Avenue (north side) and Stratus Avenue (south side), with buffered treatments from adjacent vehicle travel lanes. These cycle tracks will provide better connectivity within, and from, the study area to downtown McMinnville, supporting a wider range of cycling residents and visitors. Wider sidewalks and planter strips along Cumulus and Stratus Avenues are also assumed under the interchange facility design option.

Figure 6. OR 18 Interchange Facility Design Option – Plan View / Corridor
West Section



East Section

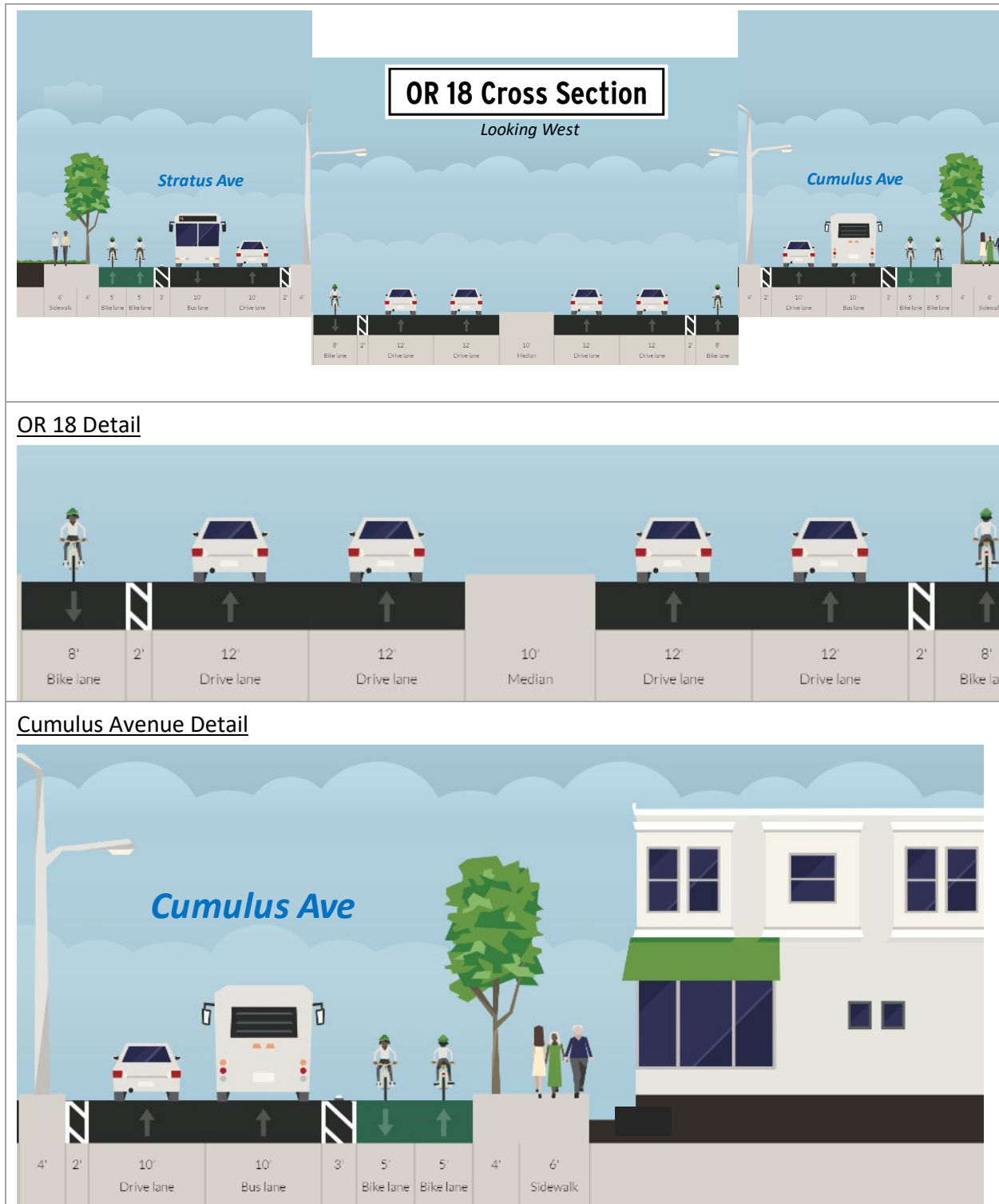


The profile view of OR 18 and Cumulus and Stratus Avenues is illustrated in Figure 7. As shown, the grade of mainline OR 18 is lowered, and both Cumulus and Stratus Avenues are widened to fit new, two-way cycle tracks, and buffered planting strips and wider sidewalks.

McMinnville gateway design treatments can be integrated into each of the major interchanges, overcrossings, and roundabout.

Plan views of more detailed design concepts for individual interchanges and junctions included as part of Option 1 are found in Appendix B.

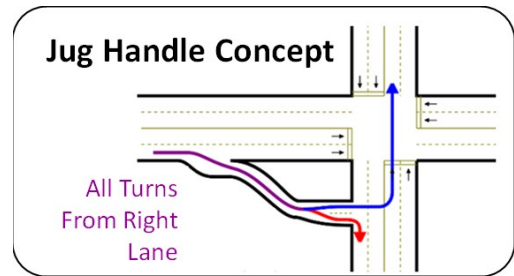
Figure 7. OR 18 Interchange Facility Design Option 1 – Profile View



Interim Capacity Enhancements

As noted in the Existing Transportation Operations and Safety Analysis Memorandum, the OR 18 signalized intersections at Norton Lane and Cumulus Avenue currently have an underutilized capacity for vehicular traffic. A combination of minor intersection improvements and the development of a frontage street network along OR 18 may also provide additional capacity. These capacity improvements may help achieve OR 18 mobility targets and provide local land use access within the 20-year planning horizon.

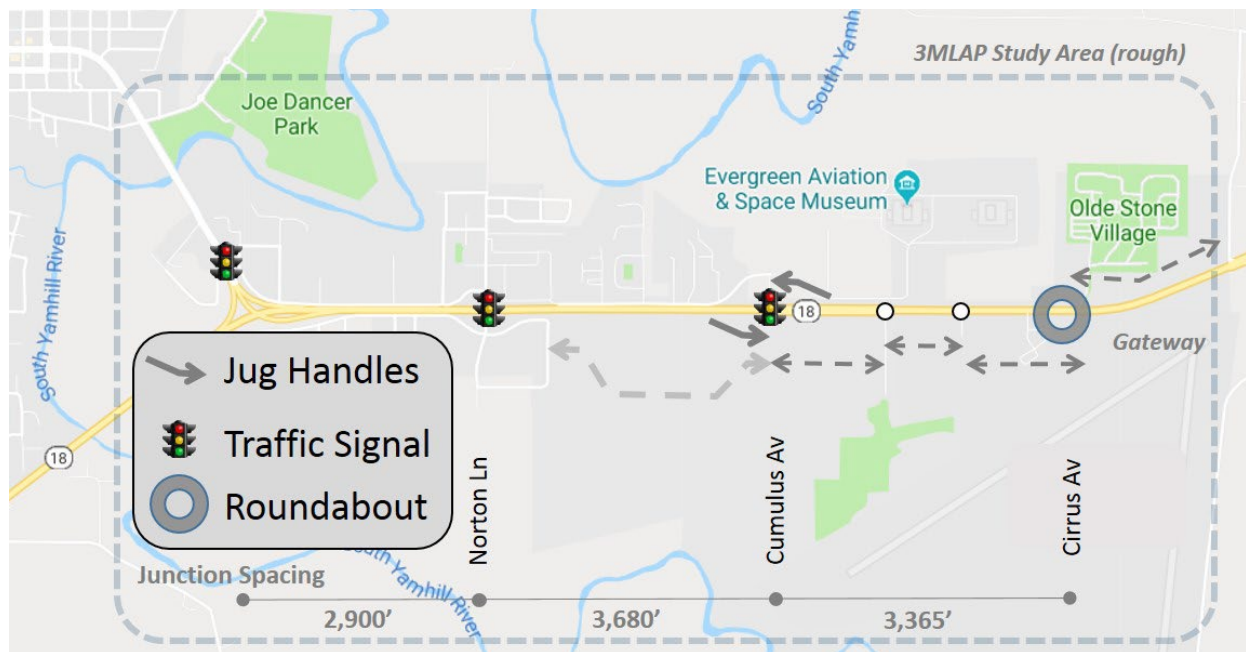
As shown in Figure 8, interim capacity enhancements may include the construction of “Jug Handle” right turn lanes on OR 18 at Cumulus Avenue (westbound and eastbound) and a roundabout at Cirrus Avenue. The Jug Handle turn lanes shift all turns from OR 18 to Cumulus Avenue, which may increase capacity and reduce delay for OR 18 through-movements at the Cumulus Avenue traffic signal.



The Jug Handle concept removes all turn movements from the major highway and shifts them to the cross-street via a right-turn lane.

The combination of these interim capacity enhancements may provide sufficient capacity to meet the Oregon Highway Plan mobility targets for OR 18 within the next 10-20 years.

Figure 8. Interim Intersection and Frontage Street Capacity Enhancements – Sketch Map



Concept Design Features for Further Consideration

Design features or issues related to Facility Option 1 that may require further consideration following the study include the following:

- Subsurface Water Table - Evaluation of subsurface water table and substrata to determine the suitability of lowering the mainline grade of OR 18, thus minimizing the height of new

structures within the study area. These measures help minimize the grade of future pedestrian and bicycle crossings of OR 18, reduce the visual impact of future structures, and reduce the height of new structure and street lights within the McMinnville Airport impact area.

- OR 18 Bicycle Facility Design – The shoulder lanes on OR 18 will require attentive design for future bicycle travel along OR 18, particularly through the on and off-ramp transition zones.
- Local Street Bus Stops - Potential additional right-of-way and design features to accommodate future bus stops along Cumulus Avenue (eastbound) and Stratus Avenue (westbound).
- Cycle Track Transition to New Yamhill River Bridge –The transition from two-way cycle tracks (Cumulus and Stratus Avenues) to the proposed bicycle and pedestrian facility design on the new Yamhill River Bridge requires further design considerations.
- Single-point Urban Interchange – Consideration of a more compact interchange form rather than tight-diamond (as depicted at Cumulus Avenue) to potentially reduce right-of-way impact.
- Roundabout Design – See Facility Option 2 below.

Facility Option 2 – Roundabouts

Option 2 generally assumes that a series of roundabouts on OR 18 is the intended primary junction design to balance local area access, circulation and regional highway through-movement mobility.

As shown in Figure 9, Facility Design Option 2 includes three new, dual-lane roundabouts along OR 18 within the study area: two replacing the current traffic signals at Norton Lane and Cumulus Avenue, and one at Cirrus Avenue (McMinnville Airport access). The general purpose of roundabout concept designs as part of Option 2 is to facilitate relatively continuous movement of OR 18 through-traffic, while providing local land use access to, and across, OR 18.

Each roundabout is presumed to include two-lane approaches on OR 18 (eastbound and westbound), two-lane approaches on Norton Lanes, and single-lane approaches on Cumulus and Cirrus Avenues. Spacing between the roundabouts is well over one-half mile. The OR 18 target design speed is assumed to vary under Option 2, from 55 mph at the study area's eastern entrance, to 30-45 mph within the study area.

Combined pedestrian and bicycle pathways are assumed around each roundabout, with designated crossings of OR 18 and the local street connectors. Median islands are assumed at each pedestrian-bicycle crossing as a refuge and safety feature.

Option 2 also assumes that the replacement of the existing OR 18/Three Mile Lane interchange with a dual-lane roundabout may not meet future OR 18 mobility standards. Option 2 assumes the same improvements to the OR 18/Three Mile Lane interchange as Option 1, including local street, pedestrian and bicycle connector enhancements along Cumulus and Stratus Avenues.

Figure 9. OR 18 Roundabout Facility Design Option – Sketch Map

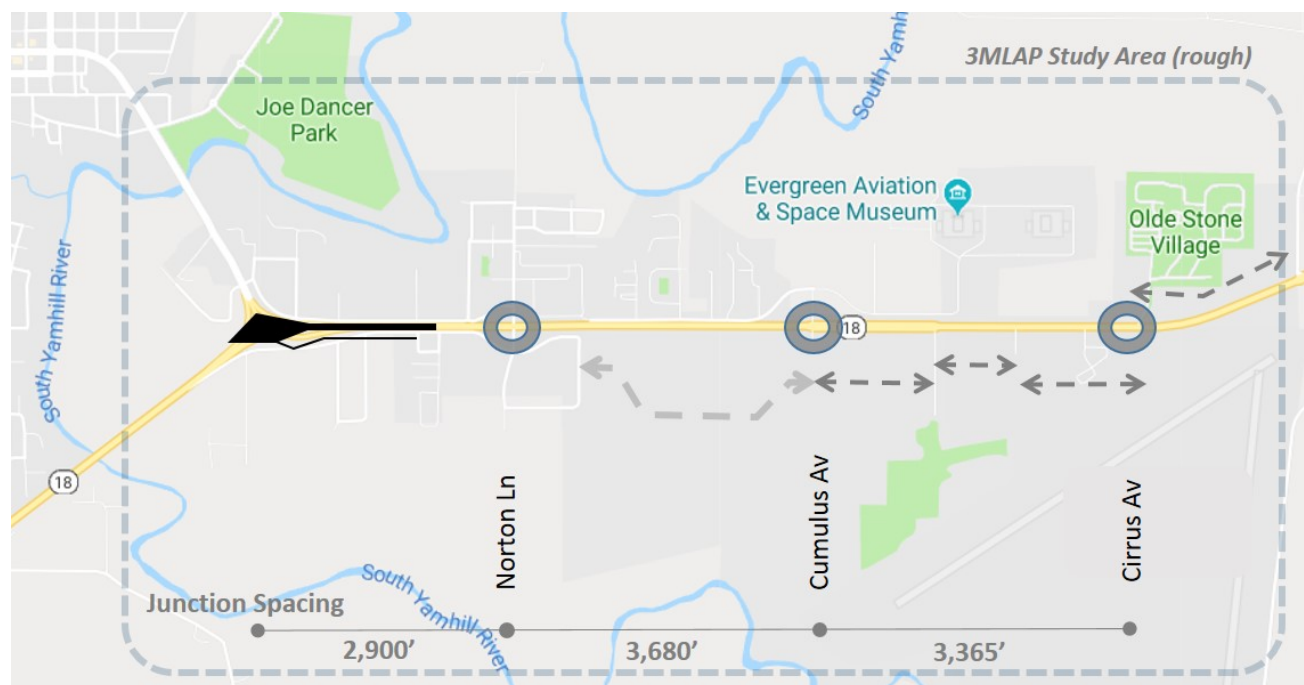


Figure 10 illustrates the plan view of the OR 18 roundabout facility design option. The existing Cumulus and Stratus Avenue intersections on Norton Lane are extremely close to OR 18, making it very difficult to fit a dual-lane roundabout on OR 18. It is more likely that both Cumulus Avenue and Stratus Avenue will require realignment further away from OR 18 under Option 2, as shown in Figure 6. A northern realignment of Cumulus Avenue to Norton Lane at Tanger Court will impact a number of residential and commercial properties.

In general, the existing OR 18 cross-section is retained between the roundabouts under Option 2.

Local street, pedestrian and bicycle connectivity within the study area across OR 18 is confined to the three roundabouts and Three Mile Lane interchange. McMinnville gateway design treatments can be integrated into the interchange and each of the three roundabouts, especially the eastern roundabout at Cirrus Avenue.

Plan views of more detailed design concepts for individual interchanges and junctions under Option 2 are included in Appendix B.

Figure 10. OR 18 Roundabout Facility Design Option – Plan View

West SectionEast Section**Concept Design Features for Further Consideration**

Design features or issues related to Facility Option 2 that may require further consideration following the study include the following:

- Inscribed Circle Diameter – The inscribed circle diameter of the concept roundabouts are conservatively assumed to be 250 feet, exceeding the Oregon Highway Design Manual guidance (200 feet minimum). The roundabout concepts also assume an 18-foot wide inside shoulder to assist truck maneuverability.

- OR 18 Design Speed and Design Vehicle – The targeted design speed of OR 18 will affect optimized roundabout operations and safety design. The target design speed may vary by OR 18 segment, from 55 mph at the study area’s eastern entrance, to potentially 30-45 mph within the study area. The target design vehicle for each roundabout concept design is WB-67.
- Roundabout Design Features – Other specific roundabout design features that require further examination (beyond this study) include approach lane deflection, roundabout radii, truck vehicle paths, pedestrian-bicycle pathways, splitter islands and many others.
- Pedestrian and Bicycle – Design features that best accommodate anticipated north-south pedestrian and bicycle crossings of OR 18 through the proposed roundabouts.

EVALUATION OF FACILITY DESIGN OPTIONS

The evaluation criteria used to test the two facility design options are derived from the project’s goal and objectives, as defined through the study’s public process.¹² Table 2 summarizes the evaluation criteria and ratings for each of the facility design options.

Table 2: Facility Design Option Evaluation Criteria and Ratings

Evaluation Criteria	Highway 18 Facility Design Options:	
	1 - Interchanges	2 - Roundabouts
Facility Design Features Help:		
Foster Economic Development*		
Ease of Access** to Existing and Planned Land Use	Interchange at Cumulus Avenue and Norton Lane overcrossing reduces direct accessibility to Willamette Valley Medical Center and other Norton Lane destinations.	Multiple, dual-lane roundabouts provide more direct access to existing and planned land uses both north and south of Highway 18.
Land Uses are Visible from Three-Mile Lane	Land uses are less visible from Three Mile Lane (Highway 18), when highway is lowered to fit interchange and overcrossings.	Land uses are more visible when highway is at-grade
Sustain Highway 18 as a Key Intercity Freight Route		
Desired Travel Speed on Highway 18	Limited access highway with single roundabout at Cirrus Avenue and interchange at Cumulus Avenue facilitates desired travel speed along Highway 18.	Multiple, dual-lane roundabouts (modestly) impede desired speed along Highway 18.
Highway 18 Truck Maneuverability	Limited access highway with single roundabout at Cirrus Avenue and interchange at Cumulus Avenue facilitates intercity truck maneuverability.	Multiple, dual-lane roundabouts impede intercity truck maneuverability.
* Within the Three-Mile Lane Study Area ** Auto, Truck, Pedestrian, Bicycle and Transit		
Enhance Multimodal Connectivity		
Within the Three-Mile Lane Study Area	Overcrossing at Norton Lane, interchange at Cumulus Avenue, roundabout at Cirrus Avenue and potential ped-bike overcrossings provide good vehicle (including transit), pedestrian and bicycle connectivity across Highway 18.	Evenly-spaced roundabouts provide good vehicle (including transit), pedestrian and bicycle connectivity across Highway 18. Dual-lane roundabouts may intimidate north-south pedestrian and bicycle connectivity, especially as Highway 18 traffic increases in the future.
Between Study Area and City Center	Replacement Three Mile Lane interchange with new Stratus Avenue connection, and new two-way cycle tracks and sidewalks along Cumulus and Stratus Avenues, significantly improve connectivity between the study area and city center.	Replacement Three Mile Lane interchange with new Stratus Avenue connection, and new two-way cycle tracks and sidewalks along Cumulus and Stratus Avenues significantly improve connectivity between the study area and city center.
Minimize Rights-of-Way And Cost Requirements***		
Rights-of-Way	ROW requirement for diamond interchange at Cumulus Avenue is greater than roundabout (Option 2).	ROW requirement for dual-lane roundabout at Cumulus Avenue expected to be less than tight diamond interchange (Option 1). Roundabout at Norton Lane will require additional ROW and impact several homes and possible businesses to re-align Cumulus and Stratus Avenues.
Cost (conceptual)	Costs are significant: new interchange at Cumulus Avenue, lowering Highway 18, and overcrossings at Norton lane and possible pedestrian-bicycle crossings.	Cost of roundabout at Cumulus Avenue is modest. Cost to re-align Cumulus and Stratus Avenues at Norton Lane is significant.

*** As differentiated between Options 1 and 2

Option 1 (Interchanges) is the most likely of the two options to positively impact and achieve desired travel speeds along OR 18 in the future, while minimizing adverse impacts on truck maneuverability. Option 2 roundabout junction designs will likely help maintain OR 18 through-movement traffic flow, but at a less than desirable or ideal speed than Option 1. Roundabouts are also likely to negatively impact truck maneuverability in the study area along OR 18.

Both facility design options are anticipated to help reduce serious crashes at key junctions within the study corridor.

¹² See Memorandum #4.

DISCUSSION AND NEXT STEPS

All of the alternatives presented in this memorandum will help the City of McMinnville meet the goals established for the Three Mile Lane area to some extent – the main differences are those of emphasis and degree. The information and analysis describe how the three distinct land use concepts and the two facility design options further the City’s goals. As described, the land use options meet most project objectives to some degree; Table 1 in this report uses select evaluation criteria to show how the alternatives match up, as compared to each other. The Facility Design options for OR 18 also largely meet project objectives, as demonstrated in Table 2, and can support the ultimate preferred land use option.

The next step of the project is to identify elements of the land use concepts and supporting transportation options that best meet the community’s goals and expectations in order to develop a Preferred Land Use Option and Facility Design Alternative. Project participants and stakeholders are asked to consider the following when envisioning an optimal future, or “preferred alternative,” for the Three Mile Lane area:

- Projects goals and objectives that are the most important and how they can best be reflected in existing and future land uses and transportation design.
- The overall character of the Three Mile Lane area and how it will be impacted by the use of the large vacant properties.
- The kinds of design guidance that will be important to create a high-quality environment given the wide range of uses existing and planned for the area.

As the process moves from the high-level concepts explored here to creating a preferred alternative and outlining its implementation, the project team will address the following:

- Consistent with project objectives, the preferred land use option will incorporate multi-modal design and allow for safe, efficient ways of traveling through and within the area. The high-level land use concepts described in this memorandum can all accommodate enhanced multi-modal connections if they are appropriately designed.
- Creating a walkable “town center” retail development with good multi-modal connections to other parts of the Three Mile Lane area.
- Creating a grid of walkable streets to integrate new development south of Three Mile Lane.
- Improving frontage roads for safer walking and biking.
- Orienting new residential areas toward existing and new trails and pathways to encourage walking and biking.
- Using design standards to prohibit long blank walls and reduce setbacks in pedestrian oriented areas.

Appendix A – Detailed Evaluation Tables

	Concept 1 - Industrial Campus		Concept 2 - Corporate Campus		Concept 3 - South Yamhill Neighborhood	
	Score	Notes	Score	Notes	Score	Notes
Goal 1: Support and enhance the district's economic vitality and marketability						
<i>This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism. Alternatives will be evaluated qualitatively for how well they address the area's development/redevelopment potential.</i>						
Amount of Commercial Land	0	Moderate amount of commercial land compared to other options	+	Largest amount of commercial land of all options	0	Moderate amount of commercial land compared to other options
Amount of Industrial Land	+	Largest amount of industrial land of all options	-	Least amount of industrial land of all options	+	Significant amount of light industrial land
Estimated number of new employment uses.	0	Somewhat limited mix of employment types relative to the other options	+	Wide diversity of employment zone types	+	Wide diversity of employment types in a finer grained mix of zones
Estimated number of new jobs, economic development and business opportunities.	0	Midpoint of the three alternatives	+	Corporate campus arguably will produce the greatest job density of the three concepts	-	Residential component reduces employment capacity
Opportunity for additional goods and services for employees in the study area.	+	Mixed use area in NW, new retail center may provide goods and services.	+	Retail center, Evergreen Site provide goods and services	+	Evergreen site, commercial in NW, and smaller retail center provide goods and services
Improved multimodal access of property	+	Proposed new criterion (not in Memo 4). More trails and assume most streets will be MM.	+	More trails and assume most streets will be MM.	+	More trails and assume most streets will be MM.
Improved airport access for business and tourism.	+	No difference	+	No difference	+	No difference
Economic feasibility of potential development scenarios for large contiguous vacant sites.		Reference to case study report.				
Support for physical expansion and increased capacity of airport.	+	Industrial user takes advantage of airport	+	Potential airport concerns about more residential in NE. Corporate campus takes advantage of airport	0	Airport concerns re: residential nearby
Preserves the functional integrity of Highway 18 for freight movement.	0	See facility option comparison - no difference between land uses.	0	See facility option comparison - no difference between land uses.	0	See facility option comparison - no difference between land uses.
Opportunity for enhanced or new tourism opportunities within the area. Includes multi-modal access and visibility.	0	Preserves aviation complex. No significant increase of tourism capacity elsewhere	+	Significant commercial opportunities throughout district	0	Smallest amount of land for commercial of the three, but preserves aviation complex for continued tourism growth

GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.					
<i>The study area contains several existing residential neighborhoods, including assisted-living and manufactured home residences, as well as major employers and tourism destinations. This plan aims to provide a mix of land uses that support one another to create a unique part of the city.</i>					
Furtherers McMinnville Great Neighborhood principles.	0	This scenario will introduce a greater mix of activities, some additional housing, while protecting Least number of new residential units	+	this scenario introduces a new park, new housing that may be multifamily near the medical center, and the	+
Estimated number of new residential units accommodated in study area.	0		0	Mid-point of the three alternatives	0
Residential housing mix.	+	Some Multifamily in NE, mixed use on Cal Portland, modest infill with some multifamily elsewhere.	+	Multifamily near medical center. Modest infill in NW. Cal portland site is partially multifamily. NE edge is multifamily.	+
Number of existing and proposed residential units with multi-modal access to parks/natural areas and goods/services.	0		0		+
Provides transit-supportive land uses.	+	All options provide some basic transit-supportive land uses (job centers and higher density residential developments). Concept 1, with a larger piece of industrial land, may be less transit-supportive	+	All options provide transit-supportive land uses (job centers and higher density residential developments)	+
Access to amenities	+	Improves access to amenities through mixed use in NW and retail center.	+	Improves access to amenities through evergreen retail and retail center.	+
Visual and physical access to natural resources	0	Greater amount of units close to Joe Dancer, fewer close to south fork and airport park	0	Lesser amount of residential (especially multifamily) in proximity to Joe Dancer via existing or proposed bridge. Greater number of MF units in proximity to south fork and airport park.	+

GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville			
<p>The study area is a primary gateway to the City of McMinnville. Alternatives will be evaluated qualitatively for how well they provide an identity for the district, reflect McMinnville's intrinsic character and highlight the landscape features of the district.</p>			
Gateway Features	<p>One gateway feature located in interchange area, where it is likely to be auto-oriented in nature. Two others have the potential to be oriented toward other modes.</p> <p>+</p>	<p>0</p>	<p>Two gateway features are located within interchange areas, which are more likely to be auto-oriented in nature. One other has the potential to be oriented toward other modes, but it is located at the edge of the study area away from much of the likely pedestrian/bicycle activity.</p> <p>+</p> <p>All gateway features are located outside of interchange areas, making them more likely to have human-scale design and orientation.</p>
Building Design	<p>All concepts have the potential for design requirements to be implemented through an overlay zone, however industrial structures tend to have lower values and special industrial needs that can conflict with these requirements.</p> <p>0</p>	<p>+</p>	<p>Due to a lesser amount of industrial land in this concept, it may be able to better implement specific building design requirements.</p> <p>+</p> <p>Similar to Concept 1, industrial areas may be less able to incorporate some design requirements; however the new residential neighborhood may make these requirements even more important and be able to improve the aesthetics of the area generally through good neighborhood design.</p>
Landscaping and Street Trees	<p>Similar to the above topic, industrial land is less likely to provide high-quality street trees and other landscaping elements than other use types.</p> <p>0</p>	<p>+</p>	<p>The corporate campus, retail center, and other uses are very compatible with high-quality landscaping.</p> <p>+</p> <p>New residential areas are envisioned to have a high quality network of street trees and other landscaping. The light industrial area may also be required to provide quality landscaping.</p>

Appendix B - Plan Views of Detailed OR 18 Junctions – Options 1 and 2

Option 1 Plan View – Three Mile Lane Junction



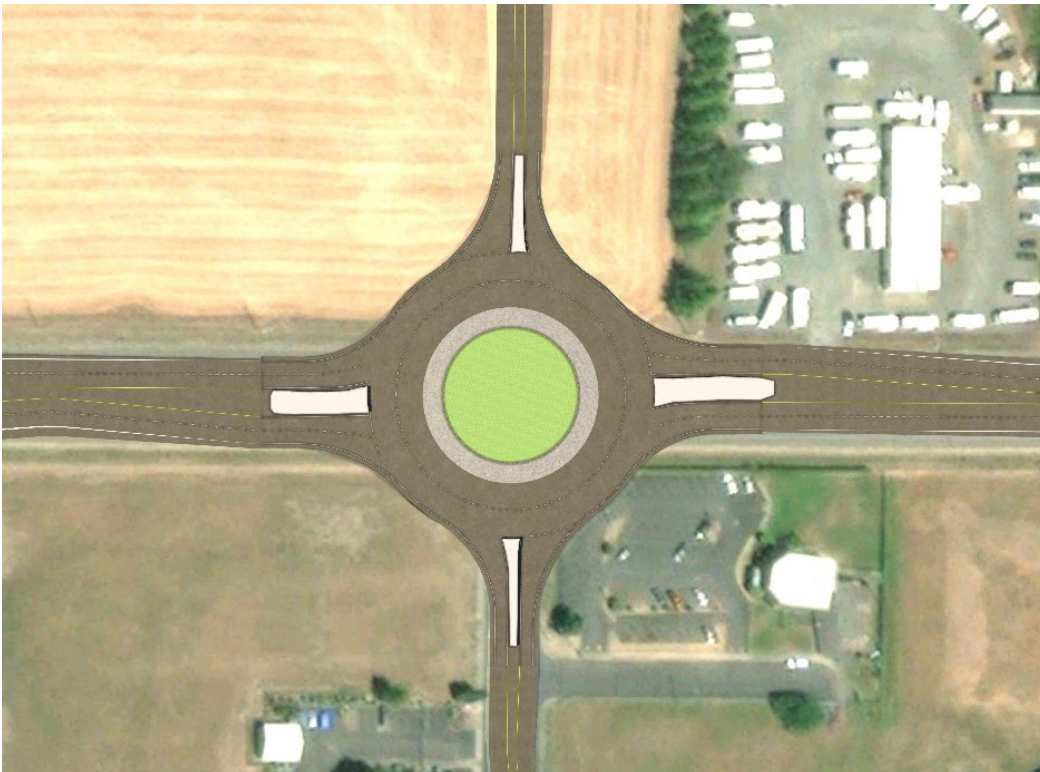
Option 1 Plan View – Norton Lane Crossing



Option 1 Plan View – Cumulus Avenue Junction



Option 1 Plan View – Cirrus Avenue Junction



Option 2 Plan View – Three Mile Lane Junction



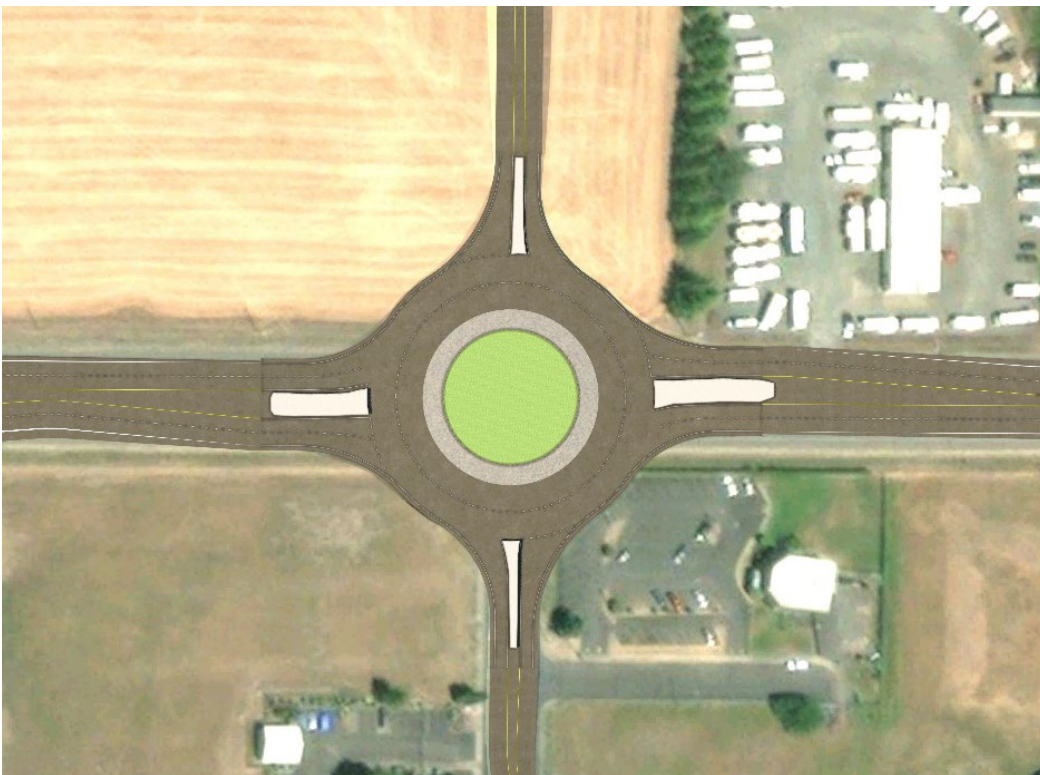
Option 2 Plan View – Norton Lane Junction



Option 2 Plan View – Cumulus Avenue Junction



Option 2 Plan View – Cirrus Avenue Junction



APPENDIX C: SUPPLEMENTAL EVALUATION - TRIP GENERATION ASSESSMENT

The original scope of work for this study anticipated applying future travel demand model estimates for each of the land use options (three) and two facility design options. Model data and estimates were not available at the time of the study. In lieu of applied travel model estimates, a supplemental trip generation analysis was completed. The trip generation assessment identifies the level and location of new trip generators within the study area, comparing and contrasting the three land use options. The assessment is predicated on the following assumptions:

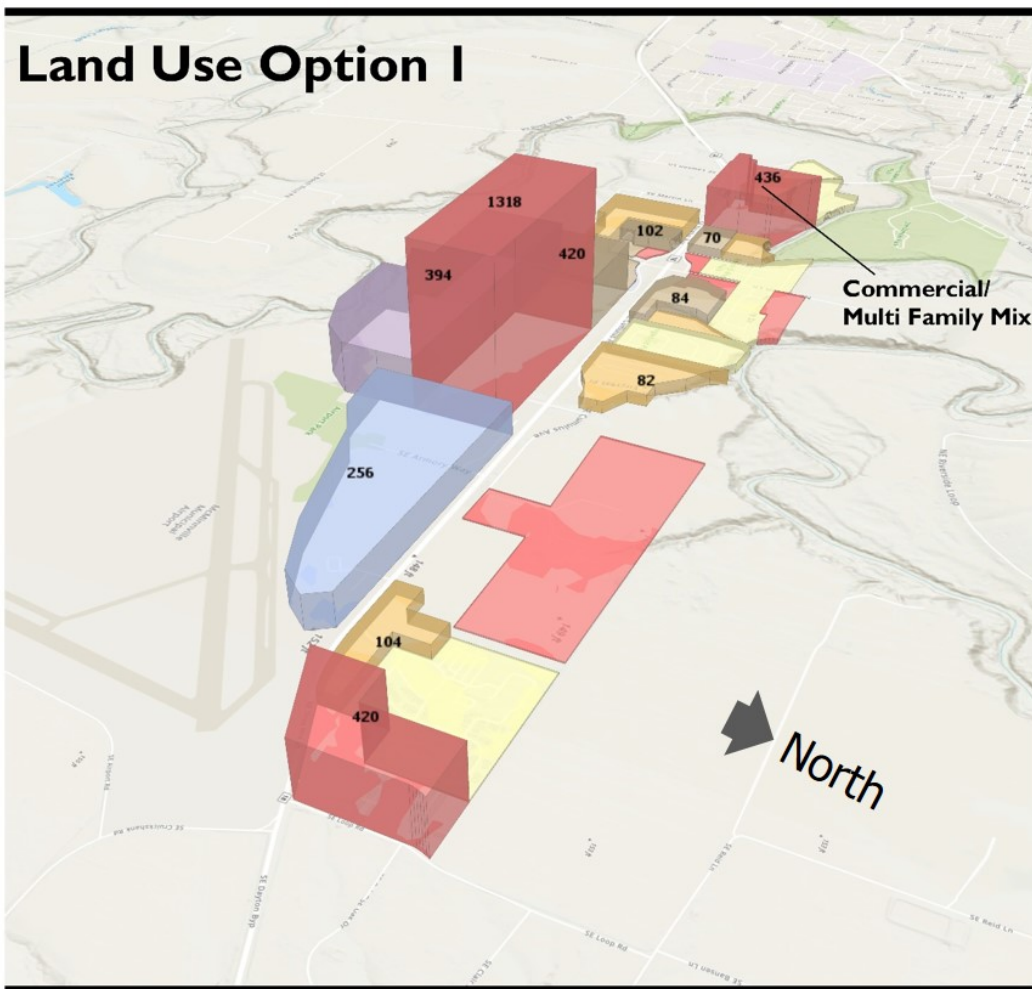
- Estimates of developable land by general type, assuming limited redevelopment
- Building density based on a range of floor area ratios by land use category
- Vehicle trip generation rates by land use type, as noted in the Institute of Transportation Engineers, Trip Generation (10th Edition), including pass-by trip rate reductions for commercial lands

Land Use Option 1

Figure 7 maps the net new vehicle trips generated in the study area under Land Use Option 1, by land use type.

The greatest number of new vehicle trips in Option 1 are generated by planned commercial and multi-story medical office developments on the south side of OR 18, between the Willamette Valley Medical Center and Cumulus Avenue. New commercial lands at the eastern end of the study area and along Cumulus Avenue (Baker Rock site) will also generate significant vehicle trips. Industrial land at the southern edge of the study area is not expected to generate significant vehicle traffic.

Figure 1: Net New Vehicle Trips – Land Use Option 1



Legend

Land Use

- Airport Commercial/Industrial
- Commercial
- Industrial
- Medical
- Single Family Residential
- Multi Family Residential

Net New PM Peak Hour Vehicle Trips

- 260
- 2,030
- 394
- 680
- 50
- 590

* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

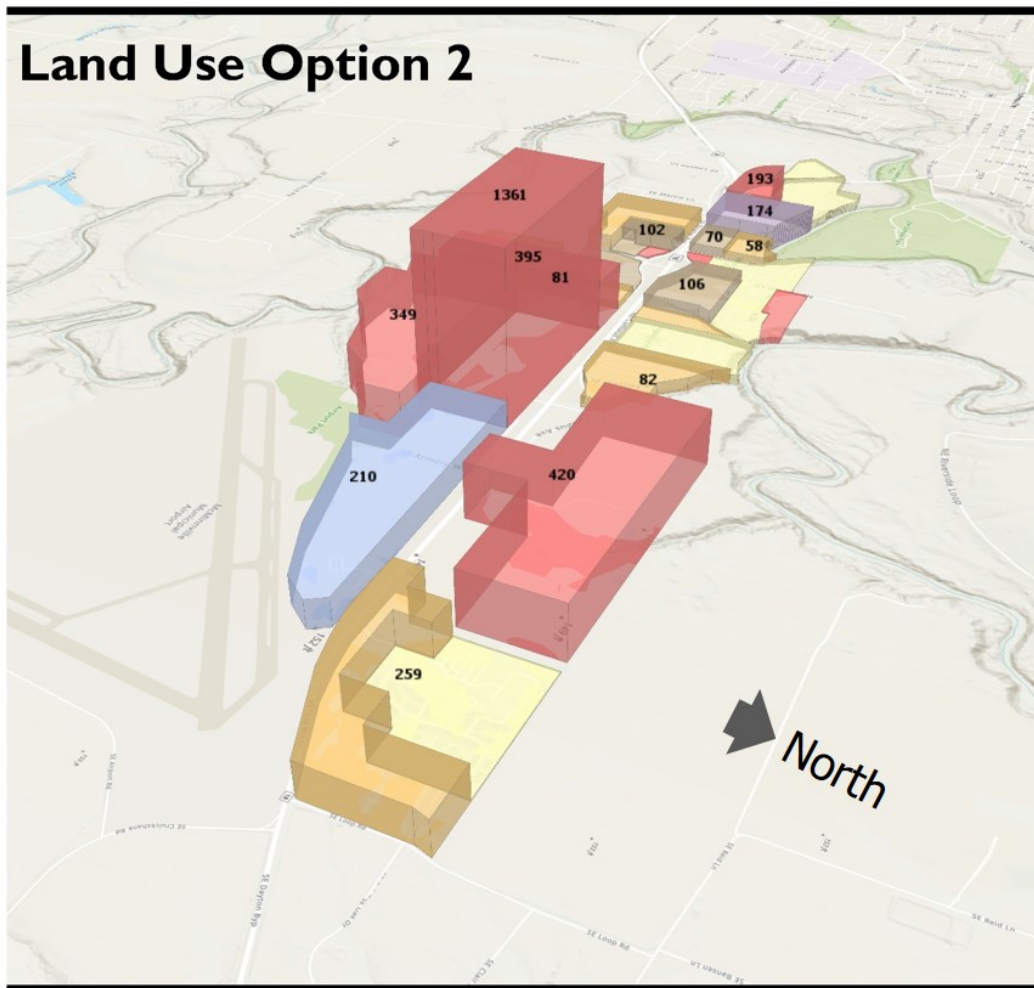
TOTAL 4,000

Land Use Option 2

Figure 8 maps the net new vehicle trips generated in the study area under Land Use Option 2, by land use type.

The total new vehicle trip generation is slightly larger in Option 2 than it is in Option 1, though more of the traffic is generated by commercial lands, located near (north and south of OR 18) and focused on Cumulus Avenue. Residential land at the eastern end of the study area will also generate new vehicle trips.

Figure 2: Net New Vehicle Trips – Land Use Option 2



Legend

Land Use

- Airport Commercial/Industrial
- Commercial
- Industrial
- Medical
- Single Family Residential
- Multi Family Residential

Net New PM Peak Hour Vehicle Trips

- 210
- 2,720
- 170
- 360
- 60
- 780
- TOTAL**

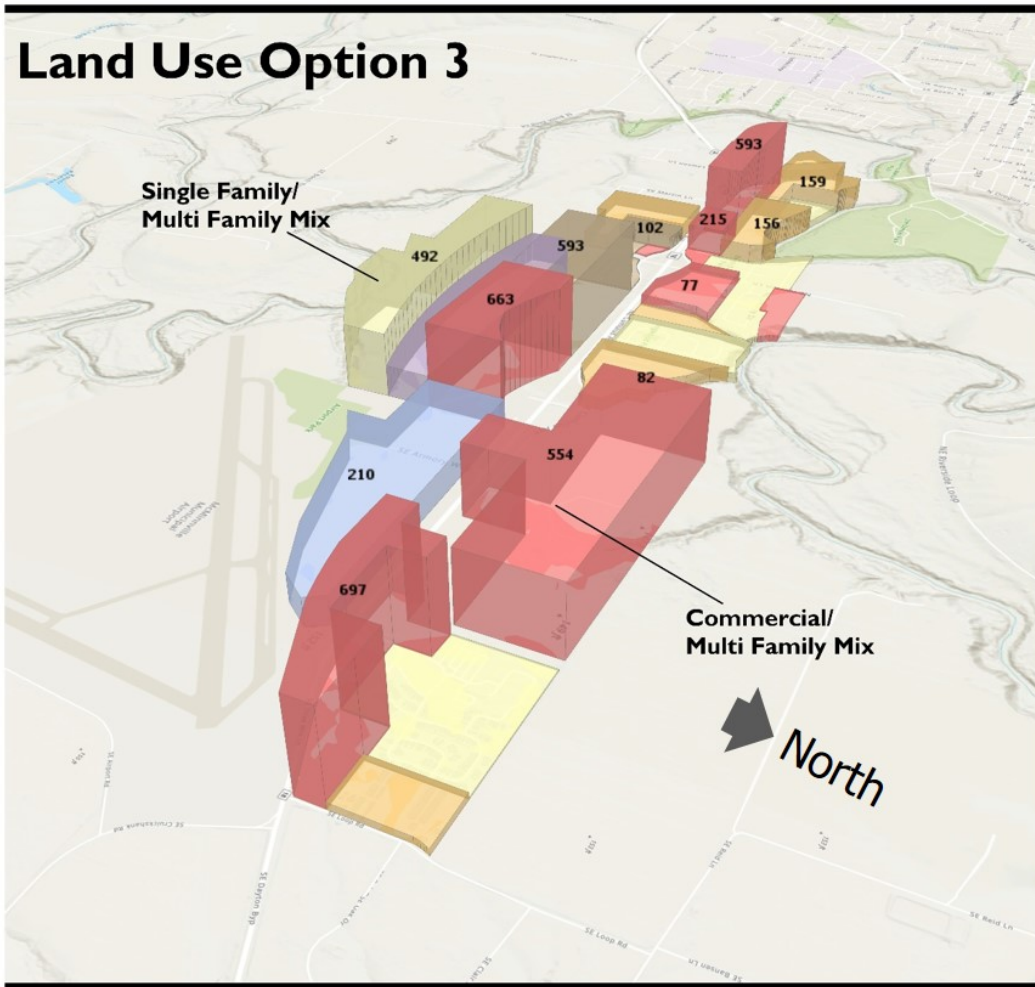
* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

Land Use Option 3

Figure 9 maps the net new vehicle trips generated in the study area under Land Use Option 3, by land use type.

Option 3 focuses more on retail-related lands within the Evergreen Aviation site, and eastern end of the study area (north of OR 18) and along Cumulus Avenue west of Norton Lane. New trip generation by medical office use near Willamette Valley Medical Center is the largest under Option 3. Residential lands at the southern edge of the study near the airport will also generate a sizeable number of new vehicle trips. Option 3 presents a higher total new vehicle trip generation than Options 1 or 2.

Figure 3: Net New Vehicle Trips – Land Use Option 3



Legend

Land Use

Airport Commercial/Industrial	210
Commercial	2,720
Industrial	240
Medical	700
Single Family Residential	230
Multi Family Residential	930

TOTAL 5,030

* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea