



## ORDINANCE 2021-001

### ACCEPTING THE ADDENDUM TO THE SHERWOOD BROOKMAN CONCEPT PLAN AND ADOPTING THE ASSOCIATED AMENDMENTS TO THE CITY'S TRANSPORTATION SYSTEM PLAN

**WHEREAS**, Metro brought the Brookman Area (Area 54/55) into the urban growth boundary in 2002 via Metro Ordinance 02-96B; and

**WHEREAS**, the Council adopted the Brookman Addition Concept Plan via Ordinance 2009-004; and

**WHEREAS**, the Brookman Addition Concept Plan envisioned Brookman Road realigned to provide a perpendicular crossing of the existing rail line and provide for a signalized intersection roughly 2,700 feet south of the existing Highway 99W/Sunset intersection; and

**WHEREAS**, since that time, the I-5/99W corridor location has not been resolved, and Washington County updated its Transportation System Plan (TSP) to identify Brookman Road as an arterial, and to be consistent with the county designation for this road under their jurisdiction, Sherwood updated its TSP to designate Brookman Road as an arterial roadway via Ordinance 2018-003; and

**WHEREAS**, in 2019, the City of Sherwood requested and was awarded a grant from Metro's 2040 Planning and Development Grant Program to address transportation and land use issues associated with development proposed for the area served by Brookman Road; and

**WHEREAS**, this project reevaluated the Concept Plan in a coordinated multi-agency effort to determine the future function, general capacity, and design needs for Brookman Road as a three-lane roadway and as a possible five-lane arterial, and reviewed the current land uses to ensure they are still appropriate as the area builds out; and

**WHEREAS**, the Sherwood Planning Commission conducted a work session to review the proposed Addendum to the Brookman Addition Concept Plan and associated amendments to the City's Transportation System Plan (TSP) on October 13, 2020; and

**WHEREAS**, the Planning Commission, after Public Hearing Notice was provided to a list of partner agencies, posted in locations in the City and on the City website, and advertised in The Times, a newspaper of general circulation in the City, held a public hearing on November 10, 2020, to review and to gather additional testimony and evidence regarding the proposed Addendum to the Brookman Addition Concept Plan and the associated amendment to the TSP; and

**WHEREAS**, the Planning Commission duly considered the subject, including the staff recommendation and public testimony, and recommended that the City Council accept the Addendum to the Brookman Addition Concept Plan and associated amendments to the TSP; and

**WHEREAS**, Public Hearing Notice of a Council hearing was advertised on the City website and advertised in The Times, a newspaper of general circulation in the City on February 11, and 25, 2021; and

**WHEREAS**, the City Council has considered the Planning Commission's recommendation, the staff reports, and testimony in this matter and has evaluated the TSP amendments against the Statewide Planning Goals and regional requirements.

**NOW, THEREFORE, THE CITY OF SHERWOOD ORDAINS AS FOLLOWS:**

**Section 1.** Findings. The City Council hereby accepts the findings in this matter located within the Planning Commission staff report (Case File LU 2020-020-PA), attached hereto as Exhibit 1 and incorporated by reference.

**Section 2.** Amendments. The City Council hereby accepts and adopts the Addendum to the Brookman Addition Concept Plan, attached hereto as Exhibit 2, and adopts the associated TSP amendments, attached hereto as Exhibit 3 and incorporated by reference.

**Section 3.** Staff Directive. To reflect the acceptance and adoption of the Addendum to the Brookman Addition Concept Plan and amendments to the TSP, staff is directed to make conforming changes to the TSP necessary to incorporate the amendments adopted herein.

**Section 4.** Effective Date. This Ordinance shall become effective 30 days from its adoption.

**Duly passed by the City Council this March 16, 2021.**

  
\_\_\_\_\_  
Keith Mays, Mayor

3/16/2021  
\_\_\_\_\_  
Date

Attest:

  
\_\_\_\_\_  
Sylvia Murphy, MMC, City Recorder

	<u>AYE</u>	<u>NAY</u>
Scott	<input checked="" type="checkbox"/>	_____
Griffin	<input checked="" type="checkbox"/>	_____
Brouse	<input checked="" type="checkbox"/>	_____
Young	<input checked="" type="checkbox"/>	_____
Garland	<input checked="" type="checkbox"/>	_____
Rosener	<input checked="" type="checkbox"/>	_____
Mays	<input checked="" type="checkbox"/>	_____

## CITY OF SHERWOOD

### Staff Report

### LU 2020-020 PA Brookman Addition Concept Plan Addendum and TSP Amendments

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#### Recommendation of the Sherwood Planning Commission:

The Planning Commission held a public hearing on November 10, 2020, to take testimony and consider the application (LU 2020-020PA) to make a recommendation on the Brookman Addition Concept Plan Addendum and associated amendments to the City's Transportation System Plan (TSP). After receiving public testimony, the Commission voted to close the public hearing to consider the Brookman Addition Concept Plan Addendum, amendments to the City's TSP, and the staff report's findings. The Planning Commission voted to recommend the approval of the Addendum and associated TSP amendments. The Planning Commission added an additional recommendation for Council consideration – to consider rezoning the high-density residential area in the western sub-area of the plan to a lower density through a separate process such as the Comprehensive Plan Update to provide a better buffer between the existing neighborhood to the north and traffic concerns.

The Planning Commission's recommendation on the Plan's Addendum and TSP amendments are based on the facts and findings in this staff report.

From:



Erika Palmer, Planning Manager

**Proposal:** The Planning Commission to review, consider, and to make a recommendation to the Sherwood City Council to:

- 1) Accept the Brookman Addition Concept Plan Addendum to the Brookman Addition Concept Plan; and
- 2) Adopt amendments to the city's Transportation System Plan to amendment maps reflecting Brookman Road's realignment in the west and east sub-areas, and text amendments describing the Brookman Road transportation project.

#### I. BACKGROUND

The Brookman Addition Concept Plan was adopted in 2009 (Sherwood ORD 2009-004) to provide a conceptual guide to the development of this area that was incorporated into Sherwood's Urban Growth Boundary in 2002 (Metro ORD 2002-969B). This concept plan identifies future land uses, parks and trails, natural resource areas, transportation improvements, and public facilities.

The plan area consists roughly of 250 acres and is located at the southern edge of Sherwood and is bound by Pacific Highway (99W) to the west, Brookman Road to the south, and Ladd Hill Road to

the east. Old Pacific Highway, an existing rail corridor, and Cedar Creek run north/south through the site area. To the north, Brookman is bordered by the existing residential neighborhoods and Sherwood's largest master-planned community, Woodhaven. South of Brookman Road is the Sherwood South Urban Reserve area, located in Unincorporated Washington County.

The Brookman Addition Concept Plan envisioned Brookman Road realigned to provide a perpendicular crossing of the existing rail line and provide for a signalized intersection roughly 2,700 feet south of the existing Highway 99W/Sunset intersection. When the Brookman Addition Concept Plan was being developed, the I-5/99W connector project was underway. It was envisioned that a new arterial would be located south of Brookman Road, approximately 1,000 feet to the south.

Since that time, the I-5/99W corridor location has not been resolved, and Washington County updated its Transportation System Plan (TSP) to identify Brookman Road as an arterial. As required, to be consistent with the county designation for this road under their jurisdiction, Sherwood updated its TSP to designate Brookman Road as an arterial. Sherwood has also created a preliminary concept plan for the Sherwood West Urban Reserve area located across Pacific Highway (99W) bounded between SW Chapman and SW Elwert Road. In addition, roughly ninety-four (94) acres of land has annexed into the city for residential development. Recently sixty-four acres have been subdivided, creating two hundred fifty-three (253) new lots proposed for single-family detached housing.

In 2019, The City of Sherwood requested and was awarded a grant from Metro's 2040 Planning and Development Grant Program to address transportation and land use issues associated with development proposed for the area served by Brookman Road. This project reevaluated the Concept Plan in a coordinated multi-agency effort to determine the future function, general capacity, and design needs for Brookman Road as a three-lane roadway and as a possible five-lane Arterial. Additionally, the project reviewed the current land uses to ensure they are still appropriate as the area builds out.

### Process and Public Involvement

The planning process engaged local landowners and residents at two events during the project. In-person stakeholder meetings with developers currently active in the Brookman area, landowners, and residents were held early in the process. Several key themes emerged from the stakeholder Interviews.

Key themes heard:

- Brookman Road is not safe in its current condition
- The vision should reflect the area
- Any future design should accommodate growth
- Transparency from the City

In addition to the stakeholder meetings, the project team met with technical agency partners, including Oregon Department of Transportation (ODOT), ODOT Rail, Washington County Land Use and Transportation, Clackamas County Land Use and Transportation, and Northwest Natural Gas.

Three cross-sections and alignment alternatives were developed during the project to identify potential tradeoffs between various options, road configurations, and potential revisions to the existing alignment identified in the Concept Plan. A public workshop was planned in March of 2020 to discuss potential Brookman Road design alternatives. Prior to holding the meeting, the State of Oregon placed requirements to reduce the spread of COVID-19 and restricted large gatherings. As a result, that in-person event was hosted as an online open house, which provided the same information as what would have been presented at the in-person event. A postcard mailer was sent to all property owners in the Brookman area and within 1,000 feet of the project area, directing them to the project website. Roughly a dozen people contacted staff with questions after reviewing the presentation of the road design alternatives.

The City Council held a work session on April 7, 2020, to review the project alternatives and ask the project team questions. The following several months were spent refining the information based on the feedback received and additional follow-up meetings with agency partners and

The Planning Commission held a work session on October 13, 2020, to review the draft plan. The Commission raised the following questions/concerns about the west sub-area of the plan:

- Were the land use designations in the west-sub area of the plan considered as part of the traffic analysis?
- Is there enough capacity on Old Highway 99w and at intersections of Timbrel/Sunset to continue to support the plan's land use designations given the revised alignments and classification of Brookman?
- Are the land uses and local road access in this area viable for future development opportunities?
- Will there be additional cut-through traffic into the existing neighborhood as a result of the realignment and access spacing that will be required?
- Will there be additional public outreach before a public hearing for residents to review and comment on the proposed plan?

#### Response

The analysis was focused on future traffic operations along the Brookman corridor to support the alternatives analysis for alignments and land uses. The future 2040 transportation demand model included Brookman with the planned realignment to OR 99W to the north per the Regional Transportation Plan and the city's Transportation System Plan. The future model showed low demand for the Old Highway 99-Timbrel connection to Timbrel/Sunset, not enough to warrant evaluating the intersection. The transportation consultants, DKS, indicated that the modeling indicates the future demand on Old Highway 99-Timbrel to Sunset will be low enough to accommodate a moderate amount of new trips even with the higher density development planned and will not trigger capacity improvements. That said, traffic studies will be required with any new development which will ensure off-site impacts are addressed. In addition, the City anticipates updating the Transportation System Plan (TSP) within the next few years at which point, the entire system will be re-looked at system improvements identified based on development, zoning and modeling data at that time.

After the Commission's concerns about local access roads and connectivity to support the land uses in the western subarea, the project team analyzed the area and updated the conceptual road layout included in this plan update. As development occurs, the conceptual road layout and accesses may change.

## Updated Conceptual Local Road Connectivity in Brookman Western Subarea



The project team is also recommending calming traffic-calming measures to be reviewed and evaluated in the future to mitigate and reduce vehicle trips through the existing neighborhood to the north (Page 9 of Addendum).

During the week of October 19, 2020, staff mailed a tri-fold mailer about the project and the upcoming public hearing to all property owners and those within 1,000 feet of the Brookman area. This mailer was also posted on the project webpage. Staff has had correspondence with a few residents and property owners, but no formal comments have been received at the date of this staff report.

## II. OVERVIEW

- A. Applicant: The City of Sherwood
- B. Location: The Brookman Addition Concept Plan area, as described above. The Sherwood Transportation System Plan is a city-wide document.
- C. Review Type: The proposal requires a Type V review, which involves public hearings before the Planning Commission and City Council. The Planning Commission will make a recommendation to the City Council, who will make the final decision. Any appeal of the City Council decision would go directly to the Oregon Land Use Board of Appeals.

- D. Public Notice and Hearing: The project is a legislative amendment. Notice of the first evidentiary hearing was provided to the Department of Land Conservation and Development (DLCD) and Metro on October 9, 2020. Notice of the November 11, 2020, Planning Commission hearing was published in The Times, a newspaper of general circulation, on October 22, 2020, and November 5, 2020. Notice of the hearing was also posted in City Hall. A project webpage was created on the city's website in August 2019 has been updated throughout the planning process.
- E. Review Criteria:  
The required findings for the Plan Amendment are identified in Section 16.80.030 of the Sherwood Zoning and Community Development Code (SZCDC). In addition, the amendment must be consistent with Goals 1, 2, and 12 of the Statewide Planning Goals and Metro's Functional Plan.

### III. PUBLIC COMMENTS

Public comments received are included in the record as Attachment B

**Mel Taylor, November 2, 2020** (See Attachment B1). Mr. Taylor's comments focus on public involvement and the possibility that Brookman Rd, parts or all of it, may be the Southern Arterial connecting I-5 to Hwy 99 at some time in the future.

Staff response: Public involvement is discussed in the Plan Addendum. Stakeholder interviews were held early on in the process. A project webpage was created in August 2019 on the city's website. After a public open house was canceled due to COVID-19, staff sent a postcard mailing to all property owners and within 1,000 feet of the boundary early last spring to review the draft road design and alignment alternatives on the project webpage and to call or email staff with questions. The proposed road design and alignment alternative slideshow have been on the project website since early April of 2020. Staff sent out another mailer about the project in October 2020, directing people to the project website for additional information prior to the public hearing. The intent of this project was to reevaluate the Concept Plan to determine the future function, general capacity, and design needs for Brookman Road and as a three-lane roadway and as a possible five-lane Arterial. There are currently no plans extending the roadway east of Ladd Hill within Clackamas County at this time.

**Scott Edington, November 5, 2020** (See Attachment B2). Mr. Edington would like the plan to move the high density housing closer to Highway 99W similar to Woodhaven & Creekview Crossing condos.

**Clayton Hargrove, November 7, 2020** (See Attachment B3). Mr. Hargrove would not like Brookman Road to shift slightly to the north and bisect his property at Highway 99W.

Staff response: The intersection of Brookman and Highway 99W was corrected to remain in its current alignment with Highway 99W after a meeting with ODOT staff. The plan's alignment no longer shows a slight shift to the north that would bisect Mr. Hargrove's property.

**Randy & Kayla Krueger, November 9, 2020** (See Attachment B4). The Krueger's are against the plan's proposal that shows Brookman Road's extension through their property.

#### IV. AGENCY/DEPARTMENTAL COMMENTS

The City requested comments from affected departments and agencies on October 21, 2020. Formal agency comments are included in the record and attached as Attachment C1-C3. The following is a summary of agency comments received:

**ODOT Rail, Carrie Martin, and Kurt Mohs** provided comments indicating that a diagnostic meeting will be required with the railroad(s), road authority, and ODOT Rail present around project kickoff and/or 30% design for the rail crossing improvements. The agency had questions about the design of bike/pedestrian access near the rail crossing and recommended new examples of newer rail crossing design concepts (See Attachments C1 and C2).

Staff Response: Staff recognizes that continuing coordination with ODOT Rail and Washington County will be needed throughout the rail crossing's early design process.

**ODOT, Region 1, Marah Danielson** provided comments indicating that Brookman's current alignment at Highway 99W is adequate, and the road should not slightly shift to the north. Her comments note an error the proposed TSP language to remove the traffic signal at the intersection of Brookman and Highway 99W (See Attachment C3).

Staff Response: The plan shows the intersection of Brookman and Highway 99W in it's current alignment, and staff did not mean to strike out the language regarding the traffic signal at the intersection of Brookman and Highway 99W. This traffic signal remains as part of the project improvements.

#### V. REQUIRED FINDINGS FOR A PLAN TEXT/MAP AMENDMENT TO THE CITY'S TRANSPORTATION SYSTEM PLAN

##### **Sherwood Zoning and Community Development Code Chapter 16.80 Plan Amendments**

##### **16.80.030 – Review Criteria**

##### **A. Text Amendment**

**An amendment to the text of the Comprehensive Plan shall be based upon a need for such an amendment as identified by the Council or the Commission. Such an amendment shall be consistent with the intent of the adopted Sherwood Comprehensive Plan, and with all other provisions of the Plan, the Transportation System Plan, and this Code, and with any applicable State or City statutes and regulations, including this Section.**

There are no proposed text amendments to the City's adopted Comprehensive Plan as part of the Brookman Addition Concept Plan's Addendum. There are two proposed text changes to the City's Transportation System Plan (TSP) document, which is adopted as a supporting element to the city's Comprehensive Plan. The proposed text changes to the TSP refer to the refinement planning effort in 2019 and 2020 and describes Brookman Road's proposed realignment.

Page #	Item	Recommended Changes
<b>Volume 1: Sherwood Transportation System Plan</b>		
36	<p>Project D14 in Table 1:                      Realign Brookman Road to intersect with Highway 99W approximately ¼ mile north of its existing intersection; This alignment would provide future separation from the Southern Arterial connection at Highway 99W and would improve safety and driver expectancy for the intersection on the highway by moving it within the urbanized context (within future urbanized area of Brookman Concept Plan area). This improvement includes a traffic signal at the realigned intersection with a westbound left and southbound right turn lane, and a grade separated railroad crossing. All traffic signals on the state highway system would need to be approved by the state traffic engineer and design coordination with ODOT would be needed to ensure that the improvements were done in a manner that would improve driver expectancy and safety.</p>	<p>Realign Brookman Road to intersect with Highway 99W approximately ¼ mile north of its existing intersection; This alignment would provide future separation from the Southern Arterial connection at Highway 99W and would improve safety and driver expectancy for the intersection on the highway by moving it within the urbanized context (within future urbanized area of Brookman Concept Plan area). This improvement includes a traffic signal at the realigned intersection with a westbound left and southbound right turn lane, and a grade separated railroad crossing. All traffic signals on the state highway system would need to be approved by the state traffic engineer and design coordination with ODOT would be needed to ensure that the improvements were done in a manner that would improve driver expectancy and safety.</p> <p><b><i>The intersection of Brookman Rd and OR 99W to be improved with the installation of a traffic signal. All traffic signals on the state highway system need to be approved by the State Traffic Engineer and design coordination with ODOT is needed to ensure that the improvements are done in a manner that improves driver expectation and safety. The design of the intersection may result in the need for additional right of way to improve the intersection alignment.</i></b></p>
73	<p>Function and Design of Brookman Road and Concept Plan Area Update: Brookman Road is a rural corridor that sits on the southern edge of the Urban Growth Boundary (UGB). Through the Brookman Addition Concept Plan, it was identified that the road was needed to</p>	<p>Function and Design of Brookman Road and Concept Plan Area Update: Brookman Road is a rural corridor that sits on the southern edge of the Urban Growth Boundary (UGB). Through the Brookman Addition Concept Plan, it was identified that the road was needed to provide access to areas south of Sunset Road. The I-5 to 99W Connector project had</p>

<p>provide access to areas south of Sunset Road. The I-5 to 99W Connector project had conceptually identified the "Southern Arterial" as the primary east-west mobility route through the area, with an alignment along or just south of Brookman Road. Since the time of those planning efforts, additional planning efforts in the Basalt Creek area have refined the eastern portion of the "Southern Arterial". To establish additional clarity about the western portion of the facility, a coordinated multi-agency effort is needed to determine the future function and general capacity and design needs for Brookman Road and the Southern Arterial. These efforts will help ensure that appropriate right of way can be reserved as the area is urbanized while providing accessibility to future development. In the interim, to provide for future flexibility, Brookman Road has been designated by Washington County as an arterial with 5-lanes of right-of-way needed. It is recognized that changing the role and function of Brookman Road would require modifications to the Brookman Addition Concept Plan to determine how future development would occur. During the interim, while refinement planning has not yet completed, access spacing and other requirements will need to be evaluated on a case by case basis at the time of any development</p>	<p>conceptually identified the "Southern Arterial" as the primary east-west mobility route through the area, with an alignment along or just south of Brookman Road. Since the time of those planning efforts, additional planning efforts in the Basalt Creek area have refined the eastern portion of the "Southern Arterial". <b><i>The Brookman Road Concept Plan Area underwent a multi-agency refinement planning effort in 2019 and 2020. The results of that process recommended that Brookman Road should use a 3-lane "transitional" road design as the interim design until additional road capacity is needed. Brookman Road will maintain its Arterial designation, allowing widening to a five-lane arterial consistent with the Washington County and Sherwood TSP. This effort ensures the appropriate right of way can be reserved as the area is urbanized while providing accessibility to future development. While the majority of the existing road alignment would remain the same, the refinement process also recommended the intersection of Brookman Road and Ladd Hill Road be realigned approximately 700 feet to the south to flatten out a sharp curve and minimize impacts to residences.</i></b></p> <p><del>To establish additional clarity about the western portion of the facility, a coordinated multi-agency effort is needed to determine the future function and general capacity and design needs for Brookman Road and the Southern Arterial. These efforts will help ensure that appropriate right of way can be reserved as the area is urbanized while providing accessibility to future development. In the interim, to provide for future flexibility, Brookman Road has been designated by Washington County as an arterial with 5-lanes of right-of-way needed. It is recognized that changing the role and function of Brookman Road would require</del></p>
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	<p>application. The long-term intent is to reevaluate the Brookman Addition Concept Plan in the context of the Urban Reserve designation to the south. The evaluation would consider the refinement of both the location Southern Arterial, and a local collector level roadway to provide access to the area. As the issues for the Southern Arterial are resolved (including the long-term alignment) appropriate changes to these interim designations should be considered.</p>	<p><del>modifications to the Brookman Addition Concept Plan to determine how future development would occur. During the interim, while refinement planning has not yet completed, access spacing, and other requirements will need to be evaluated on a case-by-case basis at the time of any development application. The long-term intent is to reevaluate the Brookman Addition Concept Plan in the context of the Urban Reserve designation to the south. The evaluation would consider the refinement of both the location Southern Arterial, and a local collector level roadway to provide access to the area. As the issues for the Southern Arterial are resolved (including the long-term alignment) appropriate changes to these interim designations should be considered.</del></p>
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**RESPONSE COMMUNITY NEED:** The proposed Addendum to the Brookman Concept Plan addresses transportation and land use concerns associated with development proposed for the area served by Brookman Road. The initial concept plan envisioned Brookman Road realigned to provide a perpendicular crossing of the existing rail line and provide for a signalized intersection south of the Highway 99W/Sunset intersection. When the Brookman Addition Concept Plan was being developed, the I-5/99W connector planning was well underway. It was envisioned that a new arterial would be located south of Brookman Road, approximately 1,000 ft. Since that time, the I-5/99W connector location has not been resolved, and Washington County updated its Transportation System Plan and identified Brookman Road as an arterial. To be consistent with the County, the City has also updated its' TSP. It classifies Brookman Road as an arterial, which complicates the vision for this planned area as Brookman Road was intended as a neighborhood collector. The following community goals for this planning process included:

1. Developing and analyzing potential design concepts for Brookman Road.
2. Identifying an alignment that best reflects the future transportation needs of the community.
3. Providing multi-modal transportation facilities.
4. Minimizing impacts to properties in the Concept Plan area.
5. Reviewing zoning compatibility against potential alignments.
6. Aligning the final recommendation with City and County transportation plan

The proposed revised road alignments in the Brookman area's western and eastern subareas were developed as part of the identified need to update the Brookman Addition Concept Plan because of changing conditions since adopting the concept plan.

Consistency and regional and state regulations is discussed in detail below, in this staff report.

**B. Map Amendment**

An amendment to the City Zoning Map may be granted, provided that the proposal satisfies all applicable requirements of the adopted Sherwood Comprehensive Plan, the Transportation System Plan and this Code, and that:

1. The proposed amendment is consistent with the goals and policies of the Comprehensive Plan and the Transportation System Plan.
2. There is an existing and demonstrable need for the particular uses and zoning proposed, taking into account the importance of such uses to the economy of the City, the existing market demand for any goods or services which such uses will provide, the presence or absence and location of other such uses or similar uses in the area, and the general public good.
3. The proposed amendment is timely, considering the pattern of development in the area, surrounding land uses, any changes which may have occurred in the neighborhood or community to warrant the proposed amendment, and the availability of utilities and services to serve all potential uses in the proposed zoning district.
4. Other lands in the City already zoned for the proposed uses are either unavailable or unsuitable for immediate development due to location, size or other factors.

**FINDING:** There are no proposed map amendments to the City's Zoning Map as part of the Addendum to the Brookman Addition Concept Plan. The table below indicates the maps within the city's TSP to be amended with the proposed realignment of Brookman Road in the western and eastern subareas. This standard is met.

Page #	Item	Recommended Changes
<b><i>Volume 1: Sherwood Transportation System Plan</i></b>		
18	Figure 5	Update figure to show new Brookman Road alignment
21	Figure 6: 2035 Motor Vehicle Conditions	Update figure to show new Brookman Road alignment
41	Figure 11: Motor Vehicle Projects	Update figure to show new Brookman Road alignment and classification
42	Figure 12: Pedestrian Projects	Update figure to show new Brookman Road alignment
43	Figure 13: Biking Projects	Update figure to show new Brookman Road alignment
44	Figure 14	Update figure to show new Brookman Road alignment
57	Figure 17: Street Functional Classification	Update figure to show new Brookman Road alignment
60	Figure 18: Local Street Connectivity	Update figure to show new Brookman Road alignment
64	Figure 19: Through Truck Routes	Update figure to show new Brookman Road alignment
72	Figure 20: 2035 Non-SOV Share	Update figure to show new Brookman Road alignment

**Consistency Sherwood Comprehensive Plan, and with all other provisions of the Plan, the Transportation System Plan, and this Code, and with any applicable State or City statutes and regulations**

**STATEWIDE PLANNING GOALS**

**Goal 1 (Citizen Involvement)**

**Objective: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.**

**RESPONSE:** A summary of citizen involvement opportunities provided throughout this planning process is described in the Addendum. The Planning Commission, is the designated Citizen Involvement Committee under this goal, and provides an advisory recommendation to the City Council for review and adoption.

**Goal 2 (Land Use Planning)**

**Objective: To establish a land use planning process and policy framework as a basis for all decision and actions related to the use of land and to assure an adequate factual basis for such decisions and actions.**

**RESPONSE:** The proposed Addendum does not alter any goals and policies in the Comprehensive Plan or changes to Sherwood Plan and Zoning Map and Zoning and Development Code that are already consistent with Goal 2. The Addendum does not propose any zoning changes within the Brookman plan area.

Notice was provided to DLCD 35 days prior to the first schedule public hearing as required. The plan Addendum was developed in coordination with Metro, ODOT, ODOT Rail, Washington, and Clackamas counties to be consistent with applicable regulations.

The proposed Addendum and TSP amendments are consistent with this Goal.

**Goal 3 (Agricultural Lands)**

**Goal 4 (Forest Lands)**

**RESPONSE:** Goals 3-4 not applicable to Sherwood.

**Goal 5 (Natural Resources, Scenic and Historic Areas and Open Spaces)**

**Goal 6 (Air, Water and Land Resources Quality)**

**Goal 7 (Areas Subject to Natural Hazards)**

**Goal 8 (Recreational Needs)**

**Goal 9 (Economic Development)**

**Goal 10 (Housing)**

**RESPONSE:** The proposed Addendum Brookman Addition Concept Plan is consistent with the above Goals. The Addendum only proposes changes to the alignment of Brookman Road in the western and eastern subareas. There are no proposed changes to zoning within the plan area (commercial and residential areas) or to parks and open space within the concept plan. The plan's Addendum is consistent with these goals.

**Goal 11 (Public Facilities and Services)**

**Objective: To plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.**

**RESPONSE:** This goal is addressed by the existing water, sanitary sewer and stormwater master plans that already have anticipated development within this area and have identified projects to ensure this area is adequately served. The Addendum is consistent with this Goal.

**Goal 12 (Transportation)**

**Objective: To provide and encourage a safe, convenient and economic transportation system.**

**RESPONSE:** The proposed design cross-section of Brookman Road provides for bike and pedestrian facilities on a multi-use path. The proposed design of Brookman Road provides and encourages all modes of travel and is consistent with this Goal.

**Goal 13 (Energy Conservation)**

**Objective: To conserve energy.**

**RESPONSE:** The Brookman Concept Plan is planned with transportation options and encourages energy efficiency by providing opportunities for people to live near where they work and shop, and encouraging people to walk and bike.

**Goal 14 (Urbanization)**

**Goal 15 (Willamette River Greenway)**

**Goal 16 (Estuarine Resources)**

**Goal 17 (Coastal Shorelands)**

**Goal 18 (Beaches and Dunes)**

**Goal 19 (Ocean Resources)**

**FINDING: Goals 14-19 not applicable.**

**METRO FRAMEWORK PLAN**

**Chapter 2**

This chapter of the Regional Framework Plan presents the overall policy framework for the specific transportation goals, objectives and actions contained in the Regional Transportation Plan (RTP). It also sets a direction for future transportation planning and decision-making by the Metro Council and the implementing agencies, counties and cities.

**GOAL 1: Vibrant Communities** The greater Portland region is a great and affordable place to live, work and play where people can easily and safely reach jobs, schools, shopping, services, and recreational opportunities from their home by walking, biking, transit, shared trip or driving.

**Objective 1.2: Walkable Communities - Increase the share of households in walkable, mixed-use areas served by current and planned frequent transit service.**

**Objective 1.4: Access to Community Places<sup>1</sup> - Increase the number and variety of community places that households, especially households in historically marginalized communities, can reach within a reasonable travel time for all modes of travel.**

**RESPONSE:** The land use concepts (office and light industrial edge, small village center, residential areas) the parks, open space and trail system, and the vision for a complete community from the 2009 concept plan area do not change with the proposed realignment of Brookman Road. The 2009 concept plan sets the framework for a mixed-use community coupled with pedestrian orientated design to promote walkability to jobs, schools, commercial uses.

**GOAL 2: Shared Prosperity People have access to jobs, goods and services and businesses have access to workers, goods and markets in a diverse, inclusive, innovative, sustainable and strong economy that equitably benefits all the people and businesses of the greater Portland region.**

**Objective 2.1: Connected Region - Build an integrated system of throughways, arterial streets, freight routes and intermodal facilities, transit services and bicycle and pedestrian facilities, with efficient connections between modes that provide access to jobs, markets and community places within and beyond the region.**

**Objective 2.3: Access to Jobs and Talent - Attract new businesses and family-wage jobs and retain those that are already located in the region while increasing the number and variety of jobs that households can reach within a reasonable travel time.**

**Objective 2.4: Transportation and Housing Affordability - Reduce the share of income that households in the region spend on transportation to lower overall household spending on transportation and housing.**

**RESPONSE:** Brookman Road is designated as an arterial but is proposed to be constructed as a three-lane-arterial until it warrants widening. The road will have a multi-use path for bike and pedestrians and provides people access to jobs, goods and services, and employment opportunities. As stated above, the original intent of the 2009 Concept Plan remains the same. The Brookman area integrates land uses, transportation, open space, and green infrastructure with high expectations for quality development and sustainable pedestrian-orientated design.

**GOAL 3: Transportation Choices People throughout the region have safe, convenient, healthy and affordable options that connect them to jobs, school, services, and community places, support active living and reduce transportation-related pollution.**

**Objective 3.1: Travel Choices - Plan communities and design and manage the transportation system to increase the proportion of trips made by walking, bicycling, shared rides and use of transit and reduce vehicle miles traveled.**

**Objective 3.2: Active Transportation System Completion - Complete all gaps in regional bicycle and pedestrian networks.**

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<sup>1</sup> Community places are defined as key local destinations such as schools, libraries, grocery stores, pharmacies, hospitals and other medical facilities, general stores, parks, greenspaces, and other places that provide key services and/or daily needs.

**Objective 3.4: Access to Active Travel Options - Increase household and job access to planned regional bike and walk networks.**

**RESPONSE:** The proposed realignment of Brookman Road at the western and eastern subareas does not negatively affect the transportation system or transportation choices. The Addendum calls for a multi-use path on the northside of Brookman road to increase active transportation choices.

**16.80.030 – REVIEW CRITERIA FINDINGS:**

The proposed text amendments to the TSP are consistent with the city's Comprehensive Plan, TSP, and all applicable state and city statutes. The city's TSP was adopted in 2014 (ORD 2014-012) and are found to comply with the city's Comprehensive Plan and all applicable regional and state statutes. The city's TSP describes the Brookman Road project. The proposed text amendment brings into line the project's description with the proposed realignment of Brookman Road as shown and in the Addendum in the western and eastern subareas. The original intent of the Brookman Addition Concept Plan does not change through the proposed amendments to the TSP. The land uses, parks, open space and natural resource preservation, and the desire to development to designed to be high-quality and long-lasting for a livable future, guided by green infrastructure, remain goals of the plan.

**C. Transportation Planning Rule Consistency**

**1. Review of plan and text amendment applications for effect on transportation facilities. Proposals shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with OAR 660-12-0060 (the TPR). Review is required when a development application includes a proposed amendment to the Comprehensive Plan or changes to land use regulations.**

**FINDING:** The proposed TSP map and text amendments do not amend policies in the Comprehensive Plan or the city's Zoning Plan map. Brookman Road's functional classification remains a designated arterial roadway within the city and county transportation plans. The proposed Addendum includes a 3-lane alternative roadway cross-section for future roadway improvements. The proposed 3-lane alternative roadway cross-section within the Plan Addendum does not affect the Transportation Planning Rule. When the Brookman Addition Concept Plan was adopted, it was analyzed and determined to be in full compliance with the Transportation Planning Rule. As properties annex into the city and development occurs, additional traffic studies may be required. This standard is met.

**V. RECOMMENDATION**

The Transportation System Plan amendments within the Addendum to the Brookman Addition Concept Plan comply with applicable Statewide Planning Goals, Metro regulations, and the City's Development Code's applicable provisions.

Based on a review of the applicable code provisions, agency comments, and staff review, staff finds that the Transportation Plan Amendments are consistent with the applicable criteria. Therefore, staff **recommends that the Planning Commission forward a recommendation of APPROVAL** of the Brookman Concept Plan Addendum and associated amendments to the city's Transportation System Plan to the Sherwood City Council.

**VI. EXHIBITS**

**B. Public Comments**

B-1: Mel Taylor, November 2, 2020

B-2: Scott Edington, November 5, 2020

B-3: Clayton Hargrove, November 7, 2020

B-4: Randy and Kayla Krueger, November 9, 2020

**C. Agency Comments**

C-1: ODOT Rail, Carrie, October 23, 2020

C-2: ODOT Rail, Kurt Mohs, October 22, 2020

C-3: ODOT Region 1, Marah Danielson, November 10, 2020

**From:** [MARTIN Carrie A](#)  
**To:** [Erika Palmer](#)  
**Subject:** RE: Request for Agency Comment -- Case File LU 2020-020 PA Brookman Refinement Plan and City of Sherwood Transportation System Plan (TSP) amendments  
**Date:** Friday, October 23, 2020 7:44:33 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

Hello Erika,

Thank you for the opportunity to comment the Brookman refinement plan,

The documents state the railroad crossing is inactive. All rail crossings are to be considered active unless the tracks have been removed.

A diagnostic meeting will be required with the railroad(s), road authority, and ODOT Rail present. Suggest sometime around project kickoff and/or 30% design.

It was stated that a multiuse pathway crossing was wanted at the rail crossing. The plans do not show a multiuse pathway and instead show a cycle track (bike lane) and a sidewalk which are two separate usages not a multiuse pathway. A multiuse pathway would be combined usage with a stop bar, stop sign, minimum 10 ft wide, and most likely some sort of fencing, channelization, gates, z-channelization at the crossing to ensure, especially bicycles, stop at the crossing. There are several rail crossing projects either being constructed, in design, or other that have a cycle track (bike lane) and the cycle track will transition onto the vehicular roadway level to a bike lane at about the vehicular SSD, travel thru the gated rail crossing, and then transition back up into a cycle track around the vehicular SSD near the sidewalk once on the other side of the rail crossing. Bikes do not normally travel behind gates like a pedestrian does. It is also not suggested to place bike lanes to travel in opposite directions on one side of the roadway if they are to utilize the rail crossing gates. When the time comes for actually design of the rail crossing the railroad, road authority, and ODOT Rail can have some more detailed discussions.

It is not recommended that bikes travel at a skew across a rail crossing but instead at a 90 degree angle. If the bike lane crosses the tracks at a skew then skewed signs will be necessary.

Sidewalks need to cross at a 90 degree angle for visibility.

Typically minimum 12 ft travel lanes are needed at the crossing which the 3 and 5 lane cross section shows.

Only low vegetation should be planted in advance and directly next to the rail crossing due to sight distances for vehicles, bikes, and pedestrians safety within the sight triangle. Tree plantings or objects in advance of the crossing should not block railroad signs and signals or it will not pass final inspection.

Will there be a cantilever installed for the rail crossing when the rail crossing transitions from 3 lanes

to 5 lanes? This was not shown in the document.

Will there be a median with guardrail to place railroad equipment/gates when the roadway transitions from 3 to 5 lanes?

All roads/driveways near the rail crossing will need to be looked at further, and especially when the crossing goes from 3 to 5 lanes wide. Some side roads may need to be right in/right out or closed/moved depending on the distance from the tracks and if they are within the SSD of the rail crossing.

Suggest looking at other projects like 209<sup>th</sup>, Century, Cornelius Pass Rd rail crossings for examples of newer design concepts.

Thank you,

*Carrie Martin*

ODOT Rail

Crossing Compliance Specialist

[Carrie.A.Martin@odot.state.or.us](mailto:Carrie.A.Martin@odot.state.or.us)

(Cell) 971-719-0906

**From:** Erika Palmer <PalmerE@SherwoodOregon.gov>

**Sent:** Wednesday, October 21, 2020 4:02 PM

**Subject:** Request for Agency Comment -- Case File LU 2020-020 PA Brookman Refinement Plan and City of Sherwood Transportation System Plan (TSP) amendments

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Hello Agency Partners:

The City of Sherwood Planning Department is requesting agency comments on the following proposal. A public hearing with the Sherwood Planning Commission is scheduled for Tuesday, November 10, 2020, at 7:00 pm, and a City Council hearing tentatively planned for December 1, 2020, at 7:00 pm. Pursuant to House Bill 4212 (2020), this meeting will be conducted electronically and will be live-streamed at <https://www.youtube.com/user/CityofSherwood>

**Proposal:** The City of Sherwood proposes to adopt a refinement to the Brookman Addition Concept Plan and associated map amendments to the City's TSP, showing the proposed Brookman Road re-alignment at Highway 99w and Ladd Hill Road.

**Code Criteria:** Sherwood Zoning and Community Development Code 16.80, Oregon State Land Use Goals, 1, 2, 12, Metro's Framework Plan, Sherwood Comprehensive Plan Chapter 2.

The link to the project webpage:

**From:** [MOHS Kurt A](#)  
**To:** [Erika Palmer](#)  
**Subject:** RE: Request for Agency Comment -- Case File LU 2020-020 PA Brookman Refinement Plan and City of Sherwood Transportation System Plan (TSP) amendments  
**Date:** Thursday, October 22, 2020 7:17:24 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)

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Erika,

Pursuant to ORS 824.202, the Oregon Department of Transportation, Commerce and Compliance Division (Department) has authority over the construction, alteration and protection of railroad-highway crossings in the State of Oregon.

Any modifications to existing at grade crossings require a crossing order issued by the Oregon Department of Transportation. The process to get to the final order begins by conducting a diagnostic meeting on site with ODOT rail crossing safety staff, the road authority and railroad (railroads in this case) as the underlying railroad right of way is owned by the Union Pacific Railroad. The line is leased to Portland and Western Railroad.

Any significant increase in average daily traffic at an existing at-grade crossing would also trigger at a minimum a discussion to determine if the existing safety devices are adequate to handle the increase in traffic.

The construction of an overpass also requires a diagnostic meeting and crossing order.

The construction of new at grade crossings is discouraged by our department and by the railroads. I believe the UPRR railroad currently requires that for any new at-grade crossings built, there be 3 at-grade crossings closed nearby.

Thanks for the opportunity to comment.

Kurt

Kurt Mohs  
Rail Crossing Compliance Specialist  
ODOT Commerce and Compliance Division  
(503) 551-0602

✉ [palmore@sherwoodoregon.gov](mailto:palmore@sherwoodoregon.gov)

👉 [www.sherwoodoregon.gov](http://www.sherwoodoregon.gov)

**Sherwood Community Development Department office hours are Monday – Friday 8 am to Noon**

During this time of health emergency, we are encouraging the use of email and making appointments with staff. Thank you for understanding.

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## Department of Transportation

Region 1 Headquarters  
123 NW Flanders Street  
Portland, Oregon, 97209  
Phone: (503) 731-8200  
Fax: (503) 731-8259

November 10<sup>th</sup>, 2020

To: Erika Palmer, Sherwood Planning Manager

From: Marah Danielson, ODOT Senior Planner

Subject: Brookman Rd Concept Plan Update and TSP Changes

ODOT participated in the Brookman Rd Concept Update planning process which reevaluated the need to relocate the Brookman Rd intersection at OR 99W. At the time the plan was originally done, the region was exploring options for the I-5 to OR 99W connector (Southern Arterial) which is why the concept plan showed relocating the Brookman Rd intersection to north by a ¼ mile. Upon further evaluation through the plan update process, it has been determined that there is not a need to relocate Brookman Rd intersection at OR 99W. ODOT supports the decision that the Brookman Rd connection to OR 99W remain in the existing location. The city's Transportation System Plan identifies a project to install a signal at the intersection. Since there isn't a design concept for this project at this time, we do not know whether the improvements can be done within the existing right of way. While additional right of way to the north may be needed to improve the intersection alignment for the future improvement, some preliminary design is needed to inform that decision. Based on the level of analysis for this planning effort, ODOT thinks it is reasonable to show the Brookman Rd connection at OR 99W within the existing right of way.

ODOT has reviewed the proposed TSP language changes to implement the Brookman Rd Concept Plan Update. The proposed language changes for page 36 of the TSP address the outcome of the update to remove the language for relocating the Brookman Rd/OR 99W to the north by ¼ mile. The proposed language changes also include removing the language requiring a traffic signal at the intersection. Although the intersection will remain in its current location, a traffic signal should still be included in the TSP since it is needed to mitigate traffic growth at the intersection. The project team has indicated that it was not the city's intent to remove the signal project from the TSP. Therefore, ODOT recommends the following language relating to the Brookman Rd/OR 99W intersection:

- The intersection of Brookman Rd and OR 99W to be improved with the installation of a traffic signal. All traffic signals on the state highway system need to be approved by the State Traffic Engineer and design coordination with ODOT is needed to ensure that the improvements are done in a manner that improves driver expectation and safety. The design of the intersection may result in the need for additional right of way to improve the intersection alignment.

**From:** [Mel Taylor](#)  
**To:** [Erika Palmer](#)  
**Subject:** Comments for Brookman Concept Plan Refinement  
**Date:** Monday, November 2, 2020 11:49:13 PM

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

I just noticed that I had some mail from the Planning Dept at the City of Sherwood, letting me know that after Covid delays, they were scheduling "public" hearings to get approval for recommended refinements to the 2009 Brookman Concept Plan. In going on line to review the documents that are being proposed, I found a Public Hearing Notice (LU 2020-020 PA) that says that for comments to be considered and addressed within the staff report, I need to submit them today. The mailing I received did not mention the staff report comment deadline. I just happened to click on the Public Hearing Notice, and read it.

I have a couple of things I would like to comment on. The first being the process that has been followed to realign the Brookman Rd. And the second thing I would like to mention is it seems like a lot of effort is being made to not let people know what is really being proposed for Brookman Rd. It is obvious that the door is being left open for Brookman Rd to be the Southern Arterial (think I-5 to Hwy 99 connector, if another route is not found. The proposed alignment of the road gives that away.

First the process comments. Resolution 2019-027, April 16, 2019 page 2, states that in doing the refinement plan to determine the future alignment of the road, a meeting would be held with stakeholders, including existing land owners. None of the landowners on the East end of Brookman Rd were aware that the refinement work was being done, until the work was finalized. They did not meet with us. But we all got postcards letting us know it was done, and to go online to look at it. And now, the two public hearing that I was promised, have turned into an opportunity to send comments, and watch a live-streamed Youtube. From the start it looked like there was something that the City did not want people to know about the proposed refinement plan.

So, I think the citizens and property owners need to be told about the possibility that Brookman Rd, parts or all of it, may be the Southern Arterial connecting I-5 to Hwy 99 at some time in the future. At the start of the refinement process the goals were to tie the Brookman Rd area into the rest of the city, slow traffic down (it is 25/35 MPH now) and to maintain the character of the area. That makes sense. But when you look at the route that is proposed, it does not do that. On the west end, the intersection with Hwy 99 does not move north to make a place to connect a future Southern Connector, it becomes the Southern Connector. And on the East end, instead of connecting back to town, it goes up the hill, on a big fill, to gain elevation to get over the top and over to the Basalt Creek Industrial/Commercial area. And extra ROW is being taken to be able to have five lanes to handle the traffic. And a five lane road is not usually a slow road. It does not maintain the woodsy residential character of the area.

And the new refinement plan states that another reason for the proposed alignment is that it minimizes the impact to properties in the concept plan area. That is not true on the East End. The need to get the road up and over the hill to connect to 124th and Tonquin in the future, has dirt piled up so close to three of the homes (one is mine) that no one would want to live in them. That may be the point. The city wants all of the people there to sell so the area can develop. I just hope that we will be compensated for the having a arterial highway run through them, to solve a regional transportation problem for Metro, and a money problem for the City of Sherwood. Why else would a city want a regional highway run through an area prime for residential development if it wasn't to get regional money. I just don't want to be hurt by that as a property owner. I don't think others in the City will like it either.

I think that regional transportation needs (think Portland Metro) not City of Sherwood needs were the things that determined the design of Brookman Rd. And it is interesting that the City is recommending that the residential zoning be maintained. Will Brookman Rd become a truck route, like Tualatin Sherwood Rd? Maybe commercial zoning would be more appropriate. My concern is that the value of my

property on the east end of Brookman Rd will be reduced. I should probably help keep the Southern Connector deal a secret to protect the value of my property. I am not opposed to the area developing, but I am opposed to having a regional arterial go through a valley that people think is going to be a quiet woodsy highly desirable residential area. I think that is what the people of Sherwood are expecting. OK maybe to start with it will be a three lane road, like Sunset Blvd. But the people are not going to be happy when it Metro says it is time to connect it over to 124th and Tonquin, as a five lane arterial.

It is interesting that the City of Sherwood has approved a cul-de-sac in one of the new subdivisions that may someday connect to a five lane arterial.

And if I am wrong about what I think is going on, just tell me. I would love to know that I am wrong. Just say it.

And I apologize for any spelling errors. I just happened to find out that the deadline to whine was tonight, and I just has a short time to comment. I don't like the secretive process. I don't go around looking for meeting notices, etc. Are they posted on the bulletin board at the library. Do I need to go down and look every couple days? And I am sorry if I missed some little technicality or committed a process error.

Mel Taylor  
541.225.7722

**From:** [Scott 4045](#)  
**To:** [Erika Palmer](#)  
**Subject:** Brookman Addition Concept Plan  
**Date:** Thursday, November 5, 2020 11:12:20 AM

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

I would like this email/letter to be included in the public comment for the upcoming hearing on Tues, Nov 10, 2020:

Dear Planning Commission and City Council,

I am not opposed to growth when it's done correctly. However, future growth should not negatively impact existing residents and neighborhoods. I feel the current Brookman Addition Concept Plan, as presently laid out, does hurt existing residents and neighborhoods in many ways.

With all of the changes that have occurred since the city originally drafted the plan (county reclassification of Brookman Rd - collector vs artery is a big one), **I feel it is worth reevaluating the plan. Specifically, I'd like to address the planned location of the high density housing and in light of the many changes, how it's current location could negatively impact the surrounding community.**

#### **Placement of Higher Density Housing**

Under the current plan, the high density housing is tucked in away from 99W; heavily bordered by much lower-density housing types. This creates some challenges: traffic, safety and feel/continuity of neighborhoods.

Building the high density housing closer to 99W, like Woodhaven Crossing and Creekview Crossing (condos by the YMCA and at corner of Meinecke/99W) would be a much smarter option!

Since we already have precedence in our city for building high density this way, this seems like a VERY easy solution to implement.

Putting the high density on 99W improves traffic issues for both the high density residents and bordering neighborhoods:

- High density residents have better on/off access to 99W
- Bordering residents don't have the high density traffic filtering through the neighborhoods

If the high density housing is NOT moved from it's planned location to be closer to 99W, another solution would be to make a singular and dedicated entrance to the site from Brookman Road. Something similar to the way the Woodhaven Crossing (condos by YMCA) only has access to 99W and not to Woodhaven Dr or surrounding neighborhoods.

I acknowledge the topography and the way the area is currently partitioned/zoned, makes this option challenging, but with some simple adjustments to the plan, feel this could be a viable option as well.

Moving the high density near the highway also helps the liveability, continuity and feel of the existing neighborhoods by better matching density types as you go deeper into the Brookman area.

**Traffic Impact on Existing Neighborhoods & Middleton Elementary**

If the high density housing is built in it's proposed location and with the arterial vs collector road issue, there is a concern that residents of the high density housing would use surface streets through the neighborhoods to the north to gain access to Sunset and then 99W instead of using Brookman Road.

The proximity of Middleton Elementary to the north and it's surrounding School Zone further amplify this challenge and concern.

The school's physical location already creates access and traffic challenges throughout the area, especially during the morning commute.

Middleton also has a high number of kids that walk to school through these neighborhoods.

Allowing/pushing this new traffic north, up and around Middleton Elementary, creates additional and unnecessary risk that could be easily avoided with minor changes to the now outdated concept plan.

**Conclusion**

To me, the easiest solution is to update the plan and move the high density housing closer to 99W, just as we've done with the Woodhaven & Creekview Crossing condos.

**Please consider updating the Brookman Addition Concept Plan to better optimize the location of where the high density housing is built.**

The county's reclassification of Brookman's roadway type should be more than enough justification to redo and build a better plan.

At the very least, please consider other solutions to address these concerns so existing residents and neighborhoods aren't negatively impacted by implementation of this current, diminished concept plan!

Thank you for your time and service to our community!

Regards,

Scott Eddington  
23911 SW Aspen Lakes Dr  
Sherwood, OR 97140

**From:** [Clayt H](#)  
**To:** [Erika Palmer](#)  
**Subject:** Testimony, Brookman addition concept plan  
**Date:** Saturday, November 7, 2020 1:09:59 PM

Attachment B-3

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

I am a owner Clayton Hargrove, as well as my brother Keith Hargrove of the property at the corner of Brookman and 99W.

This plan has been based on apparently a study, that locates moving the road through properties, instead of where it pre-exists. This destroys sections of property I own for pasture, as well as across the street up Chapman, to bring it back to where it pre-exists.

Who did this study?

The safety problem has always exists due to the short center section cars enter to cross the street/turn. Much of the time, car signals not canceled automatically with such a small area half way through a turn. The combination of this, cars starting to go, stop for others, from this point has lead to many accidents of cars pulling out in front of others at full speed, distracted by the center median section activity.

A proper intersection with a traffic light eliminates the distraction.

To waste money in building a entirely new road winding the road around through people's properties I don't find a credible solution. Which also is split by the main Highway, and two separate plans, (I believe).

A project like this is what has been on Roy Rogers for over a year of fiddling around (24 hour a day construction). As a side note I worked in construction, and ready mix.

Proper contractors, design, is a simple thing at this intersection, that doesn't need a complete new road. Nor a high tax dollar Bill to tax payers, for a job milked out for massive payouts in putting roads through people properties, instead of where it already is.

**From:** [acedheatingcooling](#)  
**To:** [Erika Palmer](#)  
**Subject:** property owner  
**Date:** Monday, November 9, 2020 6:01:08 PM

## Attachment B-4

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

Testimony public hearing  
Property owner right and forcing to move.

I just discovered about this meeting and planning that is going on at my property.

Your proposed plan, if I am looking at this correctly is going through the middle of my property.

This has been our home for 34 years and we are not moving and are against this proposal.

We advise a different solution instead of forcing people out of their retirement home.

Our property in question is  
18468 sw brookman rd, sherwood, or 97140.

We say no to this plan!

Local affected property owner

Randy & Kayla Krueger  
503-746-3772

Sent from my Verizon, Samsung Galaxy smartphone

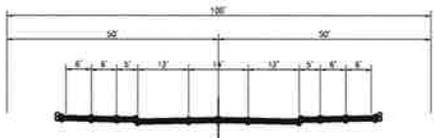
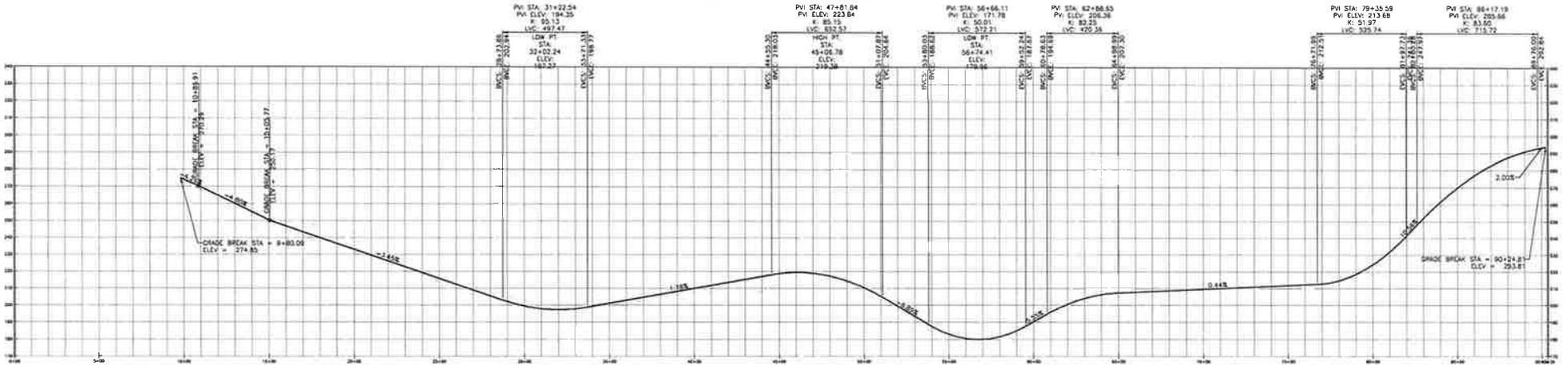
# APPENDIX A.

# BROOKMAN ROAD ALIGNMENT CROSS SECTIONS

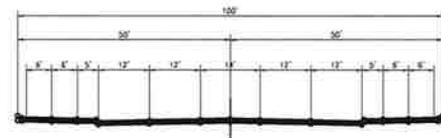


OCTOBER 2019  
 DRAFT FOR INTERNAL DISCUSSION  
 BROOKMAN ROAD ALIGNMENT STUDY - THIRD ROADWAY ALIGNMENT

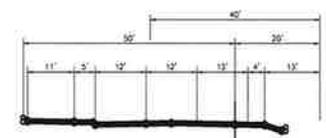
PROFILE VIEW: THIRD ALIGNMENT



3-LANE ARTERIAL CITY ROAD SECTION



5-LANE ARTERIAL COUNTY ROAD SECTION

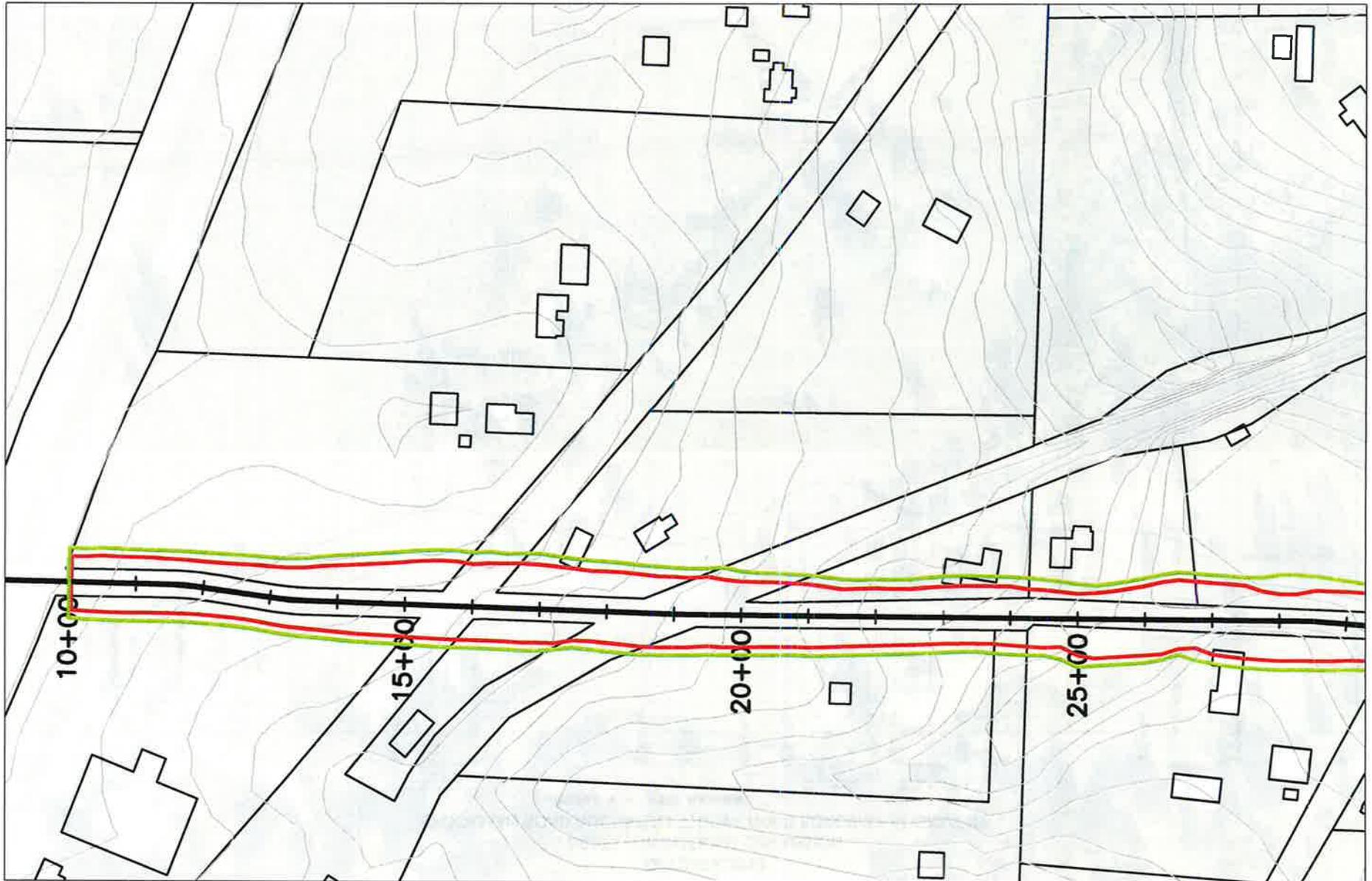
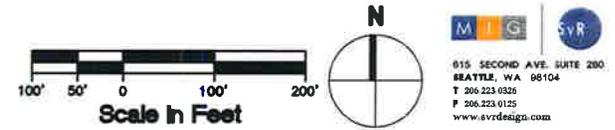


3-LANE ARTERIAL ALTERNATE CITY ROAD SECTION

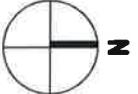
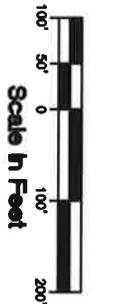
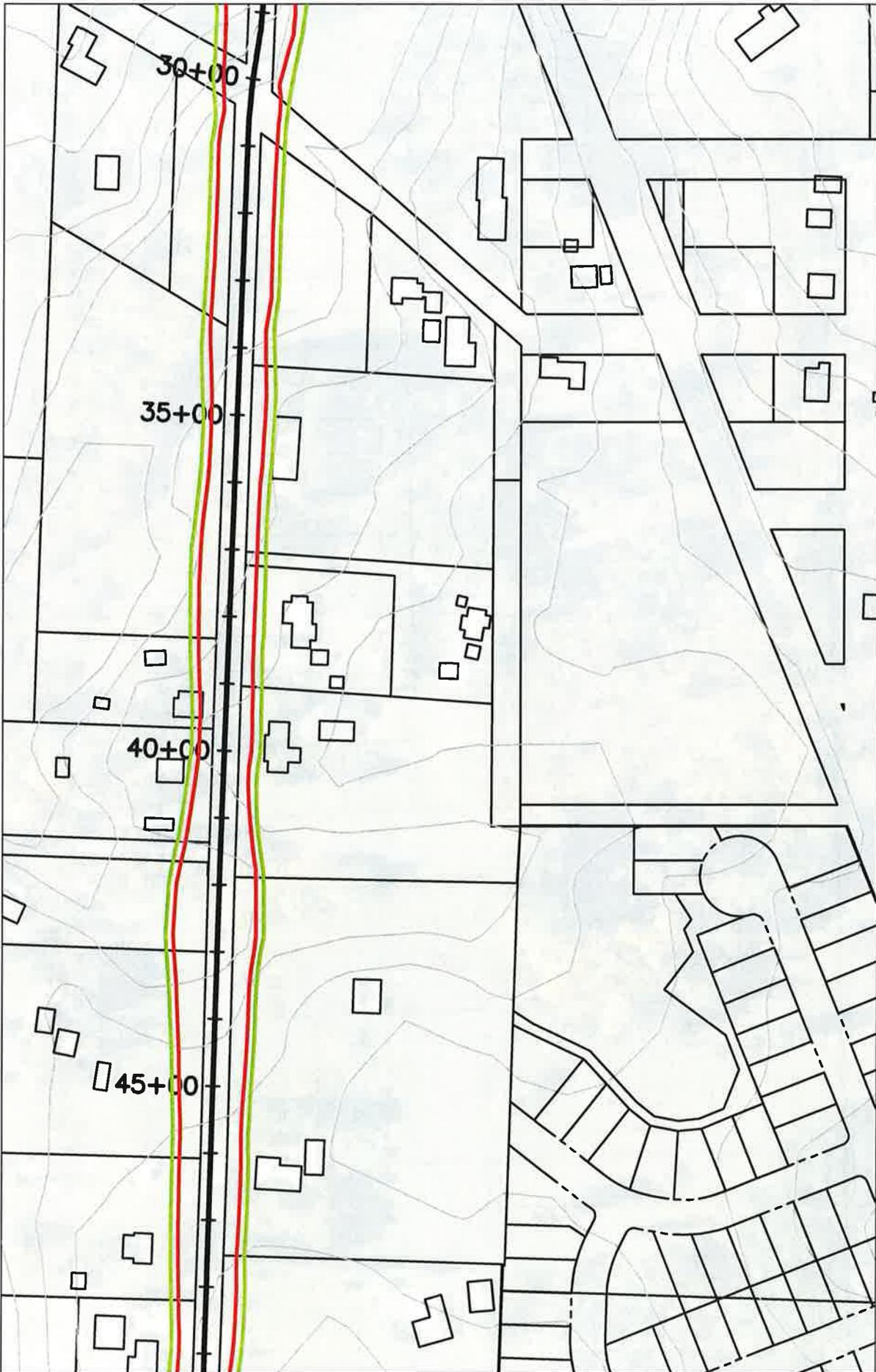
**THIRD BROOKMAN ROAD ALIGNMENT**  
 3-LANE ARTERIAL CITY ROAD SECTION  
 5-LANE ARTERIAL COUNTY ROAD SECTION  
 3-LANE ARTERIAL ALTERNATE CITY ROAD SECTION



**BROOKMAN ROAD ALIGNMENT**  
3-LANE ARTERIAL CITY ROAD SECTION  
5-LANE ARTERIAL COUNTY ROAD SECTION  
3-LANE ARTERIAL ALTERNATE CITY ROAD SECTION

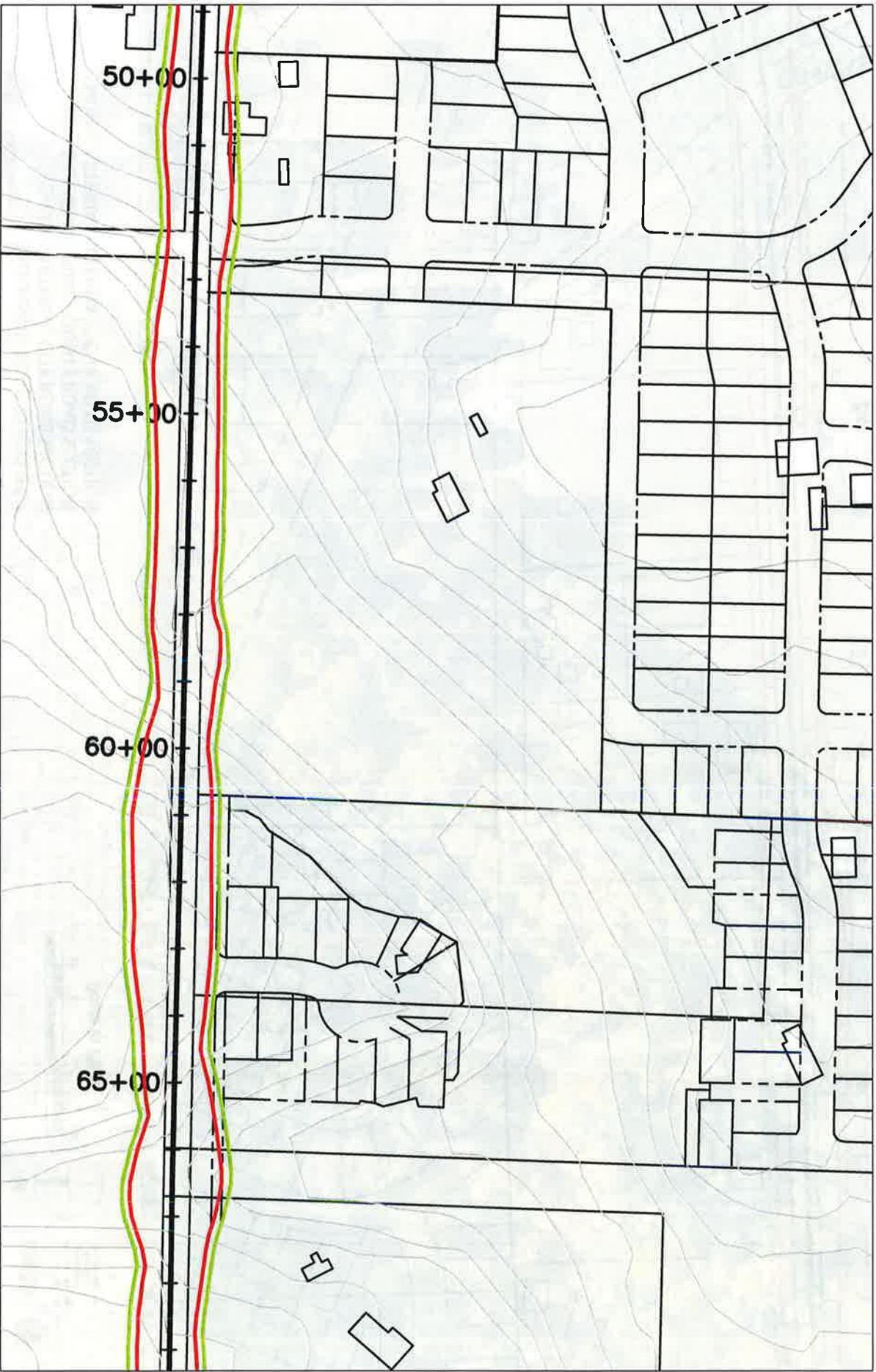


**BROOKMAN ROAD ALIGNMENT**  
3-LANE ARTERIAL CITY ROAD SECTION  
5-LANE ARTERIAL COUNTY ROAD SECTION  
3-LANE ARTERIAL ALTERNATE CITY ROAD SECTION



**M I G** **S R**  
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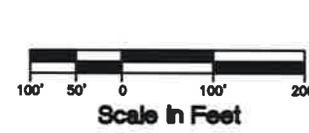
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5-LANE ARTERIAL COUNTY ROAD SECTION  
3-LANE ARTERIAL ALTERNATE CITY ROAD SECTION



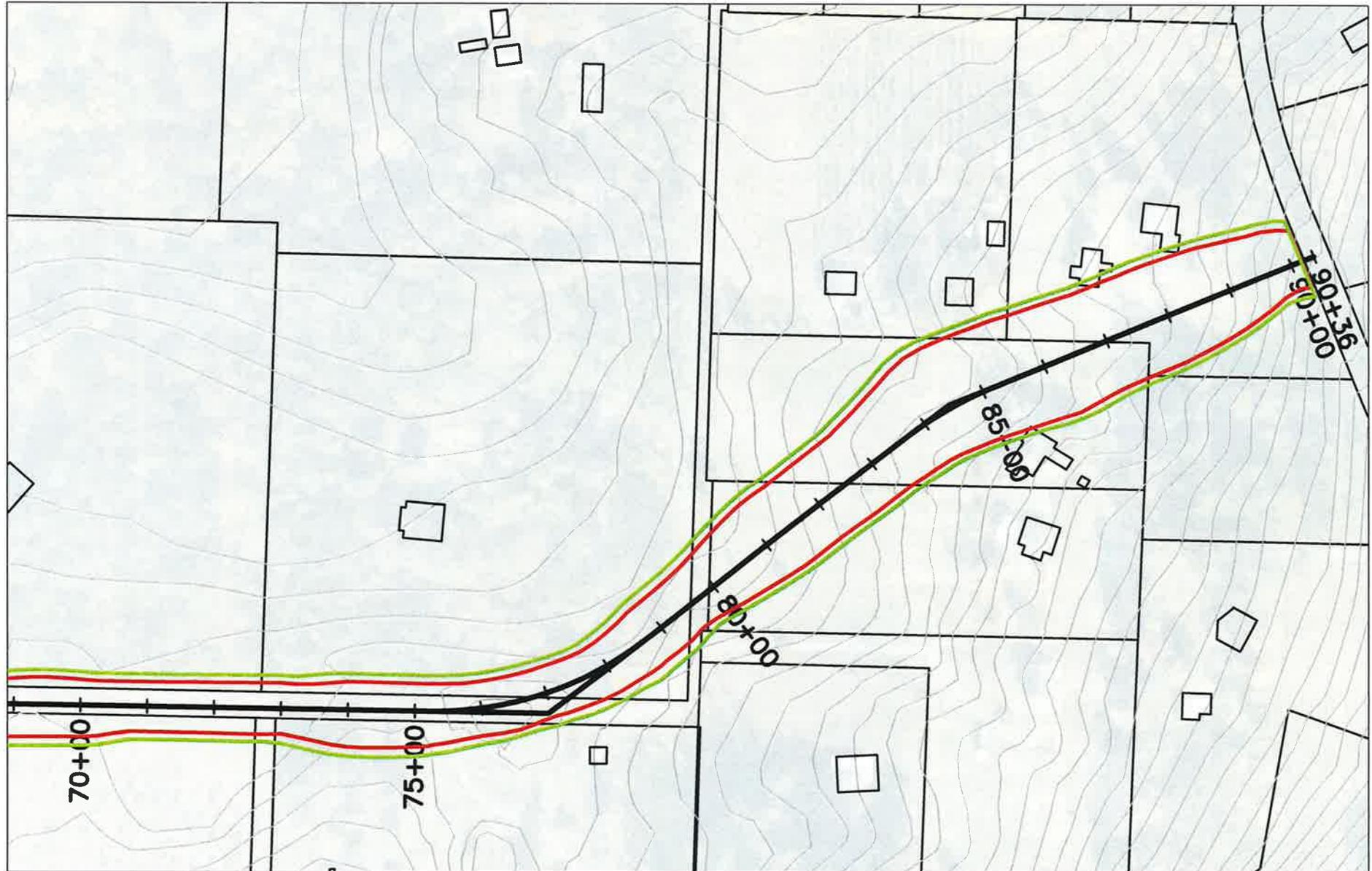
  
615 SECOND AVE, SUITE 200,  
SEATTLE, WA 98104  
P 206.223.0128  
www.svdengine.com



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3-LANE ARTERIAL ALTERNATE CITY ROAD SECTION



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# B.1

# ADDENDUM TO THE BROOKMAN ADDITION CONCEPT PLAN





## **B.1**

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## PROJECT PURPOSE

The purpose of this document is to summarize analysis and identify changes, as applicable, to the alignment and road classification of SW Brookman Road. As the alignment could also affect future land use designations, land uses were also evaluated to determine whether changes to the land use designations identified in the adopted Brookman Addition Concept Plan should also be modified.

In 2019, the City of Sherwood received a Metro 2040 Community Planning grant to refine the Concept Plan. Many factors have changed since the adoption of the Brookman Concept Plan in 2010 including the new Sherwood High School, ODOT requirements for a connection with Highway 99W, Washington County changes to the classification of Brookman Road, annexation requests, and land-use applications for new developments. In a coordinated effort with Washington County, ODOT, and Metro, the City began an effort to analyze the alignment and possible design of Brookman Road.

The following goals provided direction during the plan refinement process.

1. Developing and analyzing potential design concepts for Brookman Road.
2. Identifying an alignment that best reflects the future transportation needs of the community.
3. Providing multi-modal transportation facilities.
4. Minimizing impacts to properties in the Concept Plan area.
5. Reviewing zoning compatibility against potential alignments.
6. Aligning the final recommendation with City and County transportation plans.

The Sherwood TSP and Brookman Addition Concept Plan originally identified the future function

of SW Brookman Road as a three-lane collector facility with bicycle and pedestrian improvements. The Washington County TSP and I-5/99W Connector Study (included as part of Metro's 2018 Regional Transportation Plan) identify SW Brookman Road as a 5-lane arterial in the future. Following this designation by the County, the Sherwood TSP was amended to designate SW Brookman Road as a 5-lane arterial; constructing the road as a three-lane arterial but reserving additional road right-of-way for five lanes. In addition to widening SW Brookman Road to accommodate either a three-lane or five-lane cross-section, the Sherwood TSP and other planning documents have identified the need to realign SW Brookman Road slightly to the north to provide safe geometrics for turning movements to and from side streets.

This document is organized into the following sections:

1. **Background**, which provides the context for completing this project.
2. **Public Engagement**, which covers the two engagement opportunities over the course of the project and overall themes that emerged.
3. **Brookman Road Design Alternatives**, which summarizes the cross-section alternatives and roadway alignments analyzed for the project.
4. **Transportation Analysis**, which highlights key points from the evaluation of future conditions to determine the long-term roadway and intersection capacity and operational needs from the transportation analysis prepared by DKS and Associates.
5. **Implementation**, which includes the final recommendation and next steps for implementation.

## BACKGROUND

The Brookman Addition Concept Plan, adopted by the city Council in June 2009, is a guide for the creation of a new 250-acre community in Sherwood. The Concept Plan identifies the general location and intensity of future land uses, including medium-low to high density residential, mixed use commercial, employment, parks, and open space. A conceptual layout of basic infrastructure systems including transportation, trails, utilities, and stormwater management has been integrated with future land uses. The Concept Plan follows a 2002 decision by Metro to bring the area into the regional urban growth boundary (UGB).

The 2009 concept planning effort included a comprehensive review of the existing inventory of land use, Goal 5 resources, transportation and public facilities, a market study, and a survey of the needs of current residents and property owners. The Concept Plan also identified future land uses, public facilities, including parks and open space, civic uses, and transportation corridors. Until annexation occurs, the Brookman area will remain in unincorporated Washington County. Since the Plan's adoption, the City has applied zoning to land annexed into the Sherwood City Limits consistent with the general land use categories identified within the Concept Plan and Sherwood Comprehensive Plan. Those areas are already in various stages of development

The Concept Plan and the City's Transportation System Plan designates Brookman Road as a collector roadway with the OR 99W/Brookman Road intersection realigned approximately 1,300 feet to the north of the existing intersection. Brookman Road is intended to serve as the primary east-west connection between OR 99W and Ladd Hill Road. Figure 1 illustrates the proposed location of the road constructed as a three-lane collector. The realigned Brookman Road would also include a new grade separated crossing of the railroad tracks. The plan also proposed a physically separated multi-use pathway for bicyclists and pedestrians running parallel to Brookman Road.

Since the adoption of the 2009 Concept Plan, the Washington County TSP states access spacing and other requirements will need to be evaluated on a case by case basis. Along collector roadways, access spacing should be a minimum of 100

The long-term intent was to reevaluate the Concept Plan in a coordinated multi-agency effort to determine the future function, general capacity, and design needs for Brookman Road and as a three-lane roadway and as a possible five-lane Arterial.

feet and a maximum of 400 feet to meet City of Sherwood and Washington County standards. The Concept Plan achieves these standards, with several minor exceptions. Access spacing greater than 400 feet occurs along green spaces where motor vehicle access will not be provided, as well as at the grade-separated rail crossing on Brookman Road. The long-term intent was to reevaluate the Concept Plan in a coordinated multi-agency effort to determine the future function, general capacity, and design needs for Brookman Road as a three-lane roadway and as a possible five-lane Arterial.

However, as development has begun in the Brookman Area, the City is attempting to address a lack of uniform street classifications for Brookman Road. Additionally, the City is seeking to review the current land uses to assure they are still appropriate as the area builds out. This review includes an analysis of the potential urban development and the intersection of an additional arterial road with OR 99W (Pacific Highway). During the development of the Brookman Addition Concept Plan the location of a southern arterial i-5 connector was not known and the Concept Plan indicated Brookman Road could serve as a collector roadway and that the existing intersection of SW Brookman Road and 99W be realigned north to avoid conflicts with the southern arterial. Since the adoption of the Concept Plan, SW Brookman Road has been designated as a 5-lane arterial by both the Washington County and City of Sherwood transportation system plans to provide for future flexibility. Both recognized that additional multi-agency planning efforts were needed to reevaluate the needs of SW Brookman Road and refine the Concept Plan.

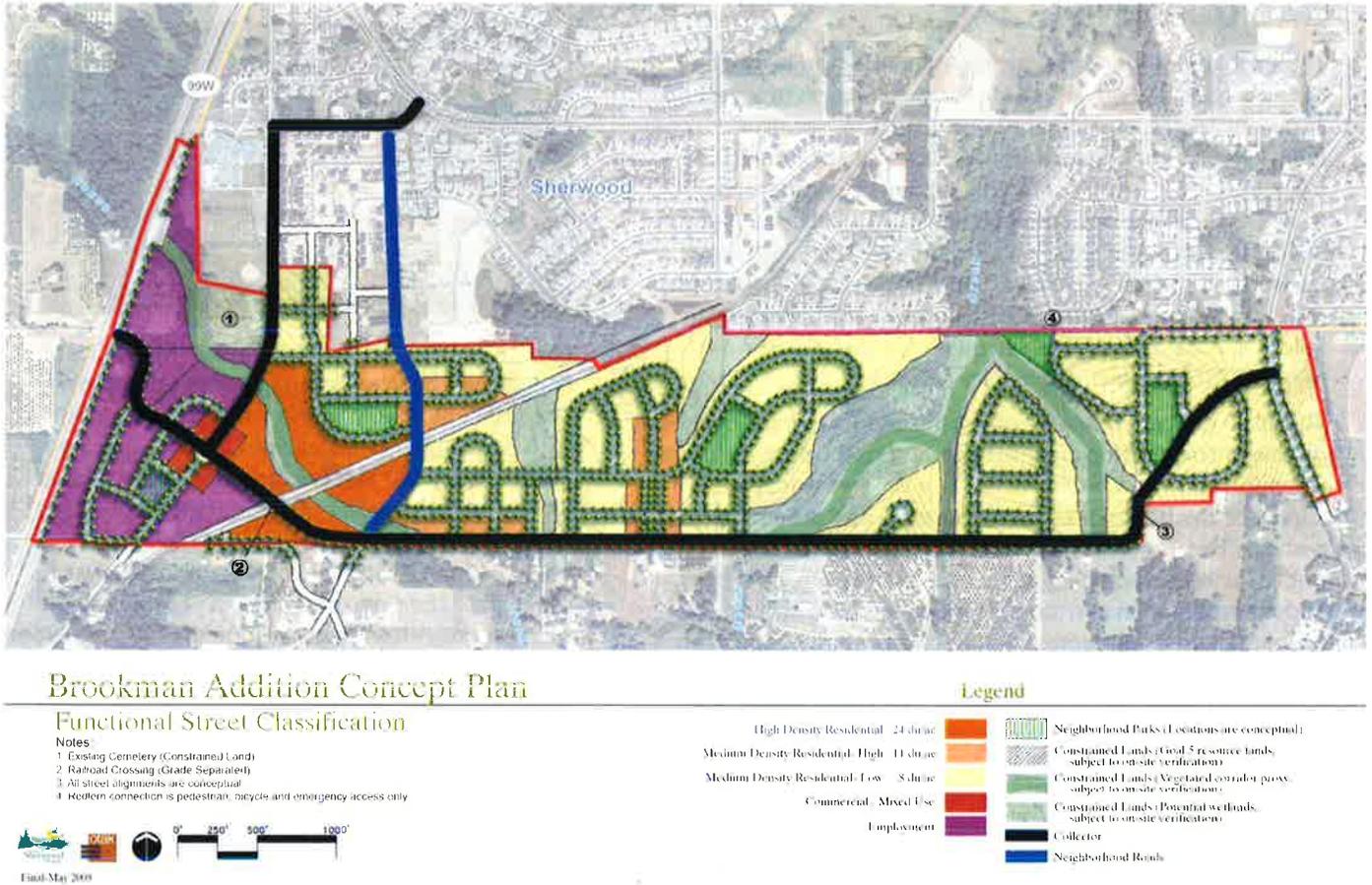


Figure 1: 2009 Brookman Additional Concept Plan Functional Street Classification and Zoning

## PUBLIC ENGAGEMENT

The planning process engaged local landowners and residents at two events during the project: in-person stakeholder meetings during the project initiation phase of the project and an online open house to vet potential Brookman Road alignments. Public information, including information about opportunities to provide input, was distributed through established City communication channels and direct mailings to area addresses. A project webpage on the Sherwood website served as an informational portal through the plan refinement process.

### Stakeholder Meetings – June 12, 2019

At the outset of the planning process, the project team met with developers currently active in the Brookman area, landowners, residents, and businesses in the plan area. These in-person

interviews provided insights into key issues and opportunities along the Brookman Road corridor. Several key themes emerged from the stakeholder interviews:

- » **Brookman Road is not safe in its current condition.** Due to a variety of users, the lack of right-of-way creates an unsafe road. High vehicle speeds, restricted site lines, and tight curves add to a consensus that immediate improvements are needed to address safety.
- » **The vision should reflect the area.** Participants articulated a vision for the future of Brookman Road which included safety for all users, including wildlife; a primarily residential road that incorporates scenic qualities; a practical design that is not overbuilt; and serves local land uses.

- » **Any future design should accommodate growth.** As Sherwood grows, there should be a long-term vision in place of where growth should occur and what improvements need to be made to accommodate that growth. However, road improvements could be focused on improving capacity within the UGB, not in periphery locations such as Brookman Road.
- » **Consider connections to the north of Brookman.** Some participants identified a potential connection to the area using Redfern Place.
- » **Clarity on the cost of the project.** The size and potential cost of modifying Brookman Road from its current conditions to an arterial should be clear and transparent.
- » **Transparency from the City.** Several participants requested frequent and transparent communication from City staff regarding current and future planning efforts for the area.

A summary of the meeting is included as **Attachment 1** to this addendum.

#### *Online Workshop – April 2020*

A public workshop was planned in March of 2020 to discuss potential Brookman Road design alternatives. Prior to holding the meeting, State of Oregon requirements to reduce the spread of COVID-19 restricted large gatherings. As a result, the in-person event was hosted as an online open house, which provided the same information as what would have been presented at the in-person event. An online event was produced as a PowerPoint presentation that the public could view. A draft of this was first presented to the City Council on April 7, 2020. The presentation was hosted on the City website and the community was encouraged to provide comments to the consulting team. The online open house was available from April 15, 2020 through May 4, 2020, during which two comments were received. Comments included requests for preservation of the existing community and requests that the City study the area through the prism of developer buildability.

## **BROOKMAN ROAD DESIGN ALTERNATIVES**

Three cross section options and alignment alternatives were developed during the project to identify potential tradeoffs between various options, road configurations, and potential revisions to the existing alignment identified in the Concept Plan. The following three alternative concepts were presented as potential designs for SW Brookman Road as the area is annexed and developed. Both three- and five-lane cross sections were considered as well as multiple alignment options. Both cross sections are assumed to be constructible for any of the alignments.

Three- and five-lane options were considered because:

- » The Concept Plan identifies Brookman Road as a three-lane collector. The TSP originally included the future roadway as a three-lane collector with the western terminus north of the existing intersection, consistent with the Figure 1 of the Concept Plan.
- » Washington County has identified in its TSP that Brookman Road should be a five-lane limited access arterial along the length of the roadway. The location of Brookman Road was not identified specifically, but is assumed to be the general location of the existing alignment.

Prior to developing the Brookman Road Alignment options, the City, Washington County and ODOT coordinated to confirm that existing plans are incorporated into the alignment and cross section options. The results of this coordination informed the cross sections and alignment options, which were then vetted through the March online open house.

## **CROSS SECTION OPTIONS**

The following cross sections provide general guidance on how Brookman Road could be constructed at some point in the future. No construction (other than what is required to be constructed as part of subdivisions already being constructed or within the entitlement process) is proposed. If construction were to occur in the future, additional site analysis and public outreach would occur as part of the formal design process.

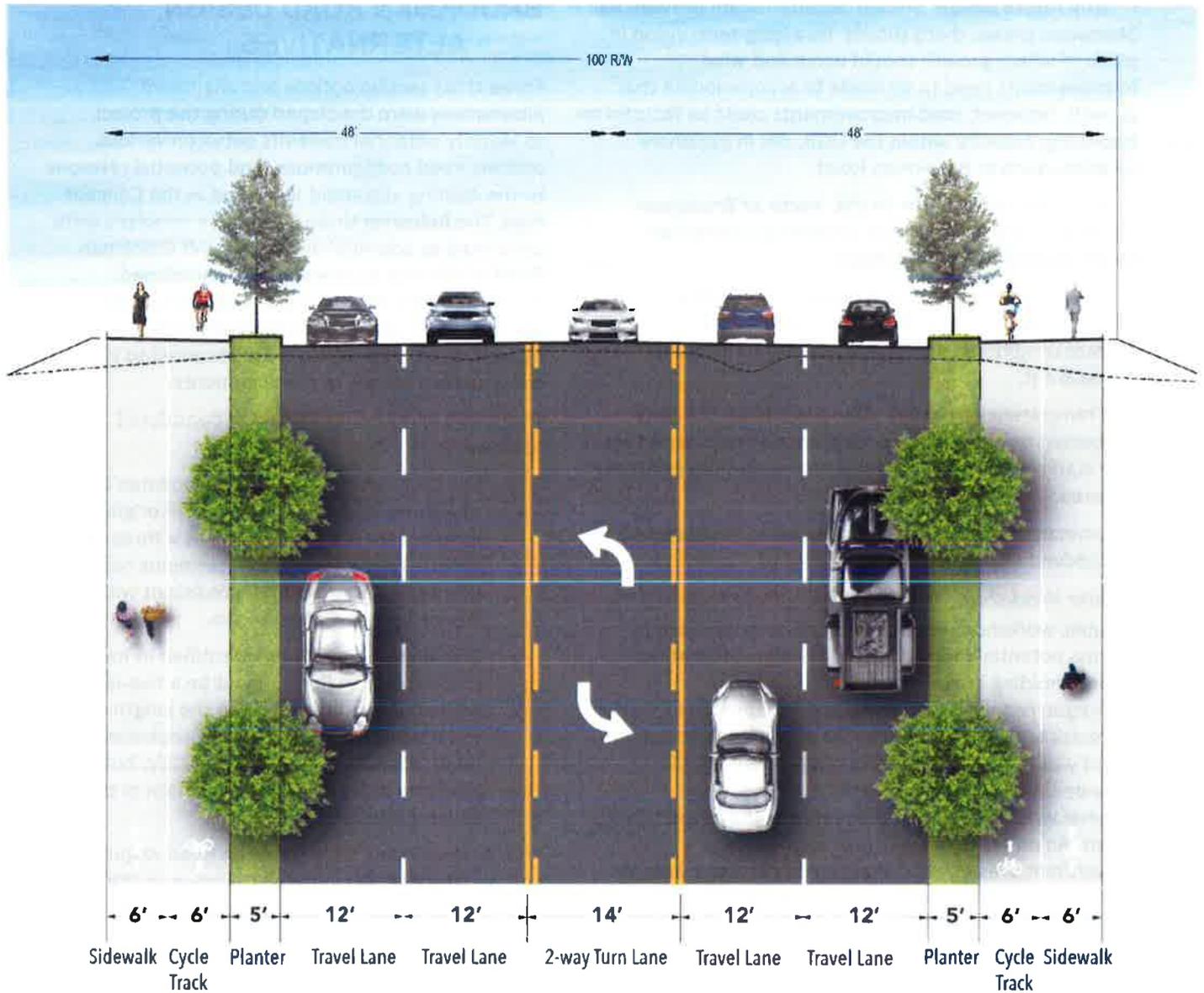


Figure 2: 5-Lane Cross Section

### OPTION 1: 5-LANE CROSS SECTION

This option includes two 12-foot lanes in each direction with a 14-foot center turn lane, planting strips, six-foot cycle tracks, and six-foot paved sidewalks. In total, the road and associated improvements would be 96 feet wide. Option 1

would be built to County standards and Washington County transportation system plan designations for SW Brookman Road as a 5-lane arterial, which would also likely require access modifications to meet access spacing standards.

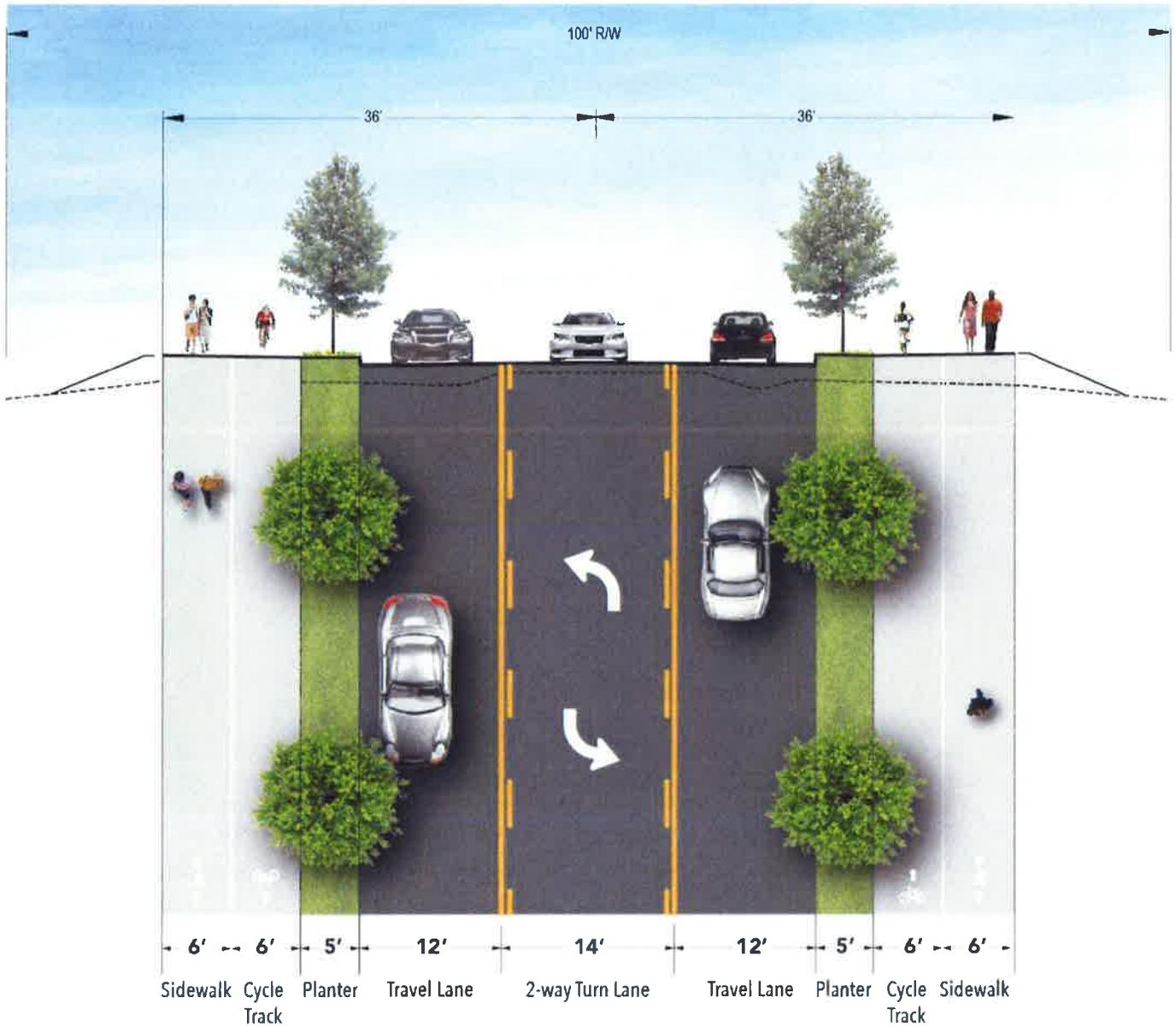


Figure 3: 3-Lane Cross Section

### OPTION 2: 3-LANE CROSS SECTION (CONCEPT PLAN CROSS SECTION)

This cross section is the cross section that was adopted as part of the Brookman Addition Concept Plan and classified as a collector roadway. The three-lane cross section includes one 12-foot

in each direction and one 14-foot center turn lane, five-foot wide planting strip, six-foot bicycle track, and a six-foot sidewalk for a total width of 72 feet.

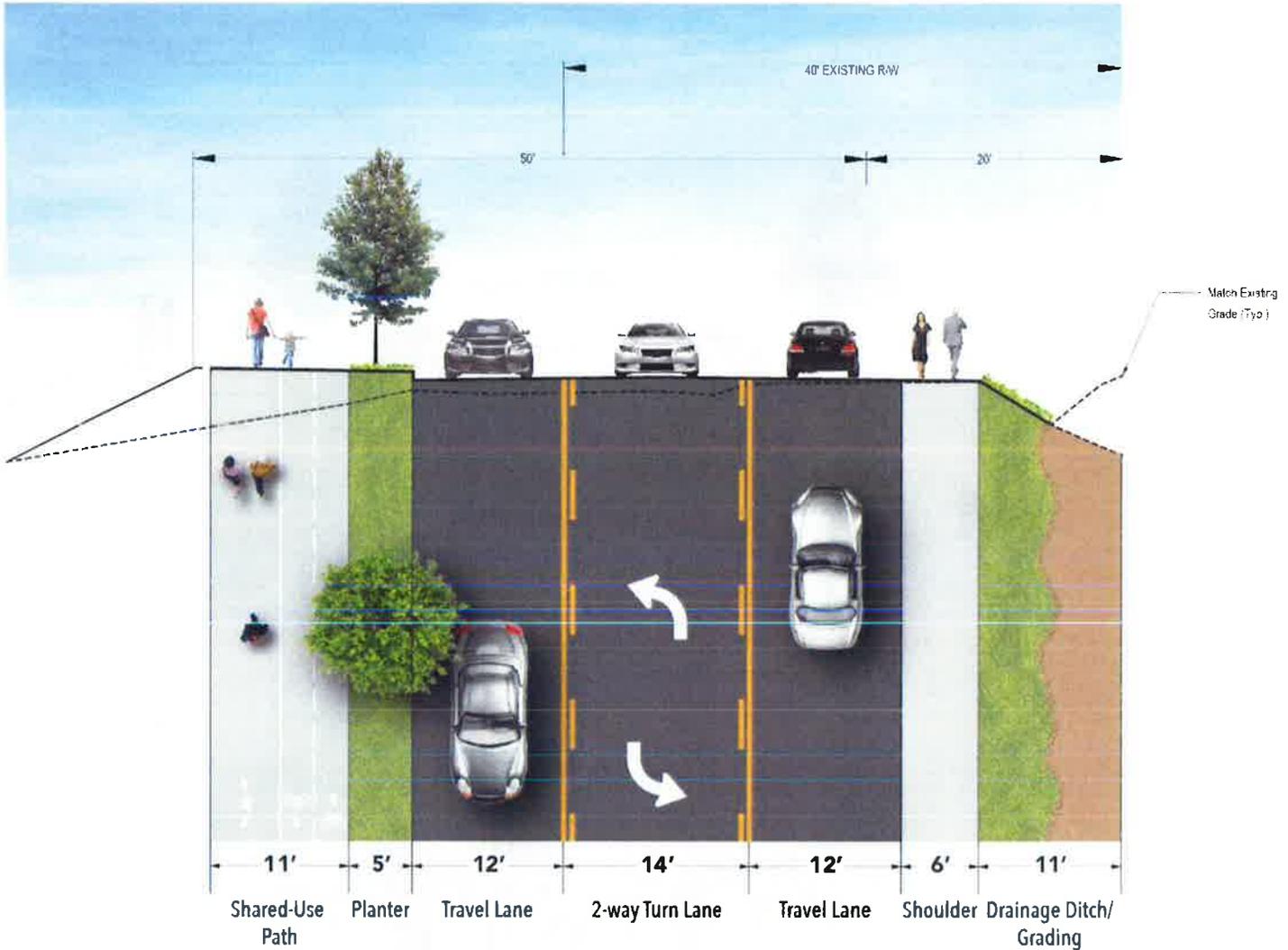


Figure 4: 3-Lane Transitional Road Cross Section

**OPTION 3: 3-LANE TRANSITIONAL ROAD**

Brookman Road currently serves as the southern boundary for Metro’s Urban Growth Boundary (UGB). The north side of the roadway is within the existing UGB, while the south side is outside of the UGB and designation and Urban Reserve, and designation that identifies the area as potentially developable if the UGB were expanded in the future to include this land. Washington County, because it is also planning and designing facilities within the County on the edge of the UGB, has developed conceptual “transitional street concepts” that provides urban style road features for areas within the UGB while still maintaining rural standards for adjacent parcels outside of the UGB on the opposite side of the roadway. This

concept is similar to the County’s transitional street concept and is consistent with the requirements for development currently underway for land within the Brookman Road City Limits.

This three-lane concept includes 12-foot travel lanes with a 14-foot center turn lane. The north side of the road contains a five-foot planting strip and an 11-foot shared-use path. The south side of the road has a six-foot shoulder and an 11-foot drainage ditch. The road and all improvements measure 70 feet in width. This option would allow for the road to expand to a 5-lane arterial consistent with the County and Sherwood TSP designation if traffic volumes increase in the future when additional road capacity is needed.



Figure 5: Brookman Road Concept Plan refinement planning recommended alignment. Full graphic attached as Appendix A



Figure 6: Brookman Concept Plan Subareas and Alignment Options Considered

## CORRIDOR ANALYSIS

The Brookman Addition Concept Plan divided the area into three distinct subareas during the planning process: the western subarea, central subarea, and eastern subarea. Brookman Road also has unique design considerations within each of these areas. This analysis considered the original Brookman Road alignment recommended in the Concept Plan as well as a number of options in the western and eastern subareas to identify connections that minimized impacts to property while still meeting transportation demands.

### WESTERN SUBAREA

The 2009 Concept Plan defined the western subarea as approximately 80 acres located between the two large transportation barriers, OR 99W to the west and the rail corridor to the east. The purpose of this area was to capitalize on highway access and visibility by providing



Figure 7: Western Subarea Closeup

space for business and employment opportunities. In the western subarea, SW Brookman Road would be realigned to provide better access through the sub-area and a new intersection would be constructed for SW Brookman Road and OR 99W about 1,300 feet to the north. The railroad crossing would be grade separated, requiring additional right-of-way for the approaches. By shifting the intersection, SW Brookman Road would be separated from the potential Southern Arterial connection at OR 99W.

### Recommended Corridor Alignment

The intersection and alignment proposed in the Concept Plan would require extensive amounts of new right-of-way and a grade-separated over crossing. This refinement plan recommends Alignment Option 2, maintaining SW Brookman

Figure 8: Western Alignment Options.

Alignment Option 1, shown in blue, is consistent with the alignment proposed under the original Concept Plan.

Alignment Option 2, shown in red, follows the alignment of Brookman Road as it exists today.

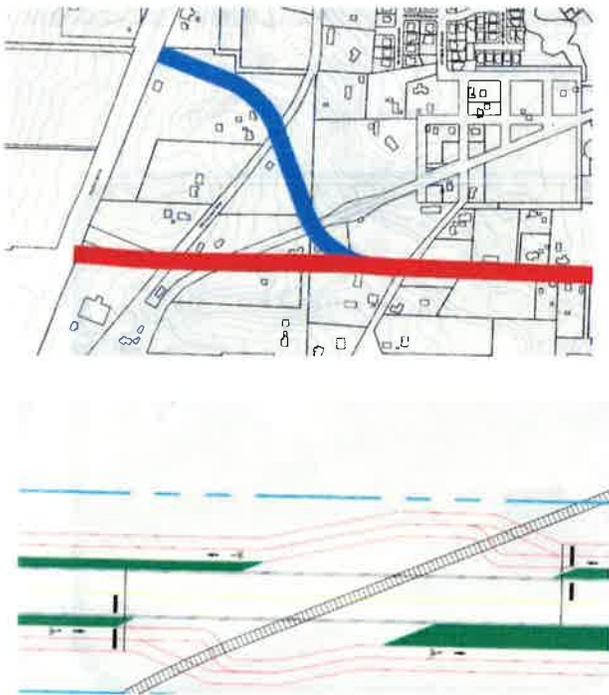


Figure 9: Recommended Rail Crossing

Road's existing right-of-way and intersection with OR 99W. This would also align with the Chapman Road intersection and future connections to Sherwood West. Under the 2009 Concept Plan, Brookman Road would cross the existing rail line at a 90-degree angle. Following meetings with the City, Washington County, and ODOT Rail Division, it was determined that the refinement plan would not require a 90-degree crossing, although bicycle paths would cross at 90-degree to ensure a safer crossing. If the intersection of SW Brookman Road and OR 99W becomes signalized in the future, there will need to be improvements on eastbound OR 99W that signals to traffic that they are entering an urban area. Representatives from Northwest Natural Gas have reviewed the recommended corridor alignment. There will be a continued need for coordination due to the existing facility along the road. To ensure there are no significant impacts to the natural gas facility and proper right-of-way is obtained on the north side of Brookman Road, a requirement of the annexation process for properties located west of the railroad tracks, north of Brookman Road to the current city boundary, will be the completion of further analysis of the roadway in the western subarea identifying road alignment and right of way needs.

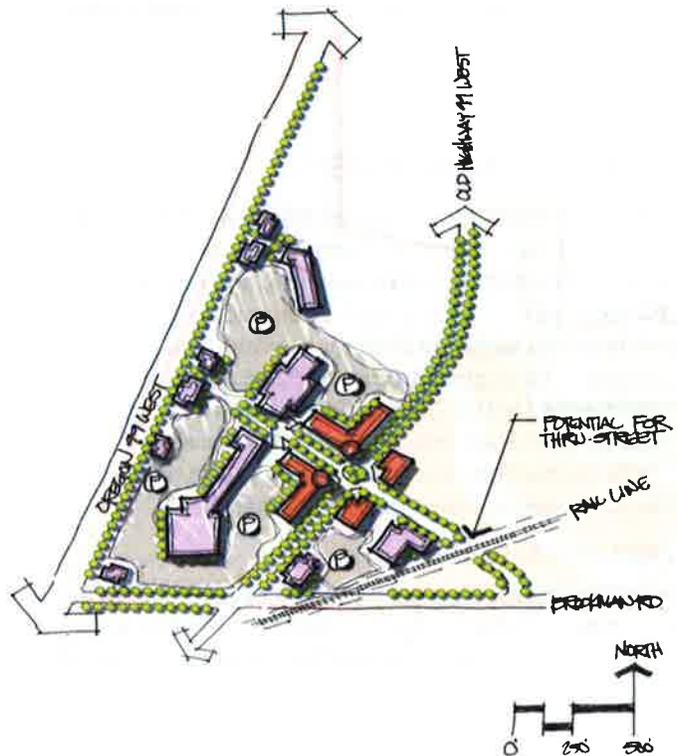


Figure 10: Conceptual design of the western portion of the Brookman Addition with the new Brookman Road alignment. Traffic calming measures should be reviewed to mitigate and reduce vehicle trips through the neighborhood to the north.

## CENTRAL SUBAREA

The 2009 Concept Plan's central subarea was designed to be a walkable residential area that allows a mix of housing types while maintaining a lower residential density. Brookman Road would provide the primary east-west access at the southern edge of the neighborhood.

Within this area, the general alignment of Brookman Road would be maintained to minimize impacts to property and natural resources. Additionally, there are sections of this subarea that are being constructed with half-street improvements as part of adjacent subdivision development.

### *Recommended Corridor Alignment*

This refinement plan recommends maintaining the existing road alignment. Future road construction and widening would analyze mitigation options such as a retaining wall or other measures to minimize right-of-way acquisition. Some newly approved subdivisions are already building half-street improvements on portions of the north side of Brookman Road while others are paying a fee-in-lieu for improvements that would be placed in a dedicated fund for future improvements.

## EASTERN SUBAREA

Bordered by Cedar Creek to the west and Ladd Hill Road to the east, the eastern subarea is designated for single-family detached dwelling units. SW Brookman Road would still provide primary east-west access to the neighborhood with enhanced pedestrian and bicycle facilities. Currently, the eastern section of Brookman Road curves sharply to the north, traveling approximately 1,300 feet before curving sharply to the east past existing homes and connecting to Ladd Hill Road. Under the 2009 Concept Plan, SW Brookman Road would veer south to avoid using the narrow road past existing homes and that second sharp turn.

### *Recommended Corridor Alignment*

This refinement plan recommends Alignment Option 3, which shifts the northern curve to south and shortens the connection to Ladd Hill Road. This would flatten out the first sharp curve and minimize impacts to existing residences, but would require new right-of-way acquisition to make the new connection to Ladd Hill. This recommended alignment is not currently shown in the Clackamas County TSP.

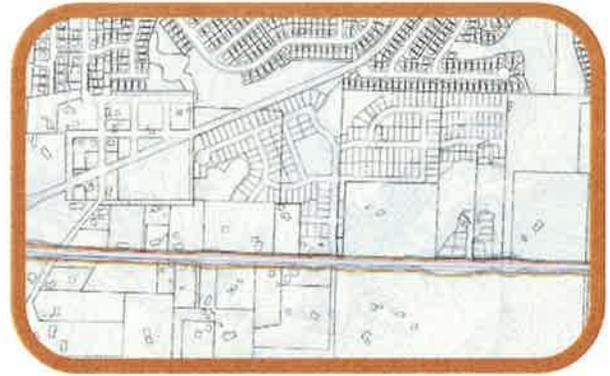


Figure 11: Central Subarea Closeup



Figure 12: Eastern Subarea Closeup



Figure 13: Eastern Alignment Options

Alignment Option 1, shown in blue, is consistent with the alignment proposed under the original Concept Plan

Alignment Option 2, shown in red, follows the alignment of Brookman Road as it exists today.

Alignment Option 3, shown in green, shows the refinement plan recommendation.



Figure 14: Study Area Intersections

## TRANSPORTATION ANALYSIS

A transportation analysis was conducted for SW Brookman Road between OR 99W and SW Ladd Hill Road to evaluate corridor alternatives. The analysis inventoried existing transportation facilities including operational analysis, a review of historical plans for SW Brookman Road, and an evaluation of future conditions to determine the long-term roadway and intersection capacity and operational needs.

Four study intersections were selected along the corridor and included:

- » OR 99W (SW Pacific Hwy W) and SW Brookman Road
- » SW Old Highway 99 W and SW Brookman Road
- » SW Middleton Road and SW Brookman Road
- » SW Ladd Hill Road and SW Brookman Road

SW Brookman Road is under County jurisdiction and is classified as an arterial. The two-lane road has a posted speed of 35 mph and only a segment of built sidewalk.

Table 1: Roadway Characteristics within Study Area

Roadway	Jurisdiction	Functional Classification	Cross Section	Posted Speed (mph)	Sidewalks	Bicycle Lanes
SW Brookman Road	County	Arterial	2 lanes	35 mph	Partial <sup>+</sup>	No
OR 99W (SW Pacific Hwy W)	ODOT	Principal Arterial	4 lanes (divided)	55 mph	No	No
SW Old Highway 99 West	City	Collector	2 lanes	35 mph	No	No
SW Middleton Road	City	Neighborhood / Local <sup>1</sup>	2 lanes	Unposted	No	No
SW Ladd Hill Road	City	Arterial	2 lanes	Unposted	No	No

<sup>1</sup> SW Middleton Road is classified as a neighborhood roadway north of SW Brookman Road and designated as a local street to the south.



## EXISTING FACILITIES

### *Existing Land Use*

The Concept Plan area consists of residences located on large lots, particularly along SW Brookman Road. The area has not been fully built out and many parcels remain largely undeveloped. Immediately north of the Concept Plan area are residential subdivisions.

### *Existing Natural Resources*

SW Brookman Road is moderately sloped as it is adjacent to Goose creek and Cedar Creek. These landforms and drainages create a series of small hills and dips along Brookman Road. Along SW Brookman Road there are riparian corridors and habitat as well as potential wetlands. The topography of Brookman Road makes it challenging to construct the type of facility identified in Metro's Regional Transportation Plan and Washington County and Sherwood Transportation System Plans.

### *Existing Access*

SW Brookman Road serves as the primary east-west route through the Concept Plan area, connecting with OR 99W to the west and Ladd Hill Road to the east. Several side streets connect to SW Brookman Road and many existing homes have driveway access to Brookman.

### *Pedestrian Facilities*

Sidewalks are present for only 500 feet of one side of SW Brookman Road in between OR 99W and Old Highway 99 West. Most of the study area lacks adequate pedestrian facilities.

### *Bicycle Facilities*

There were no bicycle lanes or other facilities within the study area, though bicyclists have the option to share the roadway with motor vehicles. The study area as a whole lacks bicycle connectivity.

### *Transit Facilities*

There are no transit facilities located directly within the study area, although services from TriMet and Yamhill County Transit serve Sherwood north of the study area. Daily fixed route service from TriMet is provided via Route 94 and Route 93, departing from downtown Sherwood and connecting to downtown Tigard and downtown Portland. Fixed route service from Yamhill County Transit provides connections from McMinnville to Tigard on weekdays, with two stops in Sherwood, the closest located over 2 miles from the study area. An inactive railroad crossing exists approximately 250 ft. east of 99W and Brookman Road.

### *Roadway Volumes*

The study area roadways are used by motor vehicles, pedestrians, and bicyclists. The activity for each of these categories was recorded at each study intersection during the evening peak period (4 PM to 6 PM). Motor vehicle volumes were relatively low on SW Brookman Road during this time, although 99W carries significant volumes with over 3,700 vehicles during the evening peak. Count data indicates that little to no pedestrian activity occurs within the area and only three bicyclists were counted in total, all of them riding through the intersection at 99W and Brookman Road.

Table 2: Existing 2019 Intersection Operations

Intersection	Jurisdictional Standard	LOS	PM Peak Hour Delay	V/C
<i>Unsignalized</i>				
OR 99W (SW Pacific Hwy W) / SW Brookman Road	0.99 V/C	D / F	> 200	> 2.0
SW Old Highway 99 West / SW Brookman Road	LOS E 0.90 V/C	A / A	9.4	0.02
SW Middleton Road / SW Brookman Road	LOS E 0.90 V/C	A / A	9.6	0.11
SW Ladd Hill Road / SW Brookman Road	LOS E 0.90 V/C	A / B	10.3	0.09

**Intersection Operations**

Three of the four study area intersections operate within the corresponding jurisdictional standard. The intersection at OR 99W and SW Brookman Road is the only intersection that falls within ODOT jurisdiction, and has a performance target of V/C ratio (which represents the sufficiency of an intersection to accommodate vehicular demand, also known as volume to capacity) equal to or less than 0.99 outside the Town Center under the Oregon Highway Plan. All other study intersections fall under City of Sherwood jurisdiction and have a target of level of service D or a v/c ratio equal to or less than 0.85 for all way stop or roundabout intersections, and a target of level of service E or a v/c ratio equal or less than 0.90 for unsignalized two way stop controlled intersections. Level of service (LOS) is a mechanism used to determine how well a transportation facility is operating from a traveler’s perspective. Typically, six levels of service are defined and each is assigned a letter designation from A to F, with LOS A representing the best operating conditions, and LOS F the worst.

The intersection of OR 99W and SW Brookman Road operates below the standard level of service. Excessive delays on side street movements and major street turning movements cause OR 99W and SW Brookman Road to operate well below ODOT mobility standards.

**PROJECTED FUTURE CONDITIONS**

*Future Land Use*

The Concept Plan designated future land-uses along Brookman Road including light industrial, high density residential, and medium density residential – high, however the majority of zoning consists of medium density residential – low. The Concept Plan intends to buffer lower density residential areas from the major transportation corridors with higher intensity land uses, wide sidewalks, trees, and generous landscaping.

*Future Traffic*

In the transportation analysis, Metro and Sherwood TSP future travel demand models were used for developing traffic volumes in the study area for the year 2040. The models generally contain regionally significant facilities, typically arterials and above, with some collector roadways. The project team reviewed network elements of the travel demand models in the study area (speeds, number of travel lanes, capacities, etc.) for consistency between facility types and with the existing roadway network and refined the models in the study area.

The baseline (2015) and future (2040) travel demand models were used to develop future year 2040 traffic volumes. The 2040 model includes regional improvements that are generally expected to be funded by 2040.

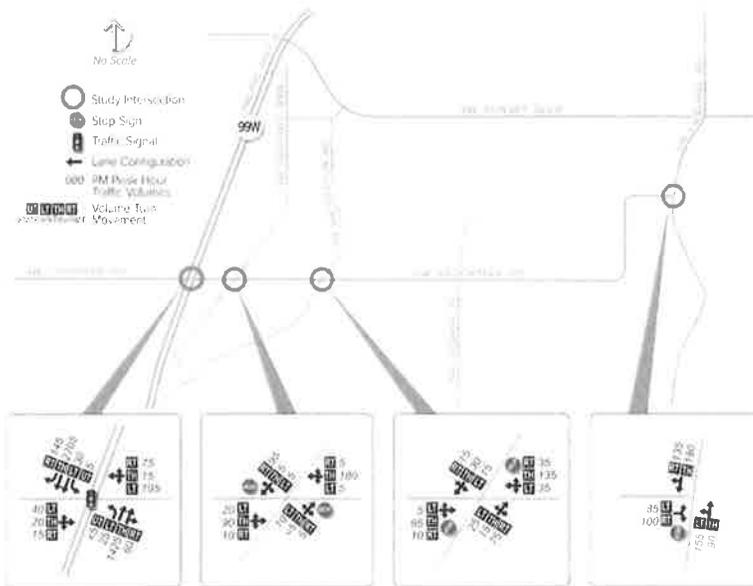


Figure 15: Future Year 2040 Peak PM Traffic Volumes

The following improvements were accounted for: The OR 99W and Brookman Road. Realign OR 99W intersection with Brookman Road a ¼-mile to the north and install a traffic signal, westbound left turn lane and southbound right turn lane. Construct grade separated rail crossing with realignment of Brookman Road (Sherwood TSP, Project D14; Brookman Concept Plan; Metro RTP, Financially Constrained Project #12047).

- Middleton Road /Brookman Road –Move stop signs to north and south approaches and add a southbound left turn lane (Sherwood TSP, Medium-Term Project D34).
- Ladd Hill Road /Brookman Road –All-way stop control with southbound right turn lane (Brookman Concept Plan).
- Ladd Hill Road (Sunset Boulevard to UGB) –Upgrade to three-lane facility (Sherwood TSP, Medium-Term Project D7; Metro RTP, Financially Constrained Project #10693)
- Sunset Boulevard (Aldergrove Avenue to Eucalyptus Terrace) –Upgrade to three-lane facility (Sherwood TSP, Medium-Term Project D15).
- Baker Road (Sunset Boulevard to UGB) – Upgrade to two-lane facility (Sherwood TSP, Medium-Term Project D27).

The 2040 model was modified to represent each roadway network scenario described further below.

Future volumes were developed for the options, shown in Figure 2. Based on the model output, neither roadway cross-section option (three-lane or five-lane) is expected to significantly shift travel patterns to Brookman Road in the study area. Both cross-sections are expected to accommodate mostly local traffic and alleviate only some of the congestion on nearby parallel routes (Sunset Boulevard, Tualatin-Sherwood Road, etc.).

The future operating conditions at the study intersections were determined for the PM peak hour based on the 2010 Highway Capacity Manual methodology for unsignalized intersections and 2000 Highway Capacity Manual methodology for signalized intersections. Table 3 shows operational results for the Baseline scenario, where roadway configurations and cross-sections remain the same as in existing conditions while volumes increase in the year 2040.

Table 3: Future 2040 Baseline Intersection Operations

Intersection	Jurisdictional Standard	PM Peak Hour		
		LOS	Delay	V/C
<i>Signalized</i>				
OR 99W (SW Pacific Hwy W) / SW Brookman Road	0.99 V/C	D	40.7	<b>1.06</b>
<i>Unsignalized</i>				
SW Old Highway 99 West / SW Brookman Road	LOS E 0.90 V/C	A / B	11.5	0.14
SW Middleton Road / SW Brookman Road	LOS E 0.90 V/C	A / B	12.1	0.18
SW Ladd Hill Road / SW Brookman Road	LOS E 0.90 V/C	A	10.0	0.30

Table 4: Future Build Intersection Operations (PM Peak Hour)

Intersection	Jurisdictional Standard	3-lane Cross section			5-lane Cross section		
		LOS	Delay	V/C	LOS	Delay	V/C
<i>Signalized</i>							
OR 99W (SW Pacific Hwy W) / SW Brookman Road	0.99 V/C	D	52.0	<b>1.03</b>	D	51.5	0.99
<i>Unsignalized</i>							
SW Old Highway 99 West / SW Brookman Road	LOS E 0.90 V/C	A / B	11.5	0.13	A / B	11.7	0.17
SW Middleton Road / SW Brookman Road	LOS E 0.90 V/C	A / B	12.1	0.18	A / B	10.4	0.12
SW Ladd Hill Road / SW Brookman Road	LOS E 0.90 V/C	A	10.0	0.30	B	10.4	0.33

Table 5: Mitigated 2040 Intersection Operations (PM Peak Hour)

Intersection	Jurisdictional Standard	3-lane Cross-section		
		LOS	Delay	V/C
OR 99W (SW Pacific Hwy W) / SW Brookman Road	0.99 V/C	D	51.5	0.99

Table 6: 95th Percentile Queues at SW Brookman Road and Rail Crossing

Direction of Travel	95 <sup>th</sup> % Queue (ft)	Available storage (ft) <sup>a</sup>
Eastbound	75	125
Westbound	375	735

<sup>a</sup> Measured to the nearest intersection.

**Potential Mitigations**

The OR 99W and SW Brookman Road intersection is forecasted to operate below standard on the side street approaches under the 3-lane cross-section scenario, while other intersections remain relatively the same in terms of operations for both scenarios. Adding dual westbound left turn lanes would mitigate 99W and Brookman Road in the 3-lane cross section scenario as shown above.

Constructing an additional left turn lane at the intersection would be more cost-effective than constructing a 5-lane cross-section on SW Brookman Road east of the intersection.

**Active Rail**

A railroad crossing exists approximately 250 feet east of SW Old Highway 99 West and SW Brookman Road. A queuing assessment was completed that quantified the potential impacts of queued vehicles on SW Brookman Road. The queuing assessment was based on 30-minute train frequencies with two minutes of total gate downtime for each train crossing SW Brookman Road affecting eastbound and westbound vehicle travel. Predicted traffic volumes in 2040 were used to measure the 95th percentile vehicle queues with a one lane approach at the railroad crossing in each direction.

approa

The 95th percentile eastbound queues were measured to be about 75 feet (three vehicles) in length, which could easily accommodate the available 300 feet of space between the rail crossing and SW Old Highway 99 West / SW Brookman Road. OR 99W is located 850 feet west of the rail crossing and would not be impacted by the delay caused by an active rail line. The 95th-percentile westbound queues were measured to be 375 feet, easily accommodated by the 735 feet of storage available to SW Middleton Road. If the railroad tracks were to become active in the future, queue lengths would be accommodated by existing road space and would not back up to SW Old Highway 99 West or 99W.





## IMPLEMENTATION

Based on technical analysis, coordination with City, Washington County, and ODOT, the following amendments are recommended to the Concept Plan:

- » **Land Use.** The existing zoning identified in the 2009 Concept Plan should remain; no zoning changes are necessary to implement the refinement plan recommendation.

*Further Action:* Traffic calming measures will be reviewed and evaluated in the future western subarea to mitigate and reduce vehicle trips through the existing neighborhood to the north.

- » **Interim Design.** The 3-lane alternative road design (Option 3) should be used in the interim until a full 5-lane road is needed. Adding dual westbound left turn lanes would mitigate 99W and Brookman Road and allow the intersection to operate within the proper jurisdictional standard for level of service and volume to capacity ratio.

The interim design would feature an 11-foot shared use path on the northern side of the road.

*Further Action:* Amend text in the existing concept plan pages 5, 18, 20, 21-24 to reflect the interim design. Replace map on page 23 with new recommended road alignment. Update other maps within the concept plan to show the new alignment. Include the 3-lane alternative cross-section graphic as a figure.

- » **Long Term Design.** The 5-lane street design should remain as the official long-term design with an arterial designation.

*Further Action:* Amend pages 5, 18, 20, 21-24 to include references to a future 5-lane road. Include the 5-lane cross section graphic as a figure.

- » **Location.** The location of Brookman Road should remain the same in the central subarea and continue to provide primary east-west access at the edge of the plan area. In the western subarea, the alignment should deviate from the original Concept Plan and instead continue along its existing path. In the eastern subarea, the southernmost alignment option is preferred due to existing grades and has the least impact to existing residential development.

*Further Action:* Include graphics of the alignment in each subarea in the existing concept plan. Amend text on pages 18, 20, and 21 to reflect new alignment.

*Further Action:* To ensure there are no significant impacts to the natural gas facility and proper right-of-way is obtained on the north side of Brookman Road, a requirement of the annexation process for properties located west of the railroad tracks, north of Brookman Road to the current city boundary, will be the completion of further analysis of the roadway in the western subarea identifying road alignment and right of way needs.

- » **Rail Crossing.** The railroad crossing should be designed to protect bike and pedestrian users by having a multi-use path cross the tracks at a 90-degree angle.

*Further Action:* Include rail crossing designs as figure in concept plan. Add bullet point discussing recommended road alignment in relation to the railroad on page 18.

- » **Community Aspiration.** There is a community desire for efficient access and connection across Highway 99w in the Brookman and Sherwood West areas. This long-term vision of a vehicle overcrossing

warrants additional analysis and study. An overcrossing in this area needs to be reviewed comprehensively in conjunction with land-uses, travel demand in these two areas, goals and policies in the City's Transportation and Comprehensive Plans, and in coordination with Washington County, ODOT Region 1 and 2, ODOT Rail, property owners, and other identified stakeholders.

The recommended interim and long-term design of Brookman Road does not preclude an overcrossing. Speaking with representatives from ODOT Region 1 and 2, ODOT Rail, and Washington County Land Use and Transportation Department, all agencies believe an overcrossing is achievable in this area, and possibly could occur within the planned location of Brookman but will require additional analysis and study to address: location, connection to Sherwood West, facility size, impacts to surrounding land uses and existing roads, and identified as a project in City's TSP including potential funding sources.

The study area would include Brookman and the two designated urban growth expansion areas (Sherwood West and Brookman South). At this time, the current level of traffic at the intersection of Brookman and Highway 99W does not necessitate the need for a grade separation crossing, and the only funding identified for future improvements is the signalization of Brookman Road at Highway 99w.

Further Action: A comprehensive study is needed of a grade separated crossing to connect Brookman and Sherwood West, coordinated with agency partners, and to identify this project in the City's TSP, including cost estimates and funding strategies.

Following the adoption of this Refinement Plan, the City will coordinate with Clackamas County to adopt the eastern alignment within their Transportation System Plan.

A new intergovernmental agreement (IGA) or an addendum to the existing IGA will also be needed. The current IGA between Clackamas County and Washington County is specific to the existing alignment of Brookman on the border between the two.

The City of Sherwood will continue to work with new developers to either construct or pay in-lieu fees for their share of future road improvements.

The City of Sherwood, Washington County, and ODOT will continue to work together and seek funding to implement the road improvements.

The following table notes the page number, item, and recommended changes to the Sherwood Transportation Plan to reflect the outcomes of the Addendum to the Brookman Addition Concept Plan.

Page #	Item	TSP Amendments
<b>Volume 1: Sherwood Transportation System Plan</b>		
18	Figure 5	Update figure to show new Brookman Road alignment
21	Figure 6: 2035 Motor Vehicle Conditions	Update figure to show new Brookman Road alignment
36	Text in Project D14 in Table 1:	The intersection of Brookman Rd and OR 99W to be improved with the installation of a traffic signal. All traffic signals on the state highway system need to be approved by the State Traffic Engineer and design coordination with ODOT is needed to ensure that the improvements are done in a manner that improves driver expectation and safety. The design of the intersection may result in the need for additional right of way to improve the intersection alignment.
41	Figure 11: Motor Vehicle Projects	Update figure to show new Brookman Road alignment and classification
42	Figure 12: Pedestrian Projects	Update figure to show new Brookman Road alignment
43	Figure 13: Biking Projects	Update figure to show new Brookman Road alignment
44	Figure 14	Update figure to show new Brookman Road alignment
57	Figure 17: Street Functional Classification	Update figure to show new Brookman Road alignment
60	Figure 18: Local Street Connectivity	Update figure to show new Brookman Road alignment
64	Figure 19: Through Truck Routes	Update figure to show new Brookman Road alignment
72	Figure 20: 2035 Non-SOV Share	Update figure to show new Brookman Road alignment
73	Text Amendment	Function and Design of Brookman Road and Concept Plan Area Update: Brookman Road is a rural corridor that sits on the southern edge of the Urban Growth Boundary(UGB). Through the Brookman Addition Concept Plan, it was identified that the road was needed to provide access to areas south of Sunset Road. The I-5 to 99W Connector project had conceptually identified the "Southern Arterial" as the primary east-west mobility route through the area, with an alignment along or just south of Brookman Road. Since the time of those planning efforts, additional planning efforts in the Basalt Creek area have refined the eastern portion of the "Southern Arterial". The

		<p>Brookman Road Concept Plan Area underwent a multiagency refinement planning effort in 2019 and 2020. The results of that process recommended that Brookman Road should use a 3-lane "transitional" road design as the interim design until additional road capacity is needed. Brookman Road will maintain its Arterial designation, allowing widening to a five-lane arterial consistent with the Washington County and Sherwood TSP. This effort ensures the appropriate right of way can be reserved as the area is urbanized while providing accessibility to future development. While the majority of the existing road alignment would remain the same, the refinement process also recommended the following:</p> <ol style="list-style-type: none"><li>1. A comprehensive study is needed of a grade separated crossing to connect Brookman and Sherwood West, coordinated with agency partners, and identify this project in the City's TSP, including cost estimates and funding strategies.</li><li>2. To ensure there are no significant impacts to the natural gas facility and proper right-of-way is obtained on the north side of Brookman Road, a requirement of the annexation process for properties located west of the railroad tracks, north of Brookman Road to the current city boundary, will be the completion of further analysis of the roadway to identify road alignment and right-of-way needs in the western subarea.</li><li>3. The intersection of Brookman Road and Ladd Hill Road be realigned approximately 700 feet to the south to flatten out a sharp curve and minimize impacts to residences.</li></ol>
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