

Brookman Addition Concept Refinement

Alternatives Analysis and Recommended Alignment

Spring 2020 Virtual Open House

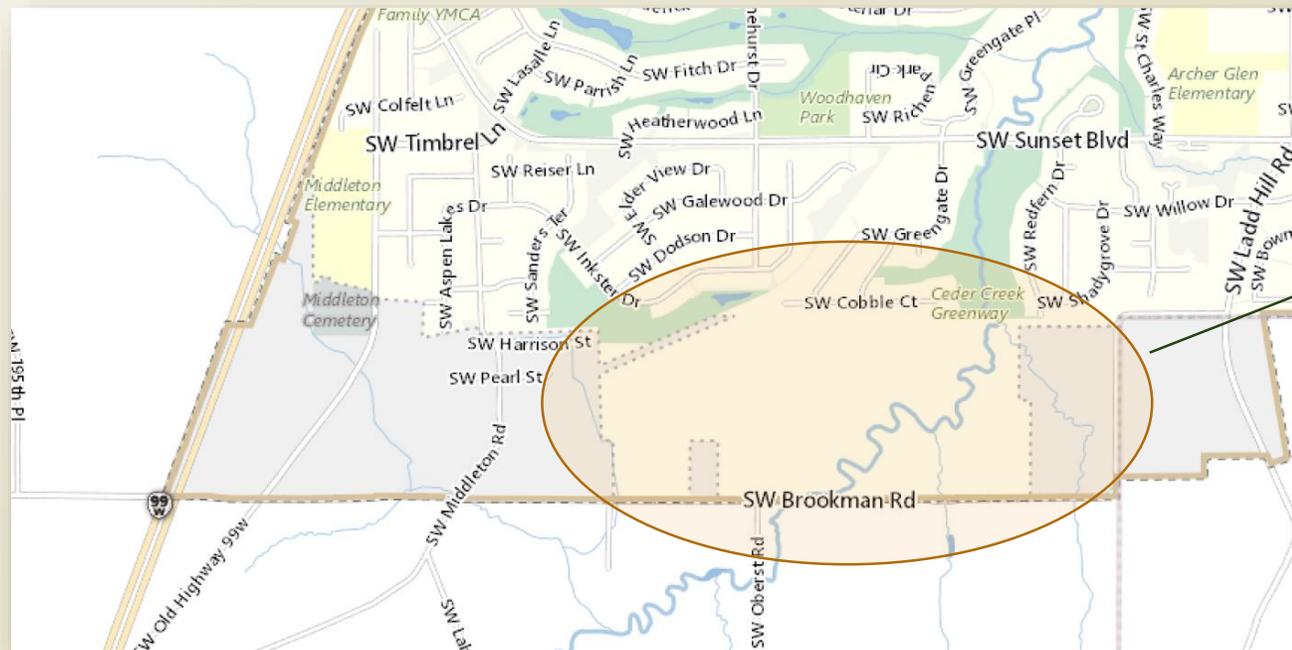
In 2009 the City of Sherwood adopted the Brookman Addition Concept Plan. This opened the door to possible annexations south of the city limits. A map of the Concept Plan area is shown below.



See the full concept plan at :
https://www.sherwoodoregon.gov/sites/default/files/fileattachments/Planning/page/1302/concept_plan_final_report.pdf

The Concept Plan Area has begun to develop, however, the details regarding the future design and number of lanes of Brookman Road have been undefined to the City and the County.

Metro, ODOT, Washington County and the City are now undergoing an effort to analyze the alignment and possible design of Brookman Road.



Areas of recent annexations

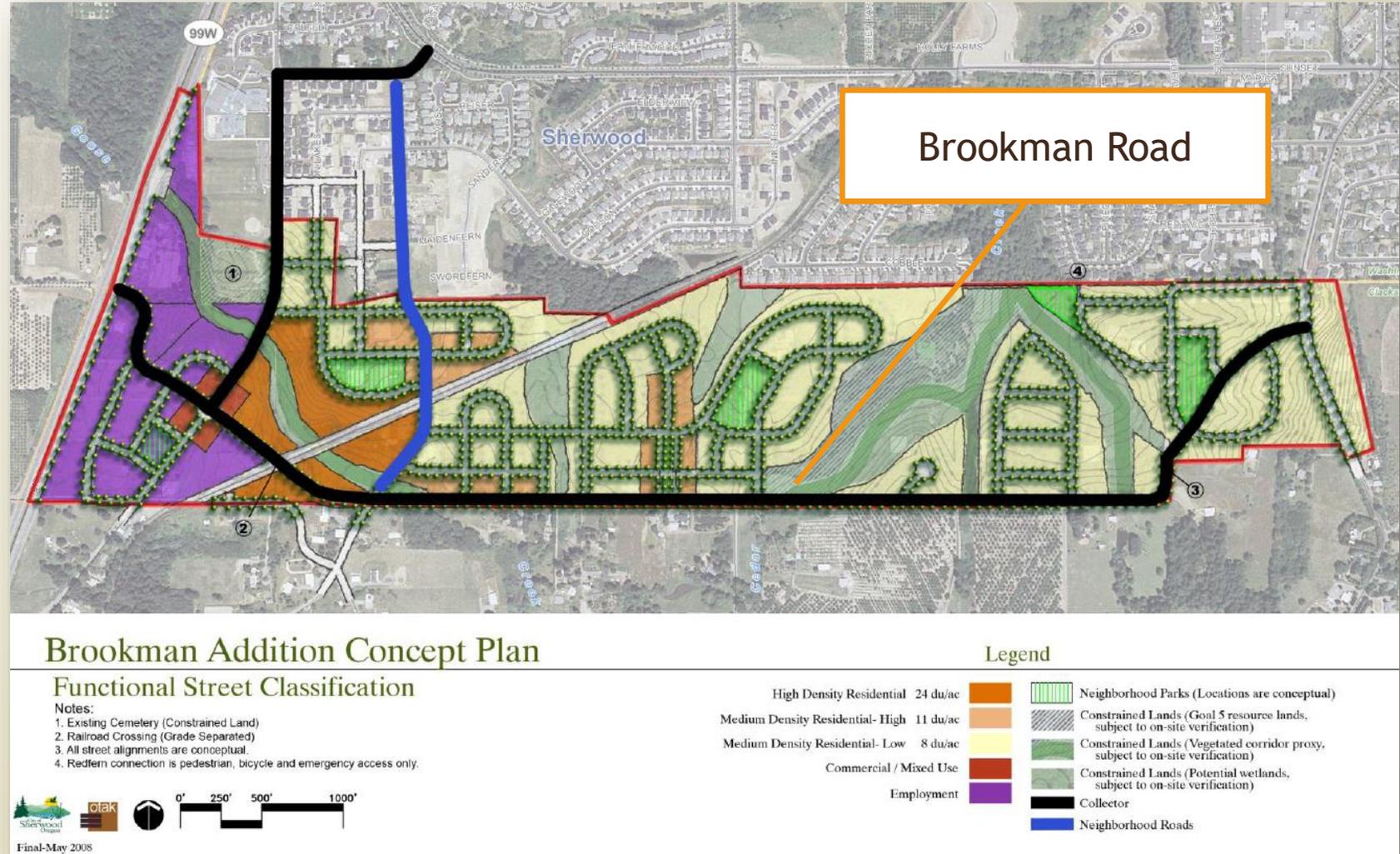
Why are we doing this now?

- Development is occurring in the area.
- The existing rural roadway cannot safely accommodate future traffic, pedestrians and cyclists as currently designed.
- The future corridor may require additional right-of-way to reduce dangerous curves and improve the pedestrian environment. Deciding where the alignment should go today reduces potential conflicts with existing development.
- The new High School is under construction and was not envisioned when the Concept Plan was adopted.
- Based on the school, better connection points may be possible to the Brookman Area.

What are our goals for this project ?

- Develop and analyze potential design concepts for Brookman Road.
- Identify an alignment that best reflects future transportation needs of the community.
- Provide multimodal (walking, bikes, transit) transportation facilities.
- Minimize impacts to properties.
- Review zoning for compatibility with new alignments.
- Align City and County transportation plans.

This shows the conceptual road alignment from the 2009 Concept Plan (Brookman Road is the east/west road in black).



Existing Brookman Road Concept Plan

Brookman Road jogs north

Brookman crosses RR tracks at almost 90 degrees

Diverts most traffic past homes



Brookman Addition Concept Plan

Functional Street Classification

Notes:

- 1. Existing Cemetery (Constrained Land)
- 2. Railroad Crossing (Grade Separated)
- 3. All street alignments are conceptual.
- 4. Redfern connection is pedestrian, bicycle and emergency access only.



Final-May 2008

Legend

High Density Residential 24 du/ac			Neighborhood Parks (Locations are conceptual)
Medium Density Residential-High 11 du/ac			Constrained Lands (Goal 5 resource lands, subject to on-site verification)
Medium Density Residential-Low 8 du/ac			Constrained Lands (Vegetated corridor proxy, subject to on-site verification)
Commercial / Mixed Use			Constrained Lands (Potential wetlands, subject to on-site verification)
Employment			Collector
			Neighborhood Roads

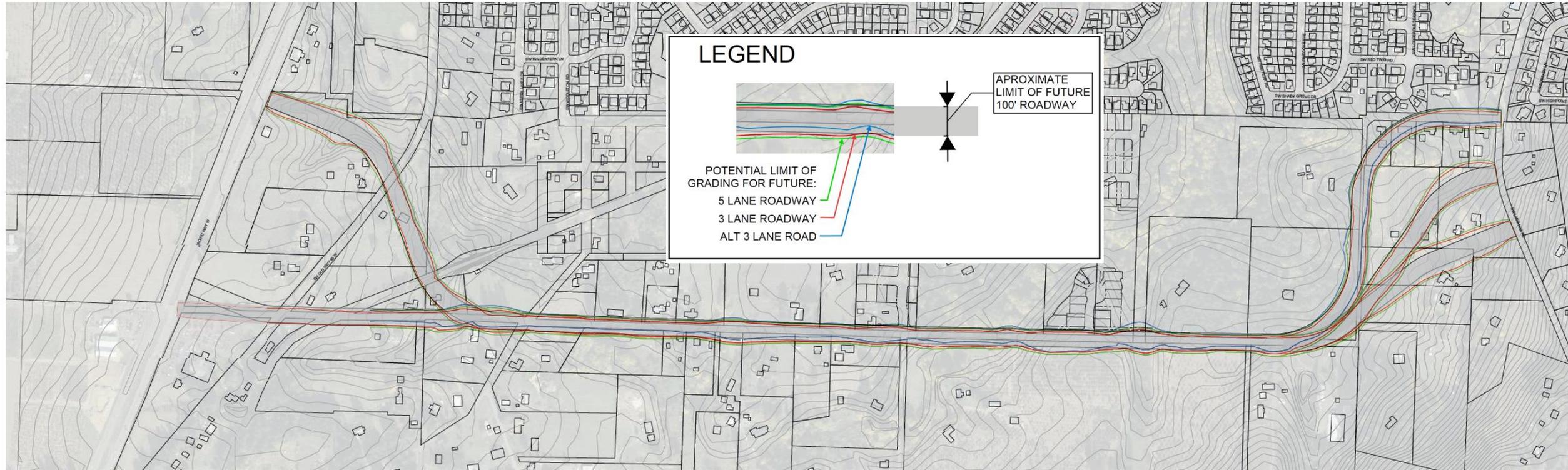
In the summer of 2019, the City met with several stakeholders including property owners, developers, and others.

The following key findings emerged. Brookman road:

- Does not feel safe in its current condition
- Future design should accommodate growth
- Needs more clarity on costs
- Should be safe for multiple types of users
- Scenic aspects of the area should be incorporated
- Should not be overbuilt
- Local needs should be served
- Speeds should be reduced
- Should connect to the rest of the City in a meaningful way

The alignment and grading impacts are conceptual and shown to illustrate possibilities. Final design may vary.

BROOKMAN ROAD CORRIDOR STUDY



5 LANE COUNTY ROAD

100' RW

48'

6' 5' 5' 12' 14' 12' 12' 5' 5' 6'

Sidewalk Cycle Track Planter Travel Lane Travel Lane 2-Way Left Turn Lane Travel Lane Travel Lane Planter Cycle Track Sidewalk

ROADWAY SIMILAR TO 5 LANE COUNTY ROAD

3 LANE COUNTY ROAD

100' RW

36'

6' 5' 5' 12' 14' 12' 5' 5' 6'

Sidewalk Cycle Track Planter Travel Lane 2-Way Left Turn Lane Travel Lane Planter Cycle Track Sidewalk

ROADWAY SIMILAR TO 3 LANE ROAD EXCEPT BIKE LANES TO BE LOCATED OUTSIDE OF THE ROADWAY

3 LANE ALTERNATIVE COUNTY ROAD

40' EXISTING RW

50'

11' 5' 12' 14' 12' 6' 11'

Shared-Use Path Planter Travel Lane 2-way Left Turn Lane Travel Lane Shoulder Drainage Ditch/Grading

Match Existing Grade (Typ.)

ROADWAY SIMILAR TO 3 LANE ALTERNATIVE CITY ROAD EXCEPT A FUTURE BROOKMAN ROAD WOULD ALSO HAVE A CENTER LANE

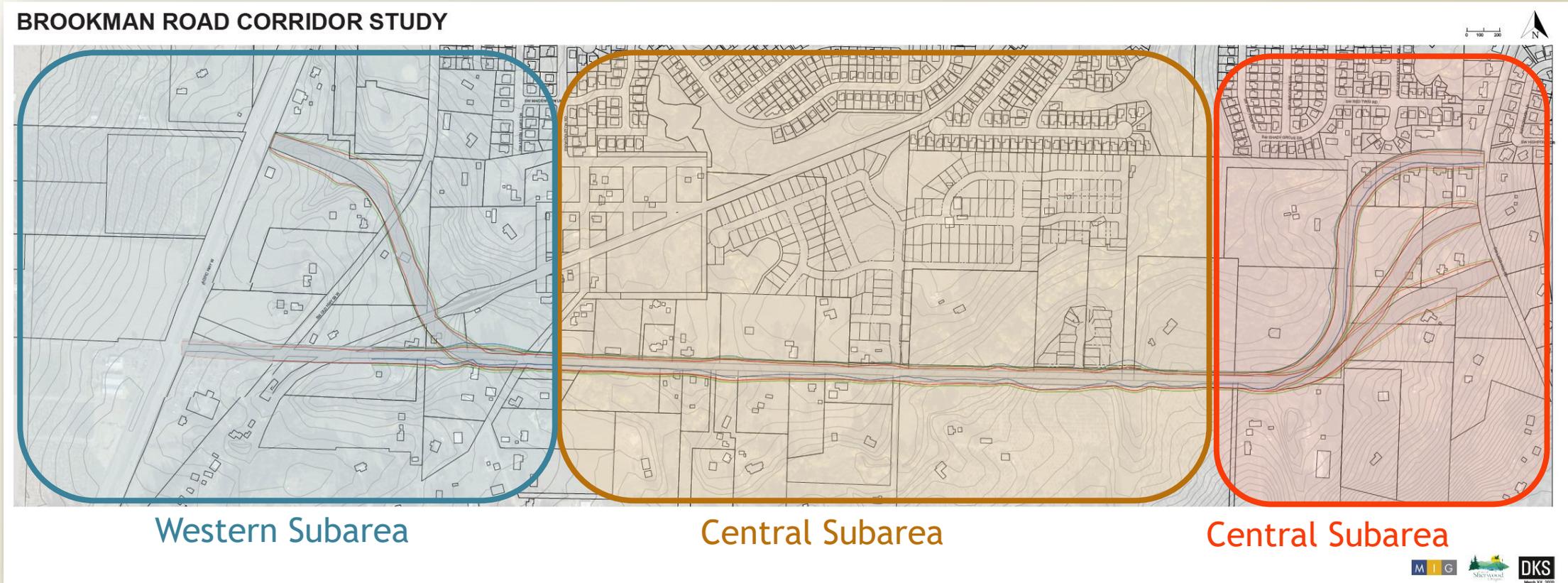
LEGEND

APROXIMATE LIMIT OF FUTURE 100' ROADWAY

POTENTIAL LIMIT OF GRADING FOR FUTURE:

- 5 LANE ROADWAY
- 3 LANE ROADWAY
- ALT 3 LANE ROAD

Let's look at each subarea in more detail and the options evaluated



The alignment and grading impacts are conceptual and shown to illustrate possibilities. Final design may vary.

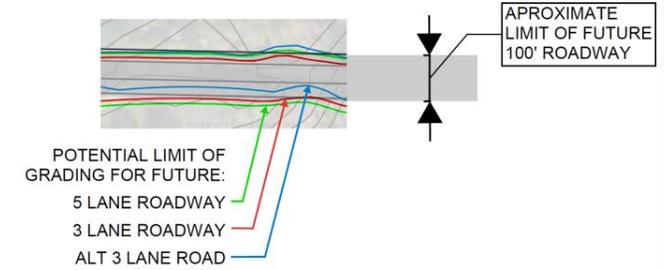
Options Considered

Concept Plan Option: Require extensive amounts of new right-of-way

Recommended Option: Maintain existing right-of-way. Better aligns with the Sherwood West Concept Plan



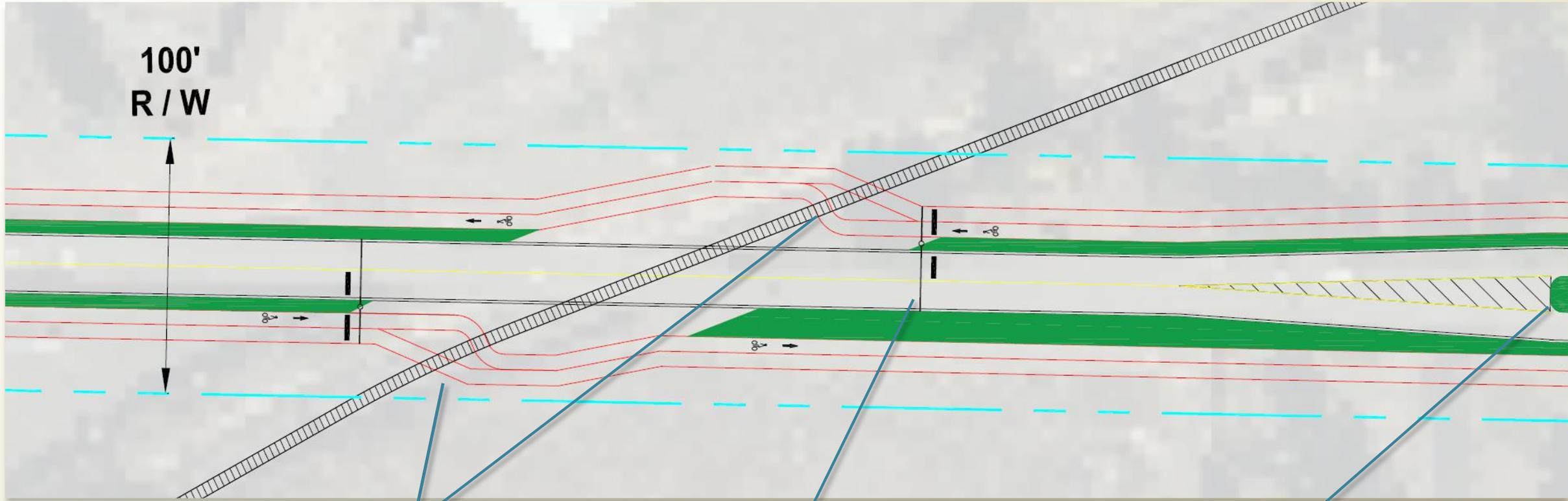
LEGEND



Recommended Option: Railroad track crossing designed with gates and coordinated with future signal at Brookman/OR 99W intersection. RR crossing does not need to be at 90 degrees.



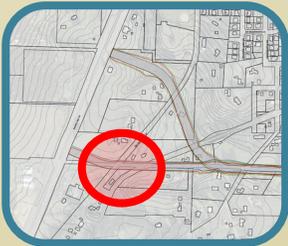
The alignment and grading impacts are conceptual and shown to illustrate possibilities. Final design may vary.



Bicycles cross the track at 90 degrees to prevent stuck tires

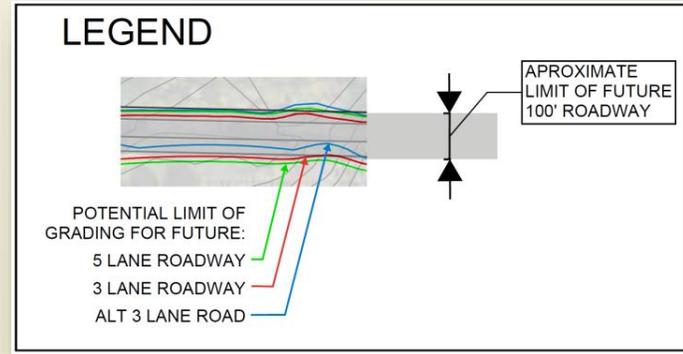
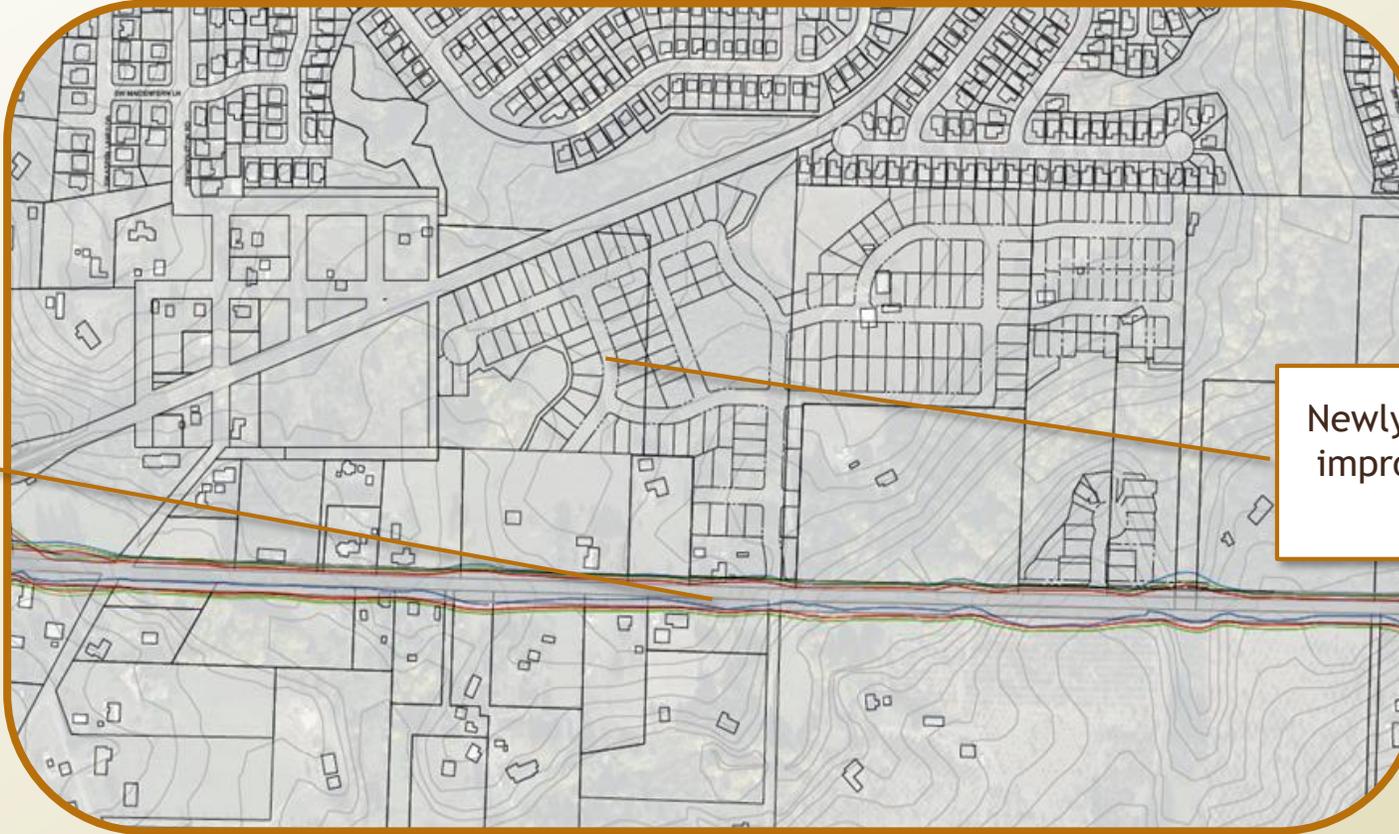
Crossing arms prevent stopping on the tracks.

Median is removed to narrow roadway at the railroad crossing



Possible Railroad Alignment Design

Recommended Option:
Maintain existing alignment. Future road construction and widening will analyze mitigation options such as retaining wall and other measures to minimize right-of-way acquisition



Newly approved subdivisions will build ½ street improvements for a portion of the roadway on the north side of Brookman



The alignment and grading impacts are conceptual and shown to illustrate possibilities. Final design may vary.

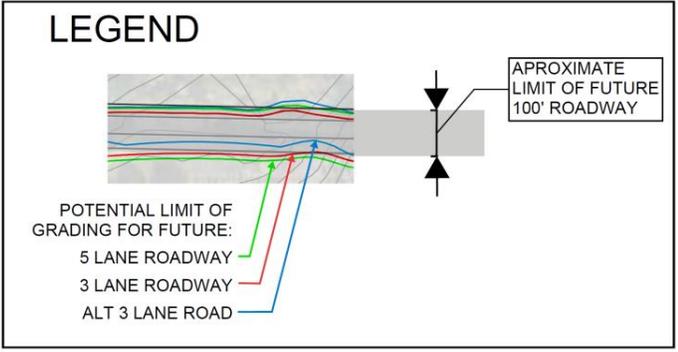


Existing option:
with modifications
to the curve

**Concept Plan
option:** veers south
to avoid using
existing path past
homes.

Preferred Option: This alignment
meets Ladd Hill at a better angle
while still minimizing impacts to
homes

All alternatives
flatten out this
dangerous curve



The alignment and grading impacts are conceptual and shown to illustrate possibilities. Final design may vary.

Eastern Brookman Road

A transportation analysis was performed for SW Brookman Road between OR 99W and SW Ladd Hill Road as part of the Sherwood Brookman Addition Concept Plan Update. The analysis provides an inventory of existing transportation facilities including operational analysis and evaluation of future conditions to determine the long-term roadway and intersection capacity and operational needs.

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



Figure 1. Study Area

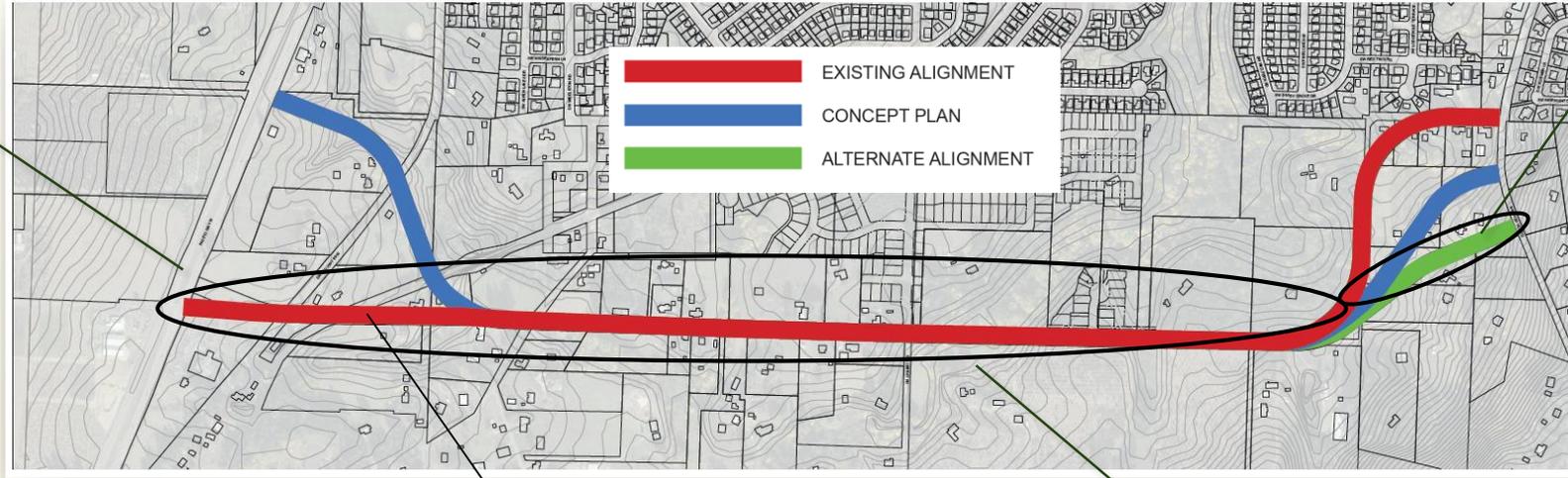
Results for existing traffic:

- Vehicle counts were low at all times except PM commute hours, at which the Brookman/99W intersection operated at below acceptable levels.
- Little to no pedestrian activity was counted.
- Only 3 bikes were counted at the intersection with 99W, nowhere else.

Results for future (2040) traffic:

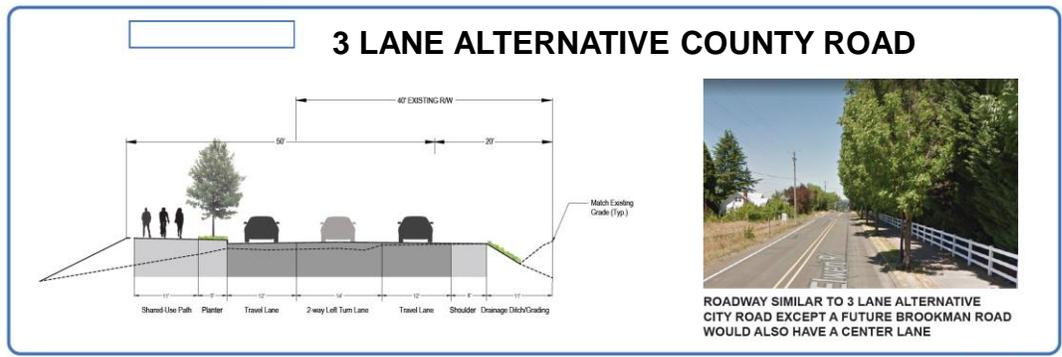
- The transportation network was evaluated for the future year 2040 to assess the potential benefits and impacts of widening SW Brookman Road.
- 3-lane and 5-lane alternatives were analyzed.
- Using a 3-lane alternative with a turn lane will result in similar impacts to the 5 lane version, but at less overall costs.
- Both sections could accommodate pedestrians and bicycles.
- Should the railroad become active, the queue lengths would be acceptable in either alternative.

Preferred
alternative



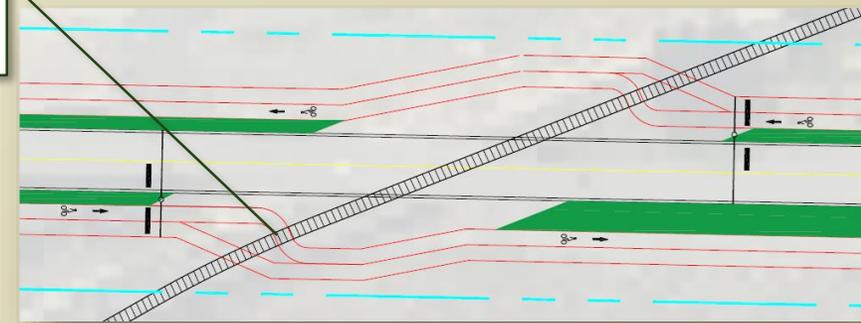
Preferred
alternative

3-lane alternative
'interim'
preferred design



Trail crosses RR at
right angle

Center location
remains unchanged



Overall Recommendations

Based on the meetings, the traffic study, the alignment analysis and onsite research, the following is recommended:

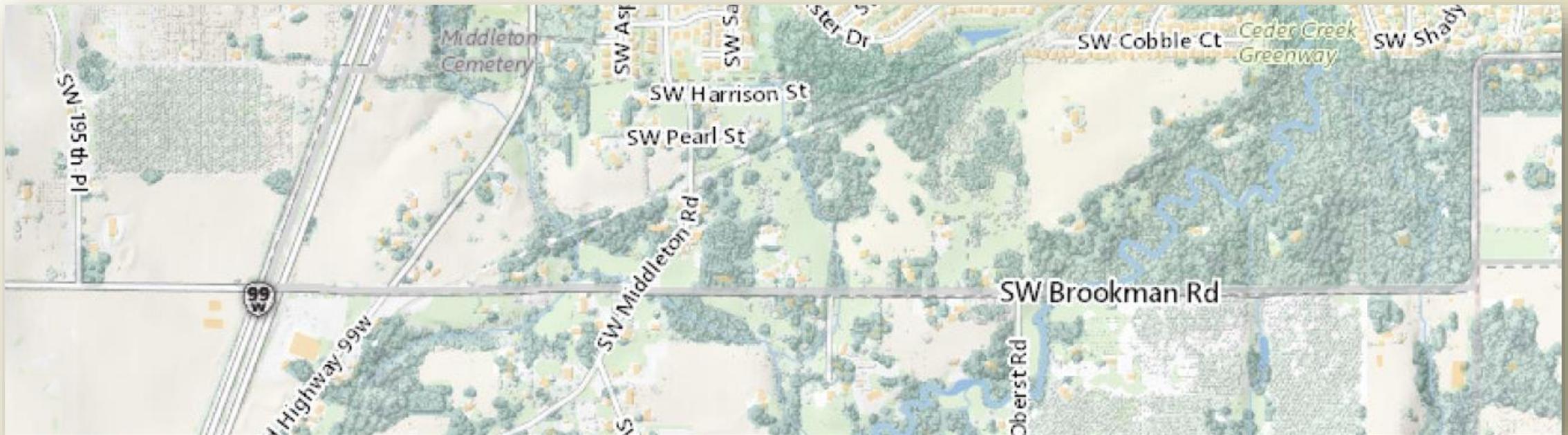
- The existing zoning should remain.
- A 3-lane alternative arterial design for Brookman Road should be used as the interim design until a full 5 lane construction is needed. This features a shared use path on the northern side of the road only.
- The 5-lane street design should remain the official long-term design with an arterial designation.
- The location of Brookman Road should remain the same in the center subarea.
- In the west subarea the alignment should deviate from the Concept Plan and continue along its existing path.
- The Railroad crossing should be designed to protect bike and pedestrian users by having a multi-user path cross the tracks at a 90-degree angle.
- In the east subarea, the southernmost alternative is preferred due to grades.

What are the Next Steps?

- The city will need to adopt the proposed refinements to the Brookman Addition Concept Plan through a public hearings process during the summer of 2020.
- The city will continue to work with new development to construct or pay a fee-in-lieu for their proportional share of future improvements.
- The City will continue to work with new development to construct or pay a fee-in-lieu for their proportional share of future improvements
- Sherwood, Washington County, and ODOT will continue to work together and seek funding to implement road improvements.

Please provide any comments to Matt Straite-

matts@migcom.com



Comments