TRANSPORTATION PLANNING RULE ANALYSIS

PEPPERMILL ZONE CHANGE

TRANSPORTATION PLANNING RULE ANALYSIS

BANDON, OREGON

February 20, 2026

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TRANSPORTATION PLANNING RULE ANALYSIS

PEPPERMILL BANDON



Bandon, OR

February 20, 2026

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project # 6265

EXECUTIVE SUMMARY

This report provides the Transportation Planning Rule Analysis prepared for the proposed Zone Change of approximately 46.1 acres of land located adjacent to China Creek Road near Highway 101 and Two Mile Lane in Bandon, Oregon.

The site is currently zoned Coos County "Forest". The applicant is proposing to rezone approximately 28.7 acres to Rural Residential RR-2 zoning and approximately 17.4 acres to Commercial C-1 zoning. The zone change triggers an evaluation as per Oregon Administrative Rule, OAR 660-012-0060 (the Transportation Planning Rule or TPR).

The following recommendations are based on the information and analysis documented in this report.

FINDINGS

- The addition of development trips does not trigger any intersections to not meet the applicable v/c.
- Crash rates and crash patterns do not warrant roadway improvements.
- The southbound queue on Highway 101 at Two Mile Lane is estimated at 75 feet (3 vehicles). This queue length would warrant a separate left-hand pocket to reduce the potential for rear-end collisions on Highway 101.
- The westbound approach at the intersection of Highway 101 at Two Mile Lane is anticipated to have a queue of 150 feet. Separate left and right turn lanes should be considered to reduce queueing.

RECOMMENDATIONS

- **Highway 101 at Two Mile Lane:** ODOT preliminary left turn warrants are met for considering a southbound left turn movement with the full build-out of the reasonable worst-case development potential. As the left turn warrants are not met under the existing conditions and are only met with the build-out at full intensity, it is recommended that the need for a turn pocket be reevaluated for necessity under the actual development proposal. This ensures that if deemed necessary in the future, mitigation is timed and constructed for actual demand and use at the time of development.

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1.0 BACKGROUND

1.1 DEVELOPMENT PROPOSAL

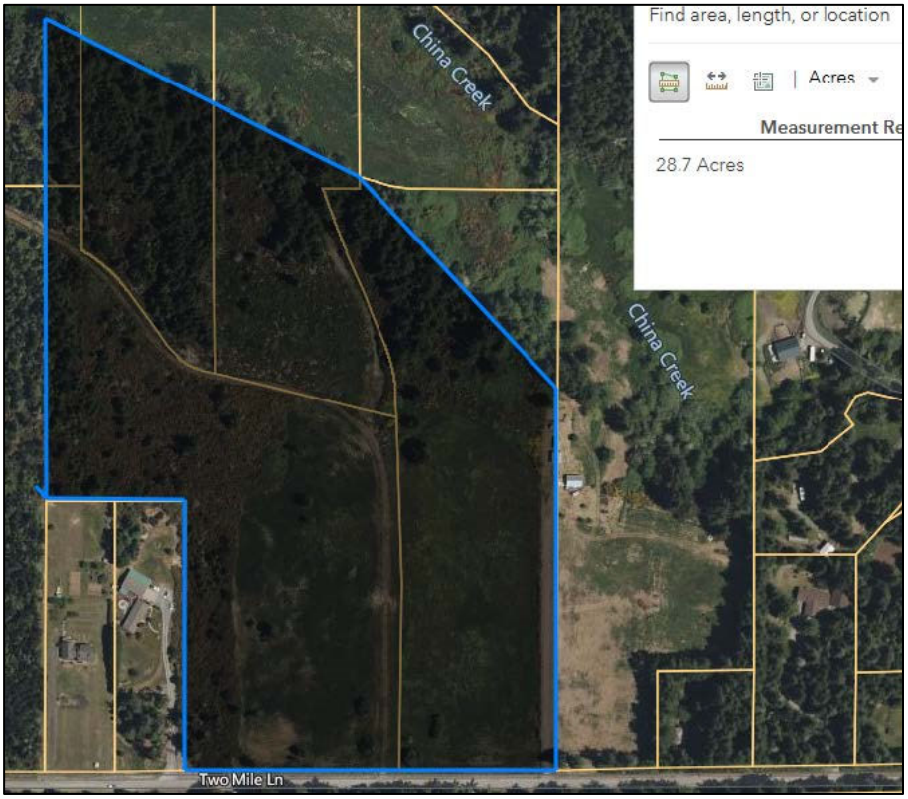
The site is currently zoned Coos County “Forest”. The applicant will be rezoning approximately 28.7 acres of the site to Rural Residential RR-2 zoning and approximately 17.4 acres of the site to Commercial C-1 zoning.

The commercially zoned property will be a portion of the lax lots with frontage on Highway 101. For the purposes of the TPR analysis, access to these lots will be assumed via a new connection to Two Mile Lane along the commercially zoned lots. The area to be zoned C-1 is illustrated in the image below.

The residentially zoned property will be a portion of the tax lots with frontage on Two Mile Lane adjacent to China Creek Road. For the purpose of the TPR analysis, access to these lots will be assumed via the existing China Creek Road connection to Two Mile Lane. The area to be zoned RR-2 is illustrated in the image below.



Proposed C-1 Zoning



Proposed RR-2 Zoning

1.2 SITE INFORMATION

The development site is comprised of Tax Lots 1600, 1607, 1608, 1610, 1611, 1615, and 1616 of Coos County Assessor's Map 29S-14W-18. The site is located east of Highway 101 and north of Two Mile Lane. The total site is approximately 58.66 acres and is currently vacant. Figure 1 provides an illustration of the site location.

1.3 ANALYSIS SCOPE

The proposed zone change triggers an evaluation consistent with the Transportation Planning Rule criteria (TPR), Oregon Administrative Rule (OAR) 660-012-0060. This evaluation considers the impacts of the "reasonable worst-case" development potential.

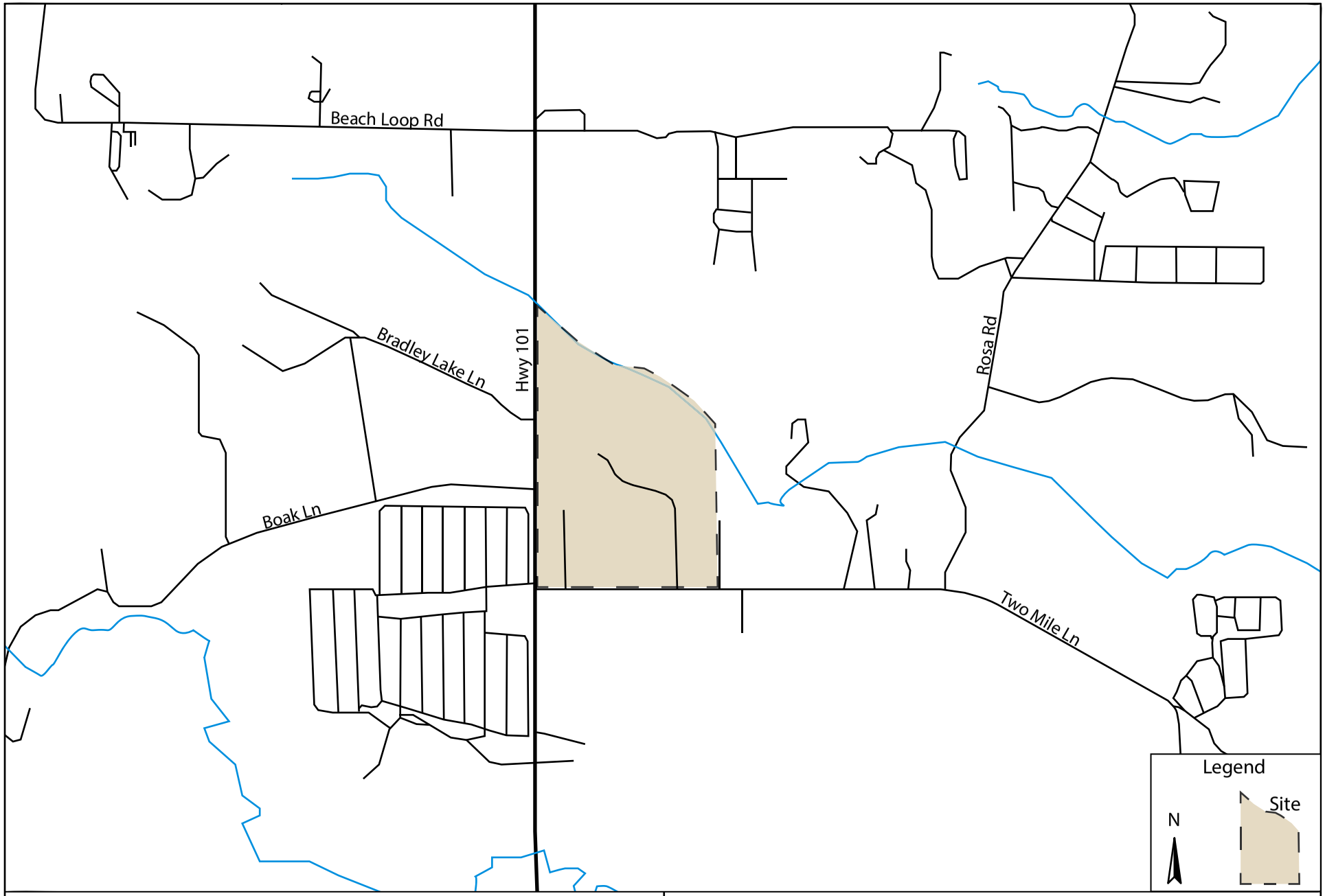
Highway 101 is under the jurisdiction of ODOT and is classified as a Statewide Highway. Two Mile Lane is within the jurisdiction of Coos County and is classified as a Major Collector. Therefore, the traffic study was performed in accordance with ODOT and Coos County standards and criteria. Appendix A contains the Scope of Work. The intersection analysis was performed for the adjacent intersections of:

- Highway 101 at Two Mile Lane

- Two Mile Lane at Site Accesses

The operational analysis was performed at the study area intersections for the weekday PM peak period (4:00-6:00 PM). The operational analysis is performed for the following conditions:

- Existing conditions, year 2026
- 15-year planning horizon, year 2041, with and without the proposed zone change. Typically, the evaluation is for the 20-year planning horizon of the Transportation System Plan for the local government. Coos County has a 20-year planning horizon of 2030. As per the Oregon Highway Plan, zone change evaluations need to have a minimum of a 15-year planning horizon for TPR analysis. Therefore, the evaluation is prepared for the year 2041.



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Figure 1: Site Location and Vicinity Map

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2.0 TRIP GENERATION AND DISTRIBUTION

To be consistent with TPR findings, the traffic generated by the proposed zoning needs to be found not to have a significant effect on the adjacent transportation system. This is done by evaluating a reasonable "worst-case" development scenario for the proposed zoning. The following provides the trip generation estimates for the reasonable worst-case development scenarios proposed zoning.

2.1 POTENTIAL ZONING

As per Coos County development code, the following describes the reasonable worst-case development potential for the proposed zoning, and Table 1 provides the PM Peak Hour trip generation estimate.

Residential R-2:

- There are 6 existing parcels to be zoned R-2. No new parcels are proposed.
- Maximum Development= 6 single family lots/6 single family homes

The trips for the residential area are estimated using ITE Land Use Code 210- Single Family Detached. The trips are based on the number of units using the fitted curve equation.

Commercial C-1:

The intent of this zoning is small-scale non-intensive commercial.

- The area could be divided into 15 parcels
- Each parcel can have up to a 4,000-sf building
- A "reasonable worst-case development" potential for this rural area will likely be 10-15 smaller retail buildings with a mix of retail, office, restaurant, small market, small hotel, etc. All building uses will be small-scale, low-impact uses.
- Total building square footage is anticipated at 40,000-60,000 over the entire acreage.

To account for the mix of uses, the trips for the commercial area are estimated using ITE Land Use Code 821- Shopping Plaza (40-150 k). This land use code assumes there are ranges of non-intrusive uses from office to restaurant and includes the internal trip factor within the base rate.

TABLE 1: PM PEAK HOUR TRIP GENERATION- PROPOSED ZONING

ITE Code	Size	Rate	Trips	In	Out
210- Single Family Detached	6 units	Ln(T)=0.94(x)+0.27	7	4 (63%)	3 (37%)
821- Shopping Plaza (40-150 K)	60 ksf	5.19	311	153 (49%)	158 (51%)
		Total	**318**	**157**	**161**

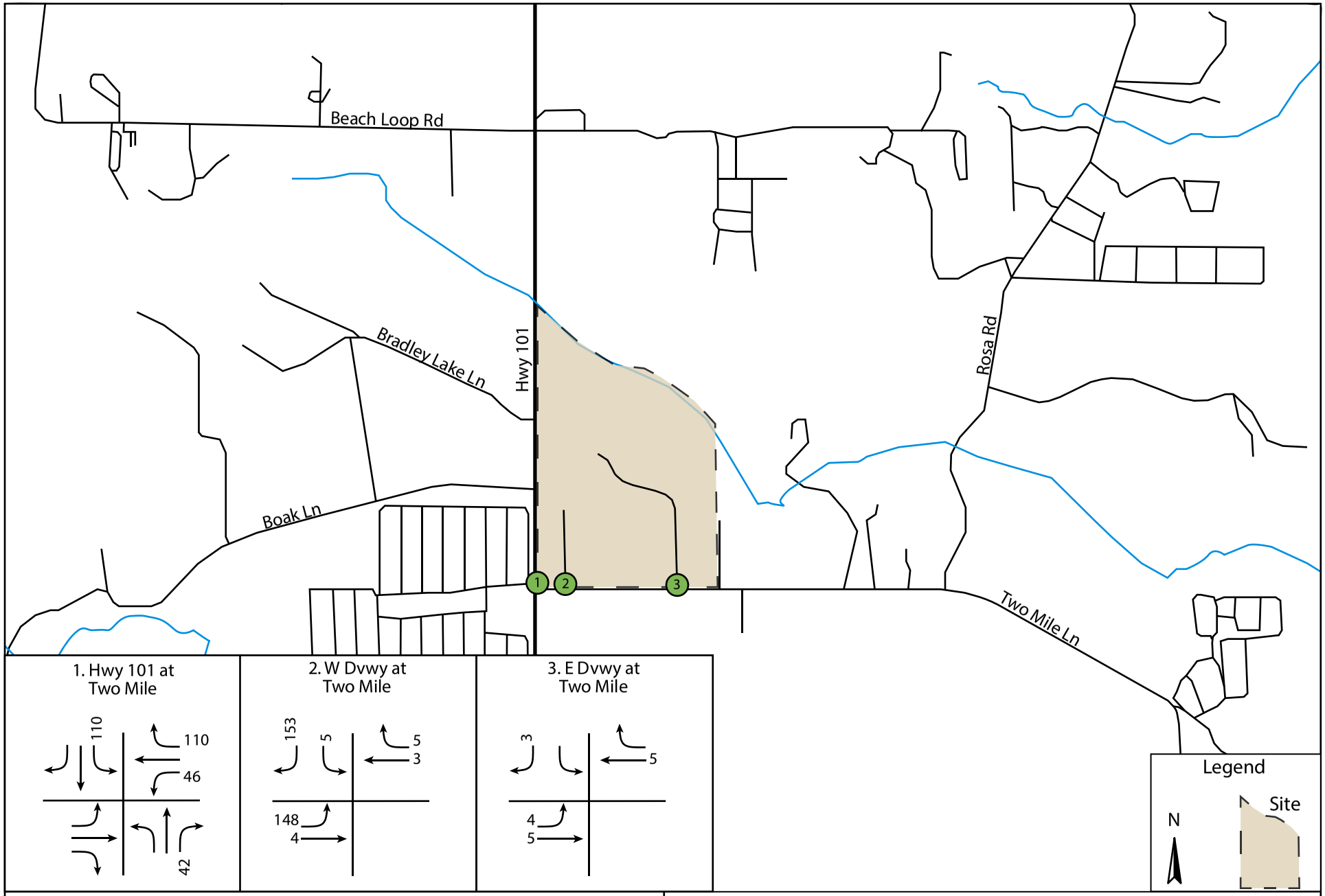
The reasonable worst-case development scenario of the proposed zoning is projected to generate 318 PM peak hour trips.

2.2 TRIP DISTRIBUTION

The trips are estimated to use the surrounding transportation system as per the following distribution pattern:

- 70% to/from the north
- 30% to/from the south

The trip distribution is based on the location of adjacent origins and destinations. The majority of site trips will be to/from the commercial uses on site. Therefore, during the weekday PM peak hour, the trips from the site will likely have origins and destinations from areas of residential neighborhoods. There is a larger concentration of residential areas to the north. The development trip distribution is illustrated in Figure 2.



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Figure 2: PM Development Trip Distribution

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3.0 EXISTING ROADWAY CONDITIONS

3.1 STREET NETWORK

The primary streets included in the study are Highway 101 and Two Mile Lane. The roadway characteristics within the study area are included in Table 2.

TABLE 2: ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Characteristic	Hwy 101	Two Mile Lane
Jurisdiction	ODOT	Coos County
Functional Classification	Statewide	Major Collector
Lanes per Direction	1	1
Center Left Turn Lane	None	None
Restrictions in the Median	None	None
Bikes Lanes Present	Shoulders	None
Sidewalks Present	None	None
Transit Route	None	None
On-Street Parking	None	None
Posted Speed	55	Not Posted

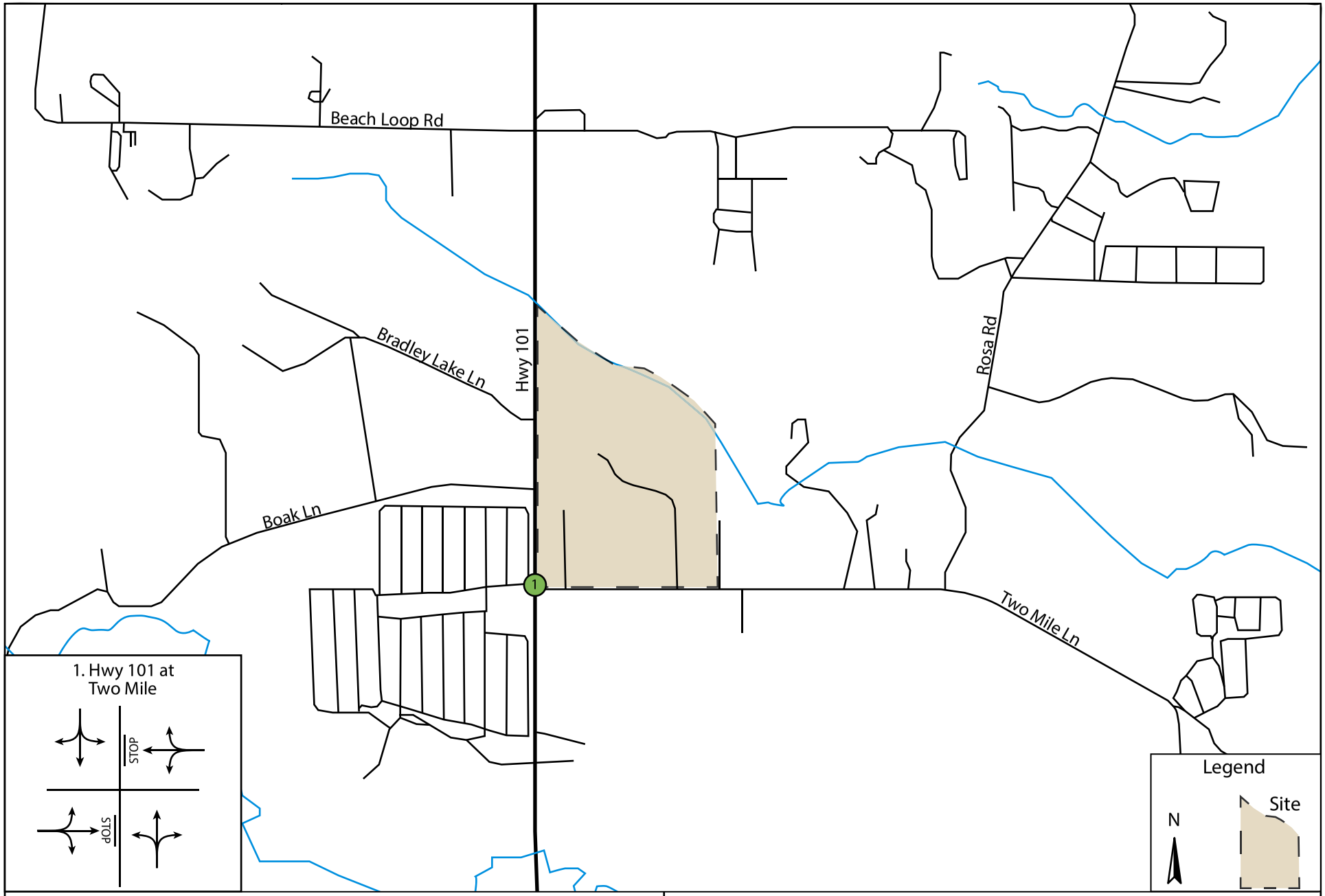
3.2 STUDY INTERSECTIONS

Intersections included in the study are:

- Highway 101 at Two Mile Lane

The following provides a description of the intersections included in the study. Figure 3 illustrates the study area intersection geometry and access control.

Highway 101 at Two Mile Lane: This is a stop-controlled intersection with a private driveway as the west approach and public street connections as all other approaches. The east and west approaches are stop-controlled, and the north and south approaches are free movements. The intersection is one lane in each direction with no turn pockets. There are no sidewalks or bike lanes at the intersection.



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Figure 3: Lane Configuration and Intersection Control

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4.0 CRASH ANALYSIS

A crash evaluation was performed for the study area intersection. The analysis investigates crash data available for the most recent 5 years, 1/1/2019-12/31/2023, to determine the crash rate in crashes per million entering vehicles and the type of crashes that occurred. Year 2024 data is incomplete and, therefore, evaluated for patterns but not included in the crash rate calculations. The crash analysis follows the HSM Critical Crash Rate methodology outlined in ODOT's Analysis Procedures Manual. The intersection crash rates are compared to the Statewide 90th Percentile Crash Rates. If the crash rate exceeds the Statewide Crash Rate, the intersection is further evaluated for possible mitigation measures. The crash data is provided in Appendix B. The crash rates are provided in Table 3. Table 4 summarizes the crash data.

TABLE 3: INTERSECTION CRASH RATE

Location	Intersection Type	Number of Crashes	AADT	MEV	Crash Rate*	Critical Crash Rate*	
Highway 101 at Two Mile	Stop	3	6720	12.26	0.24	0.408	Under

***(crashes/million entering vehicles)**

TABLE 4: INTERSECTION CRASH PATTERNS

Location	Number of Crashes	Types of Crashes						Severity		
		Head	Rear	Side	Turn	Other	Ped/ Bike	PDO	Injury	Fatal
Highway 101 at Two Mile	3	0	1	0	0	1	1	1	1	1

***(crashes/million entering vehicles)**

The intersection of Highway 101 at Two Mile has a crash rate that is lower than the Statewide Crash Rate.

There was one crash resulting in a pedestrian fatality. The crash occurred on January 26, 2020, around 10 PM. The pedestrian was on the shoulder, and the error was assigned to the vehicle. This crash occurred due to driver error and not geometrical or operational issues. No crash mitigation is recommended.

Highway 101 is not a SPIS site.

5.0 BACKGROUND TRAFFIC VOLUMES

5.1 INTERSECTION COUNTS

Turning movement counts were collected in January 2026 at the study intersections from 4:00-6:00 PM. The peak hour of the system is from 4:00-5:00 PM. The traffic volumes are included in Appendix C.

5.2 SEASONAL ADJUSTMENT

The application of seasonal adjustment factors (SAF) accounts for the fact that volumes along State Highways and recreational routes tend to fluctuate from month to month due to changes in recreational behavior, etc. Monthly volume variations for routes with recreational traffic show much higher seasonal peaking than routes with predominantly intercity traffic.

ODOT's Analysis Procedures Manual details the methodology for calculating the seasonal adjustment factor. There is an Automatic Traffic Recorder (ATR) located at milepost 275.87, approximately 2 miles north of the study area intersection. There are no major intersections or developments between the site and the ATR. Therefore, the ATR data is used. As per the ATR, Highway 101 in this section has a seasonal peak that occurs during the months of July and August. The seasonal adjustment is 1.534.

As the seasonal adjustment factor is over 1.3, the traffic volumes are further verified for accuracy. The City of Bandon recently updated its Transportation System Plan. The TSP evaluated the intersection of Highway 101 at Seabird Drive, located at milepost 275.6. The TSP volumes illustrate that during the weekday PM peak hour during the summer peak, the traffic volumes are 370 southbound and 355 northbound. The traffic counts taken for this study and adjusted using the 1.534 SAF result in 351 southbound and 310 northbound. The traffic counts adjusted for peak season are reasonably consistent with the peak season and are therefore usable. Two Mile Lane is rural residential with no recreational destinations or seasonal businesses affecting traffic flow. Therefore, flow is likely from commuter travel and was captured in the traffic count.

The seasonal adjustment factor calculation is provided in Appendix C.

5.3 FUTURE YEAR BACKGROUND VOLUMES

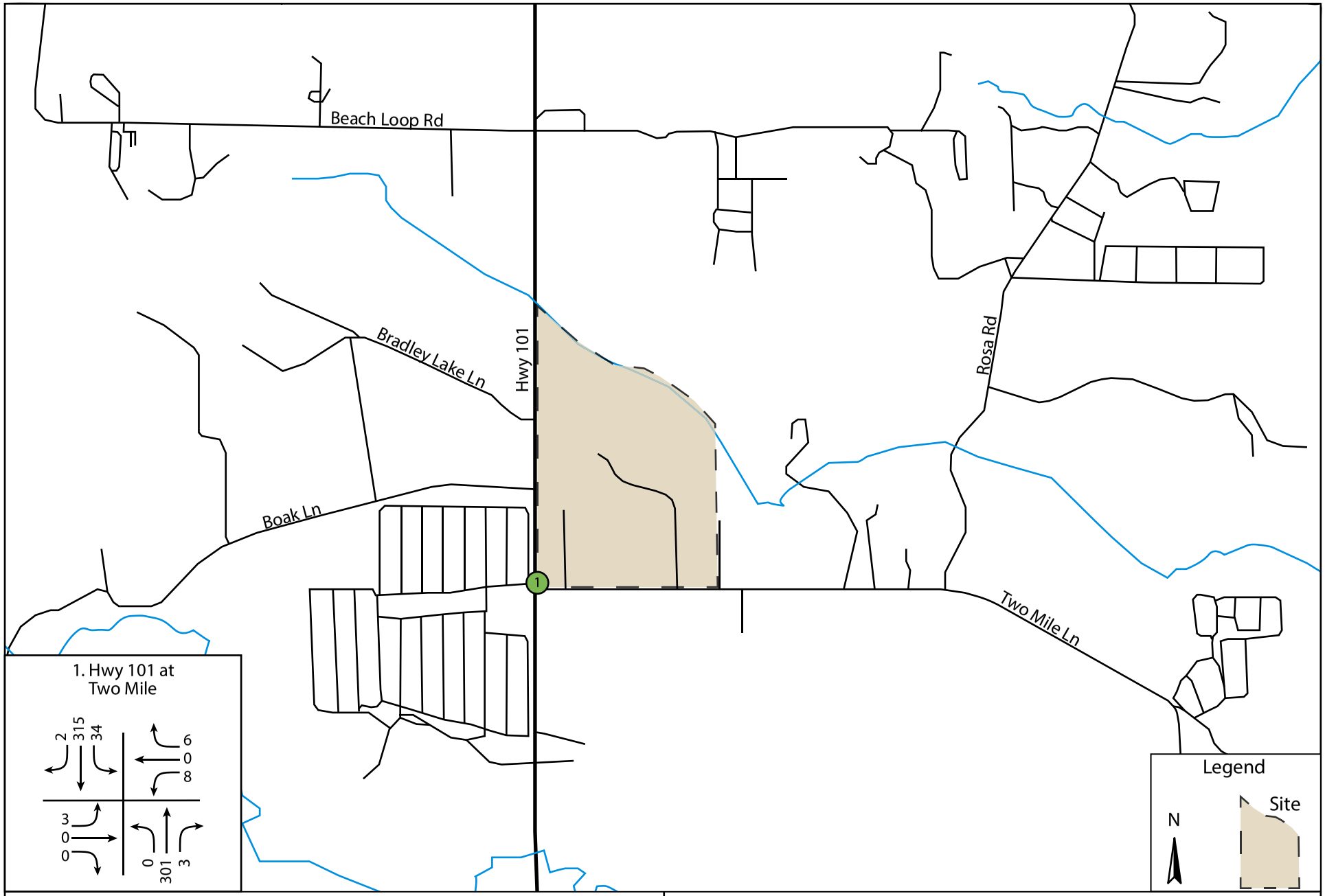
Consistent with the traffic impact analysis criteria, the intersections were evaluated for the existing conditions and a 15-year planning horizon. An annual growth rate was applied to account for naturally occurring traffic increases between the count year and the future analysis year. The growth rate was determined using ODOT Future Volume Tables. As per the ODOT future volume tables, the area is anticipated to experience a growth rate of less than

1.0% per year over the study area timeline. To be conservative, a 1.0% growth rate is used. The 1.0% per year rate was applied to the year 2026 counts to estimate the year 2041 volumes.

5.4 FINAL TRAFFIC VOLUMES

The existing traffic volumes were adjusted according to the methodology described above. Appendix C provides the traffic volume calculations. The traffic volumes are provided in the following figures:

- Figure 4- Year 2026 PM Peak Hour
- Figure 5- Year 2041 PM Peak Hour Background
- Figure 6- Year 2041 PM Peak Hour with Zone Change

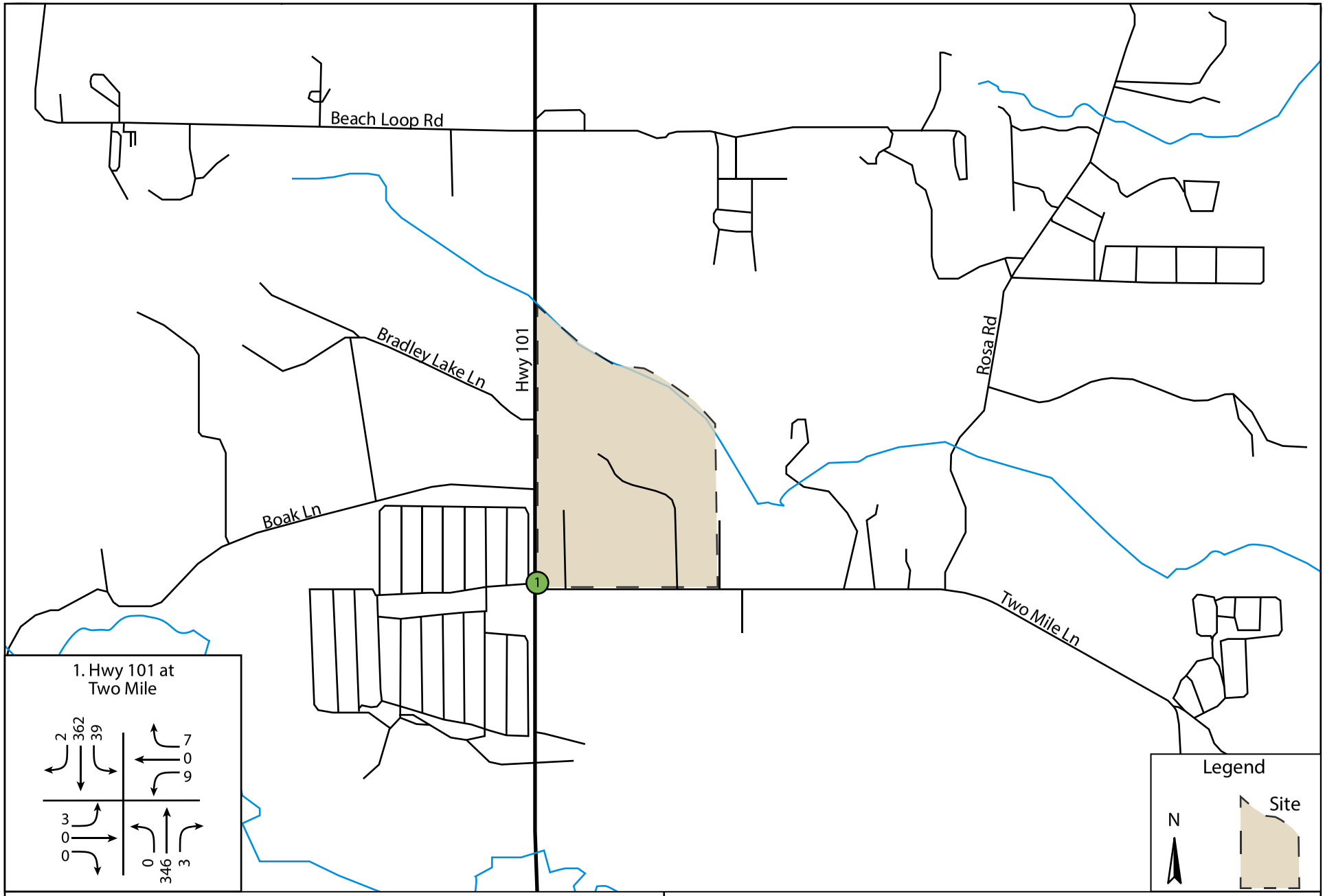


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Figure 4: Year 2026 Existing Traffic Volumes

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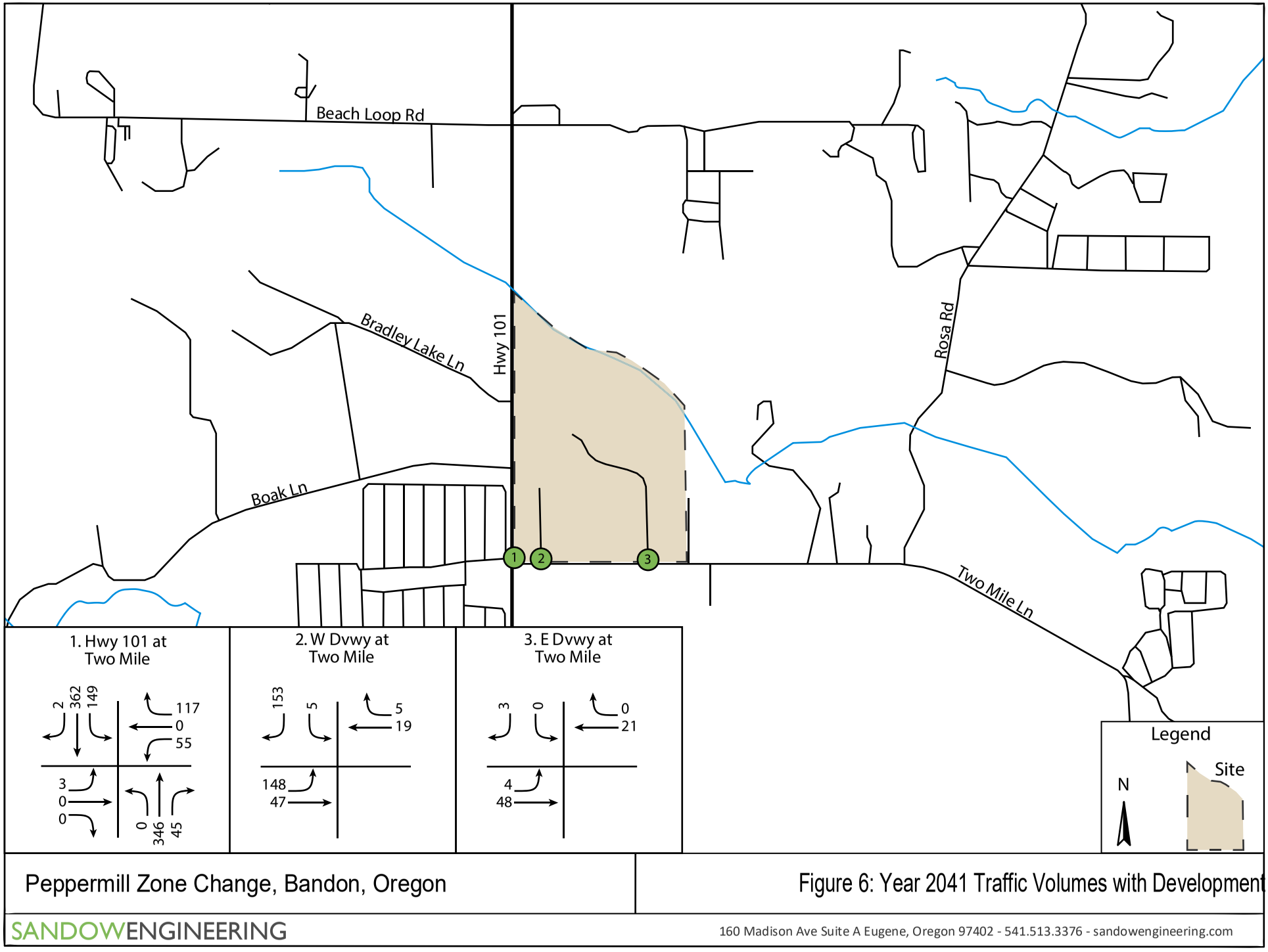


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Figure 5: Year 2041 Background Traffic Volumes

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Figure 6: Year 2041 Traffic Volumes with Development

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6.0 INTERSECTION ANALYSIS

6.1 PERFORMANCE MEASURES

The primary performance measure is the volume-to-capacity ratio (v/c). Volume-to-capacity ratio describes the capability of an intersection to meet volume demand based on the maximum number of vehicles that could be served in an hour.

Oregon Department of Transportation v/c standards, as defined in the Oregon Highway Plan, are based on roadway classification and speed. Highway 101 within the study area is outside of UGB, is a Statewide Highway, not a freight route, and has a posted speed of 55 mph. The v/c standard is 0.75.

Coos County also uses a v/c standard; the standard is 0.85 for all intersections.

6.2 INTERSECTION ANALYSIS RESULTS

A performance analysis was conducted for the studied intersections for the years 2026 and 2041 conditions during the PM peak hour. The intersection evaluation was performed using Synchro 12, utilizing the HCM 7 methodology. The results are shown in Table 5 for the PM peak hour. The SYNCHRO outputs are provided in Appendix D.

TABLE 5: INTERSECTION PERFORMANCE: WEEKDAY PM PEAK HOUR

Intersection	Mobility Standard v/c	2026 Background	2041 Background	2041 w/ Zone Change
Highway 101 at Two Mile Lane	**0.75**	0.04	0.05	0.57
Two Mile Lane at West Driveway	**0.85**	n/a	n/a	0.17
Two Mile Lane at China Creek Road	**0.85**	n/a	n/a	0.01

As illustrated in Table 5, all intersections will meet the applicable v/c standard with the proposed zone change.

6.3 QUEUE ANALYSIS

A queuing analysis was conducted for the studied intersections. The queuing analysis was performed using SimTraffic, a microsimulation software tool that uses the HCM-defined criteria to estimate the queuing of vehicles within the study area. The average and 95th percentile queuing results are illustrated in Table 6 for the PM peak. All results are rounded to 25 feet to represent the total number of vehicles in the queue, as one vehicle typically occupies 25 feet of space. The SimTraffic outputs are provided in Appendix E.

TABLE 6: INTERSECTION QUEUING: WEEKDAY PM PEAK HOUR

Intersection			Available Storage (Feet)	2026 Background (Feet)		2041 Background (Feet)		2041 With Zone Change (Feet)	
				95th	Average	95th	Average	95th	Average
Hwy 101 at Two Mile	**EB**	**LTR**	100	25	25	25	25	25	0
	WB	**LTR**	500+	50	25	50	25	150	75
	SB	**LTR**	500+	50	25	50	25	100	50
Two Mile at West Access	**EB**	**LT**	200+	n/a	n/a	n/a	n/a	25	25
	SB	**LR**	200+	n/a	n/a	n/a	n/a	50	50
Two Mile at China Creek	**SB**	**LR**	200+	n/a	n/a	n/a	n/a	25	25

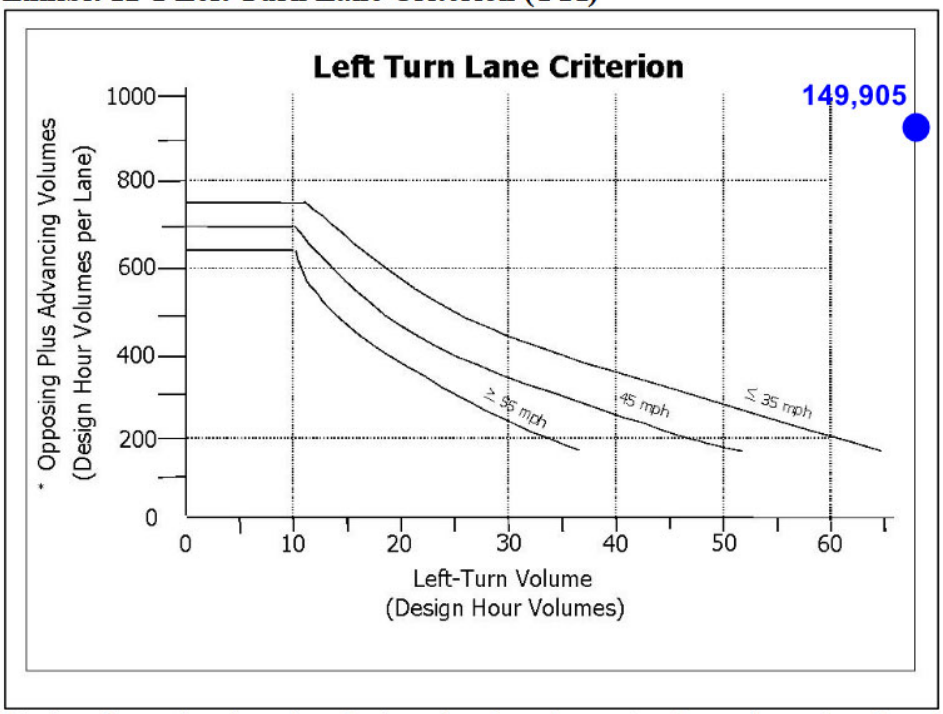
As demonstrated in Table 6, the southbound queue on Highway 101 at Two Mile Lane is estimated at 75 feet (3 vehicles). This queue length would warrant a separate left-turn pocket to reduce the potential for rear-end collisions on Highway 101. The westbound approach at this intersection is anticipated to have a queue of 150 feet. Separate left and right turn lanes should be considered to reduce queueing.

7.0 TURN POCKET EVALUATION

The intersection of Highway 101 at Two Mile Lane was evaluated for the need for a left and right turn pocket utilizing ODOT's Analysis Procedures Manual Turn Lane Criteria. The turn lane evaluation starts with a comparison of the turning vehicles, through vehicles, and the speed of the roadway. If the warrants are met, the location is further evaluated to determine if the turn lane will increase the safety of the roadway, balancing the safety for all users (pedestrian crossing distances and bike lane conflicts).

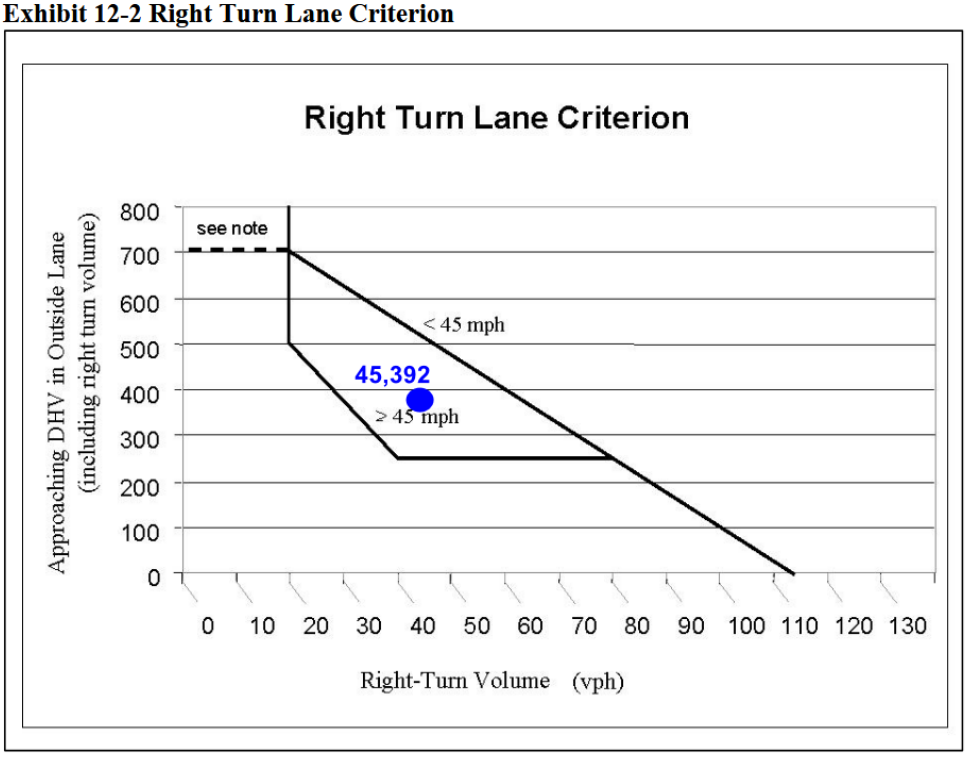
The turn warrant thresholds are evaluated for the PM peak hour at the time of completion of full build out of the proposed zoning (year 2041) and demonstrated in the graphs below. Highway 101 has a posted speed of 55 mph.

Exhibit 12-1 Left Turn Lane Criterion (TTI)



*(Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)
Opposing left turns are not counted as opposing volumes

Exhibit 12-2 Right Turn Lane Criterion



Note: If there is no right turn lane, a shoulder needs to be provided. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

The turn warrants are met for the southbound left turn movement, but not met for the northbound right turn movement. Based on the posed speed and the estimated queuing, a southbound left turn is recommended. As the improvements are not warranted under existing conditions, it is recommended that all improvements be a condition of approval of development and that all improvements be reevaluated for necessity under the actual development proposal. This ensures that mitigation is timed and constructed for actual demand and use at the time of development.

8.0 TRANSPORTATION PLANNING RULE FINDINGS

Consistent with the Transportation Planning Rule (TPR), the following elaborates on how this development meets the TPR requirements.

Goal 12, (OAR) 660-12-0060 (1) requires that a local government ensures that an amendment to a functional plan, an acknowledged comprehensive plan, or a land-use regulation (including a zoning map) does not significantly affect an existing or planned transportation facility. A plan or land use amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

The existing street classification of the study area roadways is illustrated in Table 7.

TABLE 7: EXISTING STREET CLASSIFICATION

Street	Classification
Highway 101	Statewide Highway
Two Mile Lane	Major Collector

The ODOT Highway Design Manual and Coos County's Transportation System Plan identify the factors considered in street classifications. These are land use patterns, roadway volumes, density of accesses, traffic mix and volumes, safety trends, traffic speeds, intersection spacing, and right-of-way availability and constraints.

The mix and levels of traffic are consistent with what is typically found within the types of streets in the study area. The proposed zone change and use will not require a change in street classification.

As demonstrated, the levels of traffic added from the proposed zone change will not change the functional classification of any of the adjacent streets where development traffic will be added.

(b) Change standards implementing a functional classification system; or

The standards for implementing a functional classification system are found within the ODOT Highway Design Manual and Coos County's Transportation System Plan. The standards are based on street connectivity, spacing of streets, mix and amounts of travel modes, and mobility. The proposed zone change does not need to modify the standards for the street functional classification system.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

The proposed zone change will not cause traffic levels, patterns, or access that are inconsistent with the functional classification of an existing or planned transportation facility.

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

The trips from the proposed zone change will not degrade the performance of any studied intersections to not meet the standards.

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan." OAR 660-12-0060(1)

All intersections will meet the performance standards.

9.0 CONCLUSION

This report provides the Traffic Impact Analysis and findings prepared for the proposed zone change of 46.1 acres of vacant property located south of Bandon, Oregon. The analysis evaluates the transportation impacts as per ODOT and Coos County standards, evaluating adjacent roadway and intersection operation with the zone change for a 15-year planning

horizon as per Oregon Administrative Rule, OAR 660-012-0060, the Transportation Planning Rule.

FINDINGS

- The addition of development trips does not trigger any intersections to not meet the applicable v/c.
- Crash rates and crash patterns do not warrant roadway improvements.
- The southbound queue on Highway 101 at Two Mile Lane is estimated at 75 feet (3 vehicles). This queue length would warrant a separate left-hand pocket to reduce the potential for rear-end collisions on Highway 101.
- The westbound approach at the intersection of Highway 101 at Two Mile Lane is anticipated to have a queue of 150 feet. Separate left and right turn lanes should be considered to reduce queueing.

RECOMMENDATIONS

- **Highway 101 at Two Mile Lane:** ODOT preliminary left turn warrants are met for considering a southbound left turn movement with the full build-out of the reasonable worst-case development potential. As the left turn warrants are not met under the existing conditions and are only met with the build-out at full intensity, it is recommended that the need for a turn pocket be reevaluated for necessity under the actual development proposal. This ensures that if deemed necessary in the future, mitigation is timed and constructed for actual demand and use at the time of development.

APPENDIX A: SCOPE OF WORK

Peppermill Zone Change

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TECH MEMO

DATE: December 29, 2025

TO: Michael Wang PE
Oregon Department of Transportation

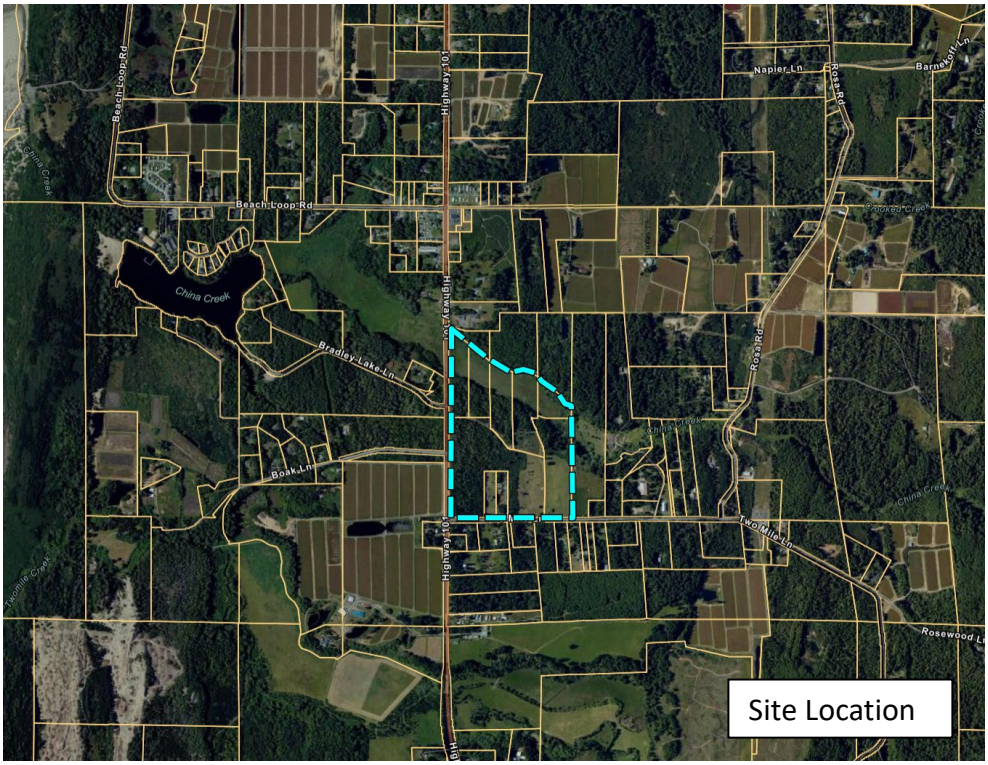
FROM: Kelly Sandow P.E.
Sandow Engineering

RE: Analysis Scope and Parameters- TPR for Peppermill Zone Change- Bandon

The following provides the trip generation estimate, trip distribution, and analysis parameters for the Transportation Planning Rule Analysis prepared for the proposed zone change of several parcels located adjacent to Highway 101 and Two-Mile Road in Bandon, Oregon.

Site Information

The development site is comprised of Tax Lots 1600, 1607, 1608, 1610, 1611, 1615, and 1616 of Coos County Assessor's Map 29-14-18. The site is located east of Highway 101 and north of Two Mile Lane. The total site is approximately 61.99 acres and is currently vacant. The site location is illustrated in the image below.



Highway 101 is under the jurisdiction of ODOT and is classified as a Statewide Highway. Two Mile Lane is within the jurisdiction of Coos County and is classified as a Major Collector.

Development Proposal

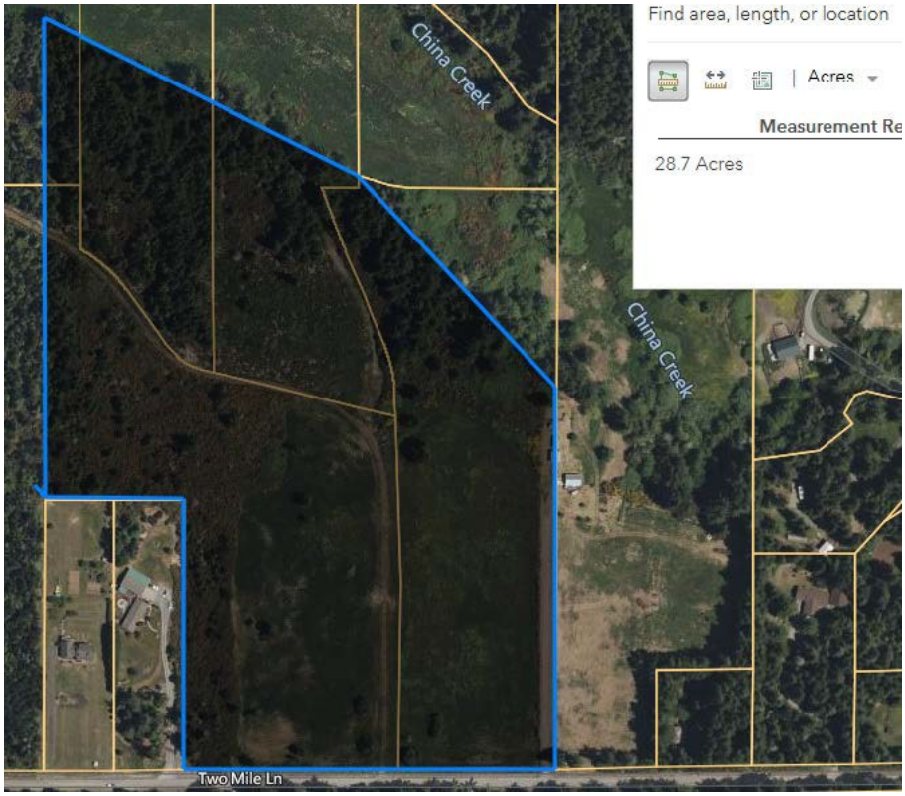
The site is currently zoned "Forest". The applicant will be rezoning approximately 28.7 acres of the site to Rural Residential RR-2 zoning and approximately 17.4 acres of the site to Commercial C-1 zoning.

The commercially zoned property will be a portion of the lax lots with frontage on Highway 101. For the purposes of the TPR analysis, access to these lots will be assumed via a new connection to Two Mile Lane along the commercially zoned lots. The properties to be zoned C-1 are illustrated in the image below.

The residentially zoned property will be a portion of the tax lots with frontage on Two Mile Lane. For the purpose of the TPR analysis, access to these lots will be assumed via the existing China Creek Road connection Two Mile Lane. The properties to be zoned RR-2 are illustrated in the image below.



Proposed C-1 Zoning



Proposed RR-2 Zoning

Trip Generation

The zone change triggers a Transportation Planning Rule Analysis, as per OAR 660-012-0060. TPR requires an evaluation of impacts using a "reasonable worst-case" development scenario under the proposed zoning. The reasonable worst-case development scenario is determined by evaluating what could be developed within the zoning, as allowed by code, and what is reasonable to be developed within the area.

As per Coos County development code, the following describes the reasonable worst-case development potential. Table 1 provides the PM Peak Hour trip generation for the reasonable worst-case uses for the proposed zoning.

Residential R-2:

- Lot size= 10 acres minimum
- Each lot would have one single family home
- Site is 28.0 acres
- Maximum development= 3 single family lots/3 single family homes

The trips for the residential area are estimated using ITE Land Use Code 210- Single Family Detached. The trips are based on the number of units using the fitted curve equation.

Commercial C-1:
The intent of this zoning is small-scale non-intensive commercial.

- The area could be divided into 15 parcels
- Each parcel can have up to a 4,000-sf building
- A "reasonable worst-case development" potential for this rural area will likely be 10-15 smaller retail buildings with a mix of retail, office, restaurant, small market, small hotel, etc.
- Total building square footage is anticipated at 40,000-60,000 over the entire acreage.

To account for the mix of uses, the trips for the commercial area are estimated using ITE Land Use Code 821- Shopping Plaza (40-150 k). This land use code assumes there are ranges of uses from office to restaurant and includes the internal trip factor within the base rate.

Table 1 below provides the PM Peak Hour trip generation for the reasonable worst-case uses for the proposed zoning.

TABLE 1: PM PEAK HOUR TRIP GENERATION- PROPOSED ZONING

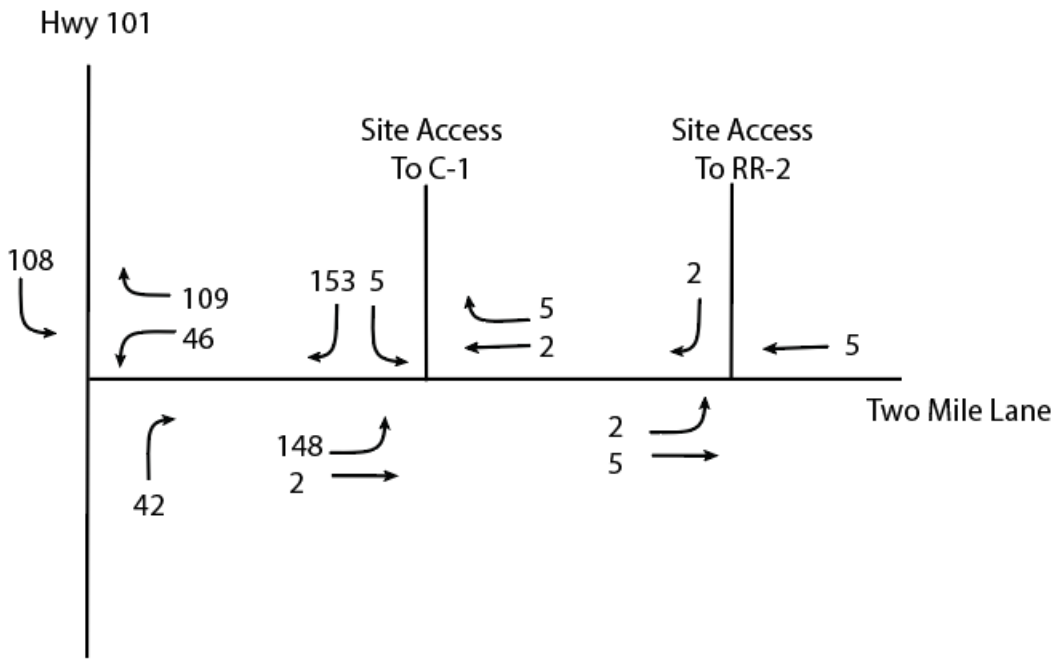
ITE Code	Size	Rate	Trips	In	Out
210- Single Family Detached	3 units	Ln(T)=0.94(x)+0.27	4	2 (63%)	2 (37%)
821- Shopping Plaza (40-150 K)	60 ksf	5.19	311	153 (49%)	158 (51%)
		Total	**315**	**155**	**160**

The reasonable worst-case development scenario of the proposed zoning is projected to generate 315 PM peak hour trips.

The trips are estimated to use the surrounding transportation system as per the following distribution pattern:

- 70% to/from the north
- 30% to/from the south

The PM peak hour development trip distribution is illustrated in the following figure.



PM Peak Hour Trip Distribution

ANALYSIS PARAMETERS

The evaluation will include ODOT and Coos County Criteria. All evaluations and findings will be in accordance with the appropriate jurisdiction.

- Years
  - Year 2026- Existing Conditions
  - Year 2030- Coos County's TSP Horizon Year
- PM Peak Period- 4-6 PM
- Growth Rate: As per Future Volume Tables. The future volume table shows less than 1% annual growth. 1% will be used to be conservative.
- Seasonal Adjustment Factor: There is an ATR located approximately 2.5 miles north. The ATR data is used for seasonal adjustment.
- Analysis to include:

Oregon
Tina Kotek, Governor

Oregon Department of Transportation
Region 3, District 8
100 Antelope Road
White City, OR 97503
(541) 774-6316
FAX (541 774-6397

FILE CODE:

TECHNICAL MEMORANDUM

TO: **Micah Horowitz**
Region 3 Development Review Planner

FROM: **Wei (Michael) Wang, P.E. & M.S.**
Region 3 Access Management Coordinator

DATE: **January 13, 2026**

SUBJECT: **Review of Peppermill Zone Change -Bandon Scoping Letter (Dated 12/29/2025)**

Page	Paragraph	Comment
2	Residential RR-2	RR-2: The min lot size for RR-2 is 2 acres not 10 acres. Please double check this.
3	Commercial C-1	The C-1 commercial assumption used in the scoping letter does not appear to be fully applicable, as there is no existing commercial development in the surrounding area. Please verify with the County if the proposed 60k SQFT of shopping plaza really follows the intent of new commercial in the proposed zone/area as a reasonable worst case. "low impact uses" as described in the county development code could potentially be interpreted as much lower traffic generating uses. From county development code: Only the following new Commercial Uses in unincorporated communities: Uses authorized under Oregon Statewide Planning Goals 3 and 4; Small-scale, low impact uses; and Uses intended to serve the community and surrounding rural area or the travel needs of people passing through the area.
3	Trip Distribution	Please explain how the 30/70 percent directional split was determined.
4	Analysis Parameters - Years	An analysis shall be conducted for all ODOT intersections for the **greater of** 15 years or the planning horizon of the applicable local and regional transportation system plan.
5	Analysis Parameters-Study Intersection	ODOT staff agreed with the proposed study intersection.
6	Analysis Parameters	ODOT would like turn-lanes/channelization evaluated at the US-101/Two Mile Lane intersection.

If you have any questions regarding my comments, please call me at (541) 315-5208 or Wei.Wang@odot.oregon.gov

  - V/C
  - Queuing
  - Crash Analysis
  - Turn pocket evaluation at the site entrance
  - Mitigation as needed
- Intersections to include in analysis:
  - Highway 101 at Two Mile Lane
- Analysis performed using Synchro 12, following HCM 7 Methodology
- Saturday flow rate: 1750

APPENDIX B:

CRASH DATA

Peppermill Zone Change

CRASH DATA SUMMARY

Hwy 101 MP 278.29 to 279.32											
YEAR	PDO	INJURY	FATAL	HEAD	REAR	SIDE	TURN	OTHER	PED	BIKE	TOTAL
2019											0
2020		1	1		1				1		2
2021											0
2022											0
2023	1							1			1
2024											0
2019-2023	1	1	1	0	1	0	0	1	1	0	3

CHECK
OK
OK
OK
OK
OK
OK

P.M. PEAK HOUR	Number of Years, n	ADT	AVG. ANNUAL MILES (MILLIONS)	AVG. YEARLY CRASHES	CRASH RATE/ MILLION MILES
672	5	6720	2452800.000	600000.0	0.24

REAR	N-S/N-W
TURN	
SIDE	
BIKE	
OTHER	S-N/W-E
PED	N-S

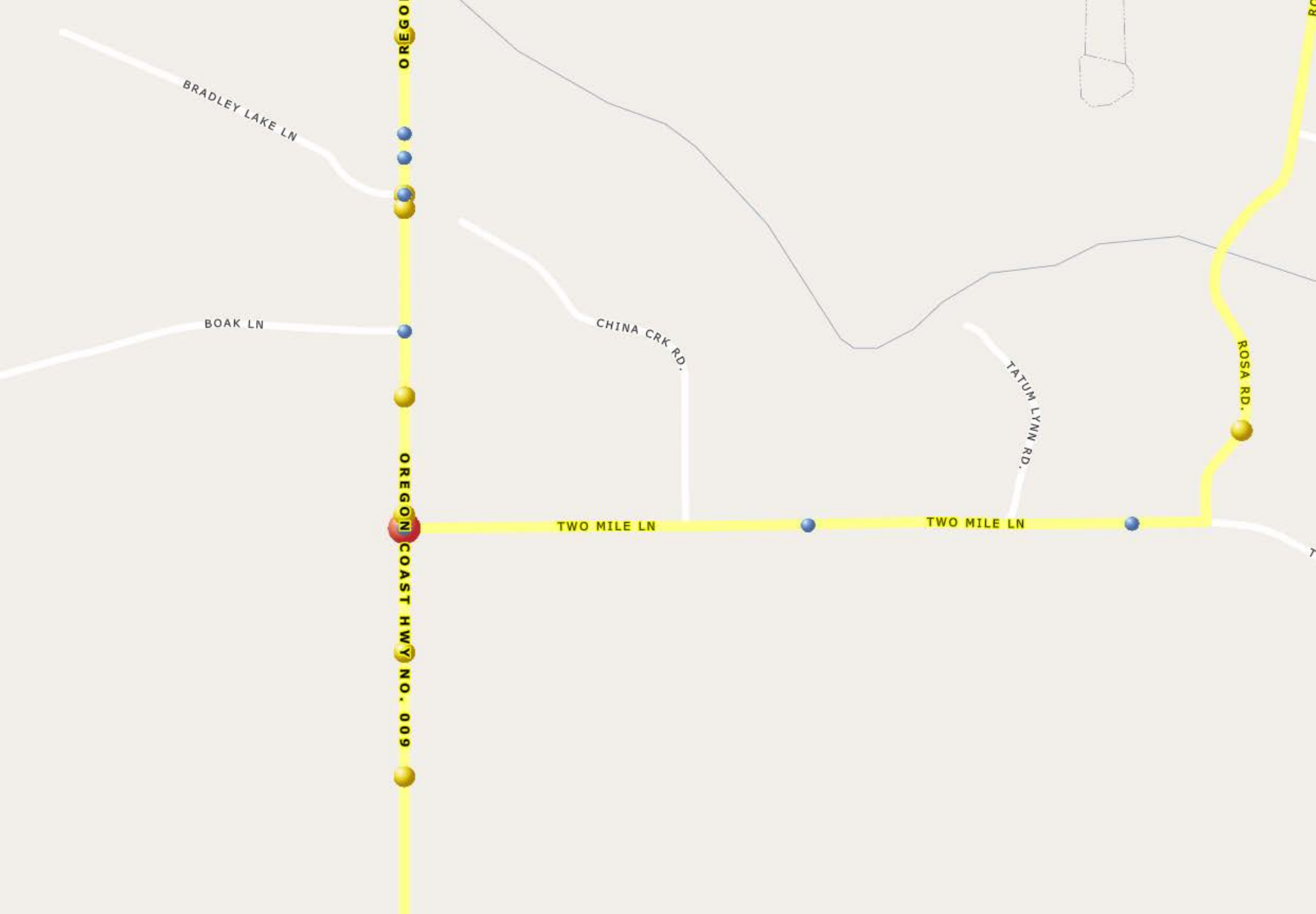
009: OREGON COAST

Highway 009 ALL ROAD TYPES, MP 278.29 to 278.32 01/01/2019 to 12/31/2024, Both Add and Non-Add mileage, ALL Crashes Severity, ALL Crashes Circumstance

1 - 3 of 3 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D R U G	M J S V	S C N H	W O R L	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# / COMPNT / MLG / MILEPNT	FC / TYP	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00419	N	N	N	N	N	N	08/28/2020	COOS	1	02		ALLEY		N	N	CLD	S-1TURN	01	NONE	STRGHT										27,10
STATE				FR					MN	0		UN	(NONE)	UNKNOWN	N	DRY	REAR			N -S								000		00
N				7P					278.30			03			Y	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	M	SUSP		019	000		10,27
N				43 3 28.27			-124 24 54.74				000900100S00		(02)													OR<25					
																		02	NONE	TURN-R											
																			PRVTE	N -W								006		00
																			PSNGR CAR		01	DRVR	INJC	66	F	OR-Y		000	000		00
																										OR<25					
00035	N	Y	Y	N	N	N	01/26/2020	COOS	1	02		INTER	3-LEG	N	Y	RAIN	PED	01	NONE 0	STRGHT										27
STATE				SU					MN	0		CN		STOP SIGN	N	WET	PED		PRVTE	N -S								000		00
N				10P					278.31			01	0		N	DARK	FAT		PSNGR CAR		01	DRVR	NONE	25	F	OR-Y		016,081	038		27
N				43 3 27.71			-124 24 54.74				000900100S00															OR<25					
																				-											
																				STRGHT	01	PED	KILL	44	M		SHLDR	000	000		00
																				UN UN											
00449	N	N	N	N	N	N	07/01/2023	COOS	1	02		INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 9	STRGHT										02,27
STATE				SA					MN	0		CN		STOP SIGN	N	DRY	ANGL		N/A	S -N								000		00
N				43 3 27.71			-124 24 54.74		278.31		000900100S00	04	0		Y	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				3P																UNK											
																		02	NONE 9	STRGHT											
																			N/A	W -E								018		00
																			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK					

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.


BRADLEY LAKE LN
BOAK LN
CHINA CRK RD.
TATUM LYNN RD.
ROSA RD.
TWO MILE LN
TWO MILE LN
OREGON COAST HWY NO. 009

APPENDIX C:

TRAFFIC VOLUMES

Peppermill Zone Change

Intersection: 1: Highway 101 @ Two Mile Lane **City:** Bandon

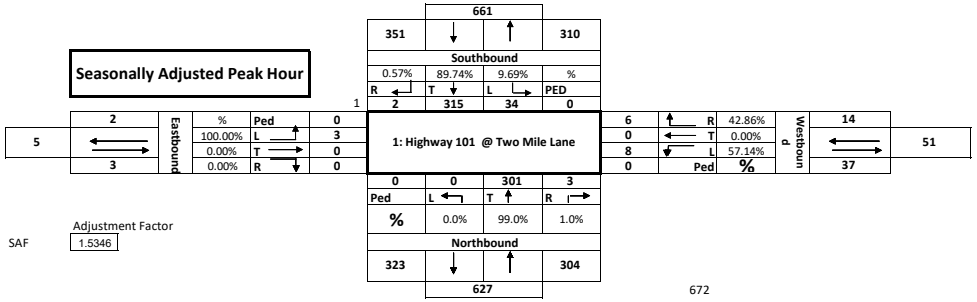
Counter: Sandow Engineering **Date:** Thursday, January 22, 2026

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
16:00	16:15	0	52	5	57	0	0	1	1	1	45	0	46	0	0	0	0	104		0	0	0	0
16:15	16:30	0	48	5	53	3	0	2	5	0	45	0	45	0	0	1	1	104		0	0	0	0
16:30	16:45	0	59	3	62	1	0	1	2	0	52	0	52	0	0	1	1	117		0	0	0	0
16:45	17:00	1	46	9	56	0	0	1	1	1	54	0	55	0	0	0	0	112	437	0	0	0	0
17:00	17:15	0	43	0	43	1	0	0	1	0	38	0	38	0	0	0	0	82	415	0	0	0	0
17:15	17:30	0	40	1	41	6	0	3	9	2	27	0	29	0	0	0	0	79	390	0	0	0	0
17:30	17:45	0	44	5	49	1	0	2	3	1	33	0	34	0	0	0	0	86	359	0	0	0	0
17:45	18:00	0	38	0	38	0	0	0	0	0	37	0	37	0	0	0	0	75	322	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Period Total		**1**	**370**	**28**		**12**	**0**	**10**		**5**	**331**	**0**		**0**	**0**	**2**		**759**		**0**	**0**	**0**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**1**	**205**	**22**	**228**	**4**	**0**	**5**	**9**	**2**	**196**	**0**	**198**	**0**	**0**	**2**	**2**	**437**		**0**	**0**	**0**	**0**
PHF	0.25	0.87	0.61	0.92	0.33	0.00	0.63	0.45	0.50	0.91	0.00	0.90	0.00	0.00	0.50	0.50	0.93					
Trucks	0	0	0		0	0	0		0	0	0		0	0	0							
% Trucks	0%	0%	0%		0%	0%	0%		0%	0%	0%		0%	0%	0%							


Seasonally Adjusted Peak Hour
661
351
310
Southbound
0.57%
89.74%
9.69%
%
R
T
L
PED
1
2
315
34
0
1: Highway 101 @ Two Mile Lane
6
R
42.86%
0
T
0.00%
8
L
57.14%
0
Ped
%
2
Eastbound
%
Ped
0
100.00%
L
3
0.00%
T
0
0.00%
R
0
5
3
0
0
301
3
Ped
L
T
R
%
0.0%
99.0%
1.0%
Northbound
323
304
627
672
Westbound
14
51
37
Adjustment Factor
SAF
1.5346

1: Highway 101 @ Two Mile Lane

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
4:00 PM		0	52	5			0	0	1			1	45						0		104	
4:15 PM		0	48	5			3	0	2			0	45						1		104	
4:30 PM		0	59	3			1	0	1			0	52						1		117	
4:45 PM		1	46	9			0	0	1			1	54						0		112	437
5:00 PM		0	43	0			1	0	0			0	38						0		82	415
5:15 PM		0	40	1			6	0	3			2	27						0		79	390
5:30 PM		0	44	5			1	0	2			1	33						0		86	359
5:45 PM		0	38	0			0	0	0			0	37						0		75	322
6:00 PM																					0	240
6:15 PM																					0	161
6:30 PM																					0	75
6:45 PM																					0	0
Total	0	1	370	28		0	12	0	10		0	5	331	0		0	0	0	2			
Peak Hour	**0**	**1**	**205**	**22**	**0**	**0**	**4**	**0**	**5**	**0**	**0**	**2**	**196**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**437**	**1242**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
4:00 PM																	0	
4:15 PM																	0	
4:30 PM																	0	
4:45 PM																	0	0
5:00 PM																	0	0
5:15 PM																	0	0
5:30 PM																	0	0
5:45 PM																	0	0
6:00 PM																	0	0
6:15 PM																	0	0
6:30 PM																	0	0
6:45 PM																	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0			
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Bikes

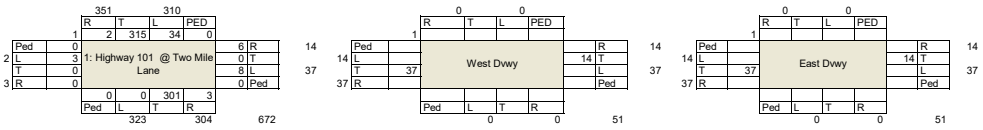
Time Period	Southbound				Westbound				Northbound				Eastbound				SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left					
4:00 PM																	0	0	0	0
4:15 PM																	0	0	0	0
4:30 PM																	0	0	0	0
4:45 PM																	0	0	0	0
5:00 PM																	0	0	0	0
5:15 PM																	0	0	0	0
5:30 PM																	0	0	0	0
5:45 PM																	0	0	0	0
6:00 PM																	0	0	0	0
6:15 PM																	0	0	0	0
6:30 PM																	0	0	0	0
6:45 PM																	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0					
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Pedestrians

Time Period	NE				NW				SW				SE			SB	WB	NB	EB
	Left	Right	Total		Left	Right	Total		Left	Right	Total		Left	Right	Total				
4:00 PM			0				0				0				0	0	0	0	0
4:15 PM			0				0				0				0	0	0	0	0
4:30 PM			0				0				0				0	0	0	0	0
4:45 PM			0				0				0				0	0	0	0	0
5:00 PM			0				0				0				0	0	0	0	0
5:15 PM			0				0				0				0	0	0	0	0
5:30 PM			0				0				0				0	0	0	0	0
5:45 PM			0				0				0				0	0	0	0	0
6:00 PM			0				0				0				0	0	0	0	0
6:15 PM			0				0				0				0	0	0	0	0
6:30 PM			0				0				0				0	0	0	0	0
6:45 PM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0

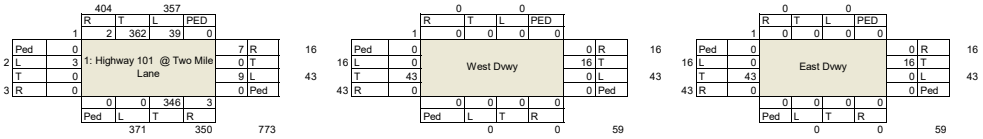
Background Trips

2026



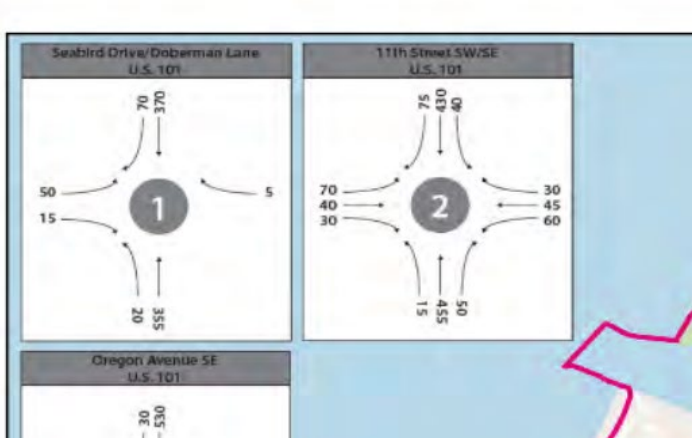
EDIT Highlighted

Base Year	###
Target Year	###
Years of Growth	15
Growth Rate Per Yea	0.010
Growth Factor	1.15



ATR 16-004 US101; OREGON COAST HIGHWAY NO. 9; 1.02 miles south of 18th SW Street

Year	Peak Month		Count Month -January	
2024	July	130	85	
2023	August	138	81	
2022	July	127	91	
2021	July	133	84	
2020	August	136	93	
		399	260	1.534615



									2024	2044		Growth Rate
6004	009	00900I00	275.87	1	X	South of 18th SW Street [1.02 miles] {Bandon ATR, Sta. 06-004}			6800	7300	SWIM	0.0037
1259	009	00900I00	277.54	1		North of Beach Loop Rd			6500	7100	SWIM	0.0046
1260	009	00900I00	281.74	1		North of Lower Fourmile Road [0.02 mile]			4900	5600	SWIM	0.0071
1261	009	00900I00	282.09	1		South of Upper Fourmile Road [0.02 mile]			4700	5400	SWIM	0.0074

APPENDIX D: SYNCHRO OUTPUTS

Peppermill Zone Change

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	0	8	0	6	0	301	3	34	315	2
Future Vol, veh/h	3	0	0	8	0	6	0	301	3	34	315	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	0	9	0	6	0	324	3	37	339	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	737	740	340	737	739	325	341	0	0	327	0	0
Stage 1	413	413	-	325	325	-	-	-	-	-	-	-
Stage 2	324	327	-	412	414	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	337	347	707	337	347	721	1230	-	-	1244	-	-
Stage 1	620	597	-	691	652	-	-	-	-	-	-	-
Stage 2	693	651	-	621	597	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	322	335	707	324	335	721	1230	-	-	1244	-	-
Mov Cap-2 Maneuver	322	335	-	324	335	-	-	-	-	-	-	-
Stage 1	598	576	-	691	652	-	-	-	-	-	-	-
Stage 2	687	651	-	599	575	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	16.3	13.79	0	0.77
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1230	-	-	322	424	174	-	-
HCM Lane V/C Ratio	-	-	-	0.01	0.035	0.029	-	-
HCM Ctrl Dly (s/v)	0	-	-	16.3	13.8	8	0	-
HCM Lane LOS	A	-	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	0	9	0	7	0	346	3	39	362	2
Future Vol, veh/h	3	0	0	9	0	7	0	346	3	39	362	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	0	10	0	8	0	372	3	42	389	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	846	849	390	847	849	374	391	0	0	375	0	0
Stage 1	474	474	-	374	374	-	-	-	-	-	-	-
Stage 2	372	375	-	473	475	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	284	300	663	284	300	677	1178	-	-	1194	-	-
Stage 1	575	561	-	651	621	-	-	-	-	-	-	-
Stage 2	653	620	-	576	560	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	269	287	663	271	287	677	1178	-	-	1194	-	-
Mov Cap-2 Maneuver	269	287	-	271	287	-	-	-	-	-	-	-
Stage 1	549	536	-	651	621	-	-	-	-	-	-	-
Stage 2	645	620	-	550	535	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	18.57	15.27	0	0.79
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	269	368	174	-	-
HCM Lane V/C Ratio	-	-	-	0.012	0.047	0.035	-	-
HCM Ctrl Dly (s/v)	0	-	-	18.6	15.3	8.1	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	0	55	0	117	0	346	45	149	362	2
Future Vol, veh/h	3	0	0	55	0	117	0	346	45	149	362	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	0	59	0	126	0	372	48	160	389	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1083	1131	390	1106	1108	396	391	0	0	420	0	0
Stage 1	711	711	-	396	396	-	-	-	-	-	-	-
Stage 2	372	420	-	710	712	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	197	205	663	190	212	658	1178	-	-	1150	-	-
Stage 1	427	439	-	633	607	-	-	-	-	-	-	-
Stage 2	653	593	-	428	439	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	131	169	663	156	174	658	1178	-	-	1150	-	-
Mov Cap-2 Maneuver	131	169	-	156	174	-	-	-	-	-	-	-
Stage 1	351	361	-	633	607	-	-	-	-	-	-	-
Stage 2	528	593	-	352	361	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	33.25	29.92	0	2.51
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	131	324	522	-	-
HCM Lane V/C Ratio	-	-	-	0.025	0.571	0.139	-	-
HCM Ctrl Dly (s/v)	0	-	-	33.3	29.9	8.6	0	-
HCM Lane LOS	A	-	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	3.3	0.5	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	148	47	19	5	5	153
Future Vol, veh/h	148	47	19	5	5	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	159	51	20	5	5	165

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	26	0	-	0	392	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	369	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1602	-	-	-	616	1059
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1602	-	-	-	553	1059
Mov Cap-2 Maneuver	-	-	-	-	553	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	704	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	5.69	0	9.19
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1366	-	-	-	1030
HCM Lane V/C Ratio	0.099	-	-	-	0.165
HCM Ctrl Dly (s/v)	7.5	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	48	21	0	0	3
Future Vol, veh/h	4	48	21	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	52	23	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	23	0	-	0	83	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	60	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1606	-	-	-	924	1060
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1606	-	-	-	921	1060
Mov Cap-2 Maneuver	-	-	-	-	921	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.56	0	8.41
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	138	-	-	-	1060
HCM Lane V/C Ratio	0.003	-	-	-	0.003
HCM Ctrl Dly (s/v)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX E: QUEUING OUTPUTS

Peppermill Zone Change

Intersection: 3:

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	12	31	44
Average Queue (ft)	4	11	11
95th Queue (ft)	20	35	47
Link Distance (ft)	160	307	708
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3:

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	12	30	30
Average Queue (ft)	3	14	10
95th Queue (ft)	17	37	33
Link Distance (ft)	160	307	708
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8:

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: Hwy 101 & Two Mile Ln, Interval #1

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	12	73	48
Average Queue (ft)	2	49	33
95th Queue (ft)	16	82	67
Link Distance (ft)	160	307	708
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Hwy 101 & Two Mile Ln, Interval #2

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	18	137	123
Average Queue (ft)	3	82	59
95th Queue (ft)	16	151	116
Link Distance (ft)	160	307	708
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Hwy 101 & Two Mile Ln, All Intervals

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	24	138	123
Average Queue (ft)	2	68	49
95th Queue (ft)	16	131	101
Link Distance (ft)	160	307	708
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Two Mile Ln/West Access, Interval #1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	12	36
Average Queue (ft)	4	29
95th Queue (ft)	20	43
Link Distance (ft)	307	504
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Two Mile Ln/West Access, Interval #2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	25	49
Average Queue (ft)	6	35
95th Queue (ft)	26	51
Link Distance (ft)	307	504
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Two Mile Ln/West Access, All Intervals

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	31	49
Average Queue (ft)	5	32
95th Queue (ft)	24	48
Link Distance (ft)	307	504
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: West Access & China Creek, Interval #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	14
Average Queue (ft)	4
95th Queue (ft)	19
Link Distance (ft)	491
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: West Access & China Creek, Interval #2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	19
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	491
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: West Access & China Creek, All Intervals

Movement	SB
Directions Served	LR
Maximum Queue (ft)	19
Average Queue (ft)	4
95th Queue (ft)	18
Link Distance (ft)	491
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

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