



Whipple Consulting Engineers
Spokane, WA

Traffic Impact Analysis
FOR

Volkman PUD Subdivision

Spokane, Washington
July, 2026
2022-3287

TRAFFIC IMPACT ANALYSIS

Volkman PUD Subdivision

City of Spokane, Washington

July 9, 2026

W.O. No. 2022-3287

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Todd R. Whipple, P.E.

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EXECUTIVE SUMMARY

Supplemental to the SEPA Process for the proposed Volkman PUD Subdivision, a residential development, the following Traffic Impact Analysis applies:

1. The City of Spokane, Spokane County and WSDOT have established Level of Service D as the minimum acceptable level for signalized intersections and Level of Service E for unsignalized intersections.
2. The City of Spokane is a traffic impact fee City; the project will be subject to City's Traffic impact Fee at the time of building permit.
3. The project proposes to develop 97.78 acres of 12 parcels totaling 136.52 acres +/- into a planned unit development. 38.73 acres +/- of the project includes slopes greater than 30% and are to remain as open space. The Volkman PUD is a mixed-use development that includes a variety of different residential uses and one neighborhood commercial land use. The single family residential under land use code #210 include a "standard" lot which are single family lots that are 1/3rd of an acre in size, the cottage lots are 1/4 of an acre. The auto court lots are centered around a central driveway with attached buildings and are included under LUC #215. The duplex lots are included under LUC #215. The townhouse units are included under LUC #215. The multifamily land uses are 4 stories and included under LUC #221. The neighborhood commercial use is anticipated to include four 5,000 sf buildings totaling 20,000 sf (20.0 ksf) .
4. The project site is currently developed with two single-family residences and outbuildings one home is proposed to remain with the project. The project proposes to be accessed via Red Cloud Avenue , Teepee Avenue, Tom Tom Avenue and Johannsen Avenue. All four roadways are proposed to be extended east into the project. The project proposes a network of roadways and alleyways that weave through the property and up the hillside. Please see Figure 2 Preliminary site plan.
5. The site is currently listed on the comprehensive plan and zoned as R1 (Residential Low). The subject property is located on a portion of S 1/2, Section 16, T26N., R42E., W.M. and Section 21, T26N., R42E., W.M. The parcel numbers for the project are 26163.0017, 26164.0046, 26164.0018, 26211.0054, 26211.0101, 26211.0201, 26211.0211, 26211.0057, 26214.0051, 26214.0058, 26164.0031, 26214.0053. The surrounding areas are zoned as low density residential. A vicinity map is included as Figure 1, along with a preliminary plat as Figure 2.
6. The project study area intersections were identified through a public traffic scoping meeting held on November 19, 2025 and recent conversations with the City of Spokane, Spokane County and WSDOT. The scope of the study includes the level of service analysis of the AM and PM peak hours of the following intersections:
 - Seven Mile Road & Inland Road
 - Red Cloud Avenue & Nine Mile Road
 - Teepee Avenue & Nine Mile Road
 - Tom Tom Avenue & Nine Mile Road

- Johansen Avenue & Nine Mile Road
- Seven Mile Road & Nine Mile Road
- Rifle Club Road & Nine Mile Road

Additional Analysis a Signal Warrant for Rifle Club Road & Nine Mile Road was requested.

7. The SR 291 Corridor is anticipated to have significant changes over the next 10 to 30 years, as developments move forward and capital improvement projects are completed. These improvements include:

- Teepee Avenue & Nine Mile Road (Volkman Development)
- Seven Mile Road & Nine Mile Road (Sundance Development)
- Rifle Club Road & Nine Mile Road (City Impact Fee Project)
- Assembly / Francis / Nine Mile Roundabout (City Impact Fee Project) (STR-2023-1668)
- Barnes Road Extension (Volkman Dedication of ROW only)

Barnes Road extension Alignment is shown, the extension of Barnes Road will Connect the Indian Trail and SR 291 corridors.

8. As shown in Table 11, the land uses of the proposed development are anticipated to generate 490 trips in the AM peak hour with 146 trips entering the site and 344 trips exiting the site. In the PM peak hour, the land uses of the proposed project are anticipated to generate 579 trips with 339 trips entering the site and 240 trips exiting the site. The landuses of the proposed development are anticipated to generate 6,187 average daily trips to/from the project.

9. Conclusions

This Traffic Impact Analysis (TIA) has reviewed and analyzed the study area per the scope established via the scoping meeting with the City of Spokane, Spokane County and WSDOT. Based upon the analysis, field observations, assumptions, methodologies and results which are provided in the body of this report, it is concluded that the development of the proposed project will generate new trips on the existing transportation system and that those trips will not have a significant impact on the level of service of the transportation system in the buildout year. This conclusion was reached and has been documented within the body of this report.

- Under the **year 2026 existing** conditions, all intersections are currently operating at an acceptable level of service. The intersection of Seven Mile Road & Nine Mile Road with the scheduled installation of the conditioned roundabout will raise the intersection level of service to an acceptable level and assumed to be complete at the time that this project moves forward.
- For the **year 2031 with background projects without the project** scenario, all intersections are anticipated to operate at acceptable levels of service . Except for the intersection of Rifle Club Road & Nine Mile Road. For the intersection of Rifle Club Road & Nine Mile Road the intersection Level of Service can be raised by signalizing the intersection. Although the intersection does not meet more than one warrant.

- For the **year 2031 with background projects with the project** scenario, all intersections are anticipated to operate at acceptable levels of service. Except for the intersections of Rifle Club Road & Nine Mile Road. For the intersection of Rifle Club Road & Nine Mile Road the intersection Level of Service can be raised by signaling the intersection. Although the intersection does not meet more than one warrant.
- Additional Analysis – Signal Warrant – The intersection of Rifle Club Road & Nine Mile Road is not warranted based upon traffic volumes but is warranted based upon only roadway network in the year 2031.

10. Recommendations

Based upon the conclusions within this study, the proposed project is recommended to complete all required conditions of approval including frontage improvement, the 2-lane roundabout at Teepee Avenue & SR 291 and payment to the mitigation fee at the time of building permit, and should be allowed to move forward without further traffic analysis, or offsite mitigation.

INTRODUCTION

Introduction, Purpose of Report and Study Area

This traffic impact analysis is required by the City of Spokane as part of the SEPA process for the proposed Volkman PUD Subdivision development at 9802 and 9702 N Nine Mile Road. The proposed development consists of 796 residential units and 20,000 sf of commercial buildings on 136.52 acres +/- site. Please see Figure 1 Vicinity Map and Figure 2 Preliminary Site Plan.

The purpose of this analysis is to review, assess, and identify the potential traffic related impacts that the proposed project may have on the transportation network and where possible minimize and/or mitigate any impact. This TIA will be completed in accordance with the current traffic guidelines from the City of Spokane, Spokane County, Washington State Department of Transportation (WSDOT), and the Institute of Transportation Engineers (A Recommended Practice – Traffic Access and Impact Studies for Site Development, 2010) as well as their respective requirements.

The City of Spokane is a traffic impact fee City; the project will be subject to the City's Traffic impact Fees at the time of building permit.

Site Location and Development Description

The project proposes to develop 12 parcels totaling 136.52 acres +/- into a planned unit development. 38.73 acres +/- of the project includes slopes greater than 30% and are to remain as open space. The Volkman PUD is a mixed-use residential development that includes a variety of different uses and one neighborhood commercial land use. The single-family residential use under ITE land use code (LUC) #210 includes "standard" single family lots that are 1/3rd of an acre in size, the cottage lots are 1/4 of an acre. The auto court lots are centered around a central driveway with attached or detached buildings and are included under LUC #215. The duplex lots are included under LUC #215. The townhouse units are included under LUC #215. The multifamily land uses are 4 stories and are included under LUC #221. The neighborhood commercial use is anticipated to include four 5,000 sf buildings totaling 20,000 sf (20.0 ksf) .

Table 1 – Development per Land Use Code (LUC)

Land use Description	LUC	Units	Total Units per LUC
Standard Lots (Single Family)	210	31	194
Cottage Lots	210	126	
Compact lot	210	37	
Auto Court	215	120	278
Duplex Lots	215	44	
Townhouse	215	114	
Multi – Family Apartments	221	324	324
Commercial (4 – 5,000 sf Buildings)	822	20,000	20,000

The project site is currently developed with two single-family residences and outbuildings one home is proposed to remain with the project. The project proposes to be accessed via Red Cloud Avenue , Teepee Avenue, Tom Tom Avenue and Johannsen Avenue. All four roadways are proposed to be extended east into the project. The project proposes a network of roadways and alleyways that weave through the property and up the hillside. Please see Figure 2 Preliminary site plan.



PROJ #: 22-3287
 DATE: 06/12/26
 DRAWN: BNG
 APPROVED: TRW

TRAFFIC IMPACT STUDY
VOLKMAN PUD
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 SPOKANE, WASHINGTON

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FIGURE 1

VICINITY MAP

EXISTING AND PROPOSED CONDITIONS

Existing and Proposed Conditions within the Study Area

Land Use & Zoning

The site is currently listed on the City of Spokane comprehensive plan and zoned as R1 (Residential Low). The subject property is located on a portion of S 1/2, Section 16, T26N., R42E., W.M. and Section 21, T26N., R42E., W.M. The parcel numbers for the project are 26163.0017, 26164.0046, 26164.0018, 26211.0054, 26211.0101, 26211.0201, 26211.0211, 26211.0057, 26214.0051, 26214.0058, 26164.0031, 26214.0053. The surrounding areas are zoned as low density residential. A vicinity map is included as Figure 1, along with a preliminary plat as Figure 2.

Existing Roadways

As shown on the site plan, the site will be accessed via Red Cloud, Teepee, Tom Tom, and Johannsen Avenues. (please see Figure 2 Site Plan) It is anticipated that the residents of the site will generally use the following roadways:

Red Cloud Avenue is a proposed east/west, two-way, 2-lane local access road within the Sundance development that extends east from the western boundary through Nine Mile Road into the proposed Volkman PUD. Red Cloud Avenue is anticipated to serve residential land uses. The proposed speed limit on Red Cloud Avenue is 25 MPH.

Teepee Avenue is a proposed east/west, two-way, 2 lane local access road within the Sundance development that extends east from the western boundary through Nine Mile Road into the proposed Volkman PUD Teepee Avenue is anticipated to serve residential land uses. The proposed speed limit on Teepee Avenue is 25 MPH.

Tom Tom Avenue is a proposed east/west, two-way, 2 lane local access road that extends east from Nine Mile Road to Makah Drive within the Volkman Development. Tom Tom Avenue is proposed to serve residential and neighborhood retail land uses. The anticipated speed limit of Tom Tom Avenue is 25 MPH

Johannsen Avenue is an east/west, two-way, 2-lane local access road that extends east from Rosewood Road through Nine Mile Road. Johannsen Avenue is proposed to then be extended east to Makah Drive. Johannsen Avenue is currently proposed to serve residential land uses. The speed limit on Johannsen Avenue is 25 MPH.

Nine Mile Road (State Route 291) is generally a north/south, two-way, 2-lane urban principal arterial/urban minor arterial/rural major collector within Spokane County that extends southeast from the western boundary of Spokane County through Seven Mile Road and Rifle Club Road before transitioning into Francis Avenue. Nine Mile Road generally serves residential and rural land uses. The speed limit on Nine Mile Road within the study area is posted at 50 and 35 MPH.

Seven Mile Road is generally an east/west, two-way, 2-lane rural major collector/rural minor arterial/urban minor arterial that extends east from Coulee Hite Road through Inland Road,

Riverside Park, and Seigle Court before terminating at Nine Mile Road. Seven Mile Road generally serves residential and rural land uses. The speed limit on Seven Mile Road within the study area is 35 MPH.

Inland Road (Old Trails Road) is a north/south, two-way, 2-lane rural major collector that extends south from Seven Mile Road to the Riverside State Park ORV Area, where Inland Road transitions into Old Trails Road. Inland Road serves residential and institutional land uses. The speed limit on Inland Road is 35 MPH.

Rifle Club Road is generally an east/west, two-way, 2-lane Urban collector that extends west from Oxford Lane through Nine Mile Road, Old Fort Drive, and Woodside Avenue before intersecting with Aubrey L White Parkway. Rifle Club Road serves residential land uses. The speed limit on Rifle Club Road is 25 MPH.

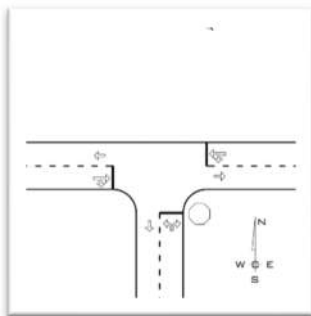
Study Area Intersections

The project study area intersections were identified through a public traffic scoping meeting held on November 19, 2025 and recent conversations with the City of Spokane, Spokane County and WSDOT. The scope of the study includes the level of service analysis of the AM and PM peak hours of the following intersections:

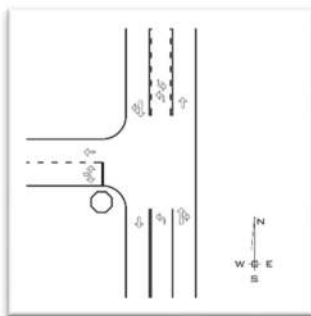
- Seven Mile Road & Inland Road
- Red Cloud Avenue & Nine Mile Road
- Teepee Avenue & Nine Mile Road
- Tom Tom Avenue & Nine Mile Road
- Johansen Avenue & Nine Mile Road
- Seven Mile Road & Nine Mile Road
- Rifle Club Road & Nine Mile Road

Additional Analysis a Signal Warrant for Rifle Club Road & Nine Mile Road was requested.

Traffic Control and Descriptions

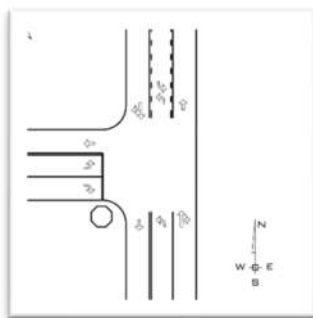
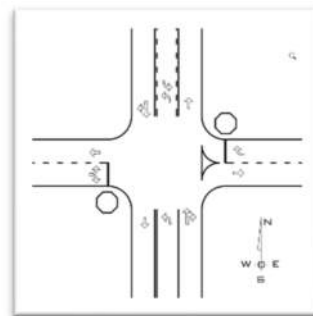


Seven Mile Road & Inland Road (Old Trails Road) is an unsignalized “T” type intersection with stop control on Inland Road (Old Trails Road) and the following lane configuration: the eastbound approach has a single receiving lane and a through-right lane. the westbound approach has a single receiving lane and a left-through lane. the northbound approach has a single receiving lane and a left-right turn lane. The intersection has posted limited sight distance. There is a significant curve on Seven Mile Road with steep slopes affecting sight distance as well as a steeper road grades and supers.



Red Cloud Avenue & Nine Mile Road is a proposed unsignalized “T” type intersection created by the Sundance development with the following lane configuration: The eastbound approach has a single receiving lane, a left-right turn lane. the northbound approach has a single receiving lane, a left turn lane and a through lane. The southbound approach has a single receiving lane, a two-way left turn lane, a through lane and a right turn lane.

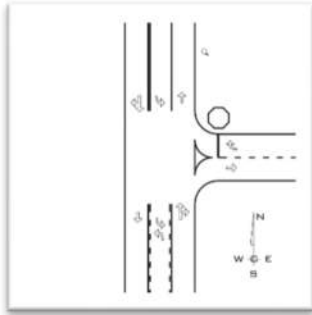
The intersection with the project is proposed to have the following lane additional configuration: The westbound approach is proposed to be right-in right-out (RI-RO) with a single receiving lane and a right turn lane. The northbound approach has a single receiving lane, a left turn lane and a through-right turn lane. the southbound and eastbound approaches remains the same,



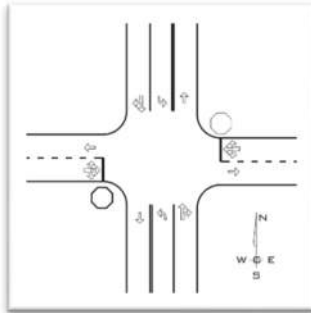
Teepee Avenue & Nine Mile Road is a proposed unsignalized “T” Type intersection created by the Sundance development with the following lane configuration: The eastbound approach has a single receiving lane, a left turn lane and a right turn lane. the northbound approach has a single receiving lane, a left turn lane and a through lane. The southbound approach has a single receiving lane, a two-way left turn lane and a through lane and a right turn lane.

The proposed NB/SB 2-lane roundabout with the project has the following lane configuration: the eastbound approach has a single receiving lane, a left-through lane, and a right turn lane. The westbound approach has two receiving lanes and a left-through-right lane. The northbound approach has two receiving lanes, a left-through lane, a through-right lane, and a right turn lane. the southbound approach has two receiving lanes and a left-through-right turn lane.

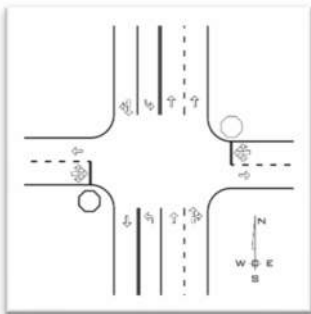




Tom Tom Avenue & Nine Mile Road is a proposed unsignalized “T” type intersection with the following lane configuration: The westbound approach is proposed to be right-in right-out (RI-RO) with a single receiving lane and a right turn lane. The northbound approach has a single receiving lane and a through-right turn lane. The southbound approach has a single receiving lane and a through-right turn lane.

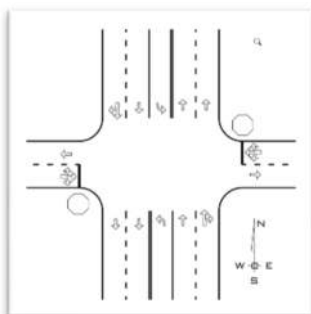


Johannsen Avenue & Nine Mile Road is an unsignalized intersection with stop control on Johannsen Avenue and with the following lane configuration: The east and westbound approaches currently have a single receiving lane and a left-through-right turn lane. The westbound approach is proposed to be right-in right-out (RI-RO) with a single receiving lane and a right turn lane. The northbound approach has a single receiving lane, a left turn lane and a through-right turn lane. The southbound approach has a single receiving lane and a through-right turn lane.



Seven Mile Road/ Lowell Avenue & Nine Mile Road is an unsignalized stop controlled intersection with stop control on Seven Mile Road and Lowell Avenue and the following lane configuration: the east and westbound approaches have a single receiving lane and a left-through-right turn lane. the northbound approach has a single receiving lane, a left turn lane, a through lane and a through-right lane. The southbound approach has two receiving lanes a left turn lane, a through lane and a right turn pocket.

The conditioned roundabout of the Sundance development (construction 2026/2027) has the following lane configuration: the east and westbound approaches have a single receiving lane and a left-through-right turn lane. The northbound approach has a single receiving lane, a left-through lane and a through-right turn lane. the southbound approach has two receiving lanes and a left-through-right turn lane.



Rifle Club Road & Nine Mile Road is a stop-controlled intersection with stop control on Rifle Club Road, and the following lane configuration; the east and westbound approaches have a single receiving lane, and a left-through-right turn lane. The north and southbound approaches have two receiving lanes, a left turn lane (TWLTL) a through lane, and a through-right lane.

Existing Intermodal Transportation System

The existing intermodal transportation system including public transit(bus), pedestrian sidewalks, and bikeways in this study area are described as follows.

Public Transit (Bus)

Existing Transit System

The existing bus routes nearest the project site are Routes 22 and 23. The nearest bus stops from the project site is 3.00 miles away at Driscoll Boulevard & Rowan Avenue. The bus stop is not a reasonable pedestrian or bike access point due to length and grade. Please see the attached route map.



Source: Spokane Transit Authority

Existing Pedestrian Networks

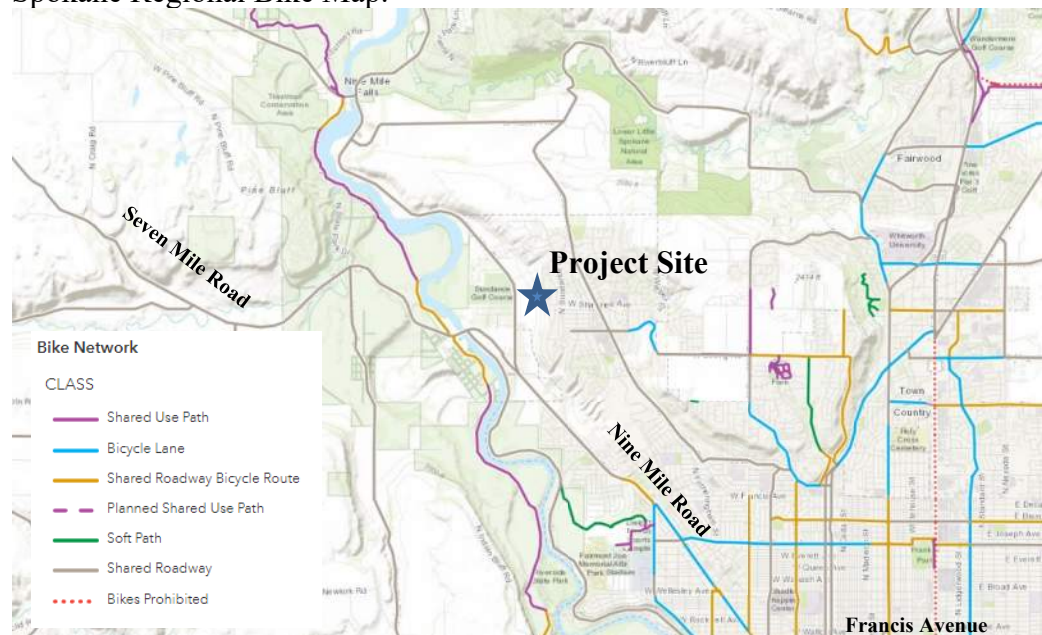
There are no existing sidewalks on Nine Mile Road or the neighborhood within the study area. Please see the attached pedestrian map. Within the project sidewalks and trails will be provided.



Source: City of Spokane Bike & Pedestrian Plans

Existing Bike Routes

Within the study area, Nine Mile Road is assigned as shared roadway. Please see the attached Spokane Regional Bike Map.



Source: Spokane Regional Bike Map – Spokane County

The SR 291 Corridor is anticipated to have significant changes over the next 10 to 30 years, as developments move forward and capital improvement projects are completed. These improvements include:

Traffic Safety

For the intersections within the study area accident¹ report summaries were collected from WSDOT. Generally, accidents are documented by type of occurrence, such as property damage or injury. No fatalities were reported for the study intersections during the last five years.

ITE MEV Method

$$\text{Rate per MEV} = \frac{\text{number of accidents in one year} \times 1 \text{ million entering vehicles}}{24 \text{ hr intersection entering vehicle} \times 365 \times 1 \text{ years}}$$

Equation 4-2 of ITE manual of traffic engineering studies (fourth edition)

Lacking specific 24-hour count data of the intersection, it is usual and customary to consider the PM peak hour volume to generally represent 10% of the 24-hour volume (ADT- Average Daily Traffic)

Table 2 – ADT Calculation – 24 hr intersection entering vehicle 10%.

Intersection	Peak Hour Volume*	% of Peak Hour	24 hr (ADT) Volume
Seven Mile Road & Inland Road	643	10	6,430
Johannsen Avenue & Nine Mile Road	928	10	9,280
Seven Mile Road & Nine Mile Road	1295	10	12,950
Rifle Club Road & Nine Mile Road	1400	10	14,000

In this analysis accidents are measured based on frequency per million entering vehicles (MEV). This ratio is a function of the average daily traffic entering the intersection and the annual frequency of accidents. This method of analysis is also considered as an “exposure” analysis. This method of analysis is used to identify areas that need further review. A typical review threshold for accidents at an intersection is 1.00 accident per MEV.

The review of the accident data is looking for repeated accidents at the same location within the intersection, or with similar vehicles, or at similar times of day, as each instance maybe an indicator of a geometric condition, or a poor lighting condition that has contributed to the number of accidents. The accident data for the intersections within the study area are shown in Table 3.

¹ Accident (ac·ci·dent) noun

1. an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury.
2. an event that happens by chance or that is without apparent or deliberate cause.

Table 3 – Accident¹ Data for Intersections within the Study Area*

Intersection	2020		2021		2022		2023		2024		Avg MEV Per yr
	PDO	INJ	PDO	INJ	PDO	INJ	PDO	INJ	PDO	INJ	
Seven Mile Road & Inland Road	0	0	0	0	0	0	0	0	0	0	
MEV @ 10% of Intx ADT	0.00		0.00		0.00		0.00		0.00		0.00
Johannsen Avenue & Nine Mile Road	0	0	0	0	0	0	0	0	0	0	
MEV @ 10% of Intx ADT	0.00		0.00		0.00		0.00		0.00		0.00
Seven Mile Road & Nine Mile Road	0	0	0	0	1	2	2	0	0	0	
MEV @ 10% of Intx ADT	0.00		0.00		0.63		0.42		0.00		0.21
Rifle Club Road & Nine Mile Road	2	0	0	0	1	0	0	0	3	0	
MEV @ 10% of Intx ADT	0.39		0.00		0.20		0.00		0.59		0.23

As shown in Table 3 no intersections exceed the threshold for additional analysis. A review of the accident data found no fatalities at the scoped intersections. Based on the documentation received this route is generally a safe area given the volumes and seeds.

Traffic Volumes and Peak Hours of Operation

Traffic counts were collected in April 2026 under the direction of Whipple Consulting Engineers (WCE) by Traffic Counts & Surveys at the following intersection:

- Seven Mile Road & Inland Road
- Johansen Avenue & Nine Mile Road
- Seven Mile Road & Nine Mile Road
- Rifle Club Road & Nine Mile Road (24 Hours)

The AM & PM peak hours from these counts are shown on Figures 3 & 4. The raw data for these counts are located in the technical appendix.

LEVEL OF SERVICE

Level of Service (LOS) is an empirical premise developed by the transportation profession to quantify driver perception for such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles afforded to drivers who utilize the transportation network. It has been defined by the Transportation Research Board in the *Highway Capacity Manual 7th Edition*. This document has quantified level of service into a range from “A” which indicates little, if any, vehicle delay, to “F” which indicates significant vehicle delay and traffic congestion that may lead to system breakdown due to volumes that may exceed capacity.

Signalized Intersections

For signalized intersections, research has determined that average stopped delay per vehicle is the best available measure of Level of Service. The following tables identify the relationships between level of service and average stopped delay per vehicle. The City of Spokane, Spokane County and WSDOT have adopted level of service D as the minimum acceptable level for all signalized intersections.

Level of Service Criteria and Descriptions - Signalized

LOS	Delay Range (sec)	General Description
A	10	• Very low delay at intersection. • All signal cycles clear. • No vehicles wait through more than one signal cycle.
B	10 to 20	• Operating speeds beginning to be affected by other traffic. • Short traffic delays at intersections. • Higher average intersections delays resulting from more vehicles stopping.
C	20 to 35	• Operating speeds and maneuverability closely controlled by other traffic. • Higher delays at intersections than for LOS B due to a significant number of vehicles stopping. • Not all signal cycles clear the waiting vehicles.
D	35 to 55	• Tolerable operating speeds, but long traffic delays occur at intersections • The influence of congestion is noticeable. • Many vehicles stop and the proportion of vehicles not stopping declines. • The number of signal cycle failures, for which vehicles must wait through more than one signal cycle are noticeable.
E	55 to 80	• Speeds are restricted, very long traffic delays are experienced and traffic volumes are near capacity. • Traffic flow is unstable, any interruption, no matter how minor, will cause queues to form and service to deteriorate. • Traffic signal cycle failures are frequent occurrences.
F	80	• Extreme delays resulting in long queues which may interfere with other traffic movements • Stoppages of long duration and speeds may drop to zero. • Vehicle arrival rates are greater than capacity. • Considered unacceptable by most drivers.

Roundabout Intersections

The calculation of level of service (LOS) at an unsignalized one/two-lane Roundabout is examined in the Transportation Research Board's 7th Edition *Highway Capacity Manual*. For Roundabout intersections, the level of service is based on the average delay of the intersection. The concept of delay as presented for unsignalized intersections in the Highway Capacity Manual is based on the amount of time a vehicle must spend at the intersection. Vehicles on an approach must yield to the vehicle within the roundabout and wait for a gap before entering the roundabout. This time that a vehicle yields or waits for a gap is calculated and averaged. Average delay of all the movements makes up the average delay of the intersection.

The Transportation Research Board has determined what levels of service for roundabouts should be, by designating level of service A through F, where level of service A represents a facility where no vehicle in any movement is delayed very long and level of service F which represents a facility where there is excessive delay for the average vehicle in at least one movement in the intersection. City of Spokane, Spokane County and WSDOT have adopted level of service D for all roundabout intersections within the study area. Analysis is completed using the *Sidra Intersection 8* Software.

Level of Service Criteria and Descriptions - Roundabout

LOS	Sidra - Delay Range (sec)	Expected Delay to Minor Street Traffic	General Description
A	10	Little to No Delay	- Nearly all drivers find freedom of operation. - Very seldom is there more than one vehicle in the queue.
B	10 to 20	Short Traffic Delays	- Some drivers begin to consider the delay an inconvenience. - Occasionally there is more than one vehicle in the queue.
C	20 to 35	Average Traffic Delays	- Many times, there is more than one vehicle in the queue. - Most drivers feel restricted, but not objectionably so.
D	35 to 55	Long Traffic Delays	- Often there is more than one vehicle in the queue. - Multiple vehicles are in the roundabout and few gaps are available. - Drivers feel quite restricted.
E	55 to 80	Very Long Traffic Delays	- Represents conditions in which demand is near or equal to capacity. - There is almost always more than one vehicle in the queue waiting for a gap. - Drivers find the delays approaching intolerable levels.
F	80	Stop-and-Go Condition Delays Generally Longer than Acceptable	- Forced flow, vehicle movements are slow to circulate, drivers wedge into the line. - Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection

Unsignalized Intersections

The calculation of Level of Service (LOS) at an unsignalized one/two-way stop-controlled intersection is examined in the Transportation Research Board's *Highway Capacity Manual 7th Edition*. For unsignalized intersections, Level of Service is based on the delay experienced by each movement and approach within the intersection. The concept of delay as presented for unsignalized intersections in the Highway Capacity Manual is based on the amount of time a vehicle must spend at the intersection. Vehicles passing straight through the intersection on the major (uncontrolled) street experience no delay at the intersection. On the other hand, vehicles which are turning left from the minor street, because they must yield the right of way to all right turning vehicles, all left turning vehicles from the major street and all through vehicles on both the minor and major streets, must spend more time at the intersection. Levels of Service are assigned to individual movements within the intersection, and are based upon the delay experienced by each movement or approach.

The Transportation Research Board has determined what Levels of Service for unsignalized intersections should be, by designating Level of Service A through F, where Level of Service A represents a facility where no vehicle in any movement is delayed very long and Level of Service F which represents a facility where there is excessive delay for the average vehicle in at least one movement in the intersection. The City of Spokane, Spokane County and WSDOT have adopted level of service E for all unsignalized intersections within the study area.

Level of Service Criteria and Descriptions - Unsignalized

LOS	Delay Range (sec)	Expected Delay to Minor Street Traffic	General Description
A	10	Little to No Delay	- Nearly all drivers find freedom of operation. - Very seldom is there more than one vehicle in the queue.
B	10 to 15	Short Traffic Delays	- Some drivers begin to consider the delay an inconvenience - Occasionally there is more than one vehicle in the queue.
C	15 to 25	Average Traffic Delays	- Many times, there is more than one vehicle in the queue. - Most drivers feel restricted, but not objectionably so.
D	25 to 35	Long Traffic Delays	- Often there is more than one vehicle in the queue. - Drivers feel quite restricted.
E	35 to 50	Very Long Traffic Delays	- Represents conditions in which, demand is near or equal capacity. - There is almost always more than one vehicle in the queue. - Drivers find the delays approaching intolerable levels.
F	50	Stop-and-Go Condition Delays Generally Longer than Acceptable	- Forced flow. - Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection

All Level of Service analyses described in this report were performed in accordance with the procedures described above. As a final note, the Highway Capacity Manual (HCM) analysis and procedures are based upon worst case conditions. Therefore, most of each weekday and the weekends will experience traffic conditions better than those described within this document, which are only for the peak hours of operation

EXISTING LEVEL OF SERVICE AND TRAFFIC ANALYSIS

Existing Level of Service and Traffic Analysis

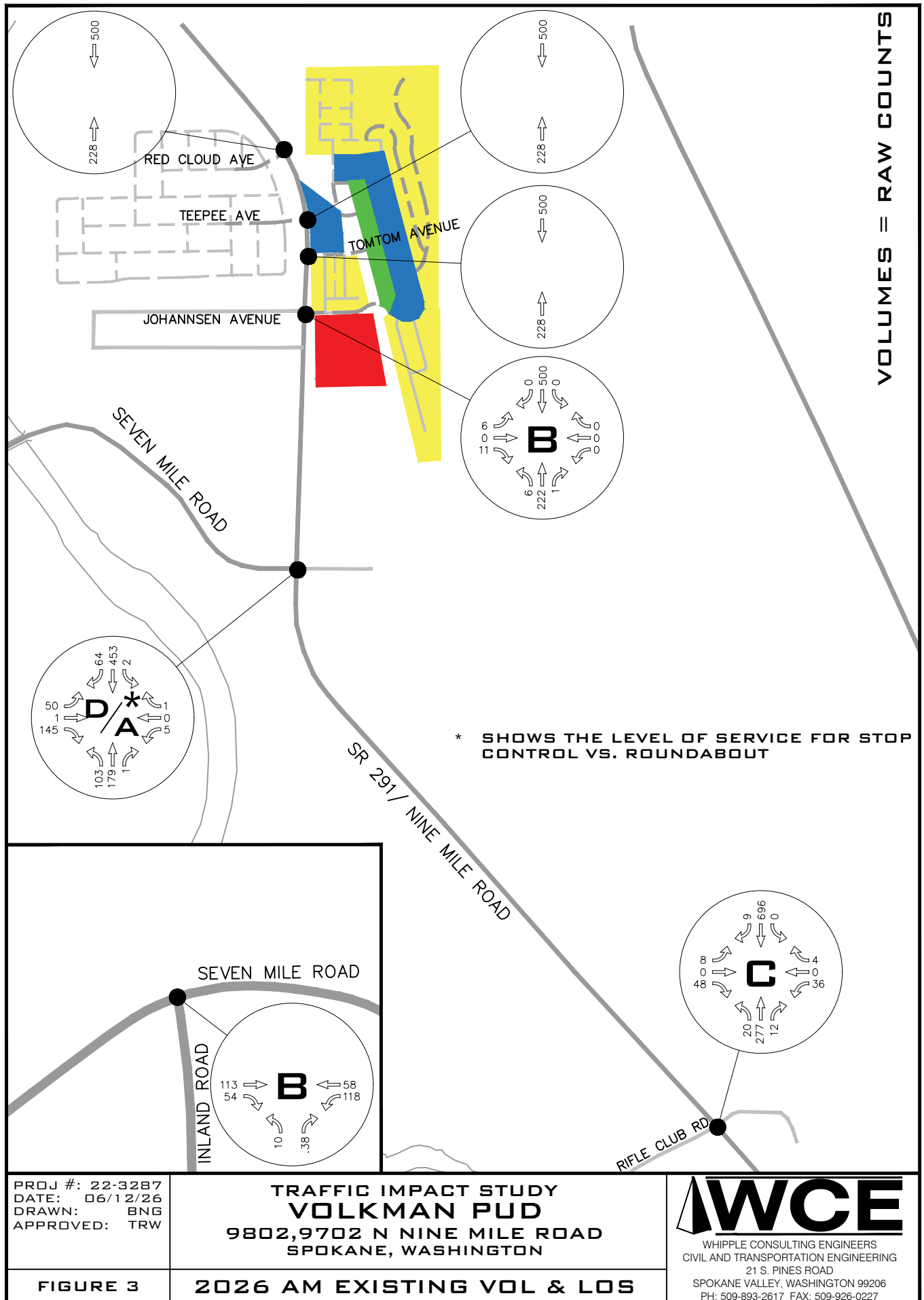
The existing Levels of Service at the scoped intersections were calculated using the methods from the 7th Edition Highway Capacity Manual as implemented in Synchro, version 12.2.5 and Sidra 10. The existing Levels of Service for the intersections within the study area are summarized on table 4. The existing traffic volumes used for this report are shown on Figures 3 & 4.

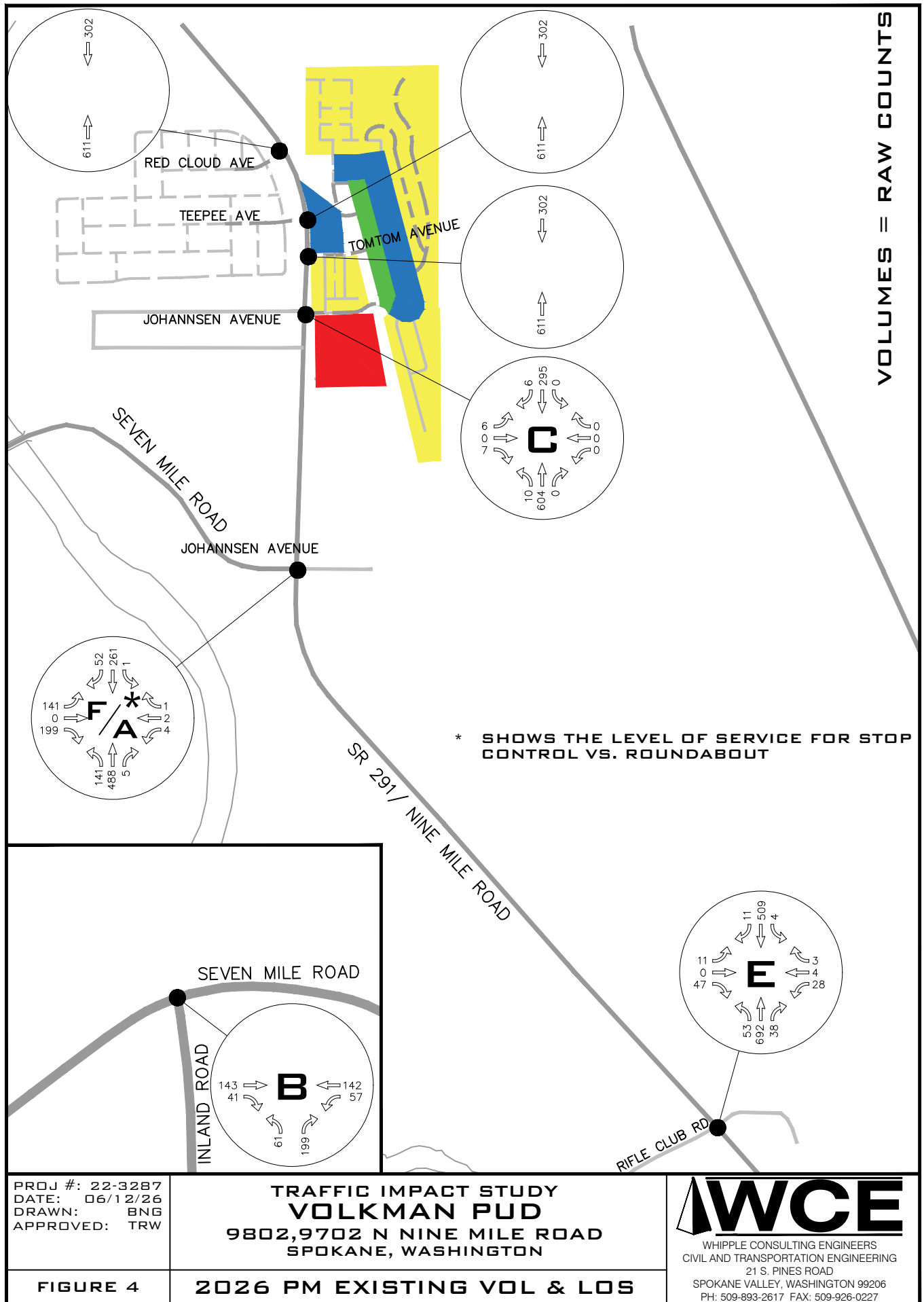
Table 4 – 2026 Existing Intersections Levels of Service (Figure 3&4)

INTERSECTION	(S)ignalized (U)nsignalized (R)oundabout	AM Peak Hour			PM Peak Hour		
		Delay (sec)	LOS	Mvmt or V/C	Delay (sec)	LOS	Mvmt or V/C
Seven Mile Road & Inland Road	U	10.51	B	NB	12.53	B	NB
Johannsen Ave. & Nine Mile Road	U	13.94	B	EB	15.79	C	EB
Seven Mile Road & Nine Mile Road • Conditioned Roundabout (2026/27)	U (R)	26.59 (6.3)	D (A)	WB (0.44)	62.46 (6.6)	F (A)	EB (0.344)
Rifle Club Road & Nine Mile Road	U	18.41	C	WB	44.77	E	WB

The City of Spokane, Spokane County and WSDOT have adopted level of service D as the minimum acceptable level for signalized intersections and level of service E as the minimum acceptable level for unsignalized intersections.

As shown in Table 4, the intersections are currently operating at an acceptable level of service. The intersection of Seven Mile Road & Nine Mile Road with the scheduled installation of the conditioned roundabout will raise the intersection level of service to an acceptable level and is assumed to be complete at the time this project moves forward. Assumption based upon bonding and development agreements in place with the Washington State Department of Transportation.





FUTURE YEAR TRAFFIC IMPACT ANALYSIS

Future Year Traffic Impact Analysis Summary

The build out year analysis is required, per the scope of the TIA meeting. Two scenarios were examined for the build out year (2031) analysis. The first scenario assumes that the existing traffic volumes as shown on Figures 3 & 4 experience an increase above the existing volumes at the established background rate and the background project trips as shown on Figures 5 & 6. The second scenario assumes that the development has moved forward and analyzes the scoped intersection with the background growth rate, the background projects, and the project trips as shown on Figures 15 & 16. These scenarios will allow a determination to be made as to what the future conditions may be both with/without the background project trips and with/without the project trips.

Background Traffic Growth

Background traffic growth is an anticipated increase in traffic volume from year to year. As the existing land uses that surround a transportation facility mature, an increase in traffic results and may be due to either an increase in drivers per household, a household's purchase of an additional vehicle, unplatted lot development, short plats, etc. Many things can cause an increase in the traffic volumes of a facility. The objective of the background traffic growth rate is to anticipate what the traffic volumes may be in the future. The background traffic growth rate for an area or street is determined by means of physical counts collected by local governmental agencies. The counts are compared on a yearly basis, and a rate of increase is calculated from the data.

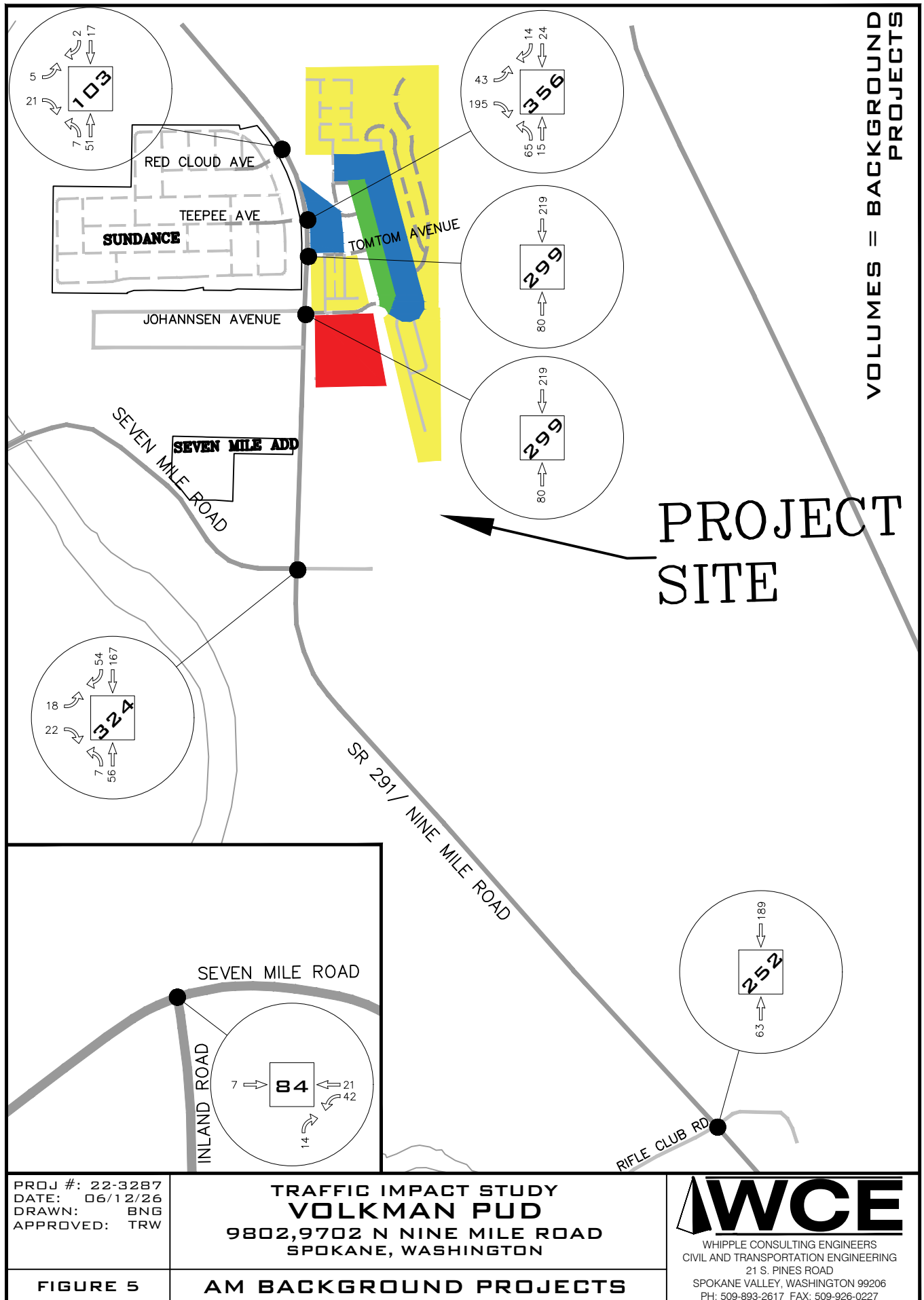
The background growth rate was determined to be 1.5% per year. Based on a five-year build out, compounded annually, the total increase in traffic rate for the year 2031 is anticipated to be 1.077.

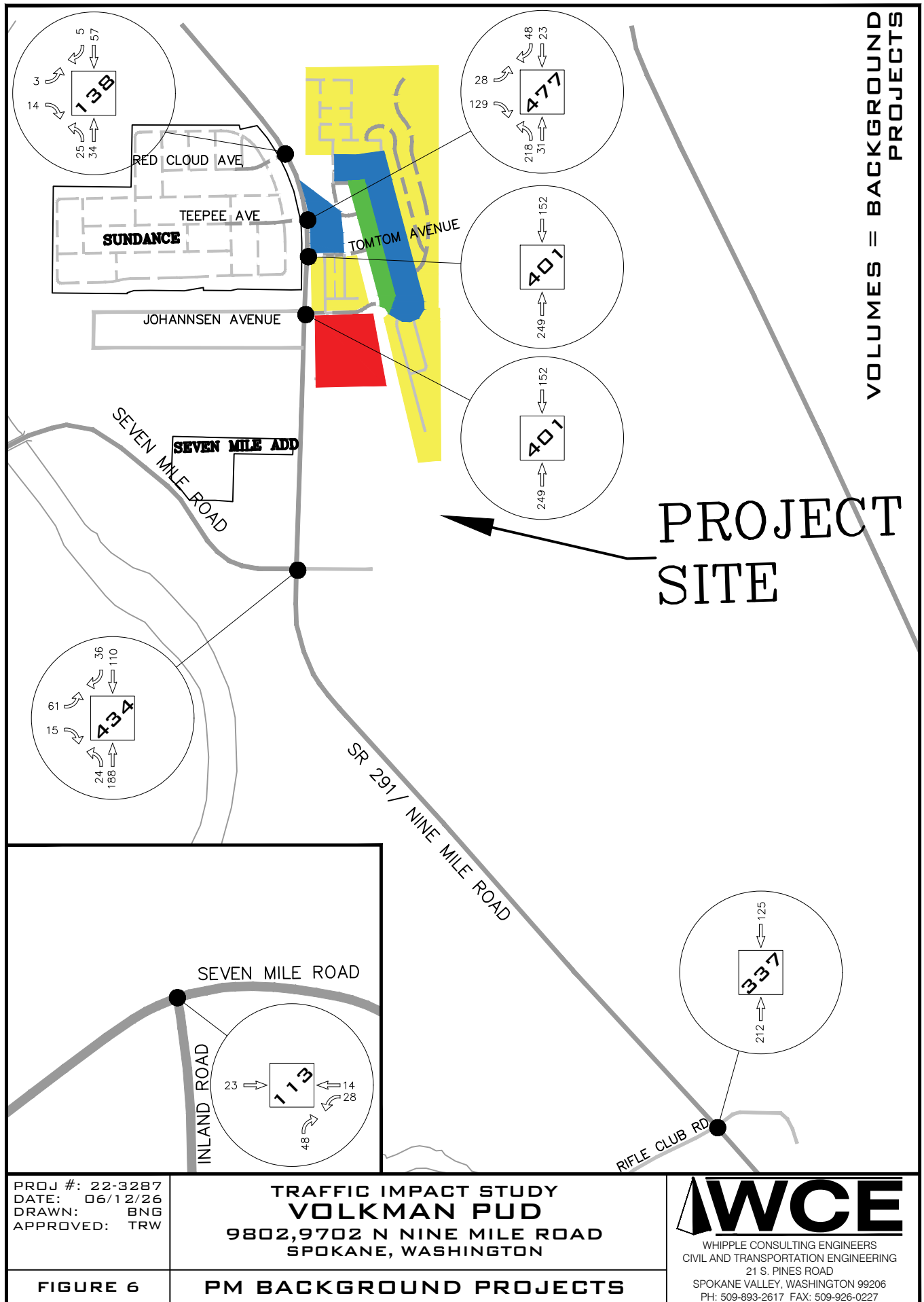
Background Project Traffic

In addition to the natural increase in background growth, background projects that have already been approved or have made application and have been vested before this project have been included. The summary of background project traffic volumes used for this report are shown on Table 5. Please see Figures 7 & 8 for a graphical representation of this distribution.

Table 5– Summary of the Background Project Trip Generation (Figures 5 & 6)

Background Projects	Land Use (ITE LUC)	Unit*	AM Peak Hour Trips			PM Peak Hour Trips		
			Vol. / LUC	Directional Distribution		Vol. / LUC	Directional Distribution	
				In	Out		In	Out
Sundance	Single-Family Detached(210)	475	352	88	264	470	296	174
Seven Mile Addition	Single-Family Detached (210)	65	51	13	38	67	42	25
	Single Family Attached (215)	26	8	2	6	12	7	5
Total			411	103	308	549	345	204





PROJ #: 22-3287
 DATE: 06/12/26
 DRAWN: BNG
 APPROVED: TRW

TRAFFIC IMPACT STUDY
VOLKMAN PUD
 9802,9702 N NINE MILE ROAD
 SPOKANE, WASHINGTON

FIGURE 6

PM BACKGROUND PROJECTS

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 WHIPPLE CONSULTING ENGINEERS
 CIVIL AND TRANSPORTATION ENGINEERING
 21 S. PINES ROAD
 SPOKANE VALLEY, WASHINGTON 99206
 PH: 509-893-2617 FAX: 509-926-0227

Year 2031 with the Background Projects and without the Project

This scenario assumes that the development has not moved forward. The traffic volumes for this condition include the traffic volumes shown on Figures 3 & 4 multiplied by the background growth rate, and adds the traffic from the background projects as shown on Figures 5 & 6. Please see Figures 7 & 8 for the traffic volumes used for this scenario. A summary of the Level of Service results is shown in the following table.

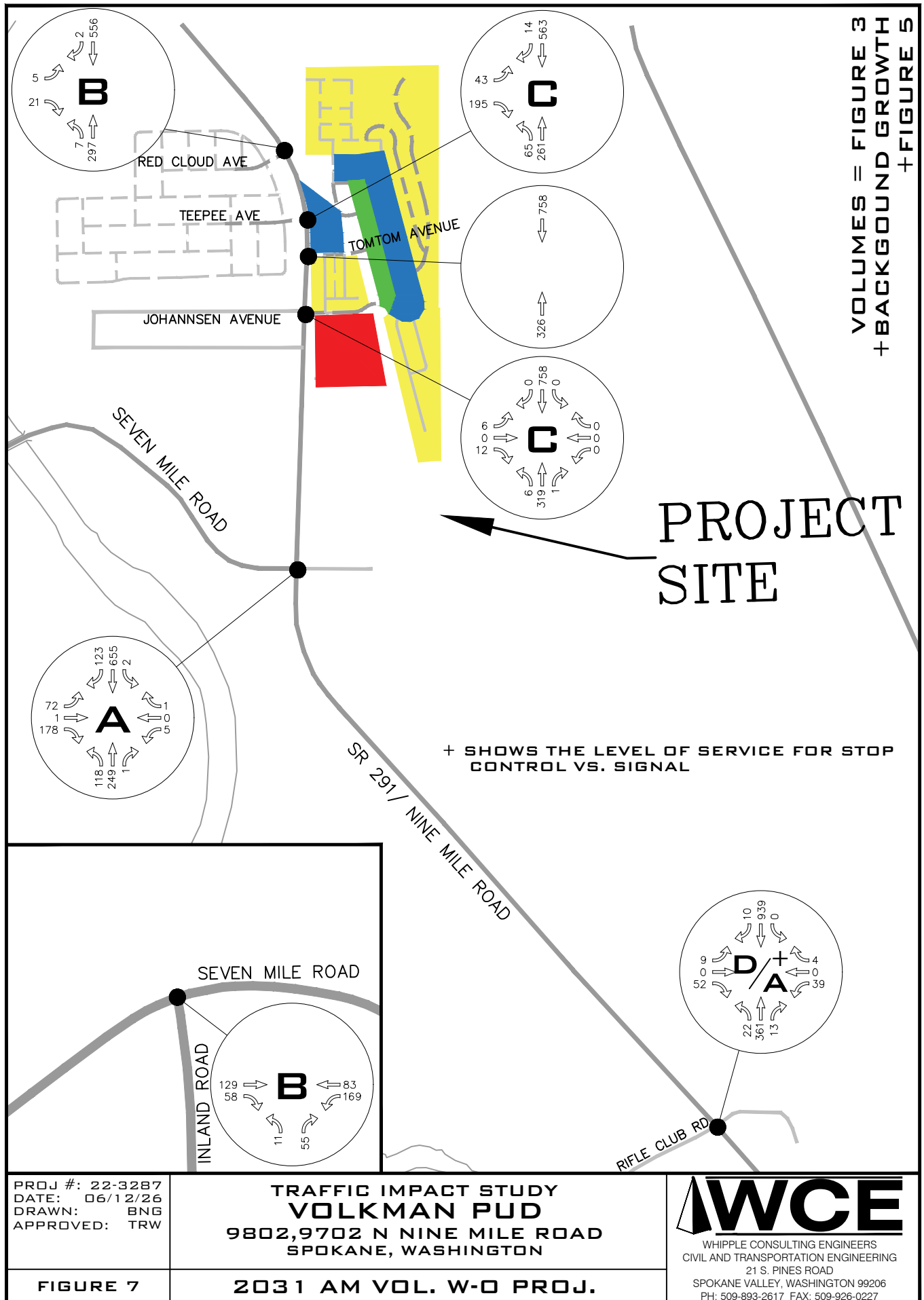
Table 6 – Year 2031 LOS, with the Background Projects and without the Project (Fig. 7&8)

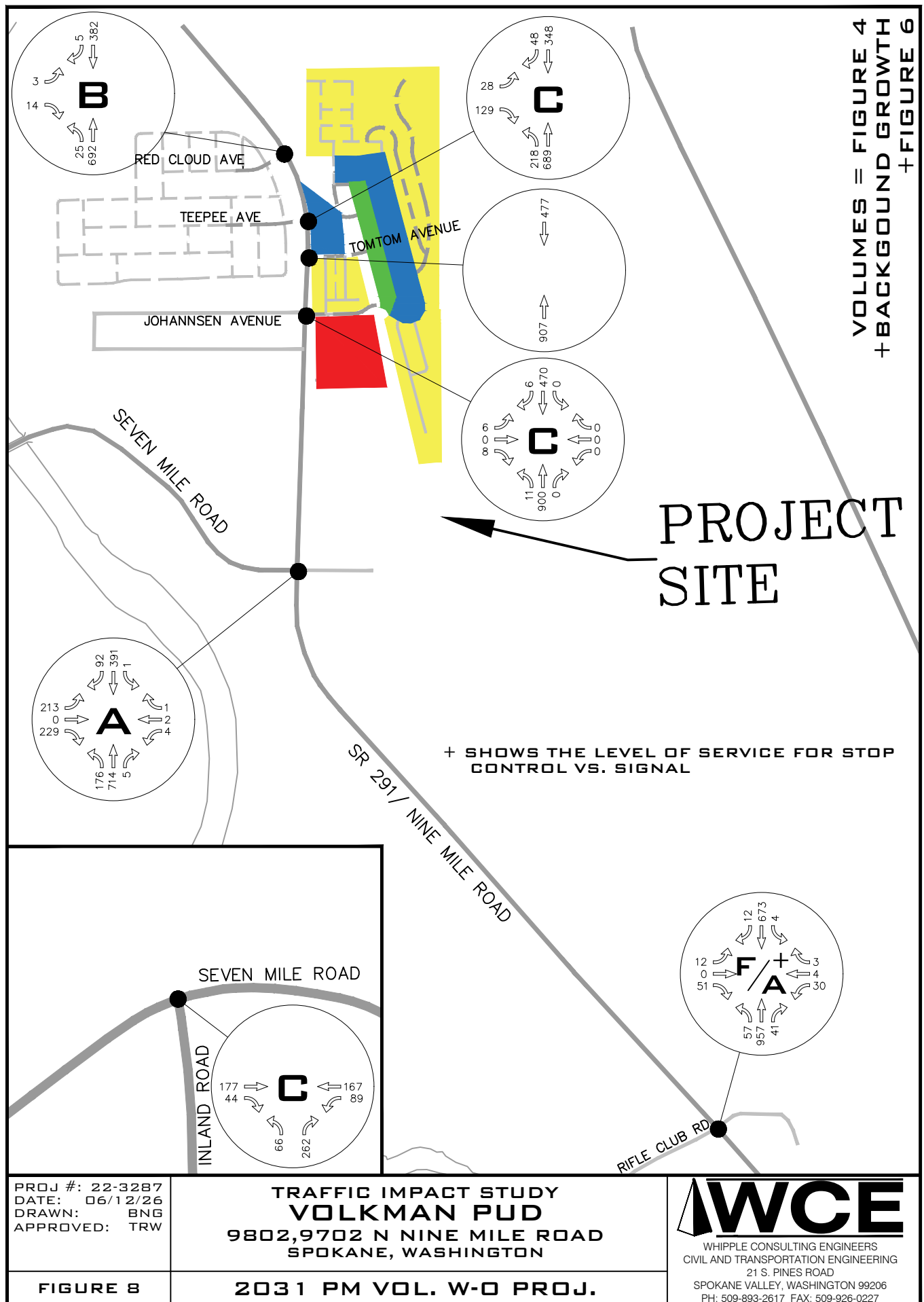
INTERSECTION	(S)ignalized (U)nsignalized (R)oundabout	AM Peak Hour			PM Peak Hour		
		Delay (sec)	LOS	Mvmt or V/C	Delay (sec)	LOS	Mvmt or V/C
Seven Mile Road & Inland Road	U	11.16	B	NB	15.38	C	NB
Red Cloud Ave & Nine Mile Road	U	13.73	B	EB	13.2	B	EB
Teepee Ave. & Nine Mile Road	U	18.63	C	EB	20.58	C	EB
Johannsen Ave. & Nine Mile Road	U	19.8	C	EB	26.73	D	EB
Seven Mile Road & Nine Mile Road	R	7.4	A	0.672	7.4	A	0.509
Rifle Club Road & Nine Mile Road • Signalize	U (S)	26.95 (7.7)	D (A)	WB	137.35 (8.9)	F (A)	WB

The City of Spokane, Spokane County, and WSDOT have adopted level of service D as the minimum acceptable level for signalized intersections and level of service E as the minimum acceptable level for unsignalized intersections.

As shown in Table 6 all intersections are anticipated to operate at an acceptable levels of service, except for the intersection of Rifle Club Road & Nine Mile Road. The intersection of Rifle Club Road & Nine Mile Road can be improved by signalizing the intersection. Although the intersection does not meet more than one warrant. Please see the additional analysis for more information.

The intersection of Rifle Club Road & Nine Mile Road is in the City of Spokane, an impact fee city, wherein the city should take notice of the failing LOS from background projects and should add this intersection to the City T.I.P. if it has not already been added.





FUTURE ANALYSIS WITH BACKGROUND PROJECTS & THE PROJECT

Trip Generation Characteristics for the Proposed Project

Trip generation rates for the AM & PM peak hours are determined by the use of the *Trip Generation Manual, 12th Edition* published by the Institute of Transportation Engineers (ITE). The purpose of the *Trip Generation Manual* is to compile and quantify empirical data into trip generation rates for specific land uses within the US, UK, and Canada.

For the proposed 192 residential lots (not including the 2 existing residences), Land Use Code (LUC) 210 Single-Family Detached Housing was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, The average rate and fitted curve equations and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 7.

Table 7-Trip Generation Rates for LUC # 210 – Single-Family Detached Housing

No. of Dwelling Units	AM Peak Hour			PM Peak Hour		
	Vol. per Fitted Curve	Directional Distribution		Vol. per Avg. Rate	Directional Distribution	
		27% In	73% Out		62% In	38% Out
192	134	36	98	179	111	68
Average Daily Trip Ends (ADT)		Average Rate Equations (Adj. Street):			Fitted Curve Equations (Adj. Street):	
Units	ADT	AM: $T = 0.70 * x = 134$ PM: $T = 0.93 * x = 179$ ADT: $T = 9.09 * x = 1,745$ T = Trips/units, x = Dwelling Units			AM: $T = 0.67(x) + 5.59 = 134$ PM: $\ln(T) = 0.92\ln(x) + 0.33 = 175$ ADT: $T = 8.07(x) + 265.45 = 1,815$ T = Trips/units, x = Dwelling Units	
192	1,815					

For the proposed 278 residential units of the auto courts, duplexes, and townhomes, Land Use Code (LUC) 215 Single-Family Attached Housing was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, The average rate and fitted curve equations and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 8.

Table 8-Trip Generation Rates for LUC # 215 – Single-Family Attached Housing

No. of Dwelling Units	AM Peak Hour			PM Peak Hour		
	Vol. per Fitted Curve	Directional Distribution		Vol. per Fitted Curve	Directional Distribution	
		25% In	75% Out		57% In	43% Out
278	149	37	112	151	86	65
Average Daily Trip Ends (ADT)		Average Rate Equations (Adj. Street):			Fitted Curve Equations (Adj. Street):	
Units	ADT	AM: $T = 0.47 * x = 131$ PM: $T = 0.51 * x = 142$ ADT: $T = 6.57 * x = 1,826$ T = Trips/units, x = Dwelling Units			AM: $T = 0.59(x) - 15.25 = 149$ PM: $T = 0.57(x) - 7.84 = 151$ ADT: $T = 6.53(x) + 3.25 = 1,819$ T = Trips/units, x = Dwelling Units	
278	1,826					

For the proposed 324 multifamily residential units, Land Use Code (LUC) 221 Multifamily Housing (Mid Rise) was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, The average rate and fitted curve equations and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 9.

Table 9-Trip Generation Rates for LUC # 221 – Multifamily Housing (Mid Rise)

No. of Dwelling Units	AM Peak Hour			PM Peak Hour		
	Vol. per Average Rate	Directional Distribution		Vol. per Average Rate	Directional Distribution	
		23% In	77% Out		61% In	39% Out
324	128	30	98	123	79	44
Average Daily Trip Ends (ADT)		Average Rate Equations (Adj. Street): AM: $T = 0.38 * x = 123$ PM: $T = 0.38 * x = 123$ ADT: $T = 4.46 * x = 1,445$ T = Trips/units, x = Dwelling Units			Fitted Curve Equations (Adj. Street): AM: $T = 0.42(x) - 7.77 = 128$ PM: $T = 0.36(x) + 3.07 = 120$ ADT: $T = 4.55(x) - 17.52 = 1,457$ T = Trips/units, x = Dwelling Units	
Units	ADT					
324	1,457					

For the proposed commercial lot, four 5,000 sf buildings are proposed totaling 20,000 sf (20 ksf) Land Use Code LUC#822 Strip Retail Plaza (<40k) was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in the Trip Generation Handbook. The average rate and the anticipated number of AM & PM peak hour trips for the proposed land use are shown in Table 10.

Table 10-Trip Generation Rates for LUC #822 Strip Retail Plaza (<40k)

Thousand Square Feet (KSF)	AM Peak Hour			PM Peak Hour		
	Vol. per Average Rate	Directional Distribution		Vol. per Average Rate	Directional Distribution	
		55% In	45% Out		50% In	50% Out
20	79	43	36	126	63	63
Average Daily Trip Ends (ADT)		Average Rate Equations (Adj. Street): AM: $T = 3.93 * x = 79$ PM: $T = 6.29 * x = 126$ ADT: $T = 54.45 * x = 1,089$ T = Trips/units, x = KSF			Fitted Curve Equations (Adj. Street): AM: PM: $\ln(T) = 0.68 \ln(x) + 2.77 = 122$ ADT: $T = 42.20(x) + 229.68 = 1,074$ T = Trips/units, x = KSF	
KSF	ADT					
20	1,089					

Pass-by Discussion

While the commercial development is anticipated to have pass-by trips, for this analysis to be conservative pass-by trips were not considered.

Table 11- Trip Generation Summary (Figures 9 & 10)

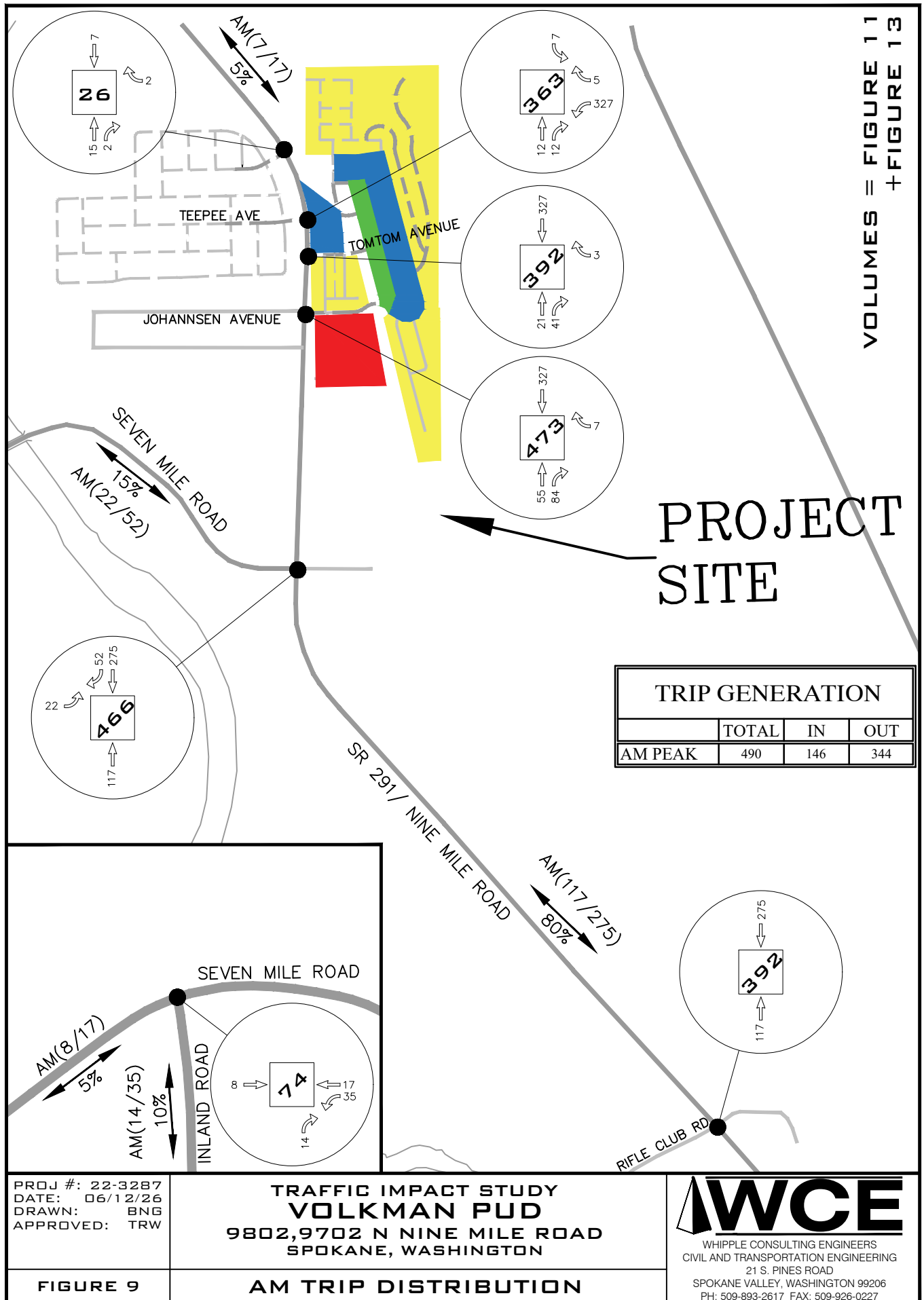
Land Use Code (LUC)	AM Peak Hour			PM Peak Hour		
	Vol. per LUC	Directional Distribution		Vol. per LUC	Directional Distribution	
		In	Out		In	Out
LUC #210 Single Family Detached Housing	134	36	98	179	111	68
LUC #215 Single Family Attached Housing	149	37	112	151	86	65
LUC #221 Multifamily Housing (Mid Rise)	128	30	98	123	79	44
LUC #822 Strip Retail Plaza (<40)	79	43	36	126	63	63
Total	490	146	344	579	339	240
Average Daily Trip Ends (ADT)						
Land Use Code (LUC)	ADT					
LUC #210 Single Family Detached Housing	1,815					
LUC #215 Single Family Attached Housing	1,826					
LUC #221 Multifamily Housing (Mid Rise)	1,457					
LUC #822 Strip Retail Plaza (<40)	1,089					
Total	6,187					

As shown in Table 11, the land uses of the proposed development are anticipated to generate 490 trips in the AM peak hour with 146 trips entering the site and 344 trips exiting the site. In the PM peak hour, the land uses of the proposed project are anticipated to generate 579 trips with 339 trips entering the site and 240 trips exiting the site. The landuses of the proposed development are anticipated to generate 6,187 average daily trips to/from the project.

TRIP DISTRIBUTION

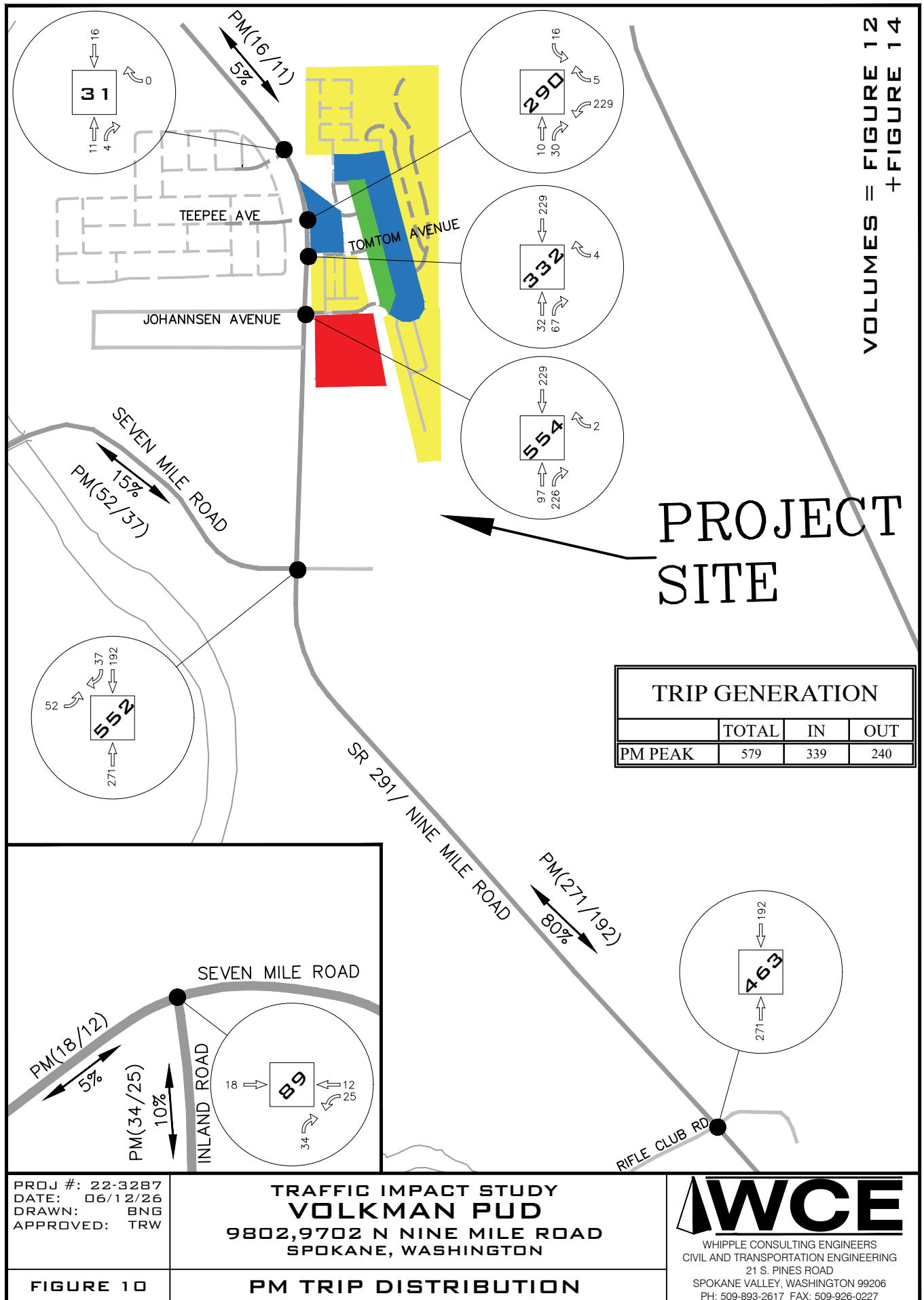
Considering many factors such as the surrounding transportation facilities, typical commuting patterns, and existing development in the area, traffic for the proposed development is anticipated as follows: 5% of the trips are anticipated to go to/from the north via Nine Mile Road, 80% of the trips are anticipated to go to/from the south and southeast via Nine Mile Road, 15% of the trips are anticipated to go to/from the southwest via Seven Mile Road with 5% continuing to/from the west and 10% to/from the South via Inland Road Please see Figures 9 through 12, Project Trip Distribution.





VOLUMES = FIGURE 11
+ FIGURE 13

PROJECT
SITE



VOLUMES = FIGURE 12
 + FIGURE 14

PROJECT
 SITE

Year 2031 with the Background Projects and the Project

This scenario assumes that the project has moved forward and is added to the previously established baseline. The traffic volume for this condition includes the traffic volumes shown on Figures 7 & 8 and adds the project trips as shown on Figures 9 & 10. Please see Figures 11 & 12 for the traffic volumes used for this scenario. A summary of the Level of Service results are shown in the following table.

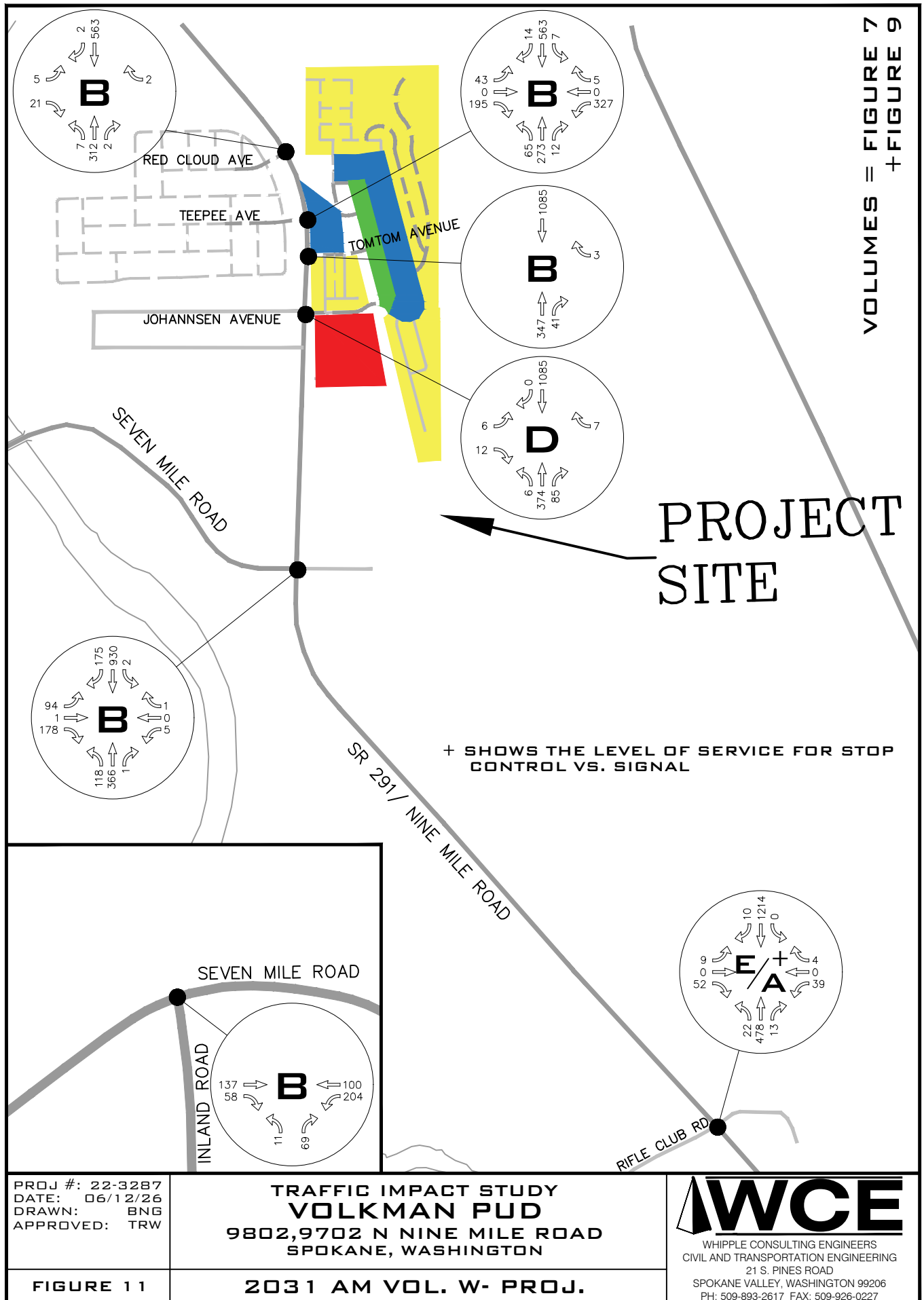
Table 12 – Year 2031 LOS, with the Background Projects & the Project (Figures 11&12)

INTERSECTION	(S)ignalized (U)nsignalized (R)oundabout	AM Peak Hour			PM Peak Hour		
		Delay (sec)	LOS	Mvmt	Delay (sec)	LOS	Mvmt
Seven Mile Road & Inland Road	U	11.55	B	NB	17.87	C	NB
Red Cloud Ave & Nine Mile Road	U	14.47	B	EB	14.48	B	EB
Teepee Ave. & Nine Mile Road • Install Roundabout	U (R)	1116.64 (10.9)	F (B)	WB (0.778)	1975.63 (8.1)	F (A)	WB (0.570)
Tom Tom Ave & Nine Mile Road	U	10.53	B	WB	18.26	C	WB
Johannsen Ave. & Nine Mile Road	U	33.29	D	EB	45.18	E	EB
Seven Mile Road & Nine Mile Road	R	18.6	B	0.963	9.2	A	0.720
Rifle Club Road & Nine Mile Road • Signalize	U (S)	46.16 (9.4)	E (A)	WB	508.28 (10.9)	F (B)	WB

The City of Spokane, Spokane County, and WSDOT have adopted level of service D as the minimum acceptable level for signalized intersections and level of service E as the minimum acceptable level for unsignalized intersections.

As shown in Table 12 all intersections are anticipated to operate at acceptable levels of service with the proposed project, except for the intersections of Teepee Avenue & Nine Mile Road, and Rifle Club Road & Nine Mile Road.

The anticipated roundabout at the intersection of Teepee Avenue & Nine Mile Road is anticipated to operate at an acceptable level of service with the project. See larger explanation in the appendix. The roundabout at the intersection of Seven Mile Road & Nine Mile Road is anticipated to operate at an acceptable level of service with the project. As proposed in the without project scenario the intersection of Rifle Club Road & Nine Mile Road is anticipated to operate below an acceptable level of service without a signal and acceptable with a signal. See signal warrant analysis, at the present time this signal only meets one warrant but should be added to the City's T.I.P. so that impact fee funds can be allocated in the future.



VOLUMES = FIGURE 7
+ FIGURE 9

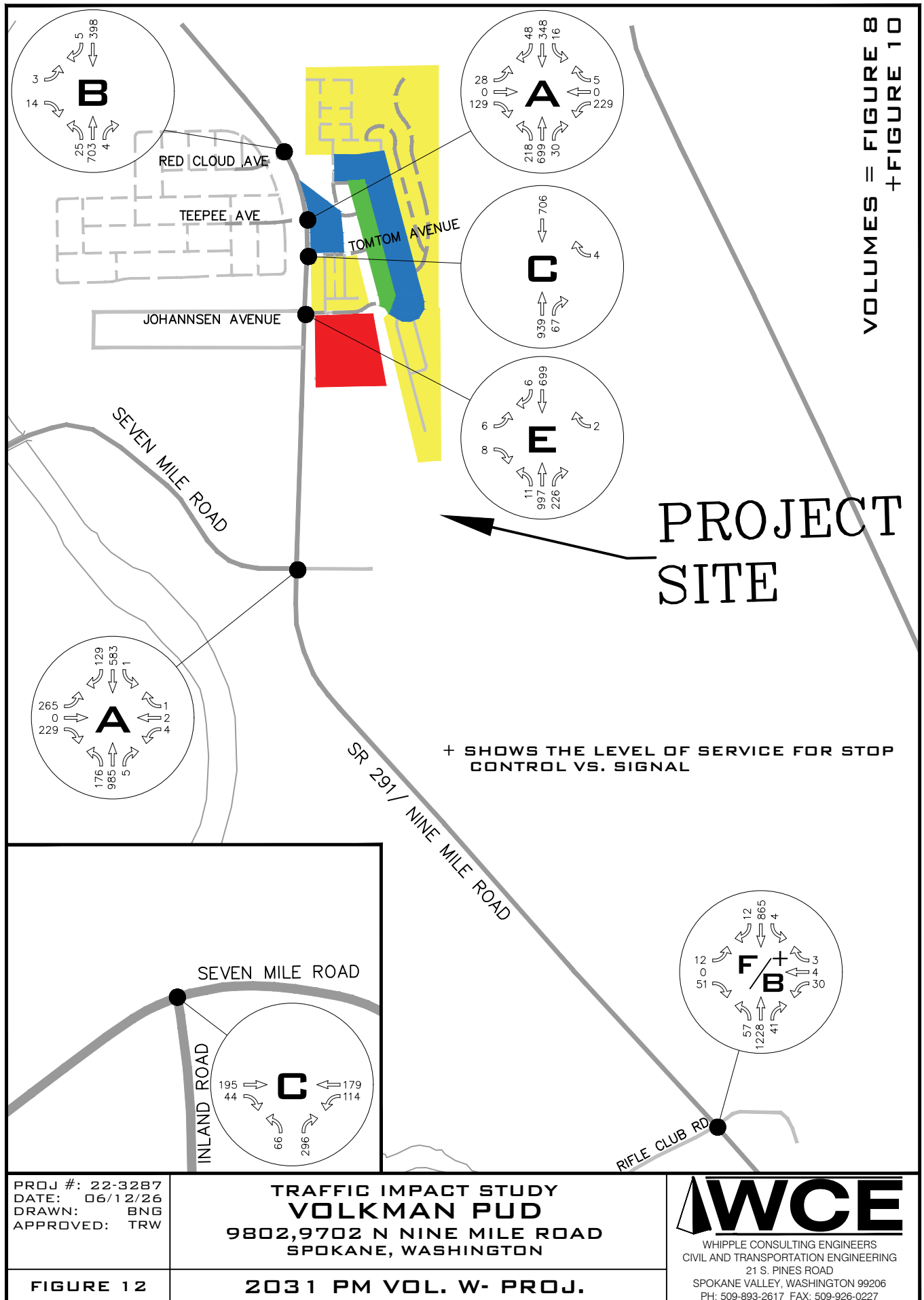
PROJ #: 22-3287
DATE: 06/12/26
DRAWN: BNG
APPROVED: TRW

**TRAFFIC IMPACT STUDY
VOLKMAN PUD**
9802,9702 N NINE MILE ROAD
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SPOKANE VALLEY, WASHINGTON 99206
PH: 509-893-2617 FAX: 509-926-0227

FIGURE 11

2031 AM VOL. W- PROJ.



VOLUMES = FIGURE 8
+ FIGURE 10

PROJ #: 22-3287
DATE: 06/12/26
DRAWN: BNG
APPROVED: TRW

**TRAFFIC IMPACT STUDY
VOLKMAN PUD**
9802,9702 N NINE MILE ROAD
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FIGURE 12

2031 PM VOL. W- PROJ.

ADDITIONAL ANALYSIS

Based upon the TIA Scope the additional analysis includes a Signal Warrant Analysis for the intersection of Rifle Club Road & Nine Mile Road.

Signal Warrant Analysis

City of Spokane Six Year Transportation Plan does not include the installation of a signal at the intersection of Rifle Club Road & Nine Mile Road. The signal would raise the intersection level of service to an acceptable level.

For the future year analysis, the background growth rate was applied to the raw counts. The background projects and the Volkman peak hour volumes were applied with a bell curve centered over the peak hours. Please see the appendix for the Warrant Analysis for the intersection. The results are summarized in Table 13.

Table 13 – Signal Warrant for the Intersection of Rifle Club Road & Nine Mile Road

Warrant	2026 Counts	2031 W-O	2031 W-O
Warrant 1 – Eight Hour Warrant	Not Satisfied	Not Satisfied	Not Satisfied
Warrant 2 – Four Hour Warrant	Not Satisfied	Not Satisfied	Not Satisfied
Warrant 3 – PM Peak Hour	Not Satisfied	Not Satisfied	Not Satisfied
Warrant 4 – Pedestrian Volume	Not Satisfied	Not Satisfied	Not Satisfied
Warrant 5 – School Crossing	Not Satisfied	Not Satisfied	Not Satisfied
Warrant 6 – Coordinated Signal System	Not Satisfied	Not Satisfied	Not Satisfied
Warrant 7 – Crash Experience	Not Satisfied	Not Satisfied	Not Satisfied
Warrant 8 – Roadway Network	Satisfied	Satisfied	Satisfied
Warrant 9 – Intersection Near A Grade Crossing	Not Satisfied	Not Satisfied	Not Satisfied

As shown in Table 14, based upon signal warrant analysis, the intersection meets 1 of the 9 warrants under current conditions. In the future analysis the intersection is anticipated to meet 1 of the 9 warrants.

The intersection is not warranted based upon traffic volumes but is warranted based upon roadway network. We believe that because of the high volume of traffic and speeds that it would be reasonable to anticipate that warrant 3 Peak Hour and warrant 7 Crash Experience maybe close to being met. We recommend that the City monitor the intersection and if either warrants 3 or 7 become met then temporary measures should be installed to limit the minor left turns (EB to NB, SB to EB) and reduce conflicts. Until a signal or a roundabout at the intersection can be constructed. We include a roundabout as an improvement as the roadway network from Francis Avenue to the project already considers three (3) roundabouts. It has been our experience that intermixing signals and roundabouts affects progression and minor street access.

CONCLUSIONS & RECOMMENDATIONS

Conclusions

This Traffic Impact Analysis (TIA) has reviewed and analyzed the study area per the scope established via the scoping meeting with the City of Spokane, Spokane County and WSDOT. Based upon the analysis, field observations, assumptions, methodologies and results which are provided in the body of this report, it is concluded that the development of the proposed project will generate new trips on the existing transportation system and that those trips will not have a significant impact on the level of service of the transportation system in the buildout year. This conclusion was reached and has been documented within the body of this report.

- Under the **year 2026 existing** conditions, all intersections are currently operating at an acceptable level of service. The intersection of Seven Mile Road & Nine Mile Road with the scheduled installation of the conditioned roundabout will raise the intersection level of service to an acceptable level and assumed to be complete at the time that this project moves forward.
- For the **year 2031 with background projects without the project** scenario, all intersections are anticipated to operate at acceptable levels of service. Except for the intersection of Rifle Club Road & Nine Mile Road. For the intersection of Rifle Club Road & Nine Mile Road the intersection Level of Service can be raised by signaling the intersection. Although the intersection does not meet more than one warrant.
- For the **year 2031 with background projects with the project** scenario, all intersections are anticipated to operate at acceptable levels of service. Except for the intersections of Rifle Club Road & Nine Mile Road. For the intersection of Rifle Club Road & Nine Mile Road the intersection Level of Service can be raised by signaling the intersection. Although the intersection does not meet more than one warrant.
- Additional Analysis – Signal Warrant – The intersection of Rifle Club Road & Nine Mile Road is not warranted based upon traffic volumes but is warranted based upon only roadway network in the year 2031.

11. Recommendations

Based upon the conclusions within this study, the proposed project is recommended to complete all required conditions of approval including frontage improvement, the 2-lane roundabout at Teepee Avenue & SR 291 and payment to the mitigation fee at the time of building permit, and should be allowed to move forward without further traffic analysis, or offsite mitigation.