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ENGINEERING, SURVEYING & PLANNING
NATURAL RESOURCE SERVICES, GIS

TRAFFIC IMPACT STUDY
JC RANCHES AND IRISH ACRES SUBDIVISIONS

SECTION 10, TOWNSHIP 5 NORTH, RANGE 45 EAST, TETON COUNTY, ID

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INTRODUCTION AND SUMMARY

PURPOSE OF REPORT AND STUDY OBJECTIVES

The purpose of this Traffic Impact Study (TIS) is to assess the effects of generated traffic from two separate, but closely located, subdivisions in Teton County, Idaho. The objectives are to:

- Quantify existing traffic and provide reasonable traffic projections in the study area.
- Provide reasonable traffic generation rates and assignments to be generated from the proposed development.
- Assess whether the proposed development has a significant detrimental impact on the existing transportation infrastructure.
- Provide solutions if detrimental impact is predicted due to the proposed development.

EXECUTIVE SUMMARY

SITE LOCATION AND STUDY AREA

The project location includes two subdivisions that are proposed in Teton County, ID. The first subdivision is the JC Ranches Subdivision. This proposed subdivision is situated on an 80-acre parcel. The parcel identification number (PID) is RP05N45E101000. Please see Figure 1 for the aerial view of the parcel from the Teton County GIS server.

Figure 1: JC Ranches Aerial View

The Irish Acres Subdivision is proposed to be developed on the 40-acre parcel in SEC 10 TWP 5N RNG 45E, Teton County, Idaho. The PID is RP05N45E103300. Please see Figure 2 for the aerial view of the parcel from the Teton County GIS server. There is a 40-acre parcel that separates JC Ranches and Irish Acres.

Figure 2: Irish Acres Aerial View

To the west, south, and east of the property lines, the land is undeveloped pasture. The north side of the properties is bordered by County Road W 4000 N. There is another subdivision across the road to the north, Los Pinos, that has already been subdivided and it appears that some of the lots have been developed. There are also single lots to the north, some of which are developed, and some are vacant.

Development Description

Both project properties are located within the Agricultural/Rural Residential – 2.5 – Acre Min. Lot Size Zoning. Both applicants are applying for single family residential subdivisions with the following details:

JC Ranches is situated on an 80-acre parcel and there are 26 proposed lots. The lots range in size from 2.51 up to 6.46 acres. One lot is proposed to be reserved for a fire pond, landscaping, and wildlife mitigation. Therefore, 25 of the 26 lots will be developed for single family residences. Each lot will be permitted one primary single-family dwelling and one attached only, accessory dwelling unit. The subdivision will have two accesses to the north onto County Road W 4000 N. This subdivision has an irrigation canal that runs from northeast to southwest across the property, separating the east and west portions of the proposed development.

The Irish Acres subdivision has 10 proposed lots on the 40-acre parcel. Four of the 10 lots are approximately 2.5 acres and the remaining six are about 5 acres in size. Each lot within the subdivision will only be permitted one single-family dwelling. No accessory dwelling units are permitted. Two accesses are proposed for the subdivision. One is on the north side and ties into W 4000 N. The other access ties into the N 2000 W county road on the west side of the subdivision. There is an internal subdivision road with two 100' diameter cul-de-sacs within the subdivision providing for emergency vehicle turnarounds.

Principal Findings

Based on our analyses, the potential traffic generated by the proposed subdivisions will have no significant impact at the W 4000 N intersection at Idaho State Highway 33. It was also found that the proposed accesses onto County roads do not have a significant effect on the Level of Service (LOS) on W 4000 N or N 2000 W.

Conclusions

Capacity analysis suggests that - if current background traffic growth rates continue - the level of service at the W 4000 N intersection will degrade from level of service "B" to "E/F" over the coming 20 years. This is not due to the addition of these subdivisions, but to the extensive growth and development throughout Teton County, Idaho.

Recommendations

It is recommended that area road agencies continue to monitor the intersection for compliance with MUTCD signal warrants.

Proposed Development

Off-Site Development

The project site is located between Tetonia and Driggs, Idaho. Tetonia is located approximately 2.5 miles northwest of the proposed subdivisions. Driggs is located just under 4 miles to the southeast. This area has been seeing substantial growth over the last several years, with an average population growth rate of 2.2% from 2012 to 2022[1]. Most years saw growth between 2-5% with the only exception being 2020 which saw a loss of 3%.

There are many rural, undeveloped parcels being subdivided in between the municipalities. Figure 3 shows the location of proposed subdivisions in the area, according to the Teton County GIS. Traffic counts have shown growth rates from 3-5% on roads in the vicinity. Due to these trends and anticipated future development, an annual traffic growth rate of 4% was assigned for the study horizon in this TIS.

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[1] https://usafacts.org/data/topics/people-society/population-and-demographics/our-changing population/state/idaho/county/teton-county/?endDate=2022-01-01&startDate=2012-01-01

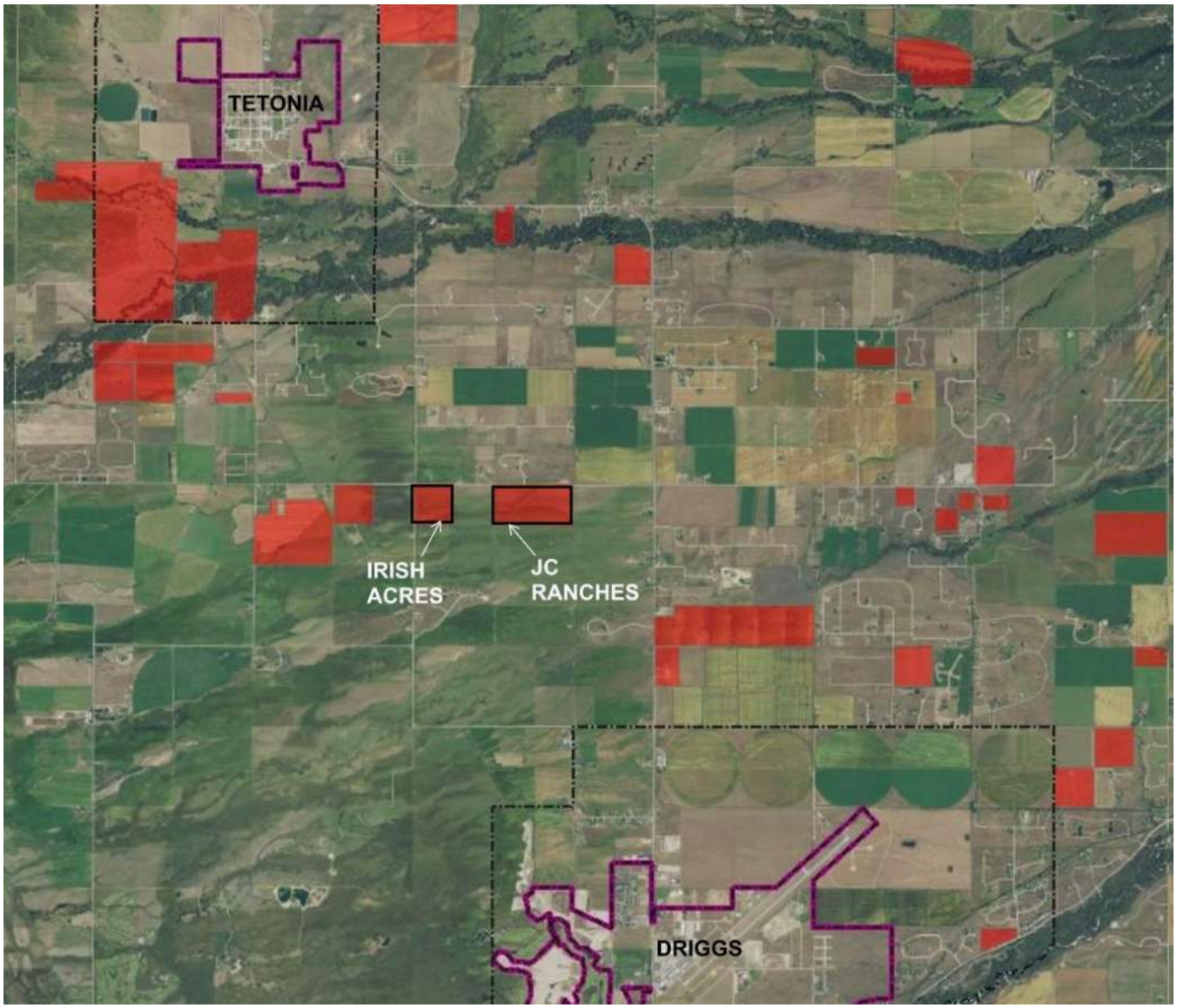

Figure 3: Area Development between Driggs and Tetonia (proposed subdivisions shown in red)

Description of On-Site Development

Proposed development for both subdivisions is single family lots ranging in size from just over 2.5 acres up to 10 acres.

Land Use and Density

The conceptual plan for this project was submitted and reviewed by Teton County prior to the zoning changes implemented in August of 2022. Prior to the zoning change in 2022, the majority of the lands between Driggs and

Tetonia were zoned for a residential 2.5-acre minimum lot size or Agriculture with a minimum 20-acre lot size.

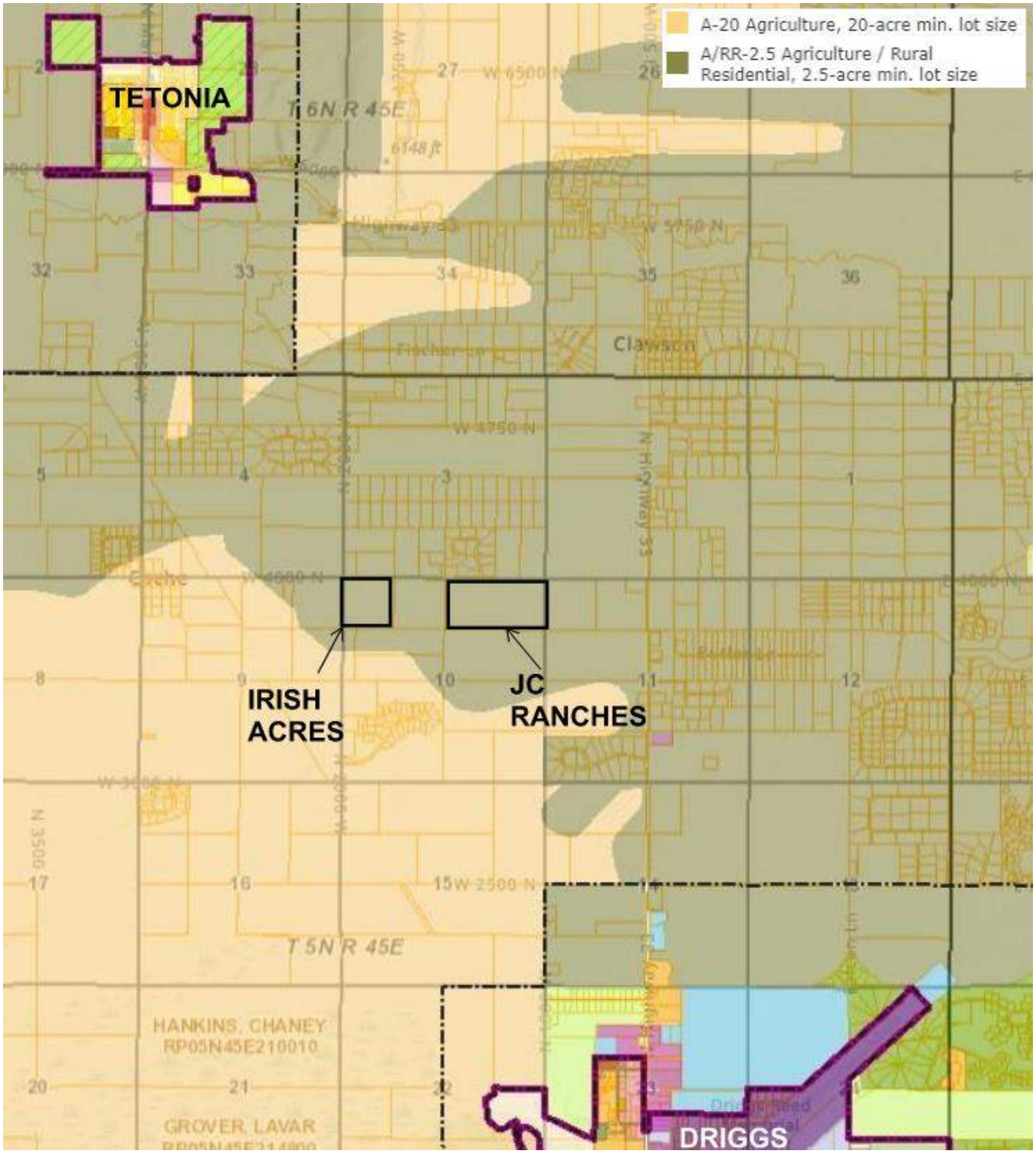

Figure 4: Project Area Zoning, Pre-August 2022

Post-August 2022, the zoning in Teton County changed in the project area. Please see Figure 5 for the updated zoning districts and associated permitted densities. Much of the land area in between Tetonia and Driggs will allow for 5-acre lots in the Rural Neighborhood district and 35-acre lots in the Lowland Agricultural district. It should be noted that with the new zoning scheme, growth in the area will decrease, as the 2.5-acre lot density will no longer be allowed.

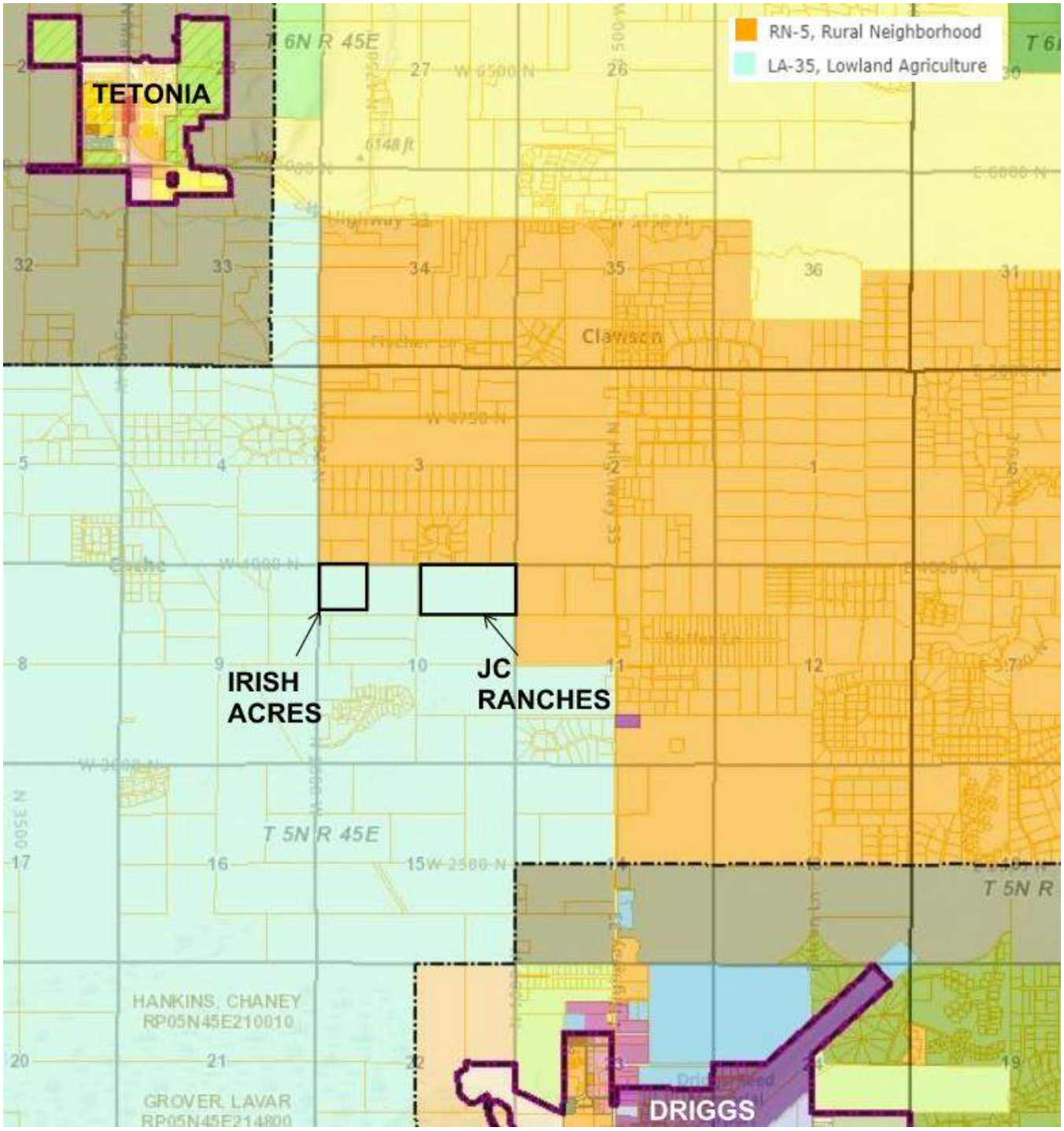

Figure 5: Project Area Zoning, Post August 2022

LOCATION

By Road: The proposed subdivisions are located on the south side of Teton County Road W 4000 N. JC Ranches is approximately 0.75 miles west of Idaho State Highway 33 (SC 33), and Irish Acres is approximately 1.25 miles west of SC 33. The project's location is approximately four miles north of downtown Driggs, Idaho.

By Lat-Long: JC Ranches is at Latitude: North 43º 46' 45", Longitude: West 111º 07' 33" and Irish Acres is at Latitude: North 43º 46' 45", Longitude: West 111º 08' 18".

By Township and Range: JC Ranches is in the North ½ of the NE ¼ and Irish Acres is in the NW ¼ of the NW ¼ of Section 10, Township 5 North Range 45 East, in Teton County, Idaho.

SITE PLAN

Size: JC Ranches is ½-mile east-west by ¼-mile north-south, encompassing approximately 80-acres. Irish Acres is ¼ mile by ¼ mile, encompassing approximately 40-acres.

Physical Description: The properties are currently grass/rangeland at approximately 6,100 feet in elevation. A surface drain crosses from northeast to southwest across JC Ranches, there are no distinguishing features in Irish Acres.

Please see the following figures for the subdivision site plans with proposed roads and accesses.

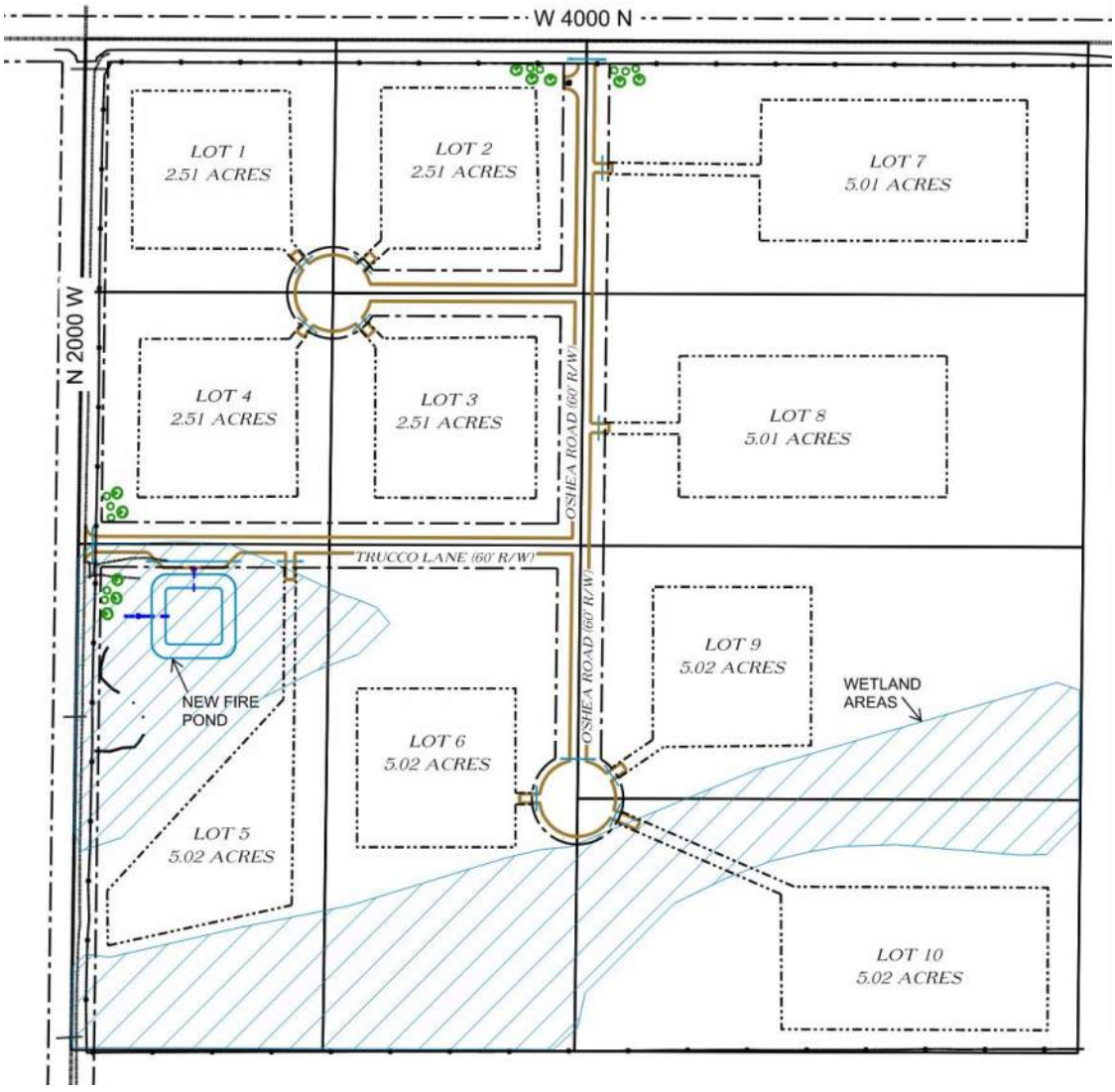

Figure 6: Irish Acres Site Plan

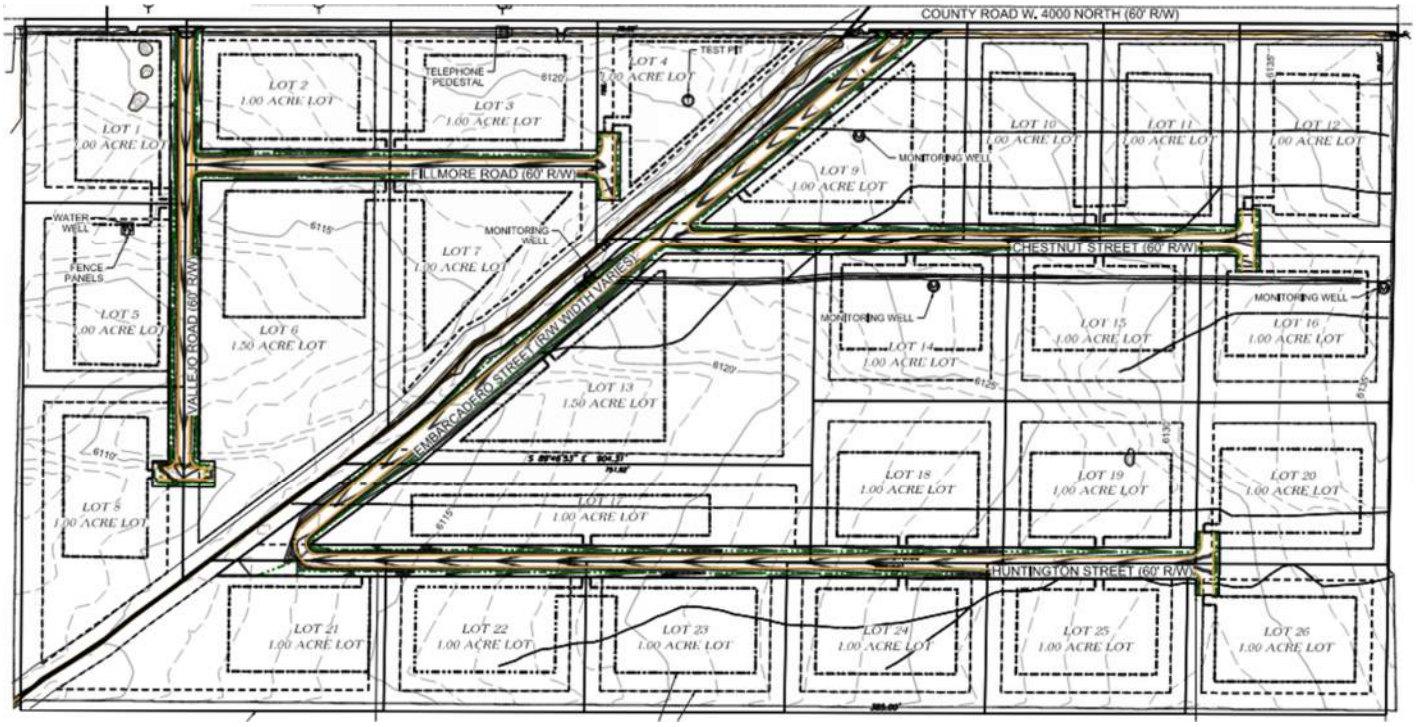

Figure 7: JC Ranches Site Plan

Area Conditions

Area of Significant Traffic Impact

The most significant impact will be on the intersection of SH 33 and W 4000 N, since the majority of the traffic generated will pass through that intersection. The intersection of N 2000 W and W 2000 N will also be impacted, but to a lesser extent. There are no other existing intersections within a mile of the subdivisions. The effect of the new subdivisions from their respective roads on W 2000 N will be examined as well.

Existing Land Uses/Zoning

The current project site use/zoning is Agricultural/Rural Residential.

Anticipated Future Development

It is anticipated that there will be further subdivisions developed in the area.

Site Accessibility

Existing

- Teton County Road W 4000 N is an East-West asphalt road with two 11-foot travel lanes and 4-foot shoulders along the northern boundary of the proposed subdivisions. W 4000 N is under STOP control at the SH 33 intersection.
- Idaho SH 33 is an asphalt road with two 12-foot travel lanes and 4-foot shoulders. Approaching W 4000 N, State Highway 33 flares to thirty-six feet wide, with left-turn, through and right-turn lanes. Right turn bays are 250 feet long, and left turn bays are five hundred feet long.

- Teton County Road N 2000 W is a North-South gravel road nominally twenty-one feet wide without shoulders along the western boundary of the Irish Acres parcel. N 2000 W is under STOP control at the W 4000 N intersection.

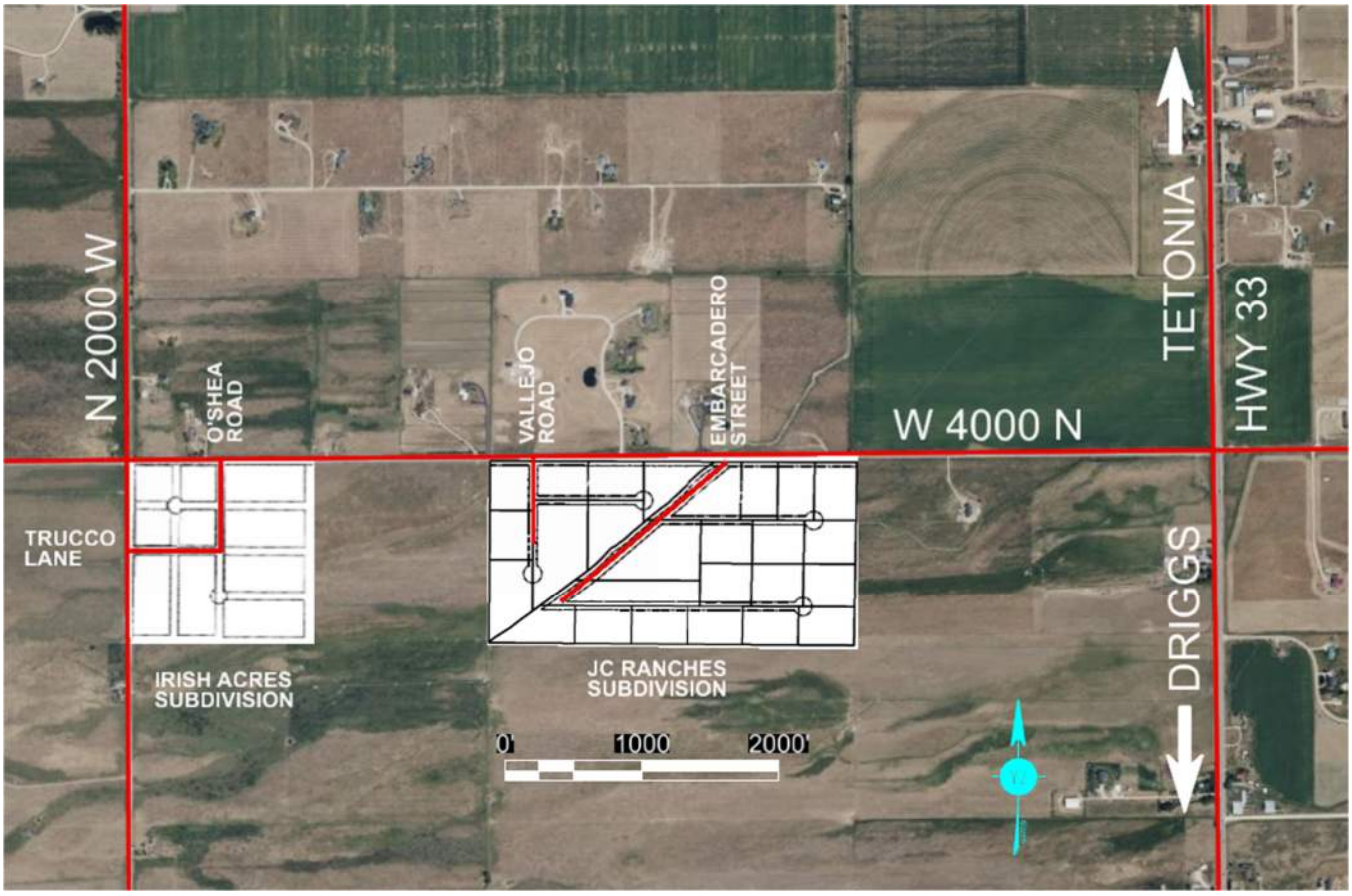

Figure 8: Area Roadway System with Proposed Subdivisions

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Figure 9: Aerial Image of Intersection of N 2000 W at W 4000 N

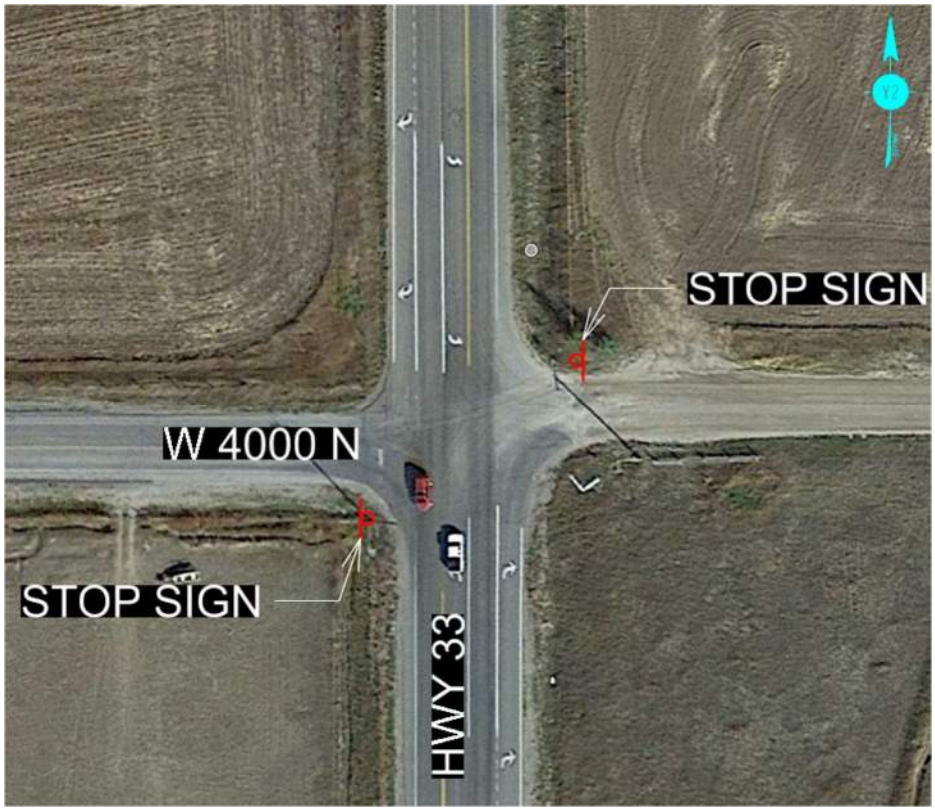


Figure 10: Image of Intersection of N 2000 W at SH 33

FUTURE

In JC Ranches, *Vallejo Road* will provide access to W 4000 N for the western 8 lots while *Embarcadero Street* will provide access for the eastern 17 lots.
In Irish Acres, *O'Shea Road* will provide access to W 4000 N while *Trucco Lane* provides access to N 2000 W.

TRAFFIC VOLUMES AND CONDITIONS

- Traffic counts were obtained on 05/10/2022 - 05/11/2022. The results of these counts are shown in Appendix A.
- Current average daily traffic (ADT) on Idaho State Highway SH 33 is about 6,200 vehicles per day.
- The west leg of W 4000 N carries approximately 1,100 ADT, with about 200 ADT on the opposite (east) leg.

PUBLIC TRANSPORTATION SERVICE

Because of the distance to area destinations and lack of public transit, all trips are assumed to take place by private vehicle.

PROJECTED TRAFFIC

SITE TRAFFIC (EACH HORIZON YEAR)

- Year 2022 traffic at existing study intersections was counted May 10-11, 2022.
- Year 2022 "Build" traffic was calculated to fully model how nearby intersections would change due to growth if the subdivisions were to be fully developed immediately.
- Year 2030 "No-Build" traffic was estimated using growth rates of 4%.
- Year 2030 "Build" traffic at study intersections was estimated by adding site-generated traffic to 2030 assuming all of the subdivision lots are fully developed.
- Year 2045 "No-Build" traffic was estimated using annual growth rates of 4%.
- Year 2045 "Build" traffic at study intersections was estimated by adding site-generated traffic to 2045 assuming all of the subdivision lots are fully developed.
- Resulting traffic forecasts are depicted in diagrams in Appendix B.

TRIP GENERATION

The Institute of Transportation Engineers' (ITE) *Trip Generation Manual* was used to generate trips for the proposed subdivisions. The 25 developable lots in JC Ranches were modeled to have a single-family home as well as an attached accessory dwelling unit, or guest house. The single-family home trip generation utilized land use 210 (Single Family Homes), which estimates that each dwelling unit will generate 9.52 vehicle trips per day. The accessory dwelling unit or guest home trip generation was estimated using 260 (Recreational Homes), which generates 3.16 vehicle trips per day. All 10 lots in Irish Acres were modeled with a one, single-family home per lot. During the AM Peak Hour, the single-family home generates 0.75 trips per dwelling, with 25% incoming and 75% outgoing, while the PM Peak Hour generates 1 trip per dwelling, with 63% and 37% outgoing. During the AM Peak Hour, the recreational home generates 0.16 trips per dwelling, with 65% incoming and 35% outgoing, while the PM Peak Hour generates 0.26 trips per dwelling, with 41% and 59% outgoing. The proposed 35-unit subdivisions will therefore generate the following daily and hourly directional volumes:

Table 1: Generated Traffic Distribution

Road	Units	Expected Units	Total Distribution			
			AM in	AM out	PM in	PM out
Trucco Lane	Dwelling	1	0	1	1	0
O'Shea Road	Dwelling	9	2	5	6	3
Vallejo Road	Dwelling	8	3	5	6	4
Embarcadero Street	Dwelling	17	5	11	13	10
Total		35	10	22	26	17

Additional traffic flow diagrams are included with the HCS analysis of each intersection included in Appendix C.

TRIP ASSIGNMENT

Based on field-observed turn movement percentages at the SH 33/W 4000 N intersection and traffic assumptions at the W 4000 N/N 2000 W intersection, site generated traffic volumes were assigned as follows:

Table 2: Generated Traffic Directional Distribution

Road	Directional Distribution							
	From east		From west		To east		To west	
	AM in	PM in	AM in	PM in	AM out	PM out	AM out	PM out
Trucco Lane	0	1	0	0	1	0	0	0
O'Shea Road	2	6	0	0	5	3	0	0
Vallejo Road	3	6	0	0	5	4	0	0
Embarcadero Street	5	12	0	1	10	9	1	1
Total	10	25	0	1	21	16	1	1

All traffic from Trucco Lane is assumed to travel east from N 2000 W. Turn movement diagrams in Appendix B illustrate the effect of these induced volumes on W 4000 N and on the W 4000 N/SH 33 intersection.

Through Traffic (Each Horizon Year)

Non-Site Traffic for Anticipated Development in Study Area

According to the Idaho Transportation Department AADT Application (https://itd.idaho.gov/road-data/), traffic recorded around the intersection of State Highway 33 and W 4000 N has been growing at rates ranging from 3-5% annually. There is some variation from year to year, but for this study, it will be assumed that all traffic will grow at an annual rate of 4%. These rates are typical in a growing suburban residential area. It is projected that these rates will cause the total intersection traffic volume to double by 2040. (See Appendix A for intersection turn movements.)

Trip Generation and Distribution

Most of the destinations to the west are additional residential lots, therefore it is assumed that most of the traffic generated by the subdivisions will travel eastbound on W 4000 N. Traffic will be divided with 90% travelling to the east and 10% traveling to the west.

At the intersection of N 4000 W and SH 33, traffic counts showed that 95% of travel was to/from the south towards Driggs, while the remaining 5% was to/from the north towards Tetonia. Traffic generated by the new subdivisions is expected to have the same 5% north/95% south directional split at the SH 33 intersection.

For the intersection of N 4000 W and W 2000 N trip distribution was assigned based on estimates of the number of properties in the area. Traffic will be assumed to be 50% to the west, 33% to the north, and 17% to the south.

Traffic Analysis

Site Access

In JC Ranches, *Vallejo Road* will provide access to W 4000 N for the western 8 lots while *Embarcadero Street* will provide access for the eastern 18 lots. In Irish Acres, *O'Shea Road* will provide access to W 4000 N while *Trucco Lane* provides access to N 2000 W.

Capacity and Level of Service

- The Highway Capacity Software (HCS) was used to estimate the capacity of the Stop-controlled intersections on W 4000 N at Idaho State Highway 33, and future operations at the intersections of W 4000 N at N 2000 W, O'Shea Street, Vallejo Road, and Embarcadero Street for the traffic scenarios listed.
- Intersections of W 4000 N at O'Shea Street, Vallejo Road, and Embarcadero Street operate at Level of Service (LOS) "A" through 2045 in the build scenario.
- For both the AM Peak "No-Build" and "Build" scenarios in 2030, the westbound approach to the W 4000 N / SH 33 intersection operates at LOS "C." Having both scenarios with the same level of service indicates the traffic generated by the subdivisions is not the main factor, but rather the increase in traffic from overall growth in the area.
- For the AM Peak "No-Build" and "Build" scenarios in 2045, the westbound approach to the W 4000 N / SH 33 intersection operates at LOS "F," while the eastbound approaches operate at LOS "D/E." The no build scenario demonstrates a degradation in LOS due to the projected growth in the area. The addition of the two subdivisions is not demonstrating an additional significant impact on the 2045 LOS.

- For the PM Peak "No-Build" and "Build" scenarios in 2045, both approaches to the W 4000 N / SH 33 intersection operates at LOS "C." Again, having both scenarios with the same level of service indicates the traffic generated by the subdivisions is not a significant factor, but rather the increase in traffic from overall growth in the area.

- At full build, both subdivisions contribute a maximum total of 22 trips towards SH 33 in the morning and 26 trips from SH 33 in the evening. Compared to an increase in traffic on SH33 of over 500 vehicles from 2022 to 2045 due to overall growth in the region, the contribution from the subdivisions is negligible.
- The following table describes capacity analysis data:

Table 3: Future LOS for "No Build" and "Build" conditions

LOS	2022				2030				2045			
	No Build		Build		No Build		Build		No Build		Build	
LOS @ minor road	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
W 4000 N @ N 2000 W	A	A	A	A	A	A	A	A	A (north) B (south)	A (north) B (south)	A (north) B (south)	A (north) B (south)
W 4000 N @ O'Shea Rd	N/A	N/A	A	A	N/A	N/A	A	A	N/A	N/A	A	A
W 4000 N @ Vallejo Rd	N/A	N/A	A	A	N/A	N/A	A	A	N/A	N/A	A	A
W 4000 N @ Embarcadero St	N/A	N/A	A	A	N/A	N/A	A	A	N/A	N/A	A	A
SH 33 @ W 4000 N	B	B	B	B	B (east) C (west)	B	B (east) C (west)	B	E (east) D (west)	C	D (east) F (west)	C

CONCLUSIONS

Construction of the JC Ranches and Irish Acres Subdivisions will not impact mainline operations on W 4000 N. The new approach street intersections will operate at LOS "A" at all times.

The W 4000 N / SH 33 intersection LOS is predicted to significantly degrade by the year 2045, although this is almost entirely due to population and traffic growth in the area, not from the subdivisions themselves. Without the subdivisions, the intersection will operate at LOS "D/E", with the addition of the subdivisions reducing it to LOS "D/F."

RECOMMENDATIONS

No road improvements are necessary to specifically accommodate the traffic generated by the proposed JC Ranches or Irish Acres subdivisions.

Road agencies should continue to monitor the performance of the W 4000 N intersection at Idaho SH 33. If delays increase significantly, right-turn bays may be an appropriate consideration.

If and when signal warrants are met, road agencies should evaluate constructing either a signal or roundabout at the W 4000 N intersection at Idaho SH 33.

REFERENCES

Teton County Online Geographic Information System. December 13, 2023. https://tetonidaho.maps.arcgis.com/apps/webappviewer/index.html?id=7cad88173b644a6a8e8c1147e94aa524.

Institute of Transportation Engineers (ITE) Trip Generation Rates, 9th Edition.

APPENDIX A

TURN COUNTS

Turn Movement Counts: State Highway 33 at W 4000 N

Project # 22037		Seasonal Adj. Factor											
5/10-11/2022													
Estimated 2 Way ADT		874			145			6660			5842		
AM Peak Traffic	Eastbound W 4000 N			Westbound W 4000 N			Northbound HWY 33			Southbound HWY 33			Total	PHF
Time	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT		0.862
06:30 - 06:45			13	1			1	10			65		90	
06:45 - 07:00			19		1			14		1	69		104	
07:00 - 07:15	1		7				2	28			74		112	
07:15 - 07:30			13	1			1	35		1	59		110	416
07:30 -07:45	1		9	1			3	43	1		89		147	473
07:45 - 08:00			21	5		3	1	36	1	1	109		177	546
08:00 - 08:15	1		20			1	6	55	1	1	91		176	610
08:15 - 08:30	1		12			3	11	57	3	1	74	1	163	663
08:30 - 08:45	1		8			3	5	37	1	2	61	1	119	635
08:45 - 09:00	1	1	9	3			6	63			75		158	616
TOTAL	6	1	131	11	1	10	36	378	7	7	766	2	1162	
	4.3%	0.7%	94.9%	50.0%	4.5%	45.5%	8.6%	89.8%	1.7%	0.9%	98.8%	0.3%		
AM PEAK VOLUMES	3	-	62	6	-	7	21	191	6	3	363	1		
SEASONALLY ADJUSTED	-	-	-	-	-	-	-	-	-	-	-	-		
5/10-11/2022														
Midday Traffic	Eastbound W 4000 N			Westbound W 4000 N			Northbound HWY 33			Southbound HWY 33			Total	PHF
Time	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT		#DIV/0!
11:00 - 11:15													0	
11:15 - 11;30													0	
11:30 - 11:45													0	
11:45 - 12:00													0	0
12:00 - 12:15													0	0
12:15 - 12:30													0	0
12:30 - 12:45													0	0
12:45 - 13:00													0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
MIDDAY PEAK VOLUMES	-	-	-	-	-	-	-	-	-	-	-	-		
SEASONALLY ADJUSTED	-	-	-	-	-	-	-	-	-	-	-	-		
5/10-11/2022														
PM Peak Traffic	Eastbound W 4000 N			Westbound W 4000 N			Northbound HWY 33			Southbound HWY 33			Total	PHF
Time	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT	LEFT	THROUGH	RIGHT		0.929
15:30-15:45			6	2			10	74	3	3	37	1	136	
15:45-16:00			8	1		2	10	91	1		43	1	157	
16:00-16:15			7	1			9	60	1		43	1	122	
16:15-16:30	1		5	1			15	60			49		131	546
16:30-16:45			9	1			8	75			46	2	141	551
16:45-17:00			5			1	11	90			67		174	568
17:00-17:15	2		6				15	95	1		46	1	166	612
17:15-17:30			11				15	100	1		50		177	658
17:30-17:45			9				11	90	1	1	48		160	677
17:45-18:00	1		6	1			9	87			49	2	155	658
18:00-18:15			5				9	84	2		46	4	150	642
18:15-18:30			5	1			14	80	1		40		141	606
18:30-18:45			3	1			7	66	1	2	45	0	125	571
18:45-19:00			5				10	47	2		32		96	512
TOTAL	4	0	90	9	0	3	153	1099	14	6	641	12	1616	
	4.3%	0.0%	95.7%	75.0%	0.0%	25.0%	12.1%	86.8%	1.1%	0.9%	97.3%	1.8%		
PM PEAK VOLUMES	2	0	31	0	0	1	52	375	3	1	211	1		
SEASONALLY ADJUSTED	-	-	-	-	-	-	-	-	-	-	-	-		
ESTIMATED DADT	26	0	485	33	0	43	353	2766	47	21	2976	10		

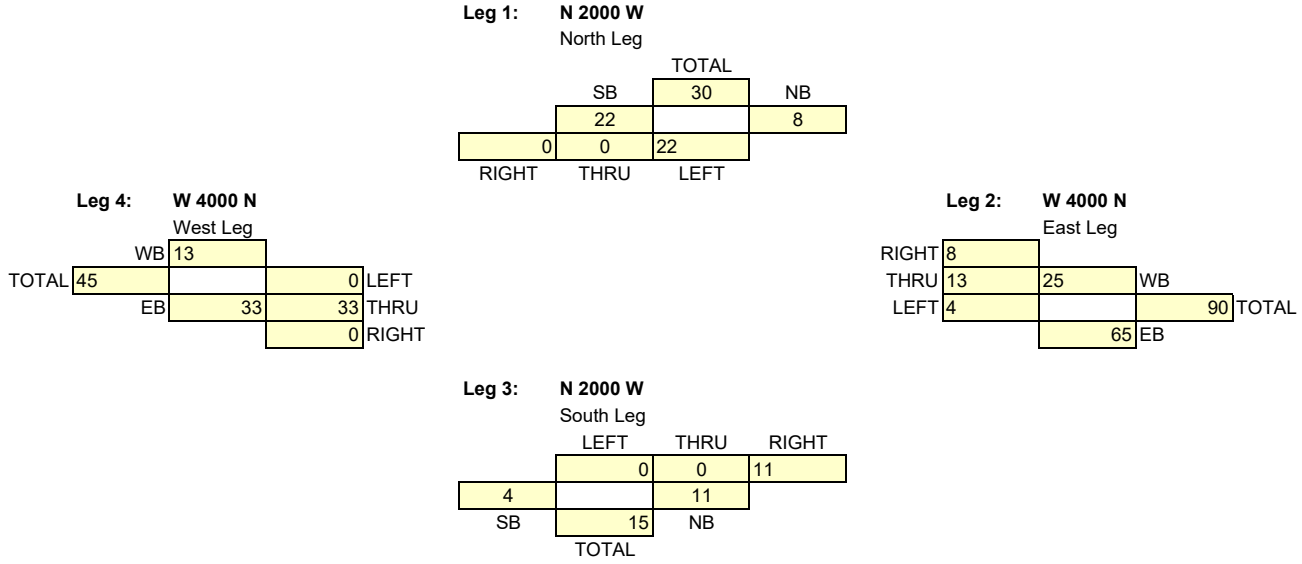
APPENDIX B

TURN MOVEMENTS

N 2000 W at W 4000 N

Crossroad Diagram:

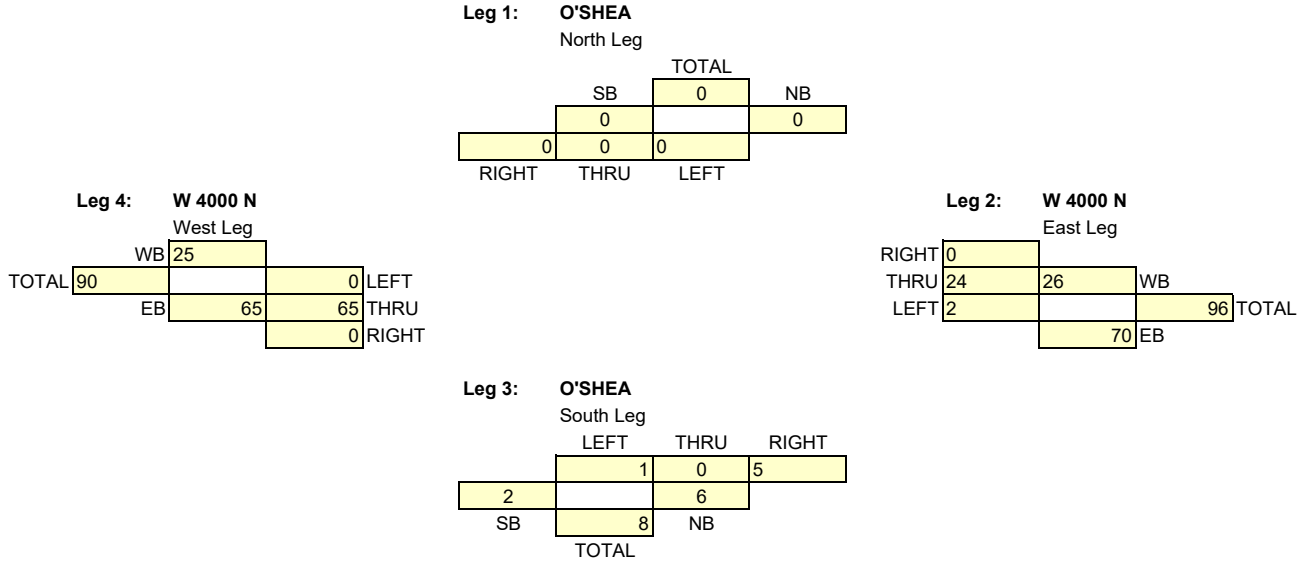
2022 AM PEAK BUILD



O'Shea at W 4000 N

Crossroad Diagram:

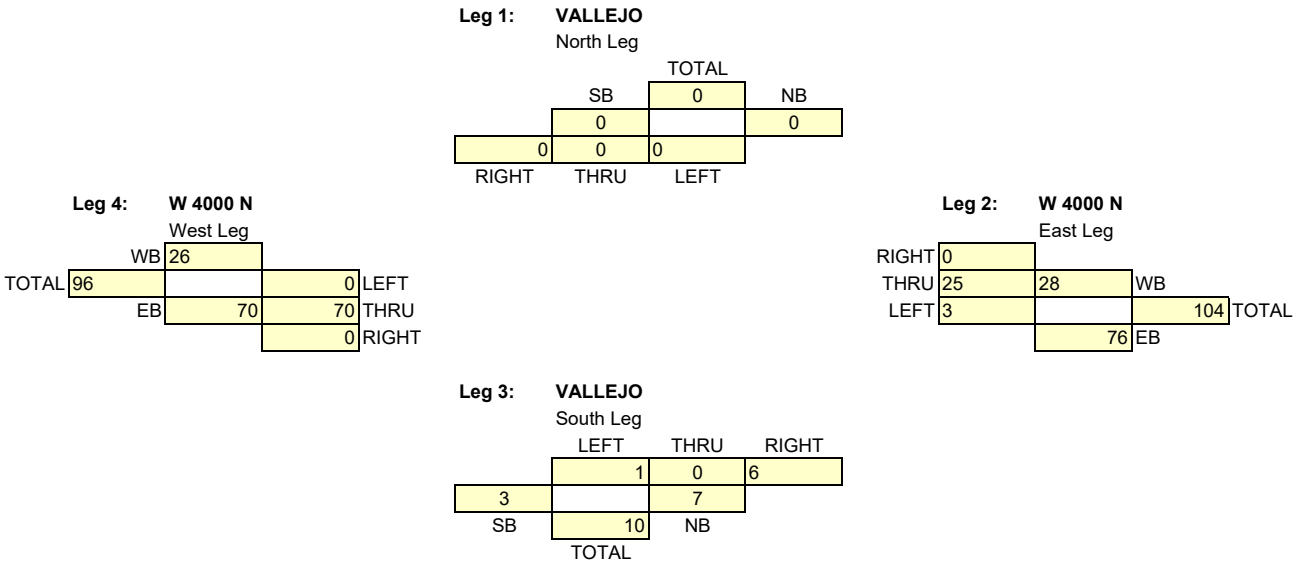
2022 AM PEAK BUILD



VALLEJO at W 4000 N

Crossroad Diagram:

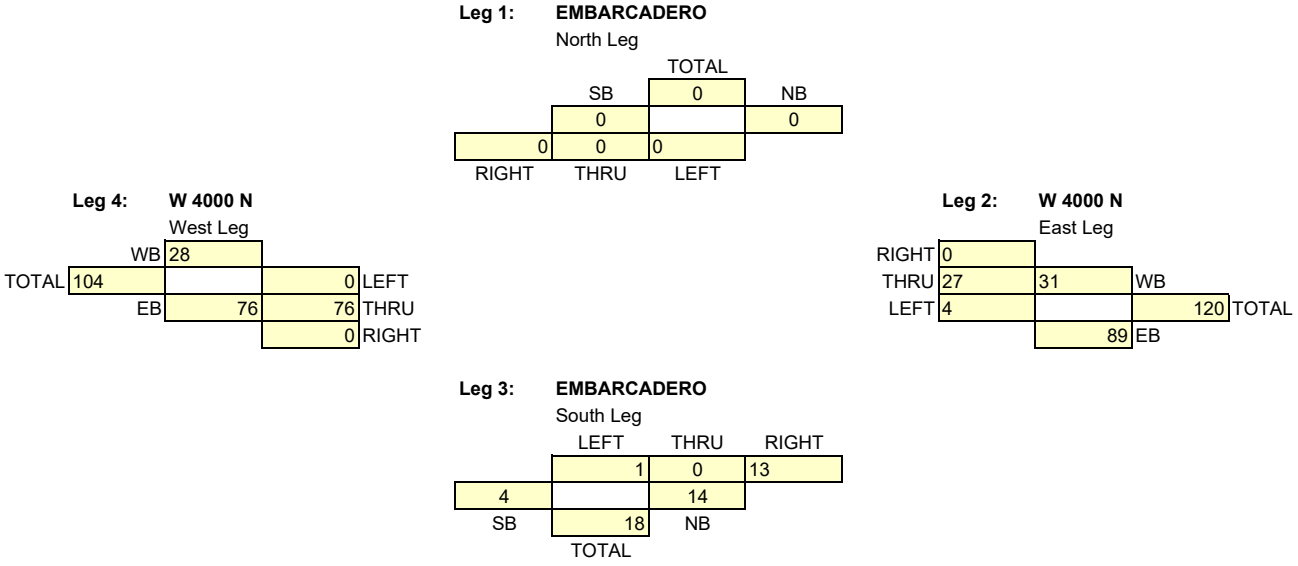
2022 AM PEAK BUILD



EMBARCADERO at W 4000 N

Crossroad Diagram:

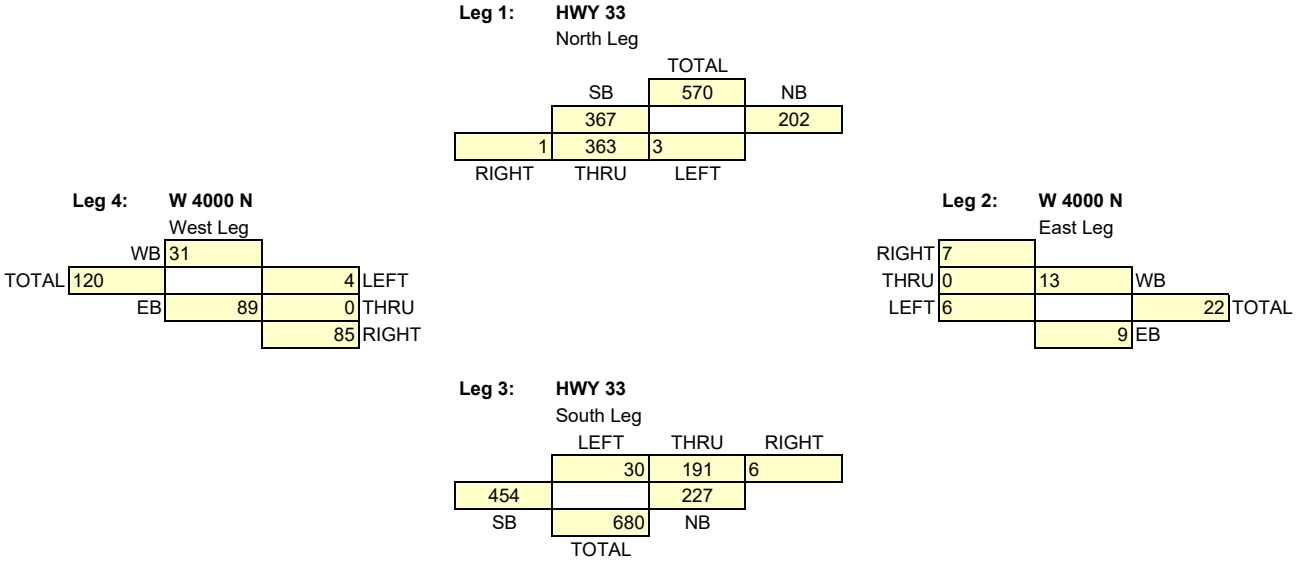
2022 AM PEAK BUILD



Idaho SH 33 at W 4000 N

Crossroad Diagram:

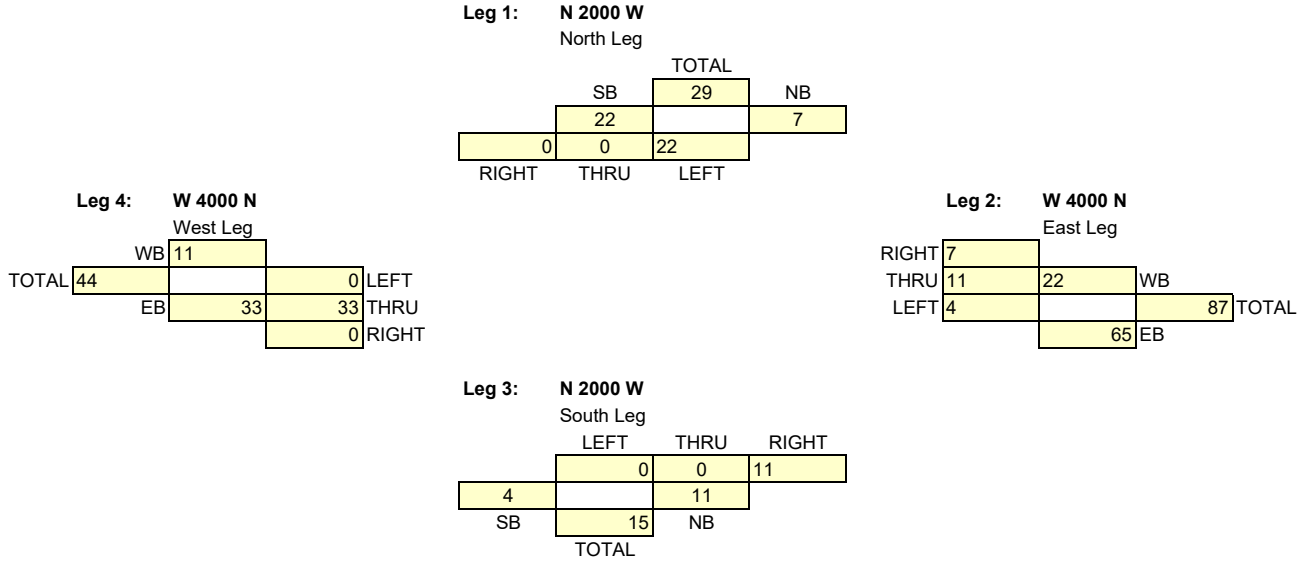
2022 AM PEAK BUILD



N 2000 W at W 4000 N

Crossroad Diagram:

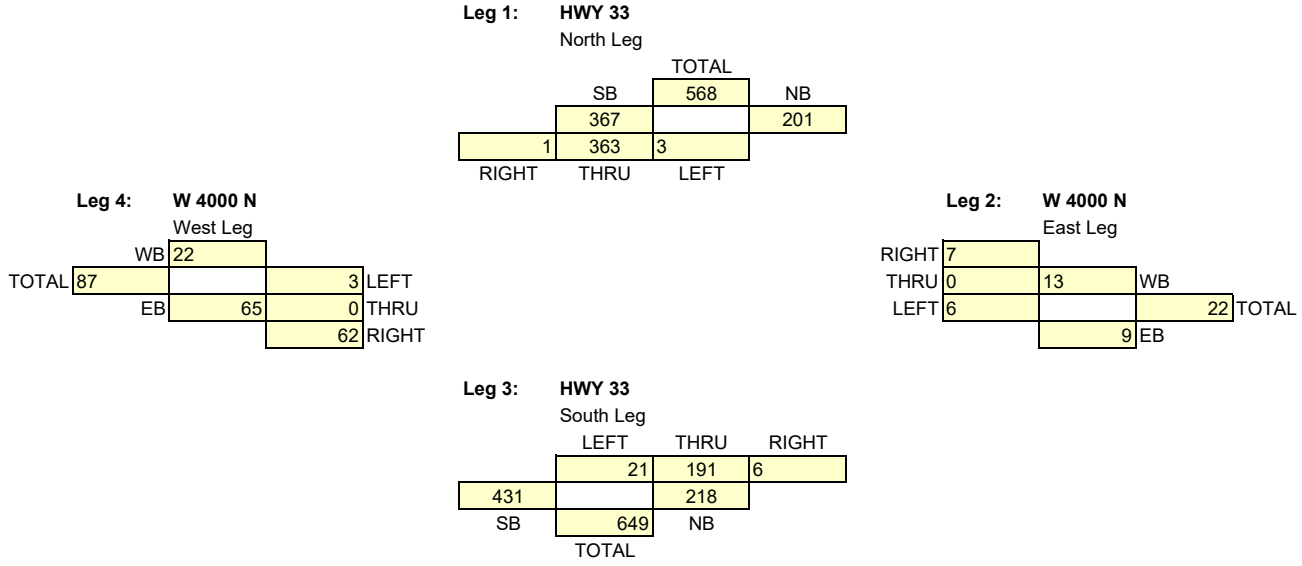
2022 AM PEAK NO BUILD



Idaho SH 33 at W 4000 N

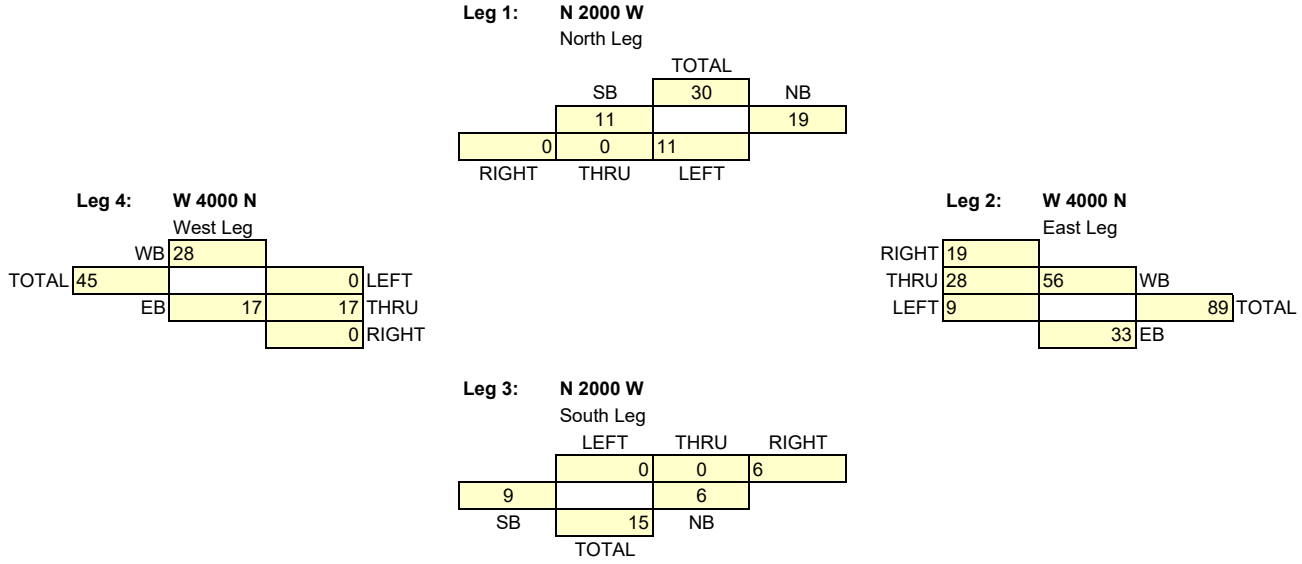
Crossroad Diagram:

2022 AM PEAK NO BUILD



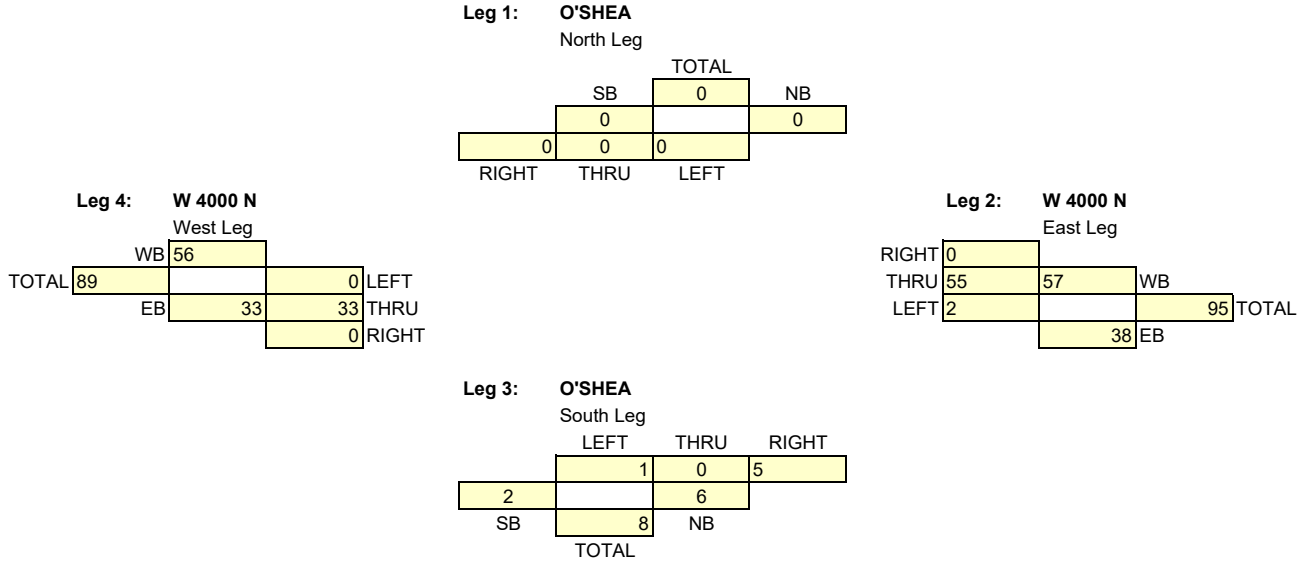
N 2000 W at W 4000 N

Crossroad Diagram:
2022 PM PEAK BUILD



O'Shea at W 4000 N

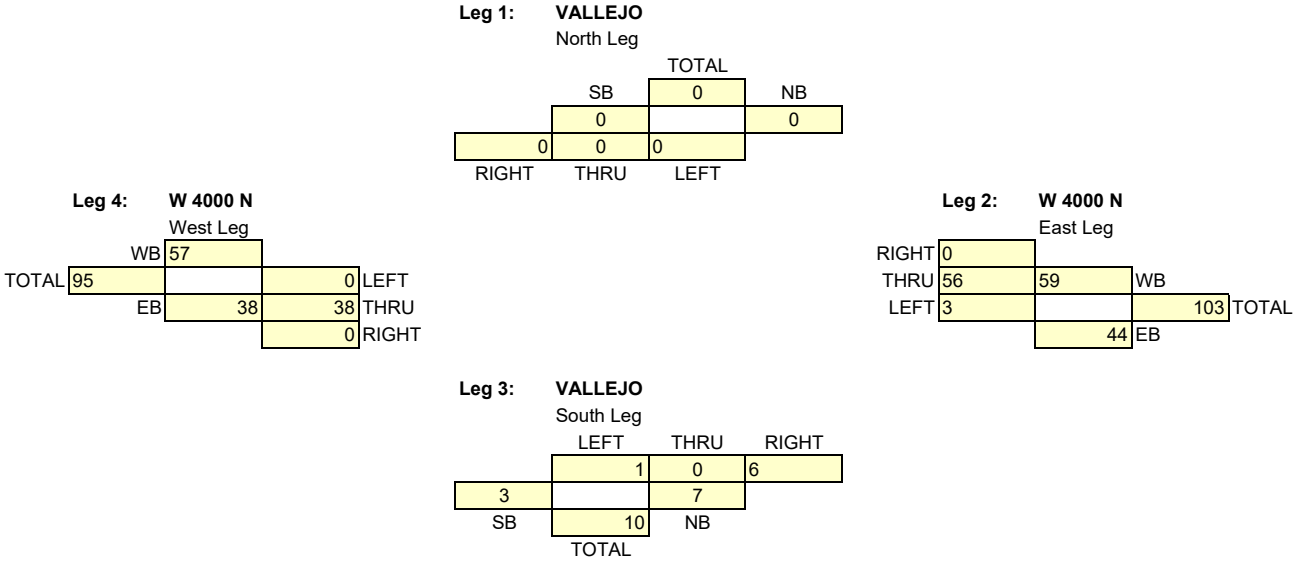
Crossroad Diagram:
2022 PM PEAK BUILD



VALLEJO at W 4000 N

Crossroad Diagram:

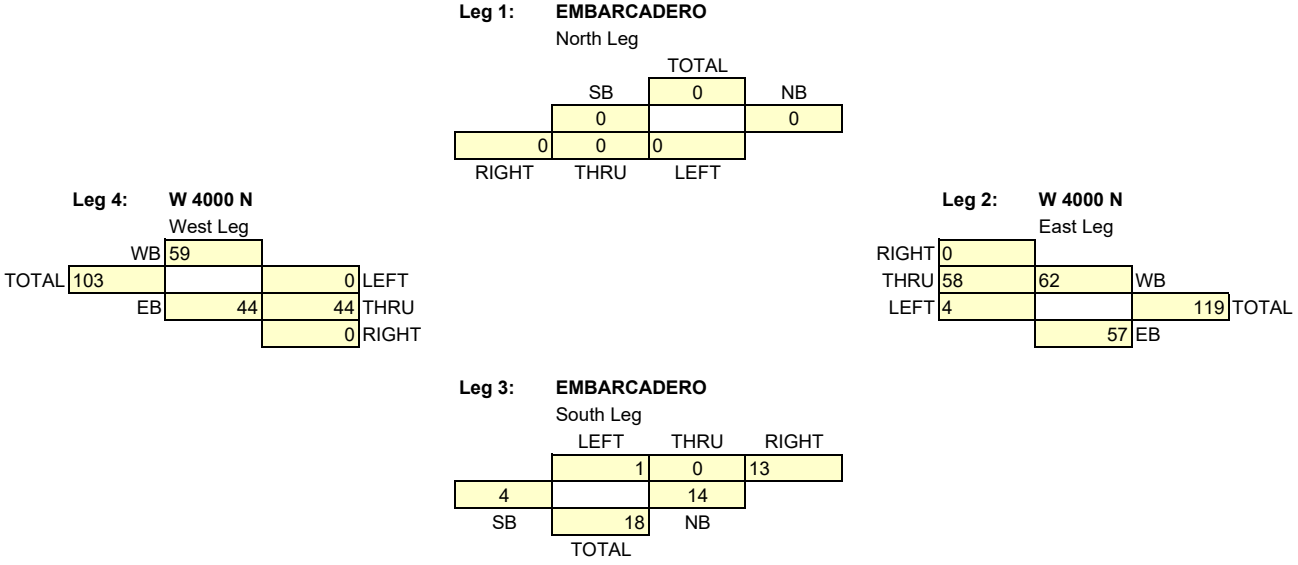
2022 PM PEAK BUILD



EMBARCADERO at W 4000 N

Crossroad Diagram:

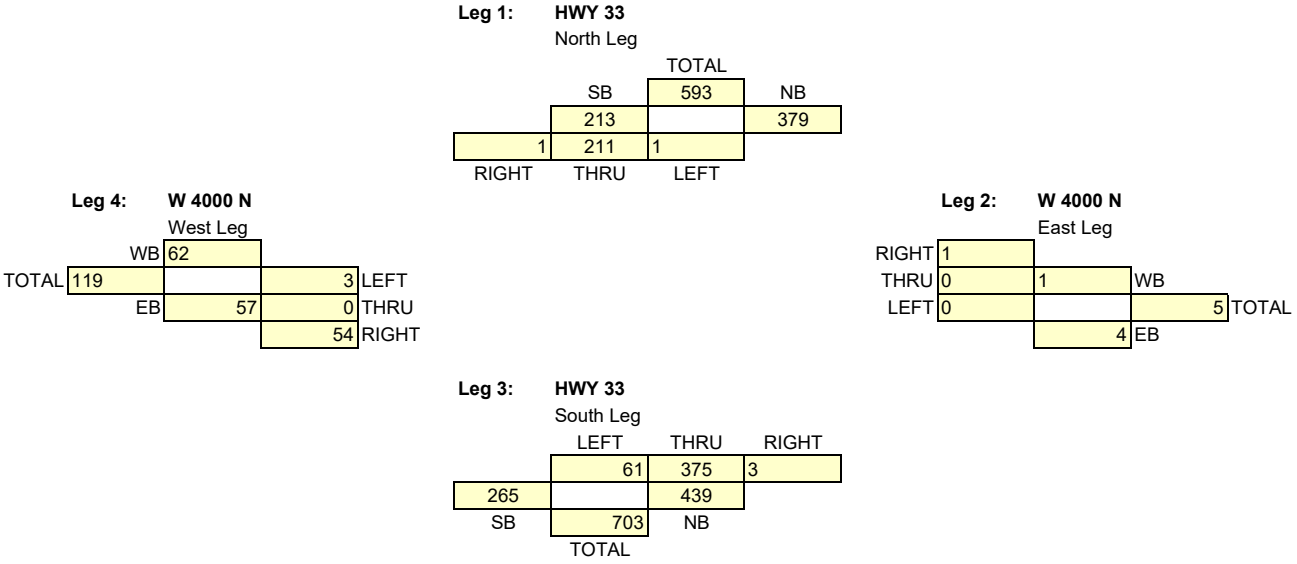
2022 PM PEAK BUILD



Idaho SH 33 at W 4000 N

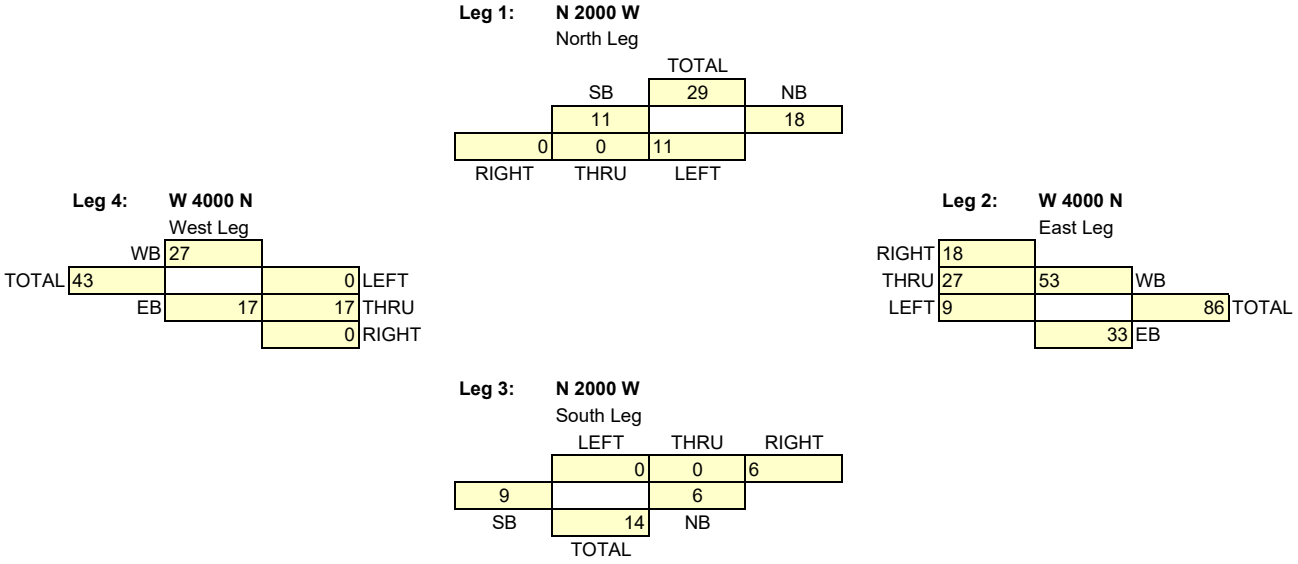
Crossroad Diagram:

2022 PM PEAK BUILD



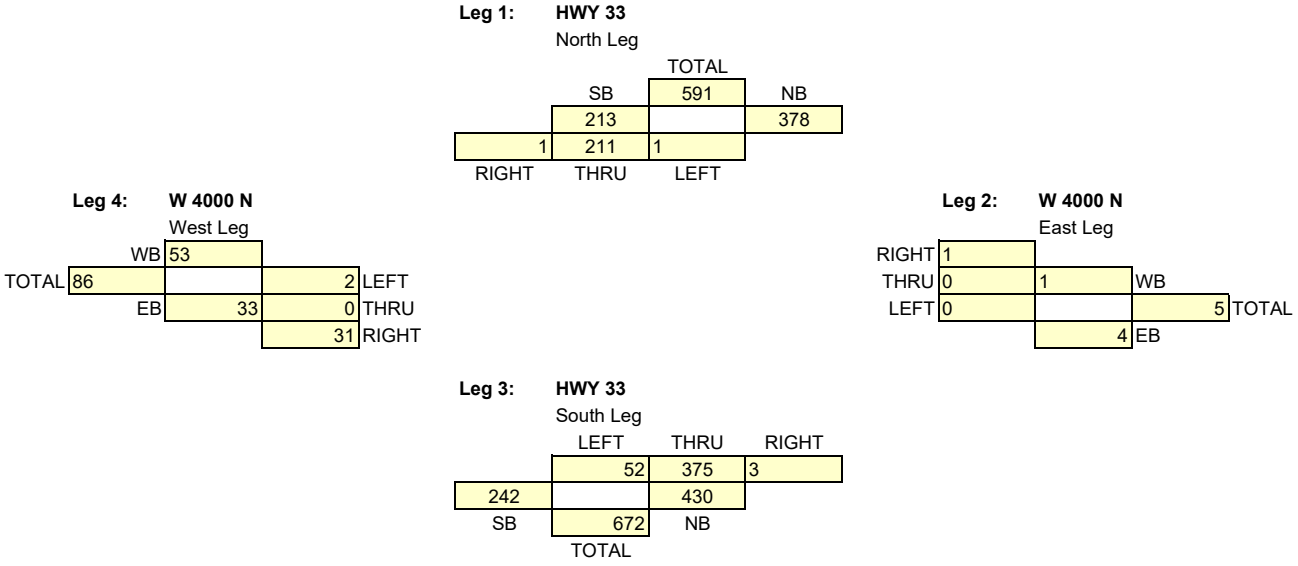
N 2000 W at W 4000 N

Crossroad Diagram:
2022 PM PEAK NO BUILD



Idaho SH 33 at W 4000 N

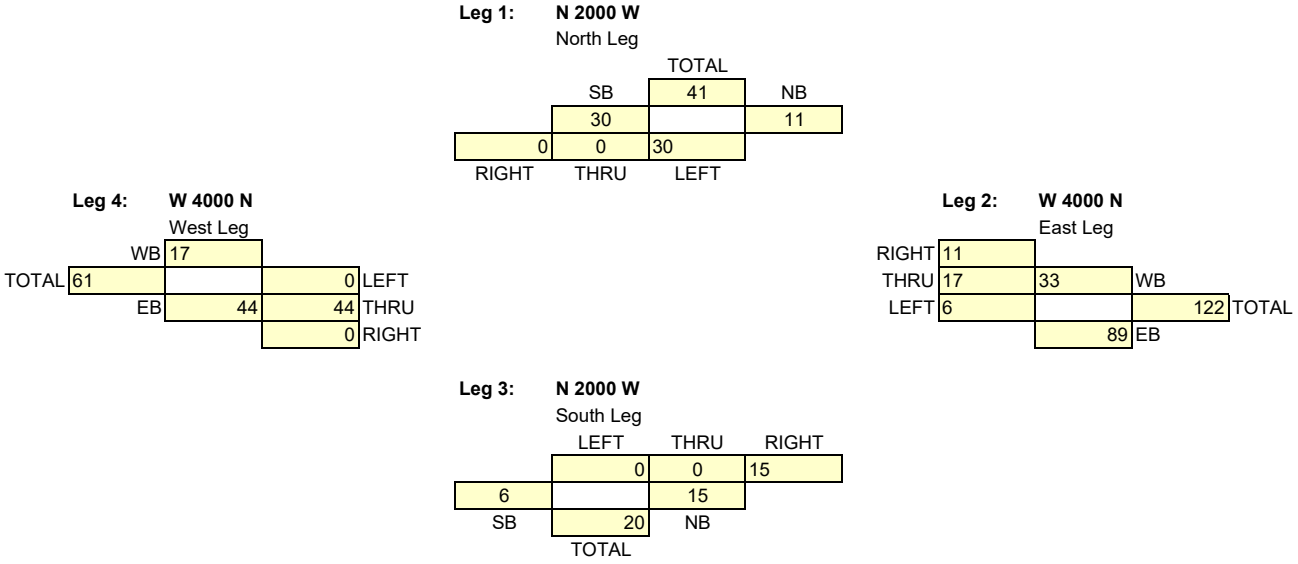
Crossroad Diagram:
2022 PM PEAK NO BUILD



N 2000 W at W 4000 N

Crossroad Diagram:

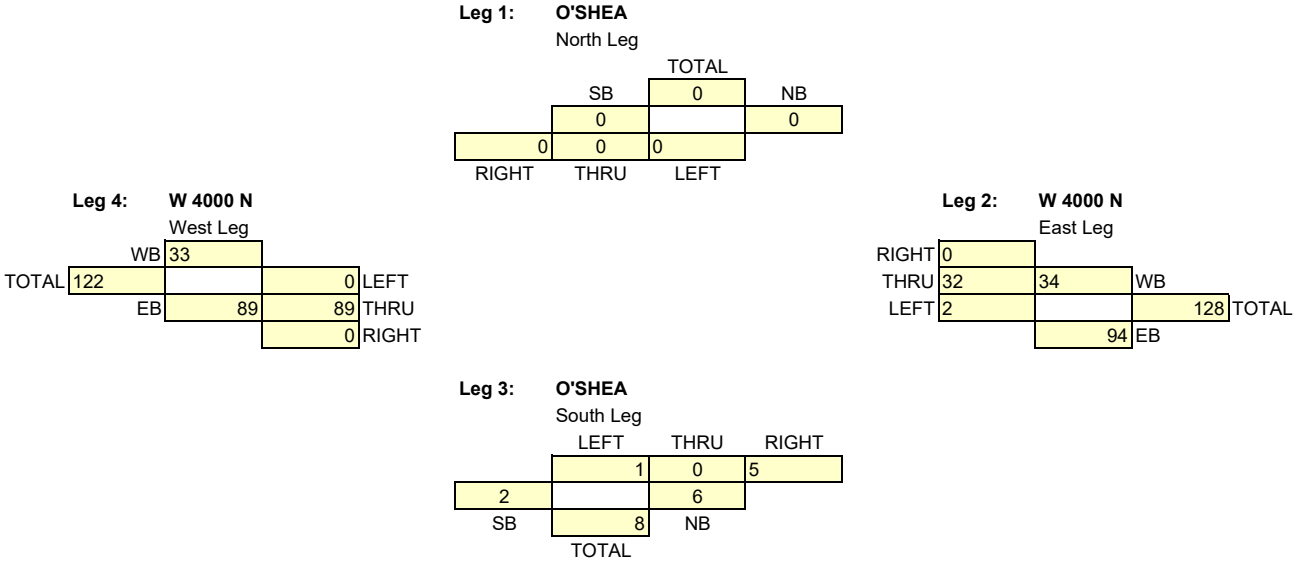
2030 AM PEAK BUILD



O'Shea at W 4000 N

Crossroad Diagram:

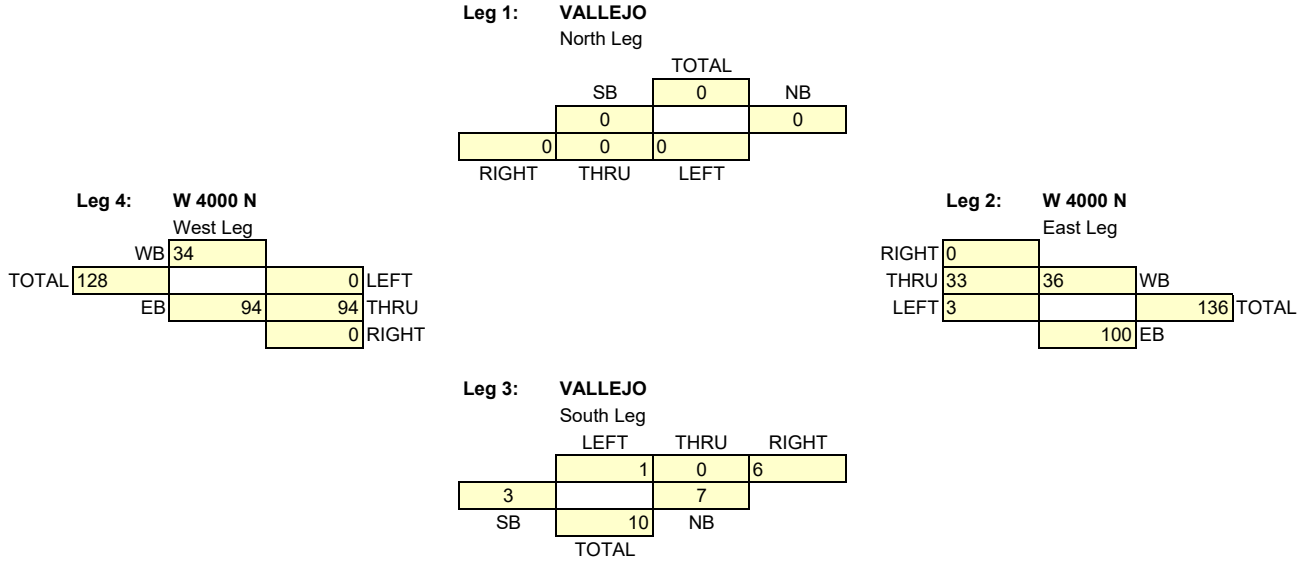
2030 AM PEAK BUILD



VALLEJO at W 4000 N

Crossroad Diagram:

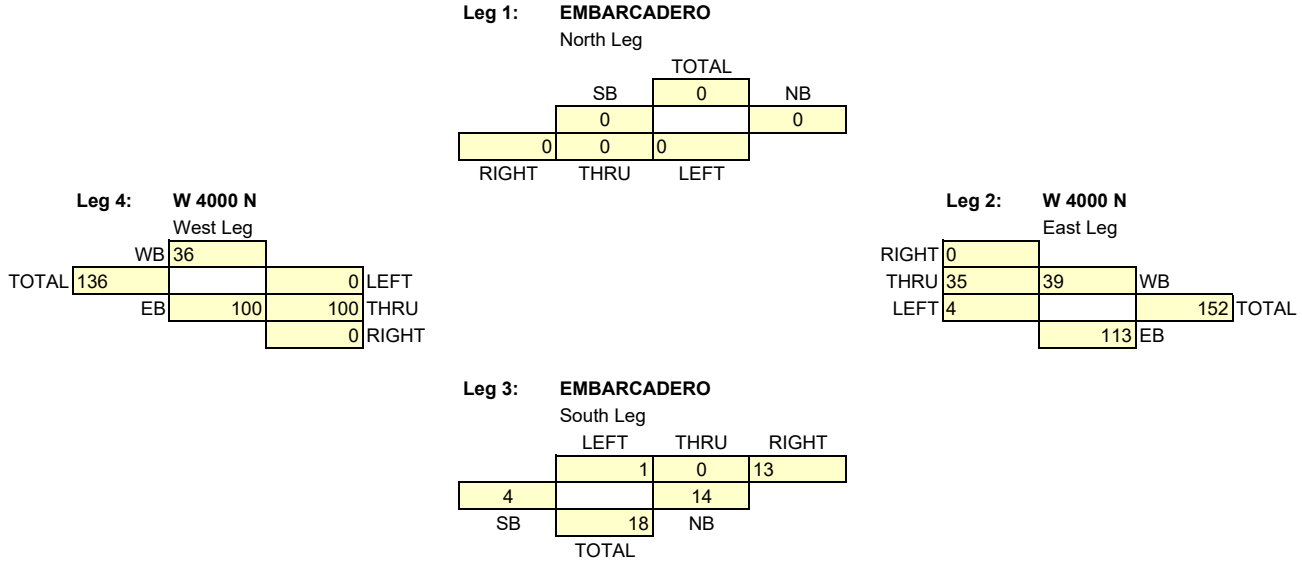
2030 AM PEAK BUILD



EMBARCADERO at W 4000 N

Crossroad Diagram:

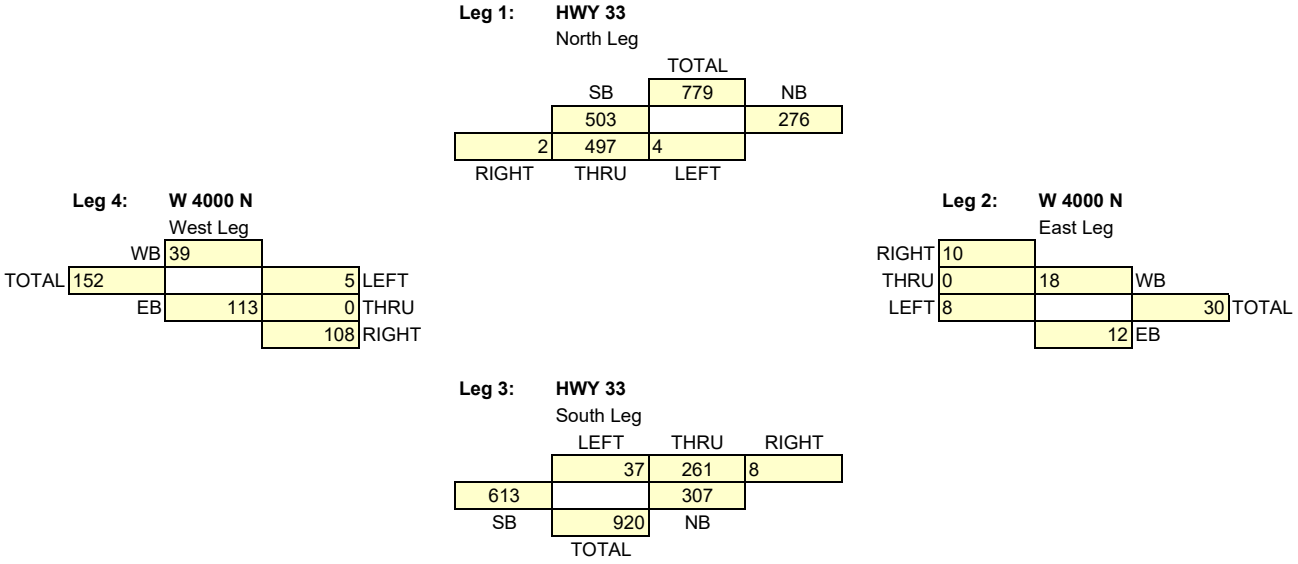
2030 AM PEAK BUILD



Idaho SH 33 at W 4000 N

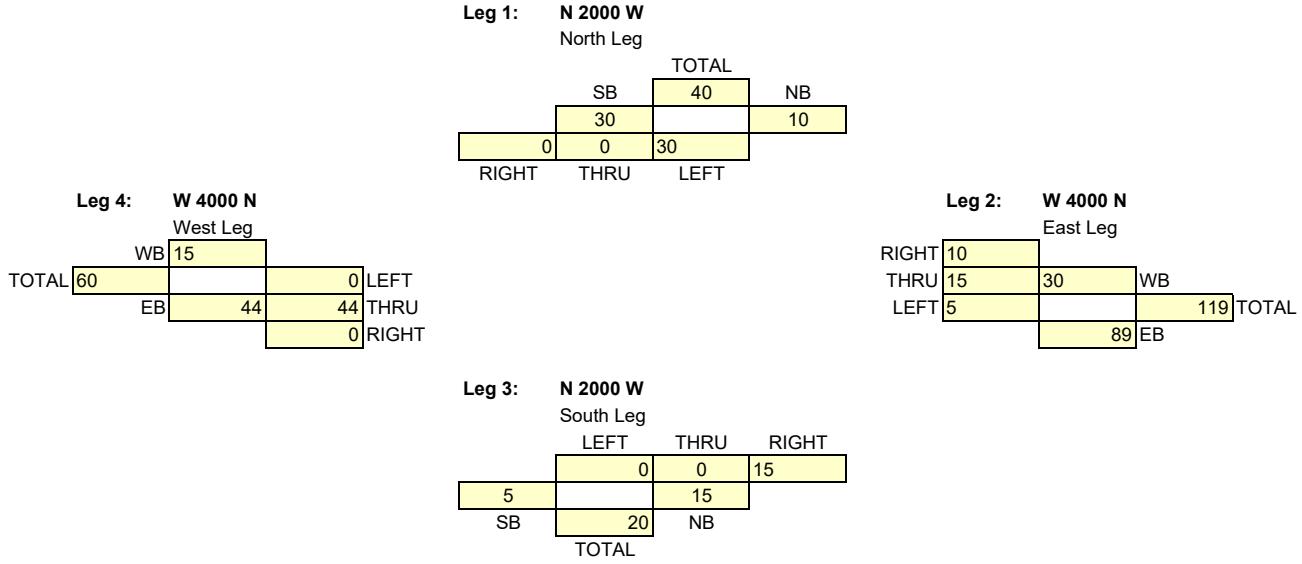
Crossroad Diagram:

2030 AM PEAK BUILD



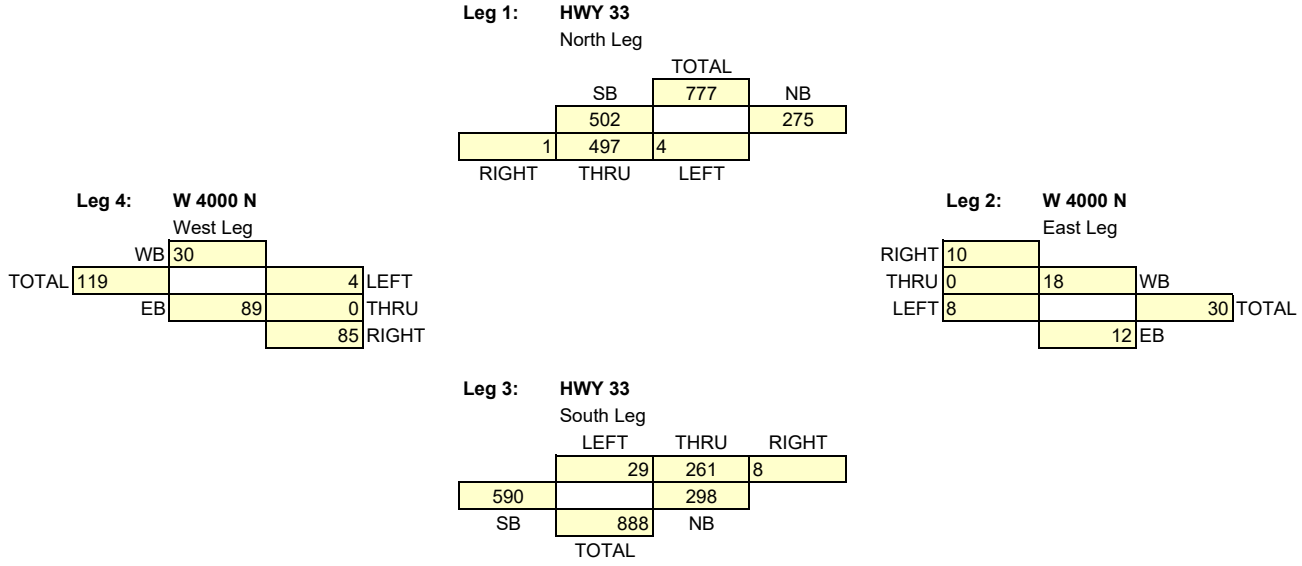
N 2000 W at W 4000 N

Crossroad Diagram:
2030 AM PEAK NO BUILD



Idaho SH 33 at W 4000 N

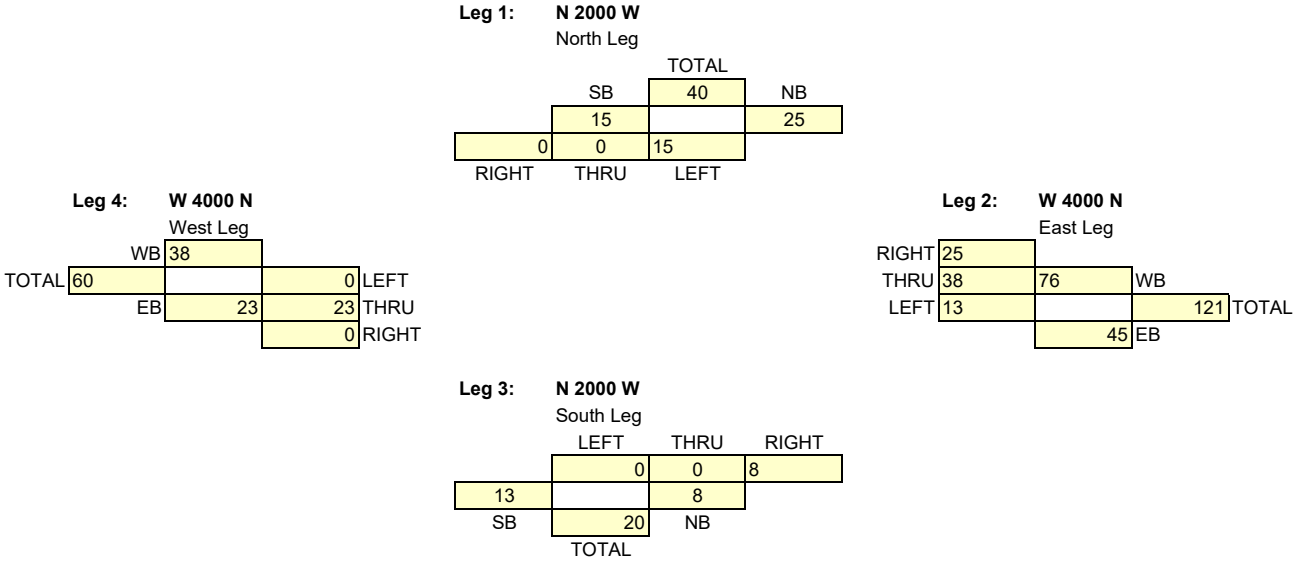
Crossroad Diagram:
2030 AM PEAK NO BUILD



N 2000 W at W 4000 N

Crossroad Diagram:

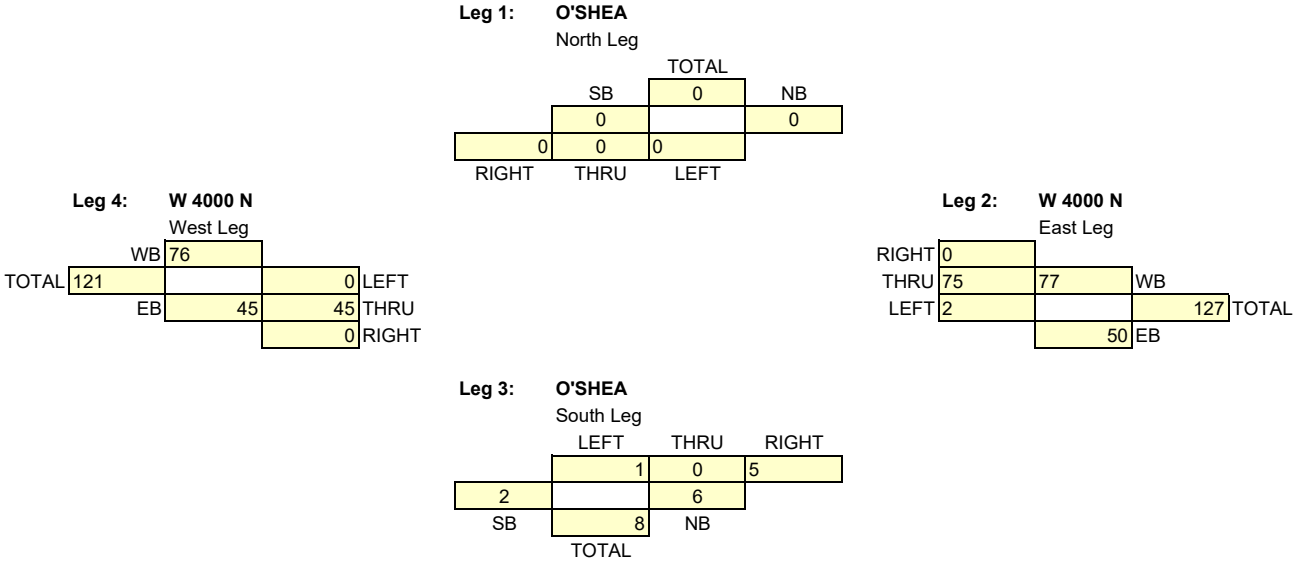
2030 PM PEAK BUILD



O'Shea at W 4000 N

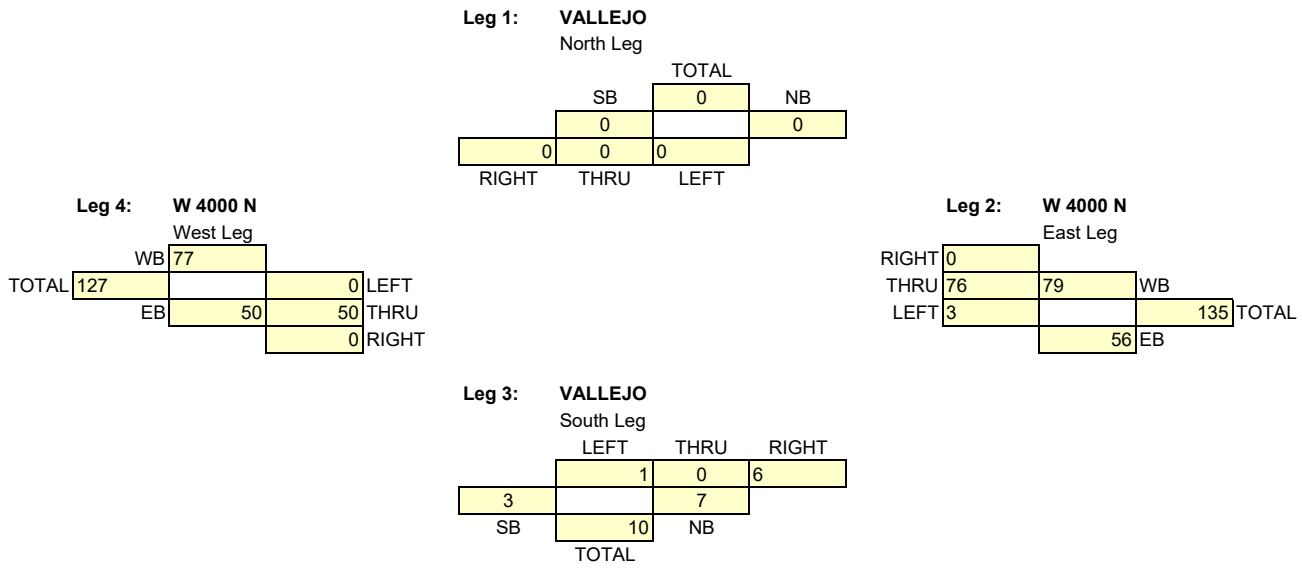
Crossroad Diagram:

2030 PM PEAK BUILD



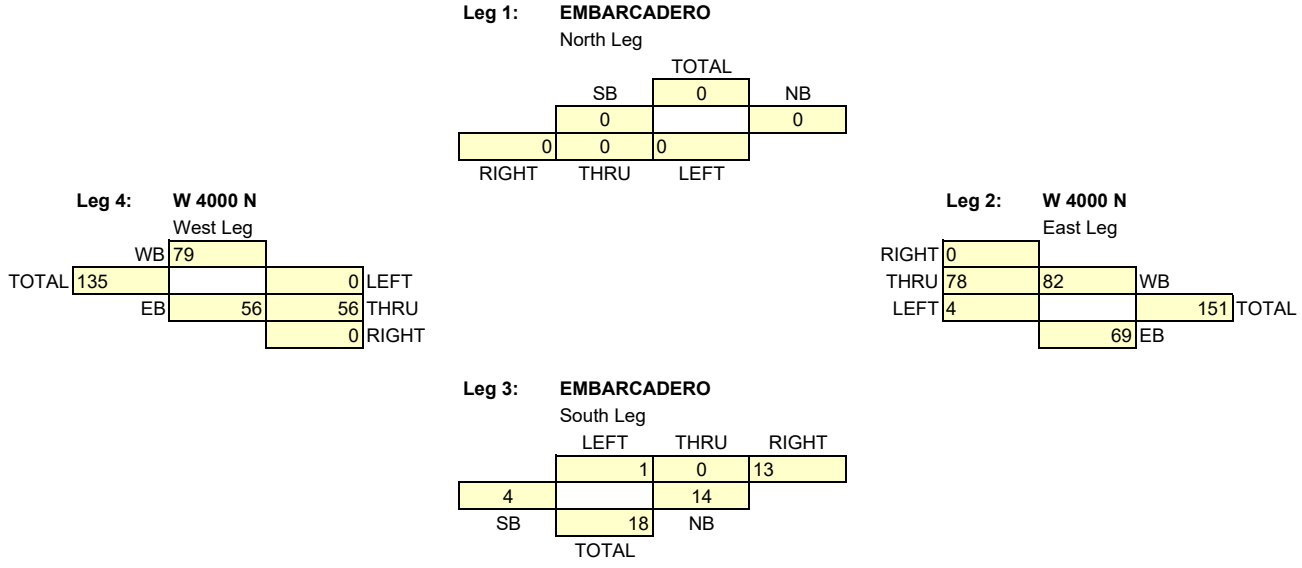
VALLEJO at W 4000 N

Crossroad Diagram:
2030 PM PEAK BUILD



EMBARCADERO at W 4000 N

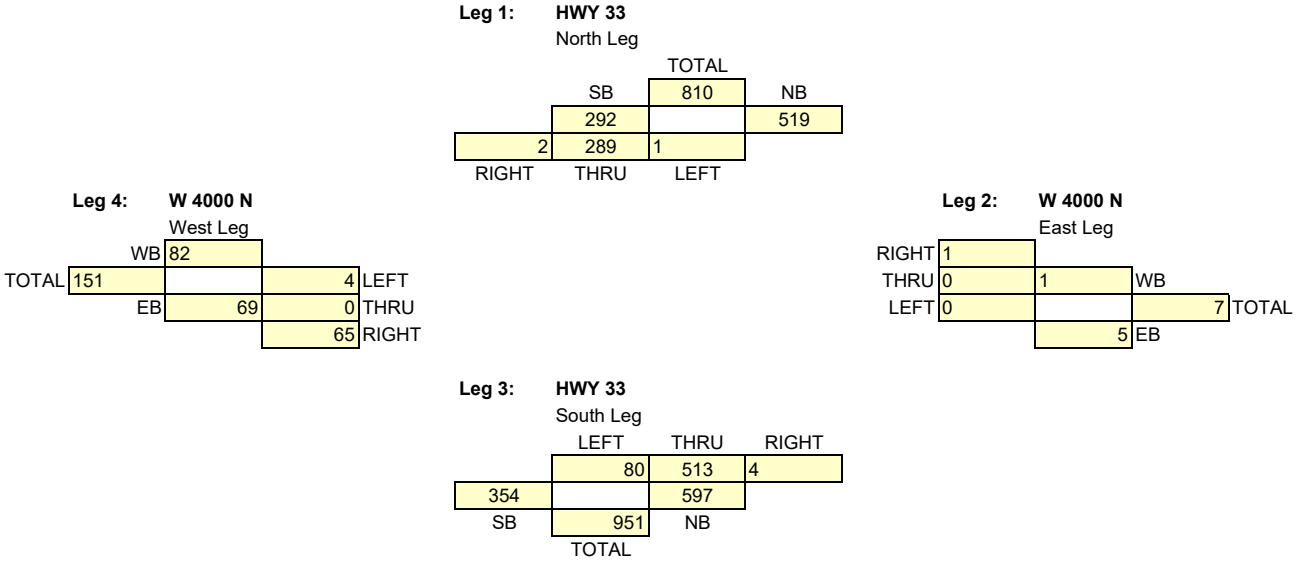
Crossroad Diagram:
2030 PM PEAK BUILD



Idaho SH 33 at W 4000 N

Crossroad Diagram:

2030 PM PEAK BUILD



N 2000 W at W 4000 N

Crossroad Diagram:
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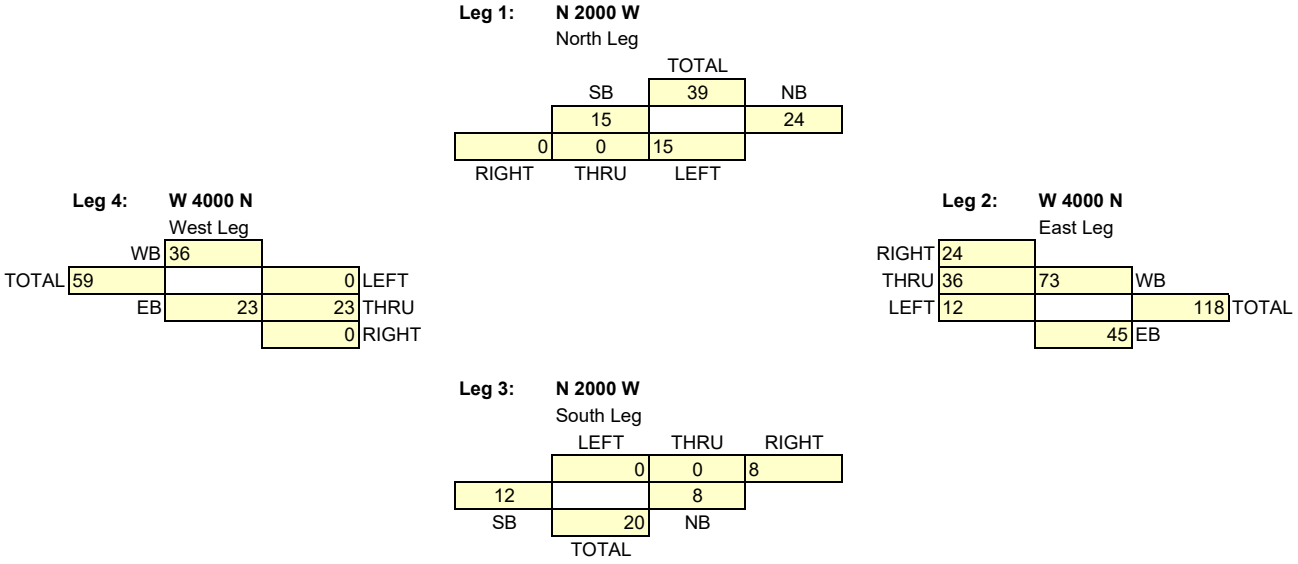

Idaho SH 33 at W 4000 N

Crossroad Diagram:
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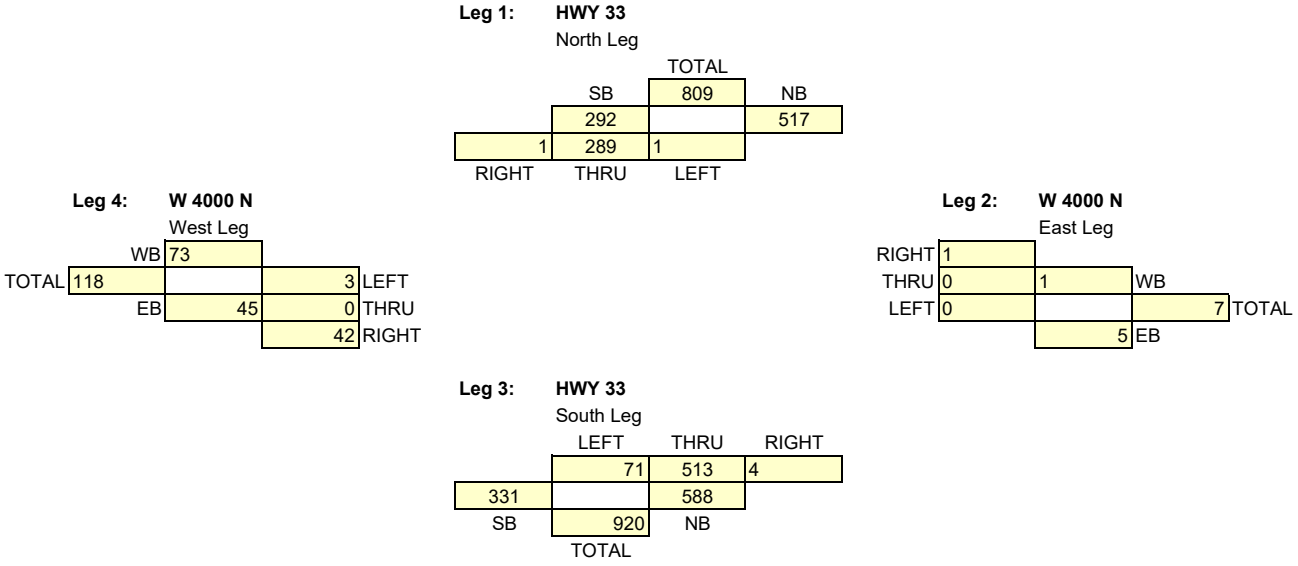
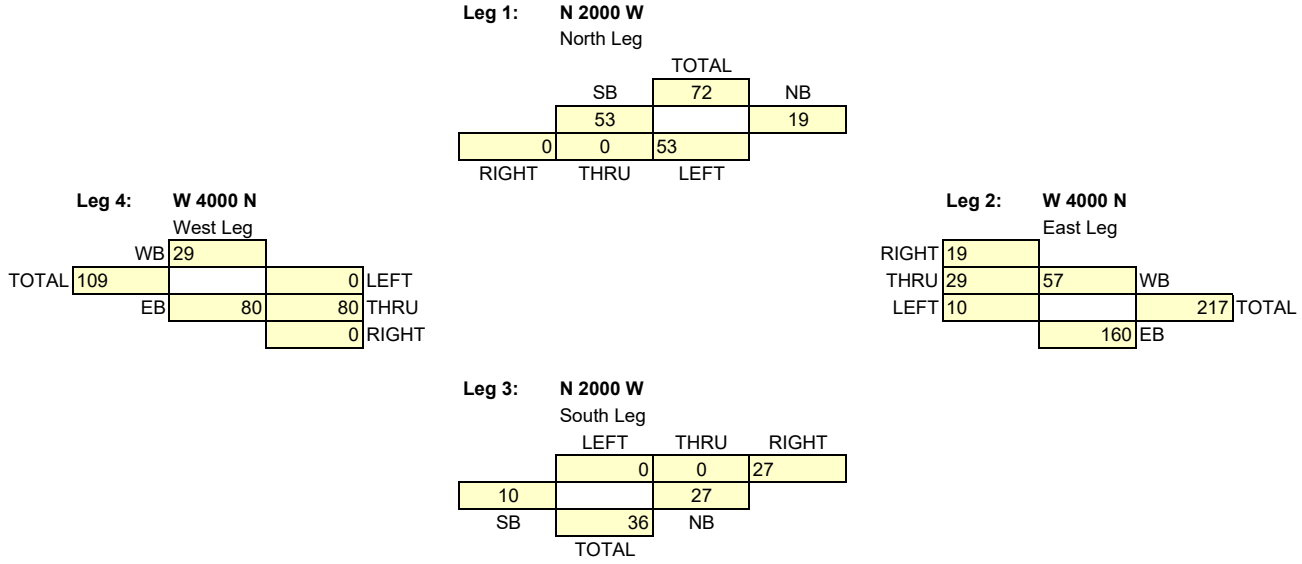


N 2000 W at W 4000 N

Crossroad Diagram:

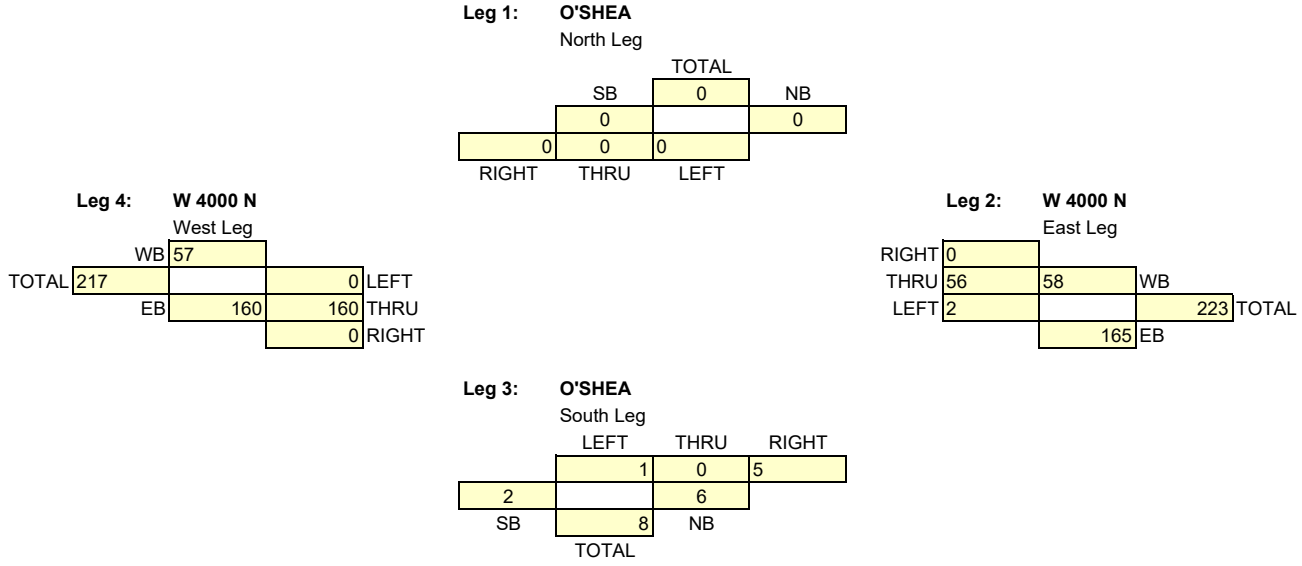
2045 AM PEAK BUILD



O'Shea at W 4000 N

Crossroad Diagram:

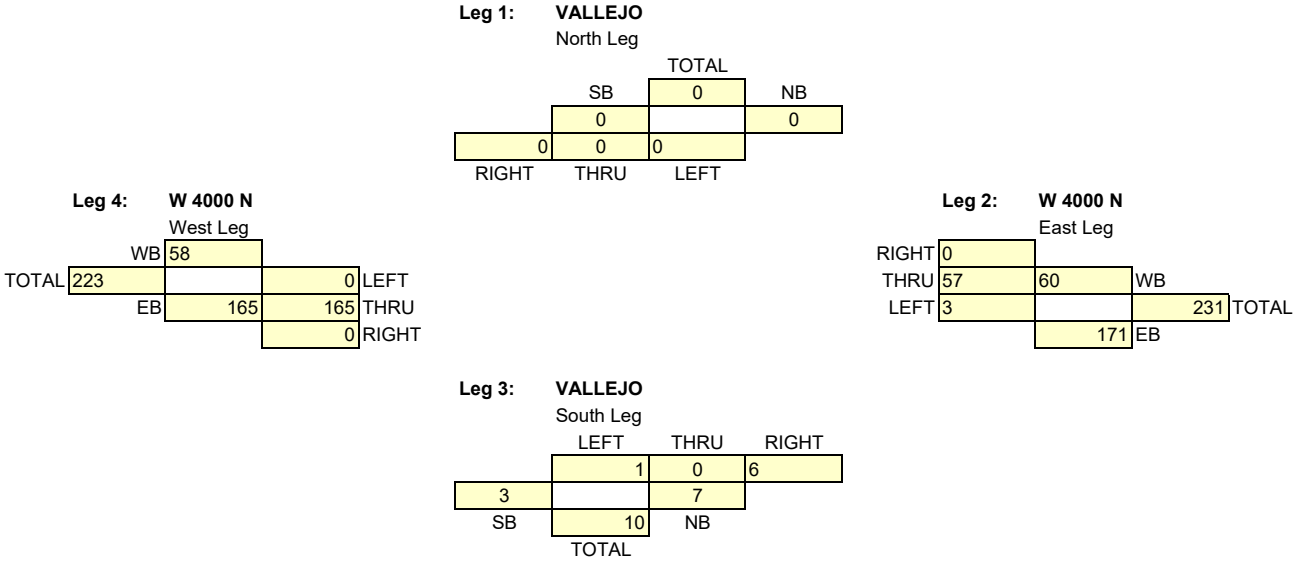
2045 AM PEAK BUILD



VALLEJO at W 4000 N

Crossroad Diagram:

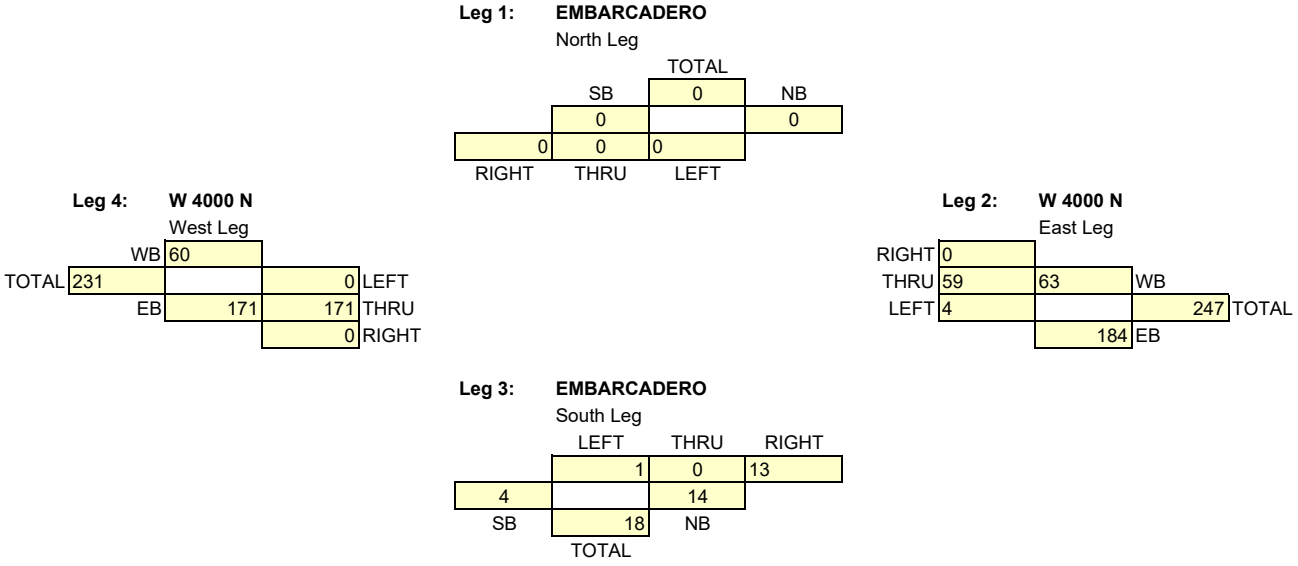
2045 AM PEAK BUILD



EMBARCADERO at W 4000 N

Crossroad Diagram:

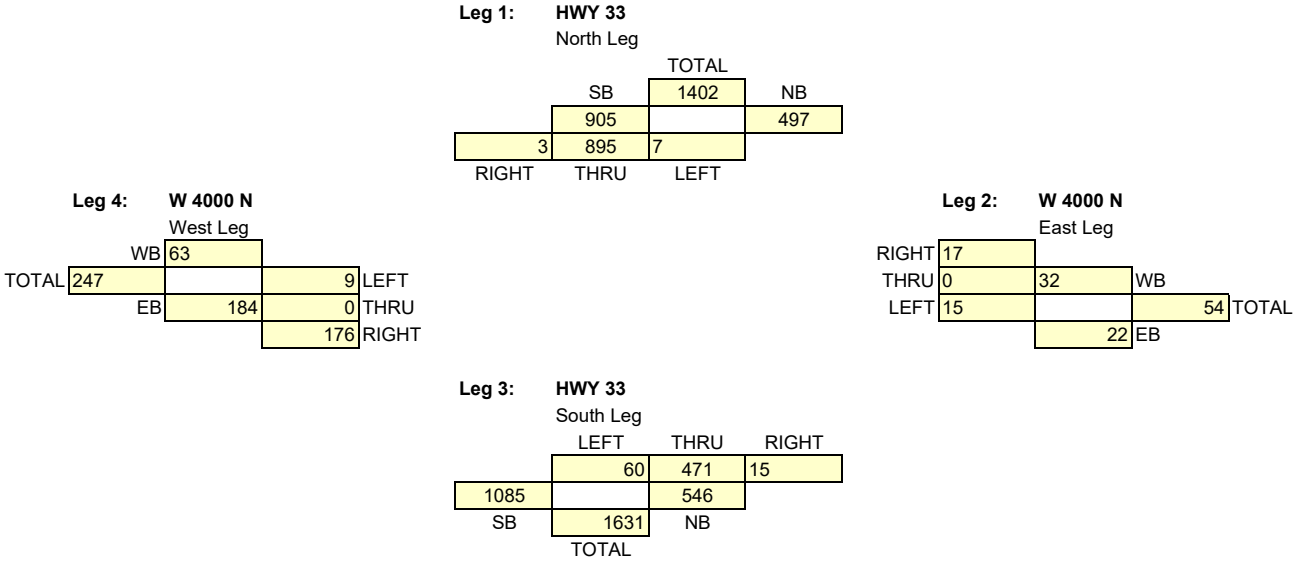
2045 AM PEAK BUILD



Idaho SH 33 at W 4000 N

Crossroad Diagram:

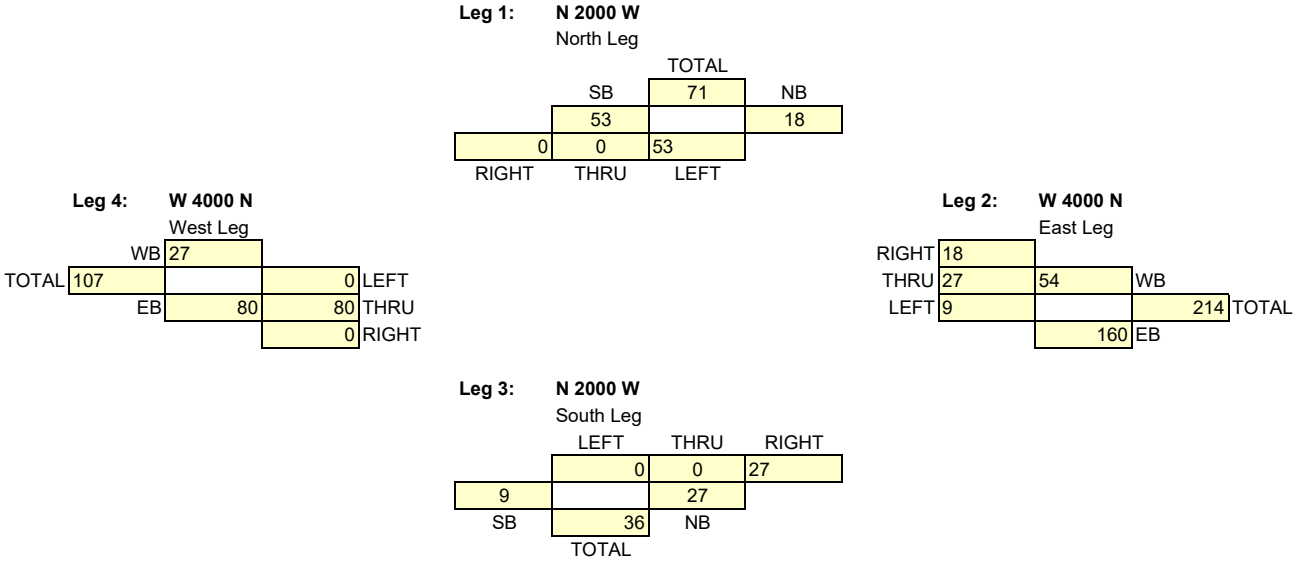
2045 AM PEAK BUILD



N 2000 W at W 4000 N

Crossroad Diagram:

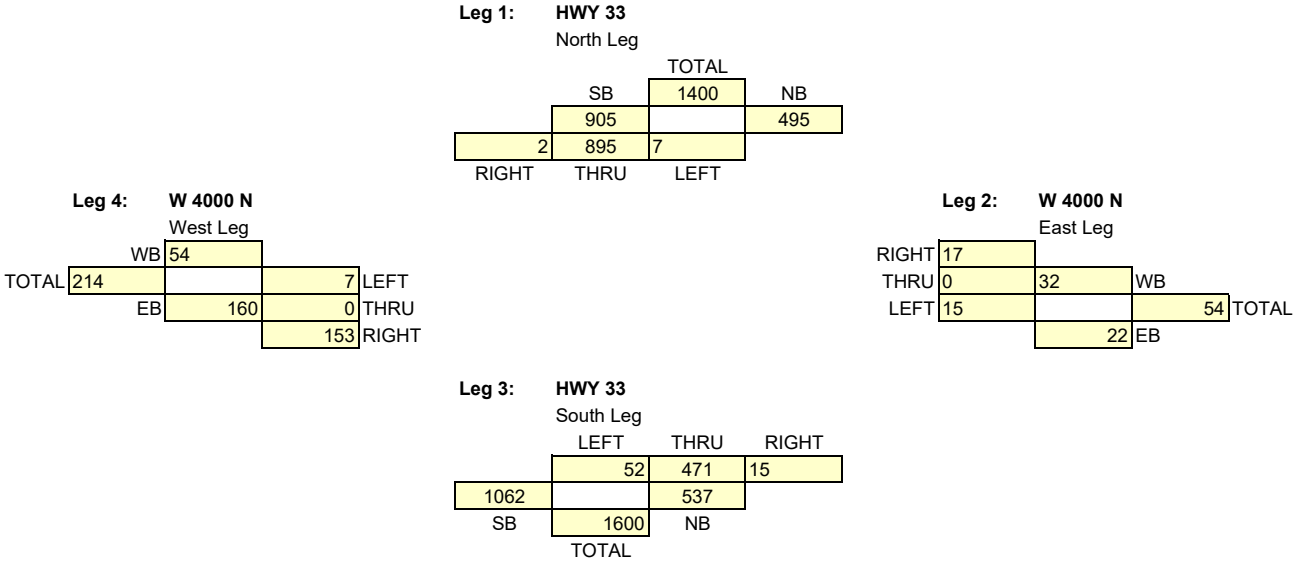
2045 AM PEAK NO BUILD



Idaho SH 33 at W 4000 N

Crossroad Diagram:

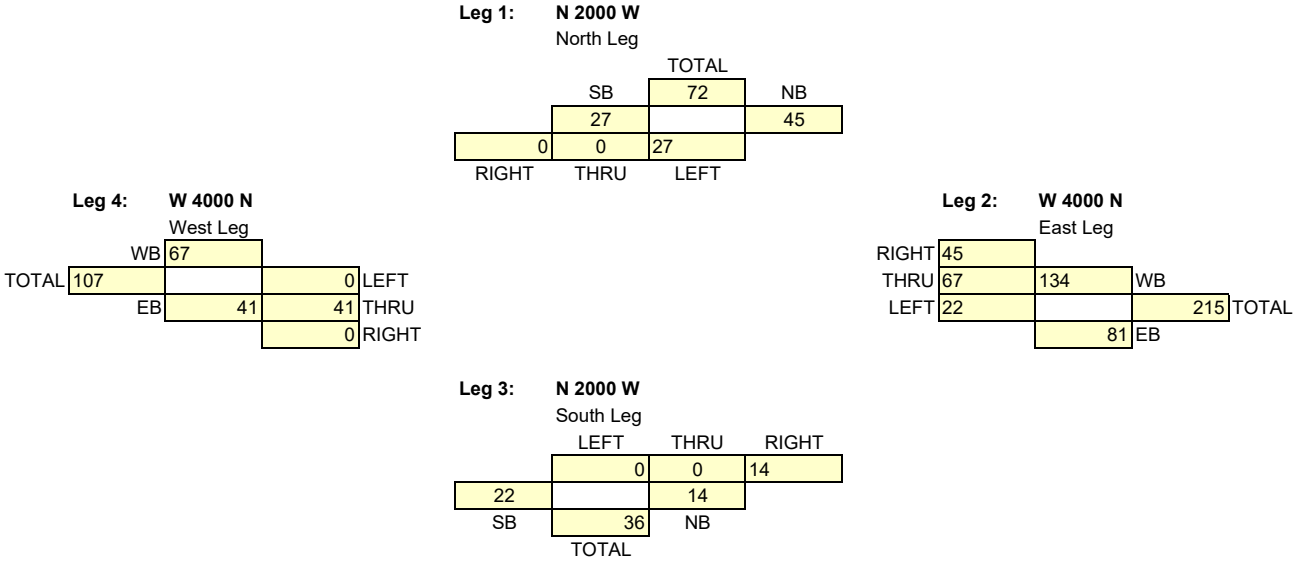
2045 AM PEAK NO BUILD



N 2000 W at W 4000 N

Crossroad Diagram:

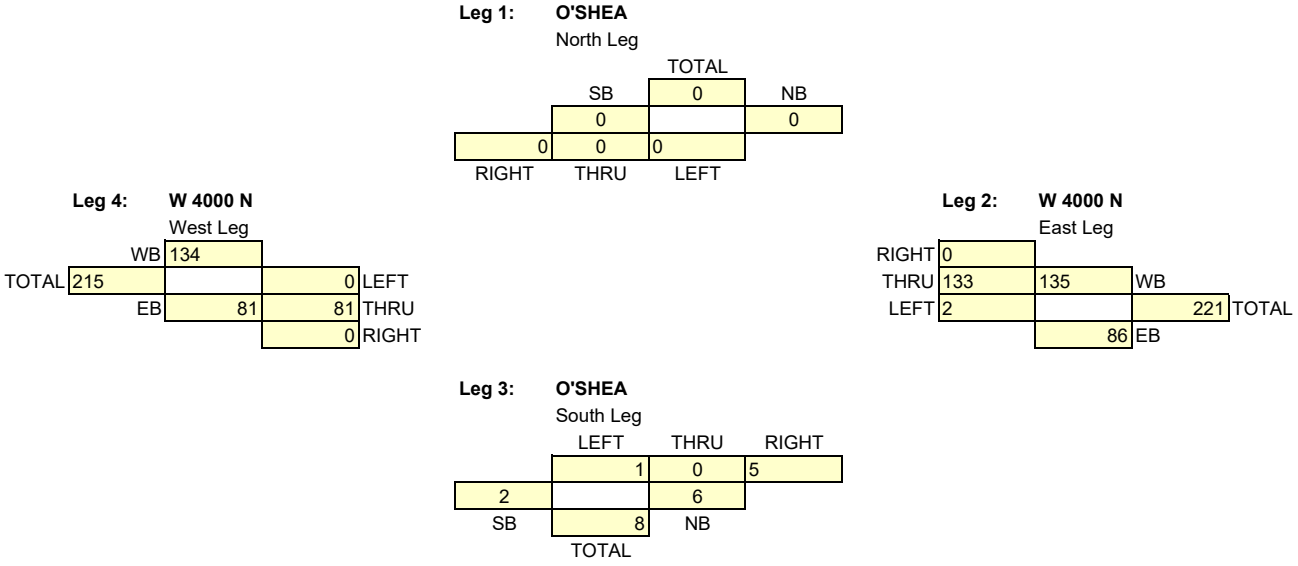
2045 PM PEAK BUILD



O'Shea at W 4000 N

Crossroad Diagram:

2045 PM PEAK BUILD



VALLEJO at W 4000 N

Crossroad Diagram:

2045 PM PEAK BUILD

Leg 1: VALLEJO

North Leg

	TOTAL	
SB	0	NB
0		0
0	0	0
RIGHT	THRU	LEFT

Leg 4: W 4000 N

West Leg

	WB 135		
TOTAL 221		0	LEFT
EB	86	86	THRU
		0	RIGHT

Leg 2: W 4000 N

East Leg

RIGHT	0		
THRU	134	137	WB
LEFT	3		229 TOTAL
		92	EB

Leg 3: VALLEJO

South Leg

	LEFT	THRU	RIGHT
	1	0	6
3		7	
SB	10	NB	
	TOTAL		

EMBARCADERO at W 4000 N

Crossroad Diagram:

2045 PM PEAK BUILD

Leg 1: EMBARCADERO

North Leg

	TOTAL	
SB	0	NB
0		0
0	0	0
RIGHT	THRU	LEFT

Leg 4: W 4000 N

West Leg

	WB 137		
TOTAL 229		0	LEFT
EB	92	92	THRU
		0	RIGHT

Leg 2: W 4000 N

East Leg

RIGHT	0		
THRU	136	140	WB
LEFT	4		245 TOTAL
		105	EB

Leg 3: EMBARCADERO

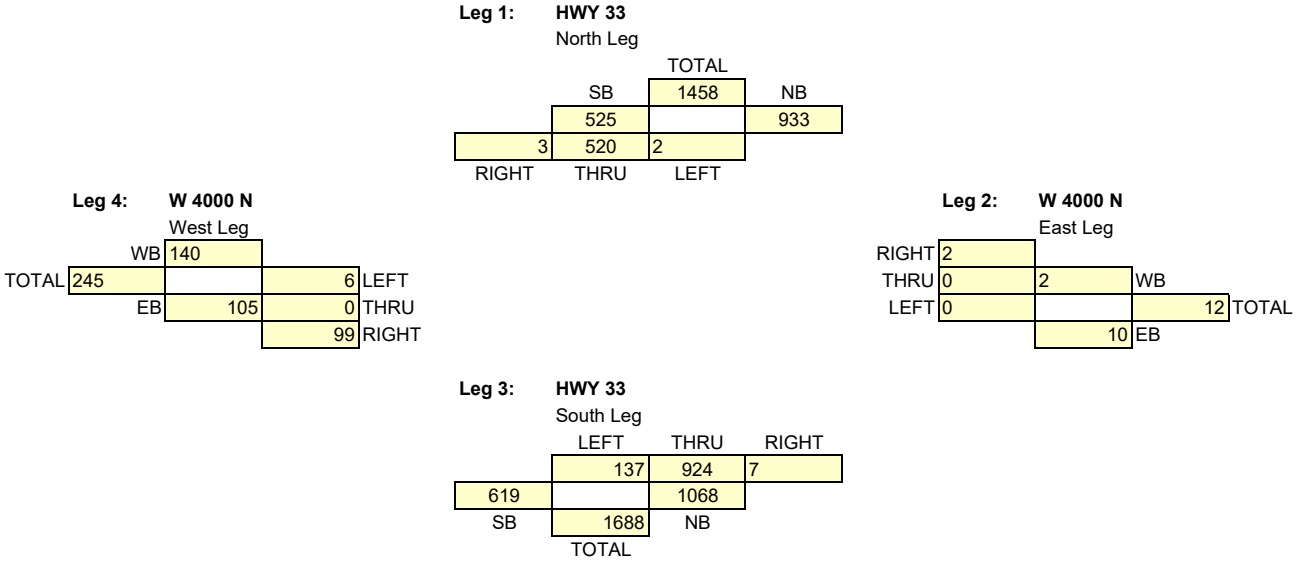
South Leg

	LEFT	THRU	RIGHT
	1	0	13
4		14	
SB	18	NB	
	TOTAL		

Idaho SH 33 at W 4000 N

Crossroad Diagram:

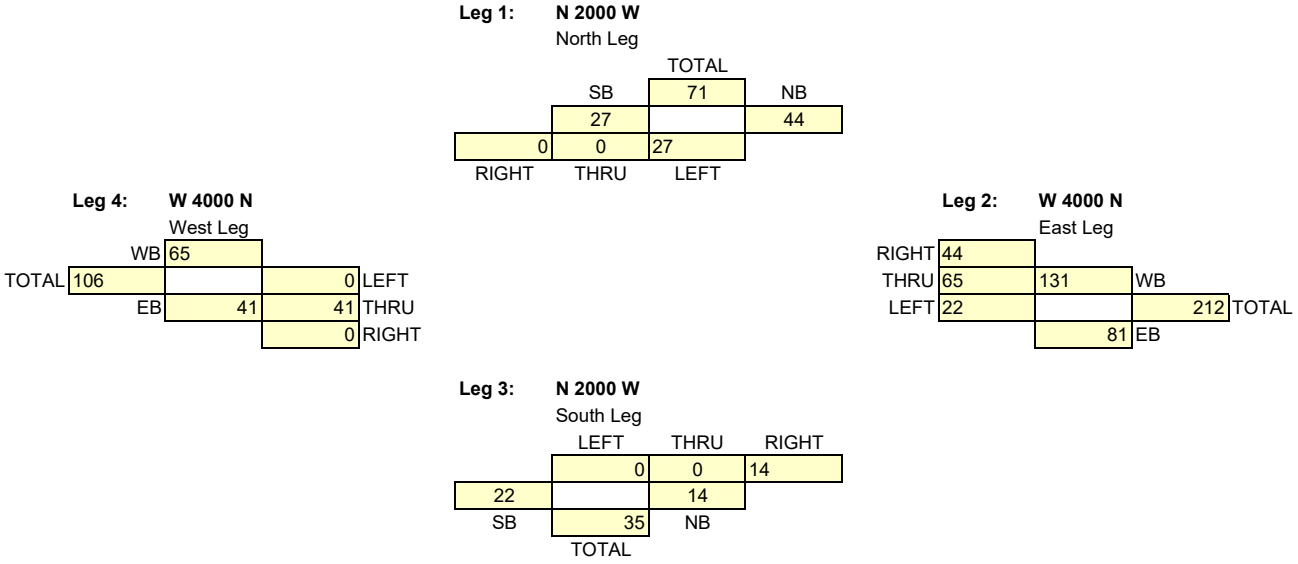
2045 PM PEAK BUILD



N 2000 W at W 4000 N

Crossroad Diagram:

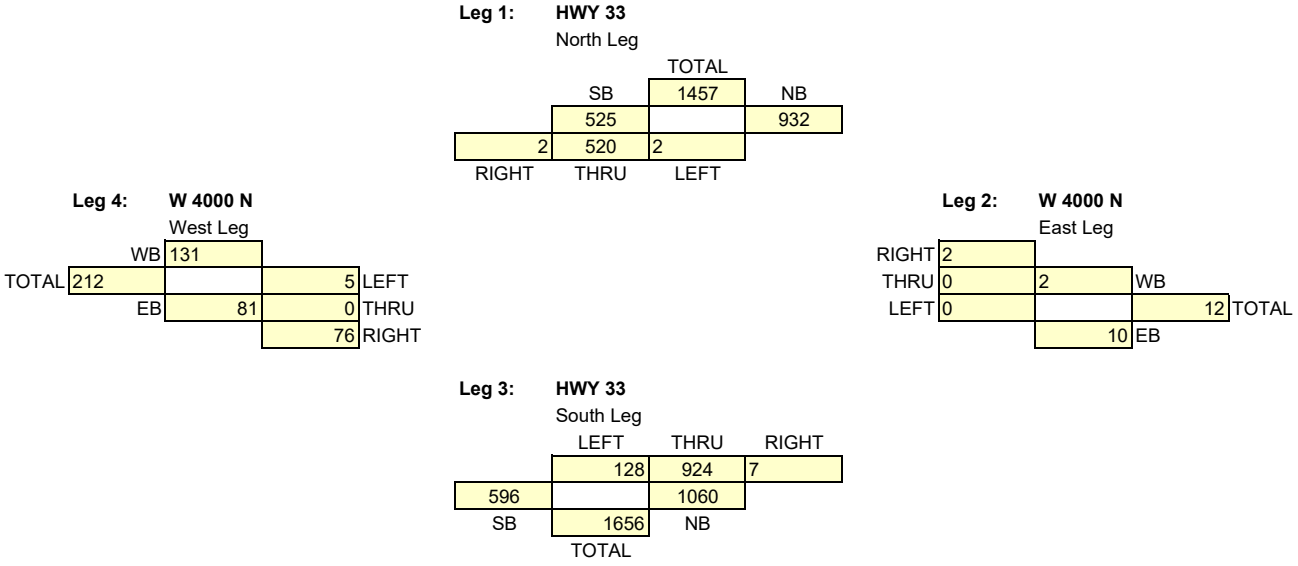
2045 PM PEAK NO BUILD



Idaho SH 33 at W 4000 N

Crossroad Diagram:

2045 PM PEAK NO BUILD



APPENDIX C

HCS DOCUMENTS

HCS Two-Way Stop-Control Report

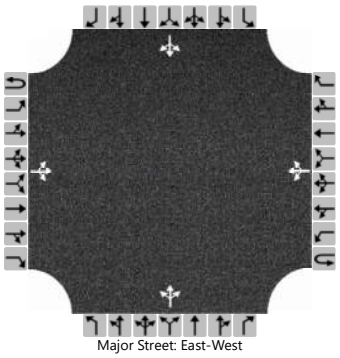
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	33	0		4	13	8		0	0	11		22	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				4					12				24	
Capacity, c (veh/h)		1586				1569					1034				908	
v/c Ratio		0.00				0.00					0.01				0.03	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.0	0.0			8.5				9.1	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.2				8.5				9.1			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

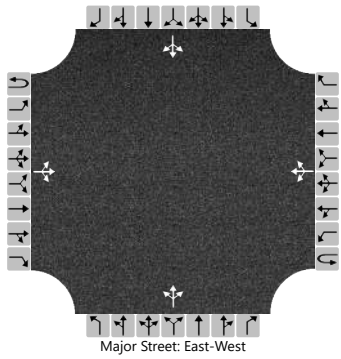
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	32	0		4	11	7		0	0	11		22	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				4					12				24	
Capacity, c (veh/h)		1590				1570					1035				913	
v/c Ratio		0.00				0.00					0.01				0.03	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.0	0.0			8.5				9.1	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.3				8.5				9.1			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

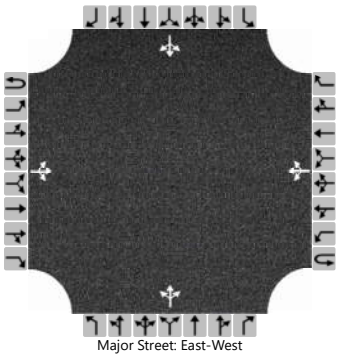
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	17	0		9	28	19		0	0	6		11	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				10					7				12	
Capacity, c (veh/h)		1549				1592					1057				892	
v/c Ratio		0.00				0.01					0.01				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.0	0.0			8.4				9.1	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.2				8.4				9.1			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

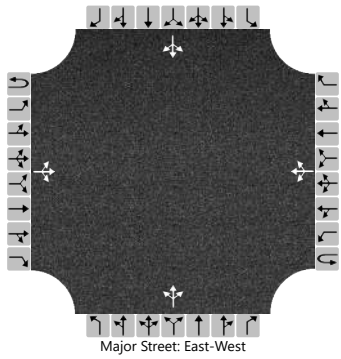
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	16	0		9	26	18		0	0	5		11	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				10					5				12	
Capacity, c (veh/h)		1553				1593					1058				898	
v/c Ratio		0.00				0.01					0.01				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.0	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.0	0.0			8.4				9.1	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.3				8.4				9.1			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

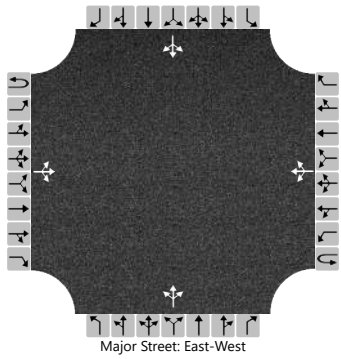
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	44	0		6	17	11		0	0	15		30	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				7					16				33	
Capacity, c (veh/h)		1576				1553					1018				870	
v/c Ratio		0.00				0.00					0.02				0.04	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.0	0.0			8.6				9.3	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.3				8.6				9.3			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

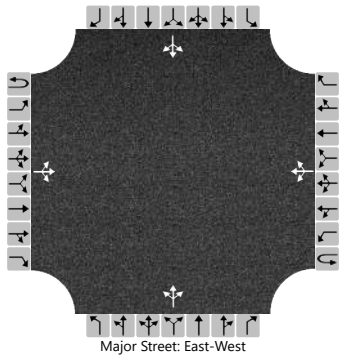
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 AM Peak No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	44	0		5	15	10		0	0	15		30	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				5					16				33	
Capacity, c (veh/h)		1580				1553					1018				877	
v/c Ratio		0.00				0.00					0.02				0.04	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.0	0.0			8.6				9.3	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.2				8.6				9.3			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

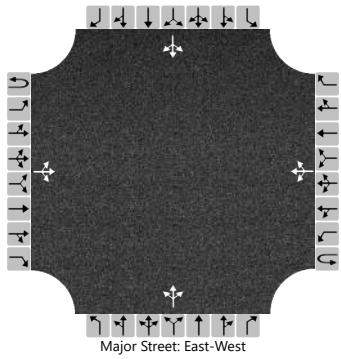
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	23	0		13	38	25		0	0	8		15	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				14					9				16	
Capacity, c (veh/h)		1526				1583					1048				848	
v/c Ratio		0.00				0.01					0.01				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.3	0.1	0.1			8.5				9.3	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.3				8.5				9.3			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

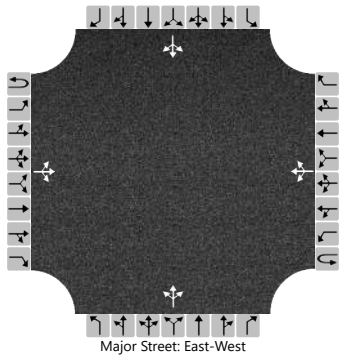
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 PM Peak No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	23	0		12	36	24		0	0	8		15	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				13					9				16	
Capacity, c (veh/h)		1530				1583					1048				854	
v/c Ratio		0.00				0.01					0.01				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.3	0.1	0.1			8.5				9.3	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				1.3				8.5				9.3			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

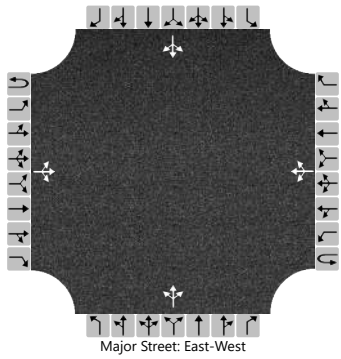
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	80	0		10	29	19		0	0	27		53	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				11					29				58	
Capacity, c (veh/h)		1547				1503					969				767	
v/c Ratio		0.00				0.01					0.03				0.08	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.1				0.2	
Control Delay (s/veh)		7.3	0.0	0.0		7.4	0.1	0.1			8.8				10.1	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				1.3				8.8				10.1			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

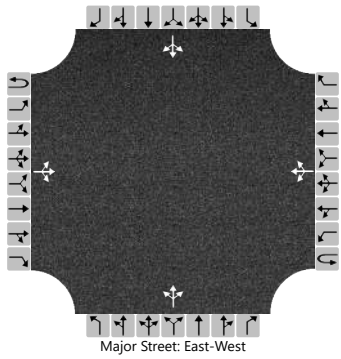
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	80	0		9	27	18		0	0	27		53	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				10					29				58	
Capacity, c (veh/h)		1552				1503					969				773	
v/c Ratio		0.00				0.01					0.03				0.07	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.1				0.2	
Control Delay (s/veh)		7.3	0.0	0.0		7.4	0.0	0.0			8.8				10.0	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				1.3				8.8				10.0			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

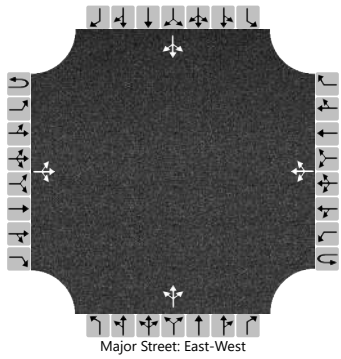
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	41	0		22	67	45		0	0	14		27	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				24					15				29	
Capacity, c (veh/h)		1459				1557					1023				736	
v/c Ratio		0.00				0.02					0.01				0.04	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.5	0.0	0.0		7.3	0.1	0.1			8.6				10.1	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				1.3				8.6				10.1			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

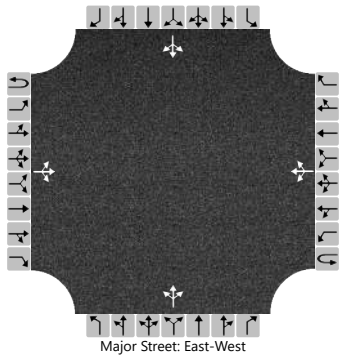
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak No Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	N 2000 W and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	N 2000 W
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	41	0		22	65	44		0	0	14		27	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				24					15				29	
Capacity, c (veh/h)		1463				1557					1023				739	
v/c Ratio		0.00				0.02					0.01				0.04	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.0				0.1	
Control Delay (s/veh)		7.5	0.0	0.0		7.3	0.1	0.1			8.6				10.1	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				1.3				8.6				10.1			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

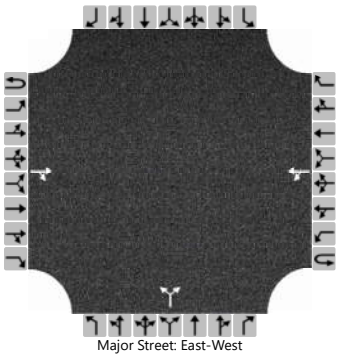
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	O'Shea Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	O'Shea Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			65	0		2	24			1		5				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					7					
Capacity, c (veh/h)						1523					972					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.7					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.6				8.7						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

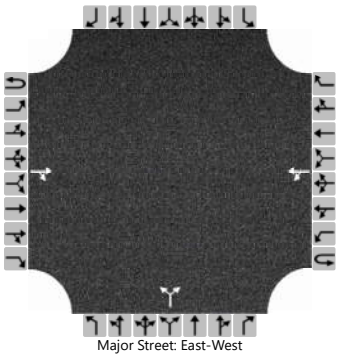
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	O'Shea Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	O'Shea Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			33	0		2	55			1		5				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					7					
Capacity, c (veh/h)						1569					1008					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.3	0.0				8.6					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.3				8.6						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

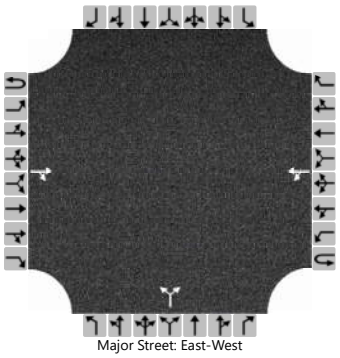
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	O'Shea Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	O'Shea Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			89	0		2	32			1		5				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					7					
Capacity, c (veh/h)						1490					938					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.9					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.4				8.9							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

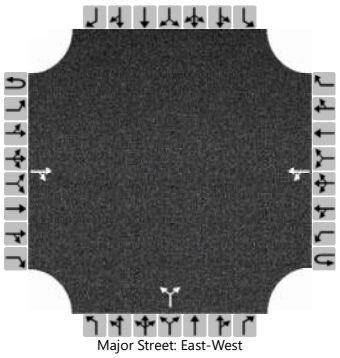
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	O'Shea Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	O'Shea Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			45	0		2	75			1		5				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					7					
Capacity, c (veh/h)						1552					986					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.3	0.0				8.7					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.2				8.7						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

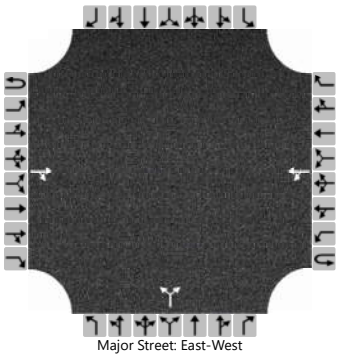
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	O'Shea Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	O'Shea Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			160	0		2	56			1		5				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					7					
Capacity, c (veh/h)						1397					844					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.6	0.0				9.3					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.3				9.3							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

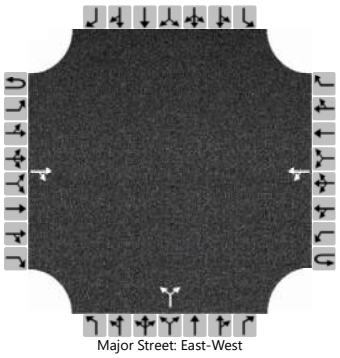
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	O'Shea Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	O'Shea Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			81	0		2	133			1		5				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					7					
Capacity, c (veh/h)						1501					922					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.9					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.1				8.9						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

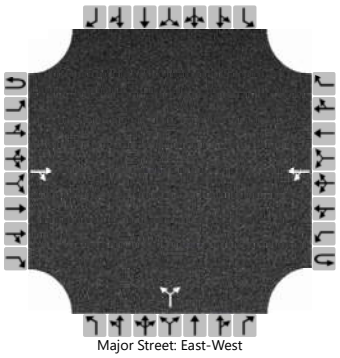
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Vallejo Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Vallejo Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			70	0		3	25			1		6				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						3					8					
Capacity, c (veh/h)						1517					967					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.8					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.8				8.8							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

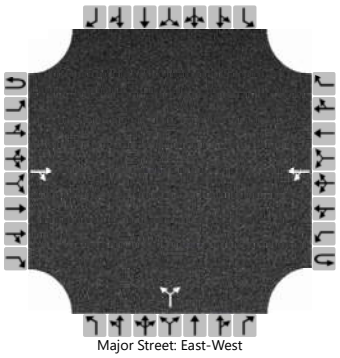
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Vallejo Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Vallejo Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			44	0		4	58			1		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4					15					
Capacity, c (veh/h)						1553					1006					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.3	0.0				8.6					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.5				8.6							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

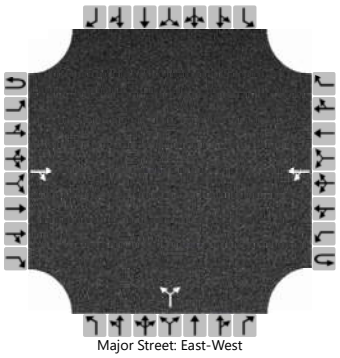
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Vallejo Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Vallejo Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			94	0		3	33			1		6				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						3					8					
Capacity, c (veh/h)						1484					933					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.9					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.6				8.9						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

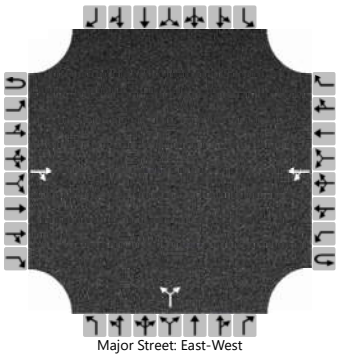
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Vallejo Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Vallejo Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			50	0		3	75			1		6				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						3					8					
Capacity, c (veh/h)						1544					983					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.3	0.0				8.7					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.3				8.7							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

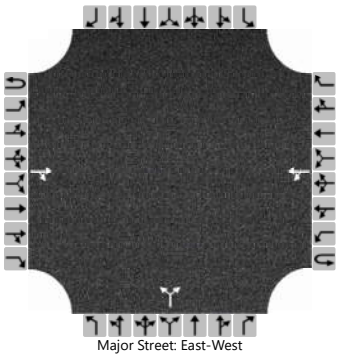
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Vallejo Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Vallejo Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			165	0		3	57			1		6				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						3					8					
Capacity, c (veh/h)						1390					841					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.6	0.0				9.3					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.4				9.3							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

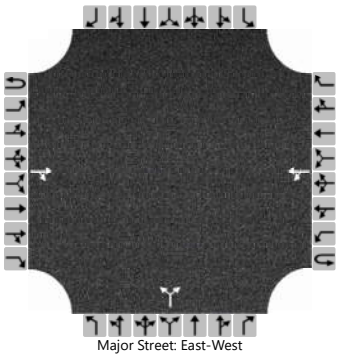
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Vallejo Road and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Vallejo Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			87	0		3	134			1		6				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						3					8					
Capacity, c (veh/h)						1493					920					
v/c Ratio						0.00					0.01					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.9					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.2				8.9						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

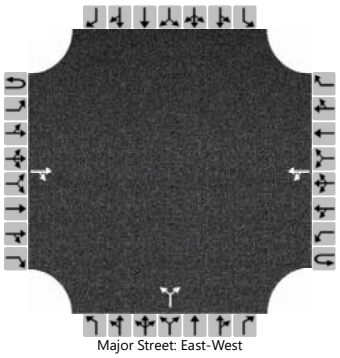
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Embarcadero St and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Embarcadero St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			76	0		4	27			1		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4					15					
Capacity, c (veh/h)						1508					966					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.8					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					1.0				8.8							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

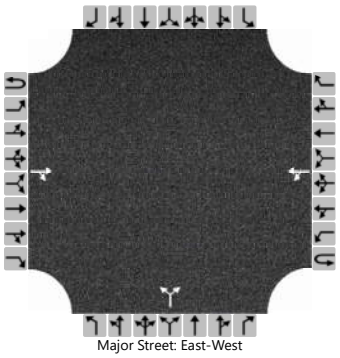
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Embarcadero St and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Embarcadero St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			44	0		4	58			1		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4					15					
Capacity, c (veh/h)						1553					1006					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.3	0.0				8.6					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.5				8.6							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

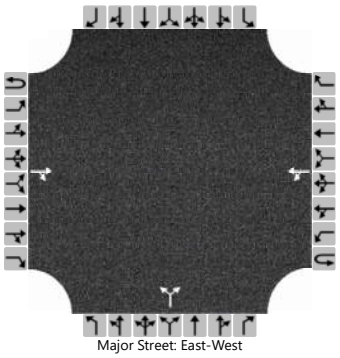
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Embarcadero St and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Embarcadero St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			100	0		4	35			1		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4					15					
Capacity, c (veh/h)						1476					933					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.9					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.8				8.9							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

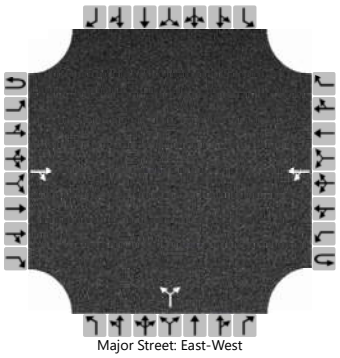
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Embarcadero St and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Embarcadero St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			56	0		4	78			1		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4					15					
Capacity, c (veh/h)						1536					987					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.7					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)						0.4				8.7						
Approach LOS						A				A						

HCS Two-Way Stop-Control Report

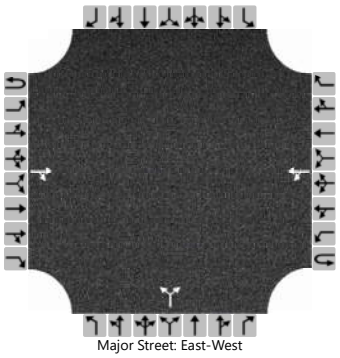
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Embarcadero St and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Embarcadero St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			171	0		4	59			1		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4					15					
Capacity, c (veh/h)						1383					843					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.1					
Control Delay (s/veh)						7.6	0.0				9.3					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.5				9.3							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

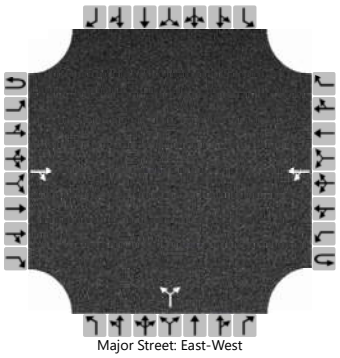
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak Build
Intersection Orientation	East-West
Project Description	

Site Information

Intersection	Embarcadero St and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Embarcadero St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			92	0		4	135			1		13				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4					15					
Capacity, c (veh/h)						1486					932					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.0					
Control Delay (s/veh)						7.4	0.0				8.9					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.2				8.9							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

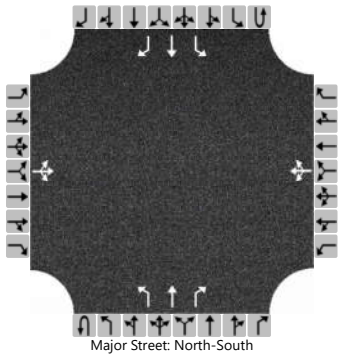
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.94
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		4	0	85		6	0	7		30	191	6		3	363	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			95				14			32				3		
Capacity, c (veh/h)			635				450			1165				1355		
v/c Ratio			0.15				0.03			0.03				0.00		
95% Queue Length, Q_{95} (veh)			0.5				0.1			0.1				0.0		
Control Delay (s/veh)			11.7				13.3			8.2				7.7		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)	11.7				13.3				1.1				0.1			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

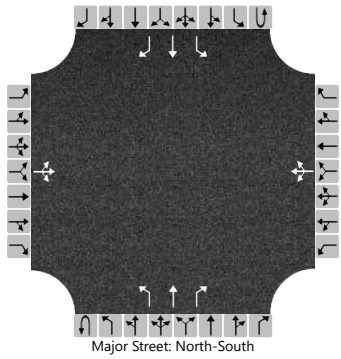
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 AM Peak
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.94
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		3	0	62		6	0	7		21	191	6		3	363	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			69				14			22				3		
Capacity, c (veh/h)			637				482			1166				1355		
v/c Ratio			0.11				0.03			0.02				0.00		
95% Queue Length, Q_{95} (veh)			0.4				0.1			0.1				0.0		
Control Delay (s/veh)			11.3				12.7			8.1				7.7		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)	11.3				12.7				0.8				0.1			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

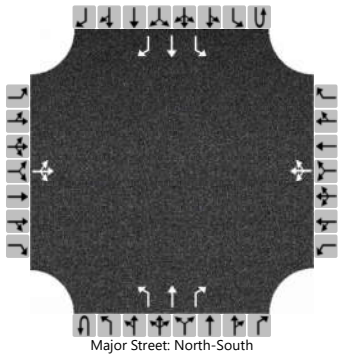
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.96
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		3	0	54		0	0	1		61	375	3		1	211	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			59				1			64				1		
Capacity, c (veh/h)			754				656			1341				1159		
v/c Ratio			0.08				0.00			0.05				0.00		
95% Queue Length, Q_{95} (veh)			0.3				0.0			0.1				0.0		
Control Delay (s/veh)			10.2				10.5			7.8				8.1		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)	10.2				10.5				1.1				0.0			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

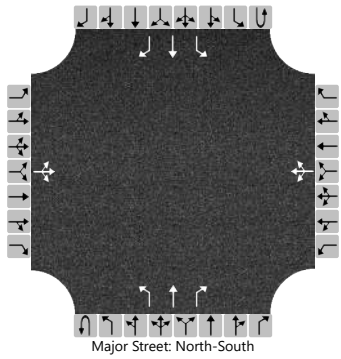
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/8/2023
Analysis Year	2022
Time Analyzed	2022 PM Peak
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.96
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		2	0	31		0	0	1		52	375	3		1	211	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			34				1			54				1		
Capacity, c (veh/h)			749				656			1342				1159		
v/c Ratio			0.05				0.00			0.04				0.00		
95% Queue Length, Q_{95} (veh)			0.1				0.0			0.1				0.0		
Control Delay (s/veh)			10.0				10.5			7.8				8.1		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)	10.0				10.5				0.9				0.0			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

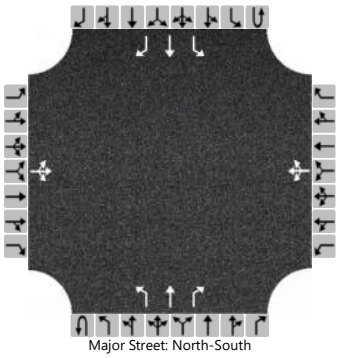
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 AM Peak Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.94
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		5	0	107		8	0	10		37	261	8		4	497	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			119				19			39				4		
Capacity, c (veh/h)			519				314			1031				1270		
v/c Ratio			0.23				0.06			0.04				0.00		
95% Queue Length, Q_{95} (veh)			0.9				0.2			0.1				0.0		
Control Delay (s/veh)			14.0				17.2			8.6				7.8		
Level of Service (LOS)			B				C			A				A		
Approach Delay (s/veh)	14.0				17.2				1.0				0.1			
Approach LOS	B				C				A				A			

HCS Two-Way Stop-Control Report

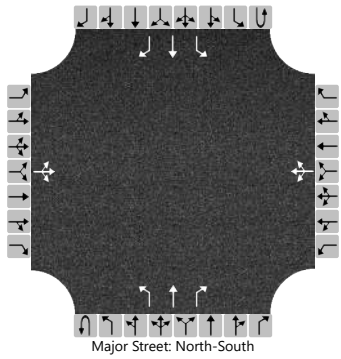
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 AM Peak No Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.94
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		4	0	85		8	0	10		29	261	8		4	497	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			95				19			31				4		
Capacity, c (veh/h)			520				340			1032				1270		
v/c Ratio			0.18				0.06			0.03				0.00		
95% Queue Length, Q_{95} (veh)			0.7				0.2			0.1				0.0		
Control Delay (s/veh)			13.5				16.2			8.6				7.8		
Level of Service (LOS)			B				C			A				A		
Approach Delay (s/veh)	13.5				16.2				0.8				0.1			
Approach LOS	B				C				A				A			

HCS Two-Way Stop-Control Report

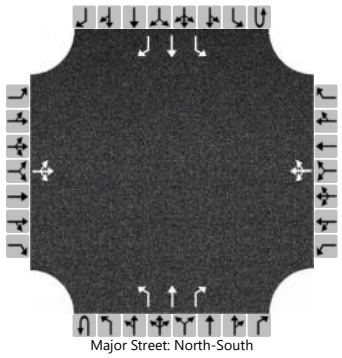
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 PM Peak Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.96
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		4	0	65		0	0	1		80	513	4		1	289	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			72				1			83				1		
Capacity, c (veh/h)			639				544			1252				1025		
v/c Ratio			0.11				0.00			0.07				0.00		
95% Queue Length, Q_{95} (veh)			0.4				0.0			0.2				0.0		
Control Delay (s/veh)			11.3				11.6			8.1				8.5		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)		11.3				11.6				1.1				0.0		
Approach LOS		B				B				A				A		

HCS Two-Way Stop-Control Report

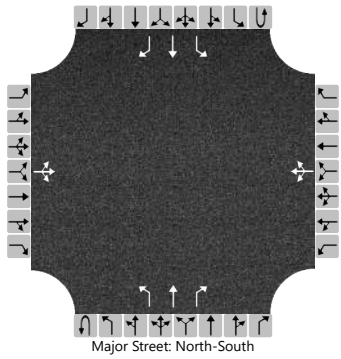
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2030
Time Analyzed	2030 PM Peak No Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.96
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		3	0	42		0	0	1		71	513	4		1	289	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			47				1			74				1		
Capacity, c (veh/h)			632				544			1253				1025		
v/c Ratio			0.07				0.00			0.06				0.00		
95% Queue Length, Q_{95} (veh)			0.2				0.0			0.2				0.0		
Control Delay (s/veh)			11.2				11.6			8.1				8.5		
Level of Service (LOS)			B				B			A				A		
Approach Delay (s/veh)	11.2				11.6				1.0				0.0			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report

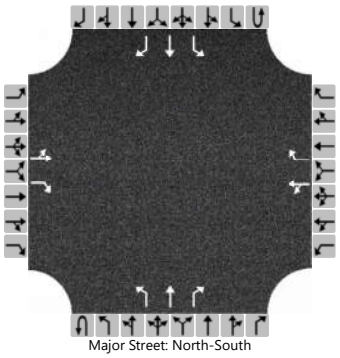
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.94
Analysis Time Period (hrs)	1.00

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	1	1	1	0	1	1	1
Configuration		LT		R		LT		R		L	T	R		L	T	R
Volume (veh/h)		9	0	176		15	0	17		60	471	15		7	895	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10		187		16		18		64				7		
Capacity, c (veh/h)		73		313		27		568		716				1044		
v/c Ratio		0.13		0.60		0.60		0.03		0.09				0.01		
95% Queue Length, Q_{95} (veh)		0.4		4.2		2.9		0.1		0.3				0.0		
Control Delay (s/veh)		61.8		33.2		303.5		11.5		10.5				8.5		
Level of Service (LOS)		F		D		F		B		B				A		
Approach Delay (s/veh)	34.6				148.4				1.2				0.1			
Approach LOS	D				F				A				A			

HCS Two-Way Stop-Control Report

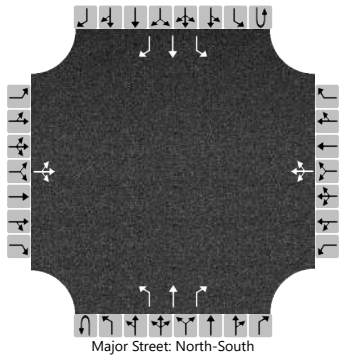
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 AM Peak No Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.94
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		7	0	153		15	0	17		52	471	15		7	895	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			170				34			55				7		
Capacity, c (veh/h)			276				68			716				1044		
v/c Ratio			0.62				0.50			0.08				0.01		
95% Queue Length, Q_{95} (veh)			4.5				2.6			0.3				0.0		
Control Delay (s/veh)			38.6				109.0			10.4				8.5		
Level of Service (LOS)			E				F			B				A		
Approach Delay (s/veh)	38.6				109.0				1.0				0.1			
Approach LOS	E				F				A				A			

HCS Two-Way Stop-Control Report

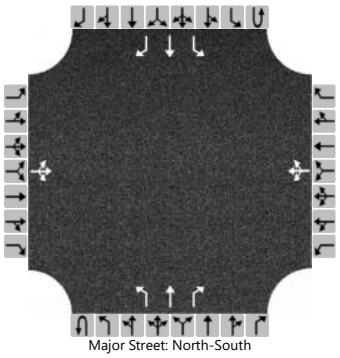
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.96
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		6	0	99		0	0	3		137	924	7		3	520	3
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			109				3			143				3		
Capacity, c (veh/h)			351				309			1019				707		
v/c Ratio			0.31				0.01			0.14				0.00		
95% Queue Length, Q_{95} (veh)			1.3				0.0			0.5				0.0		
Control Delay (s/veh)			19.9				16.8			9.1				10.1		
Level of Service (LOS)			C				C			A				B		
Approach Delay (s/veh)	19.9				16.8				1.2				0.1			
Approach LOS	C				C				A				A			

HCS Two-Way Stop-Control Report

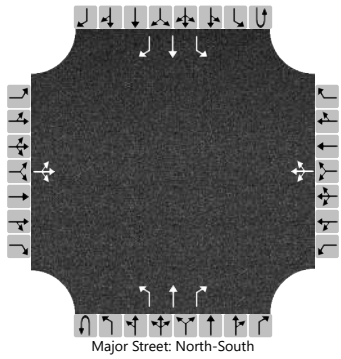
General Information

Analyst	Elizabeth Gallegos
Agency/Co.	Y2 Consultants
Date Performed	12/14/2023
Analysis Year	2045
Time Analyzed	2045 PM Peak No Build
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	Idaho SH 33 and W 4000 N
Jurisdiction	
East/West Street	W 4000 N
North/South Street	Idaho SH 33
Peak Hour Factor	0.96
Analysis Time Period (hrs)	1.00

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	1	0	1	1	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		5	0	76		0	0	2		128	924	7		2	520	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			84				2			133				2		
Capacity, c (veh/h)			348				309			1020				707		
v/c Ratio			0.24				0.01			0.13				0.00		
95% Queue Length, Q_{95} (veh)			1.0				0.0			0.5				0.0		
Control Delay (s/veh)			18.6				16.7			9.1				10.1		
Level of Service (LOS)			C				C			A				B		
Approach Delay (s/veh)		18.6				16.7				1.1				0.0		
Approach LOS		C				C				A				A		