Stagecoach Estates Subdivision
1800 South & 3800 West
Traffic Impact Study

Weber County, Utah

August 2021

TRAFFIC STUDY

TRANSPORTATION ENGINEERING

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Traffic Impact Analysis

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Category II

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I. Introduction and Summary

This traffic impact analysis is for the proposed Stagecoach Estates Subdivision located on the north side of 1800 South at 3800 West in Weber County, Utah. The site is planned to include 56 single family units and is projected to generated 41 AM and 55 PM peak hour trips and 529 daily trips. The site is planning 1 access to 1800 South and secondary access to 1700 South to the west and 1750 South when the property to the east develops.

3500 West / 1800 South currently operates with SBLTR at LOS B in the AM and LOS B in the PM peak period. This is maintained with the addition of the site. In 2027 with and without the site the intersection operates with SBLTR at LOS B in the AM and LOS B in the PM peak period. Site traffic increases the total intersection traffic by 15% in the AM peak period and 13% in the PM peak period. 3800 West / 1800 South operates with LOS B or better for all movements in 2022 and 2027.

- The key issue is the proposed 12 lots that access directly onto 1800 South. From an access management aspect, this is discouraged as these vehicles will be backing onto the roadway. If an internal roadway can be developed to provide access to these units and direct them to a City street to access 1800 N, this would be preferred.

- The intersection operations and projected traffic levels indicate that there are no offsite improvements related to this site.

II. Proposed Project

The proposed Stagecoach Estates Subdivision is planned to include 56 single family units and is projected to generated 41 AM and 55 PM peak hour trips and 529 daily trips. The site is located on the north side of 1800 South at 3800 West in Weber County, Utah. The site is planning 1 access to 1800 South and secondary access to 1700 South to the west and 1750 South when the property to the east develops. The proposed 3800 West is approximately 530 feet east of 3950 South and 180 feet east of the closest residential driveway to the west and 1200 feet west of the closest residential driveway to the east. The site plan is shown in Figure 1 and the access location and spacing is shown in Figure 2.

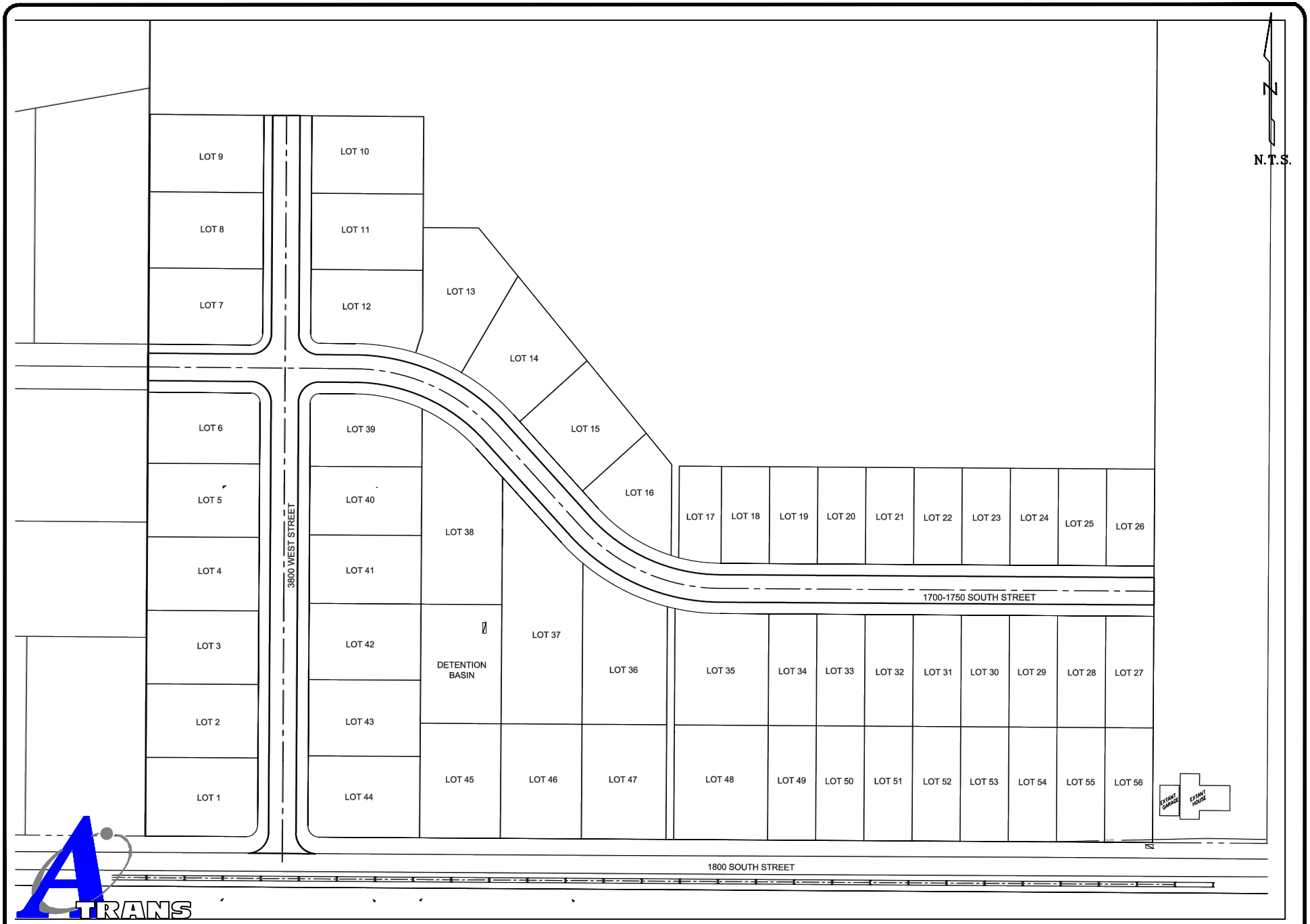

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Figure 1

Conceptual Site Plan

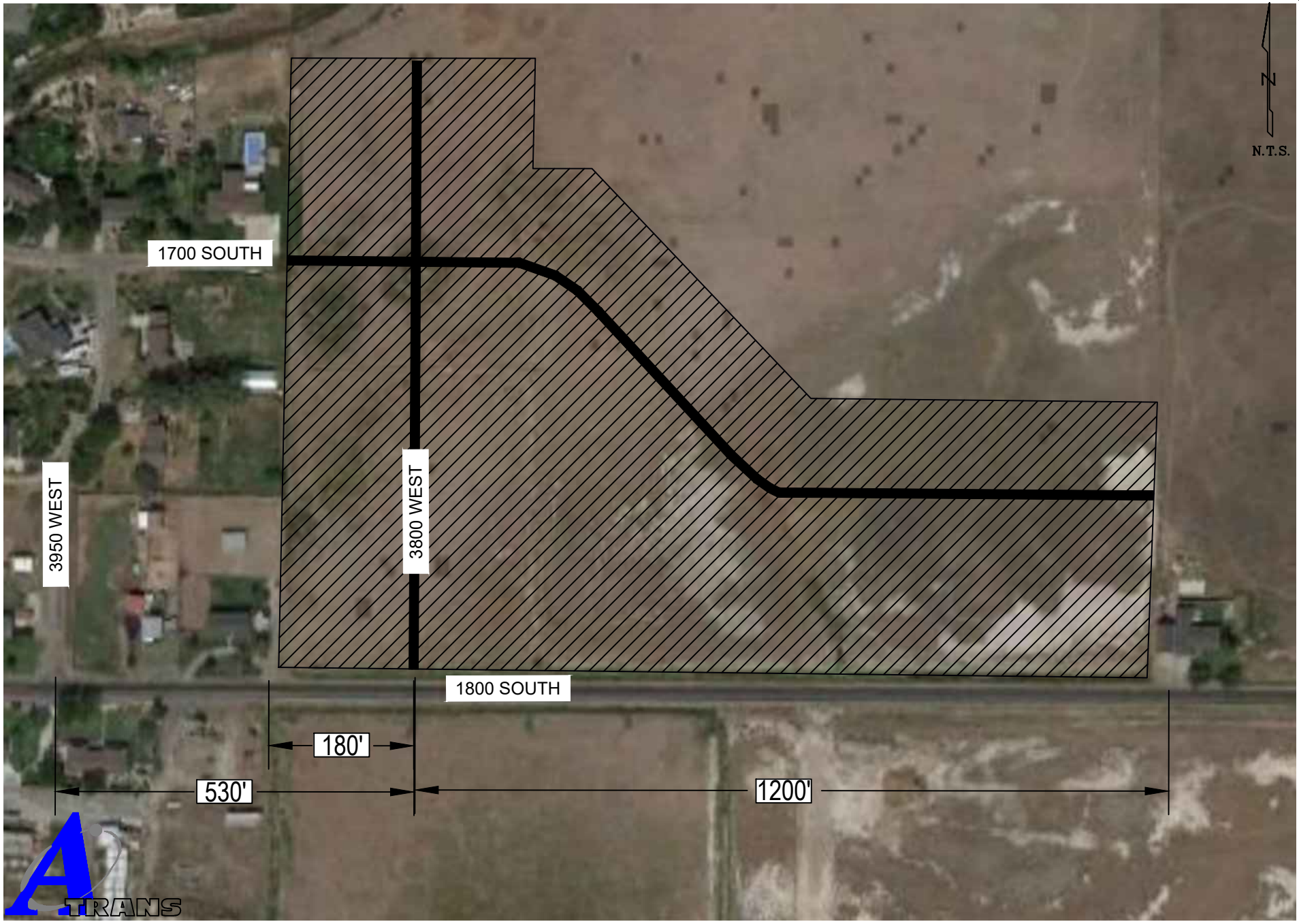

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Figure 2

Access Spacing

III. Study Area Conditions

The study area includes the following intersection.

- 1800 South / 3500 West
- 1800 South / 3800 West (Site Access)

1800 South

1800 South (Rt 3366) is currently a 2 lane facility with one lane in each direction. The 2019 AADT is 2,400 vehicles per day with a posted speed limit is 40 MPH.

3500 West

3500 West (Rt 3358) is currently a 2 lane facility with one lane in each direction. The 2019 AADT is 3,500 vehicles per day with a posted speed limit is 40 MPH.

The site location is shown in Figure 3 and existing geometry is shown in Figure 4.

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Figure 3

Site Location

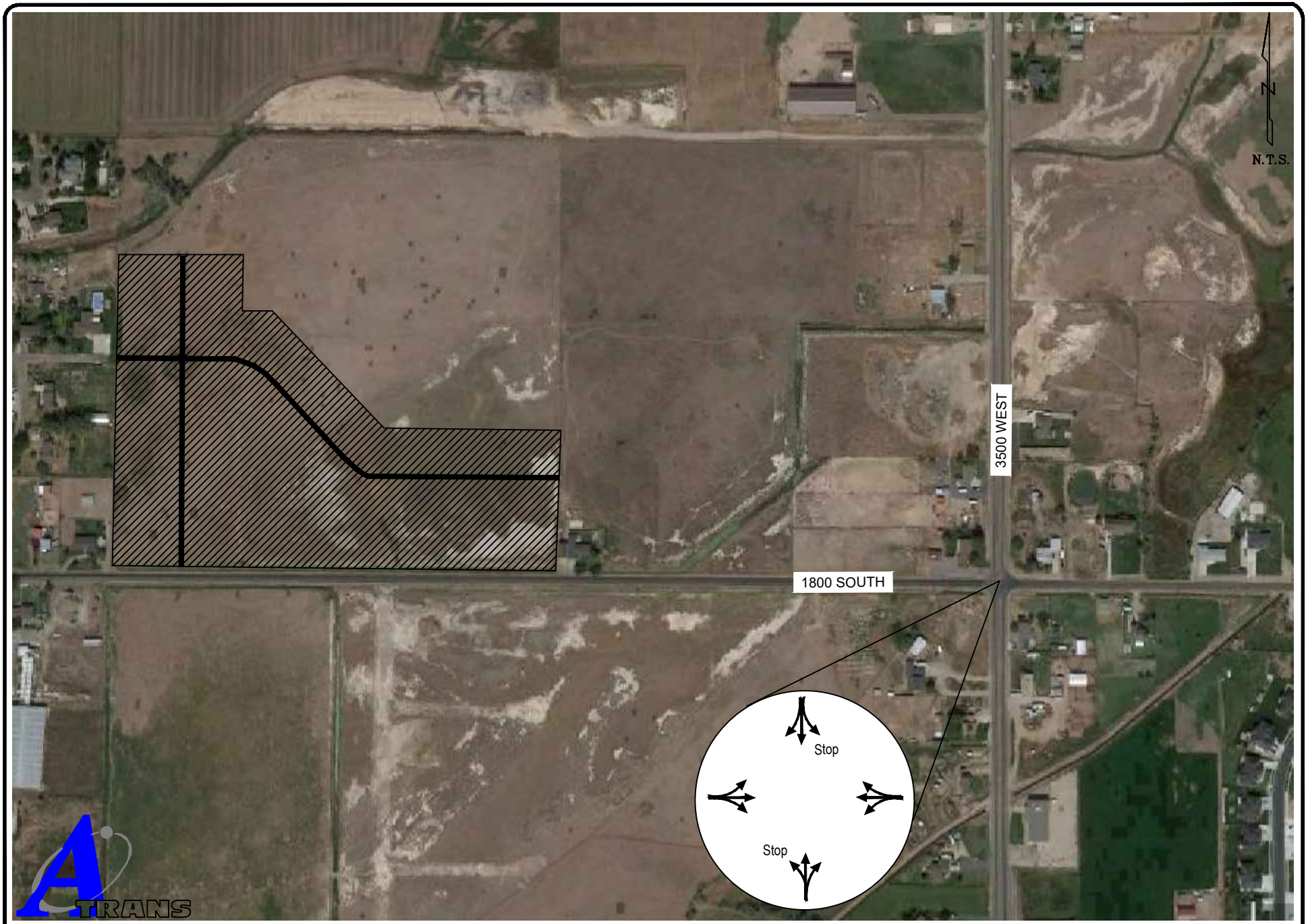

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Figure 4

Existing Geometry

IV. Analysis of Existing Condition

The existing traffic counts were performed August 11, 2021 during the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak periods. The 2021 Existing Traffic volumes used in the study are shown in Figure 5.

The 6th Edition Highway Capacity Manual defines the Level of Service (LOS) for both signalized and unsignalized intersections as a range of average experienced delay. LOS is a qualitative rating of traveler satisfaction from A to F whereby LOS A is good and LOS F poor. Table 1 shows the LOS range by delay for unsignalized and signalized intersections and accesses.

Table 1: Intersection LOS-Delay Relationship

	Unsignalized	Signalized
Level of Service	Total Delay per Vehicle (sec)	Total Delay per Vehicle (sec)
A	≤ 10.0	≤ 10.0
B	> 10.0 and ≤ 15.0	> 10.0 and ≤ 20.0
C	> 15.0 and ≤ 25.0	> 20.0 and ≤ 35.0
D	> 25.0 and ≤ 35.0	> 35.0 and ≤ 55.0
E	> 35.0 and ≤ 50.0	> 55.0 and ≤ 80.0
F	> 50.0	> 80.0

3500 West / 1800 South currently operates with SBLTR at LOS B in the AM and LOS B in the PM peak period. Table 2 shows the Existing LOS.

Table 2: Existing Level of Service

Intersection	Delay (sec/veh)	
3500 West / 1800 South (SBLTR)	10.2	B
	11.6	B

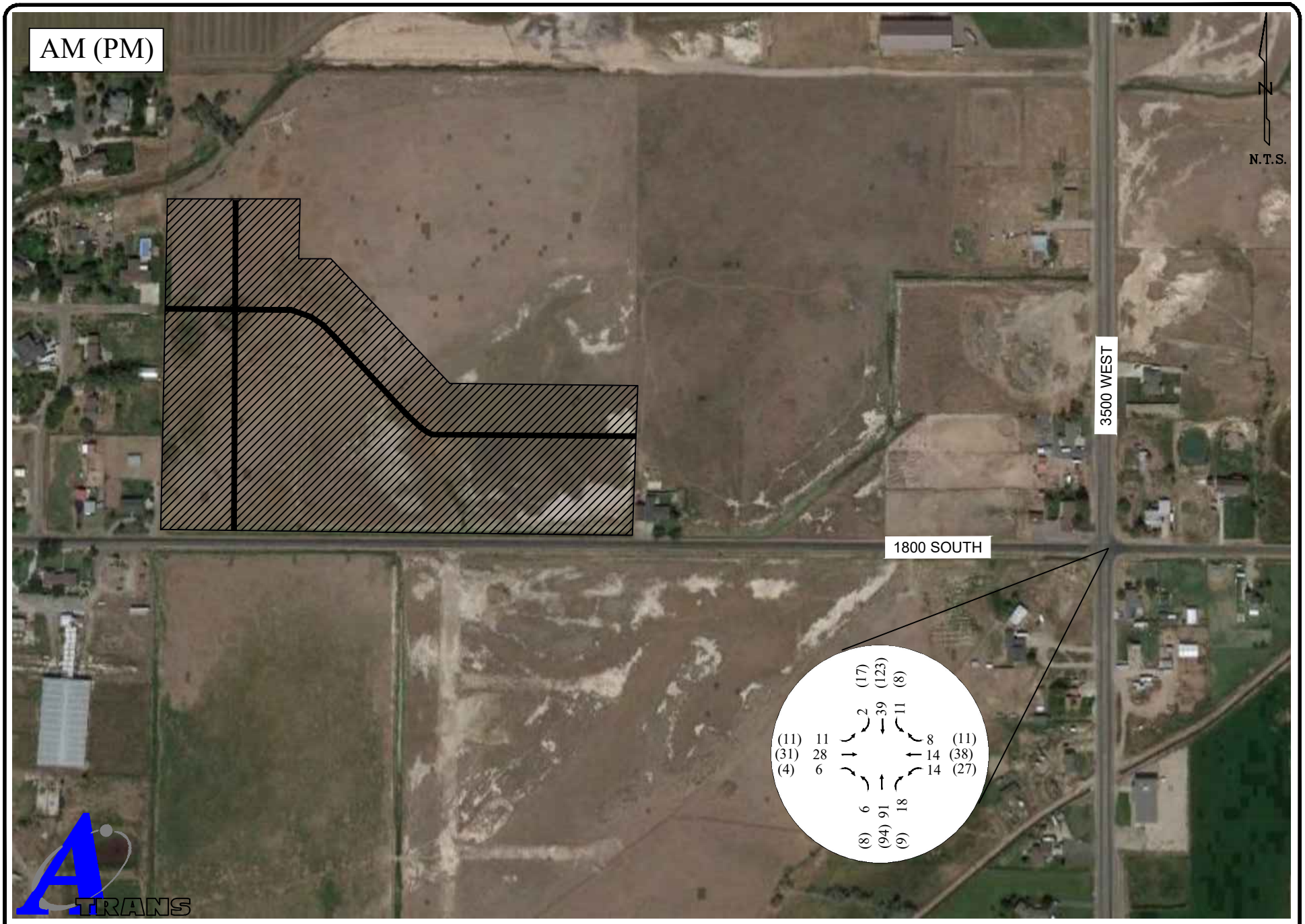

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Figure 5

Existing Traffic

V. Projected Traffic

A. Trip Generation

Trip generation for the site was done using The Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition) handbook. The site is planned to include 56 single family units and is projected to generated 41 AM and 55 PM peak hour trips and 529 daily trips. The trip generation for the site is shown in Table 3.

Table 3: Trip Generation for Site

Land Use Type	Density	Land Use #	Trip Rate	Trips	% In	% Out	Trips In	Trips Out
AM								
Single Family	56 Units	210	0.74	23	25%	75%	10	31
PM								
Single Family	56 Units	210	0.99	188	63%	37%	35	20
Daily								
Single Family	56 Units	210	9.44	529				

B. Trip Distribution

Project site traffic was applied to the origin-destination (O-D) for the site. Origin-destination was determined from evaluating the existing traffic patterns and hourly traffic volumes on each leg of the included intersections as well as the location of retail centers and freeways relative to this site. This was used as a baseline for origin destination and engineering judgment was applied to this to determine the following OD for the site. Origin Destination is shown in Figure 6. Site trip distribution is shown in Figure 7.

- 10% to/from west on 1800 South
- 60% to/from east on 1800 South
- 10% to/from south on 3500 West
- 20% to/from north on 3500 West

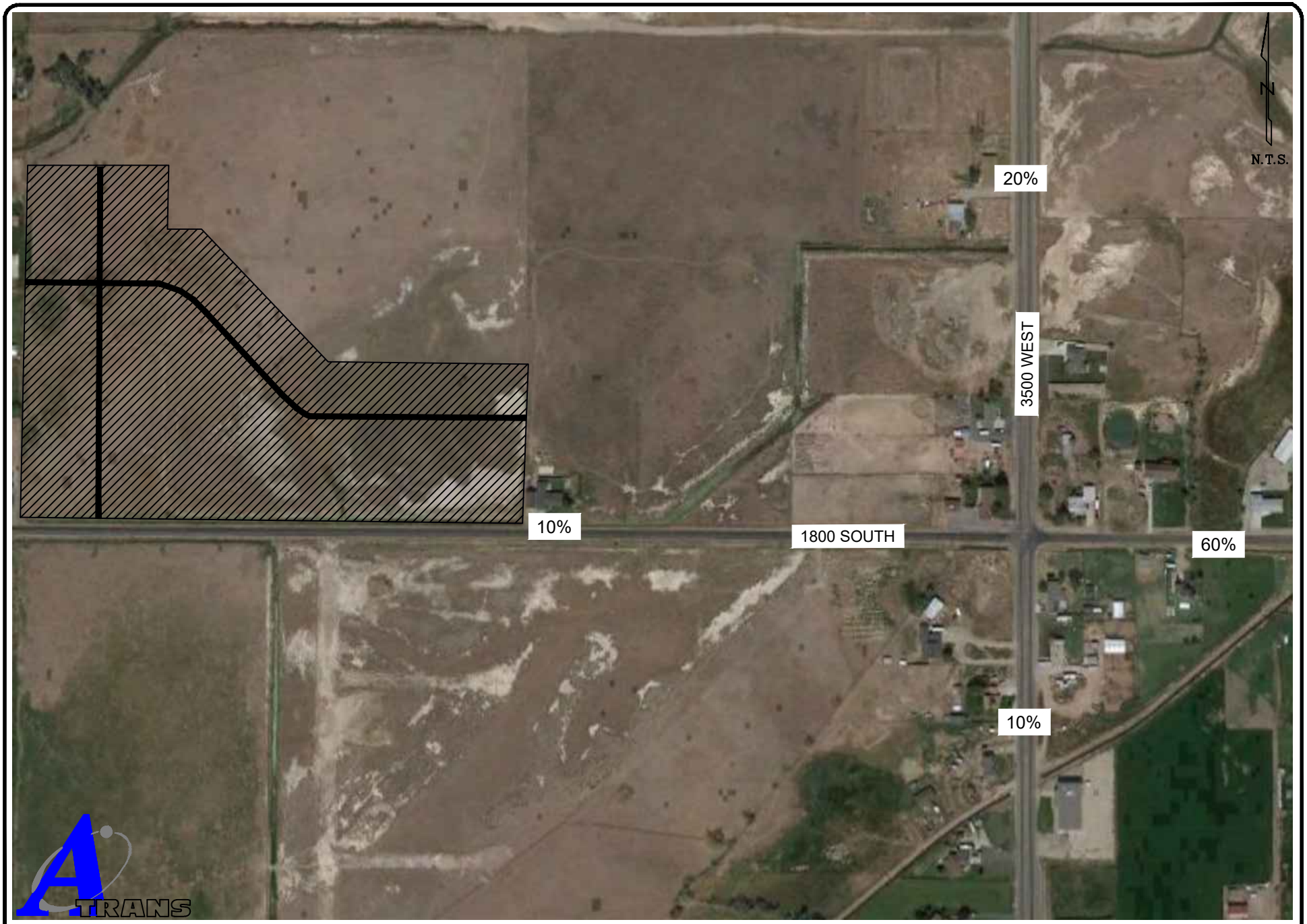

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Figure 6

Origin Destination

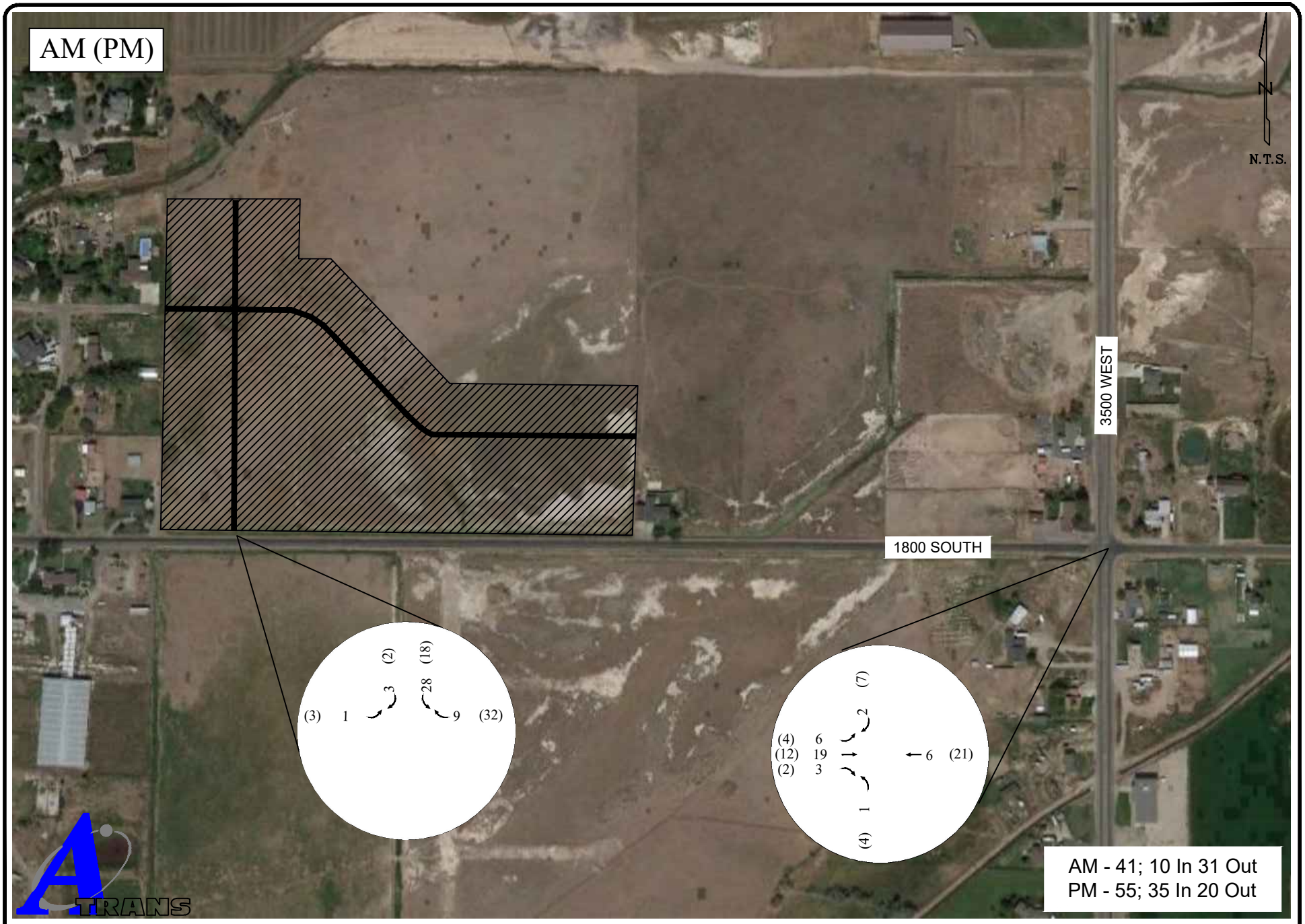

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Figure 7

Site Generated Traffic

VI. Growth

Growth in the area was determined from the 2019 Traffic Counts and 2050 projections from Wasatch Front Regional Council. The volumes utilized to determine growth in the area is shown in Table 4. Based on this data an average annual growth of 1.68% was found. The growth factor for 2027 is 1.11.

Table 4: Growth Projections

	3500 West (North)	3500 West (South)	1800 South (West)	1800 South (East)
2019	2,300	2,400	3,500	3,400
2050	4,700	5,200	5,100	4,200
Growth	**2.33%**	**2.53%**	**1.22%**	**0.65%**

Background traffic is determined by multiplying the existing traffic by the growth factor for 2027. 2027 Background Traffic is shown in Figure 8. Total traffic in the area for the future projection years is derived by adding the non-site volume forecasts to the site trip distribution. 2022 Total Traffic is shown in Figure 9. 2027 Total Traffic is shown in Figure 10.

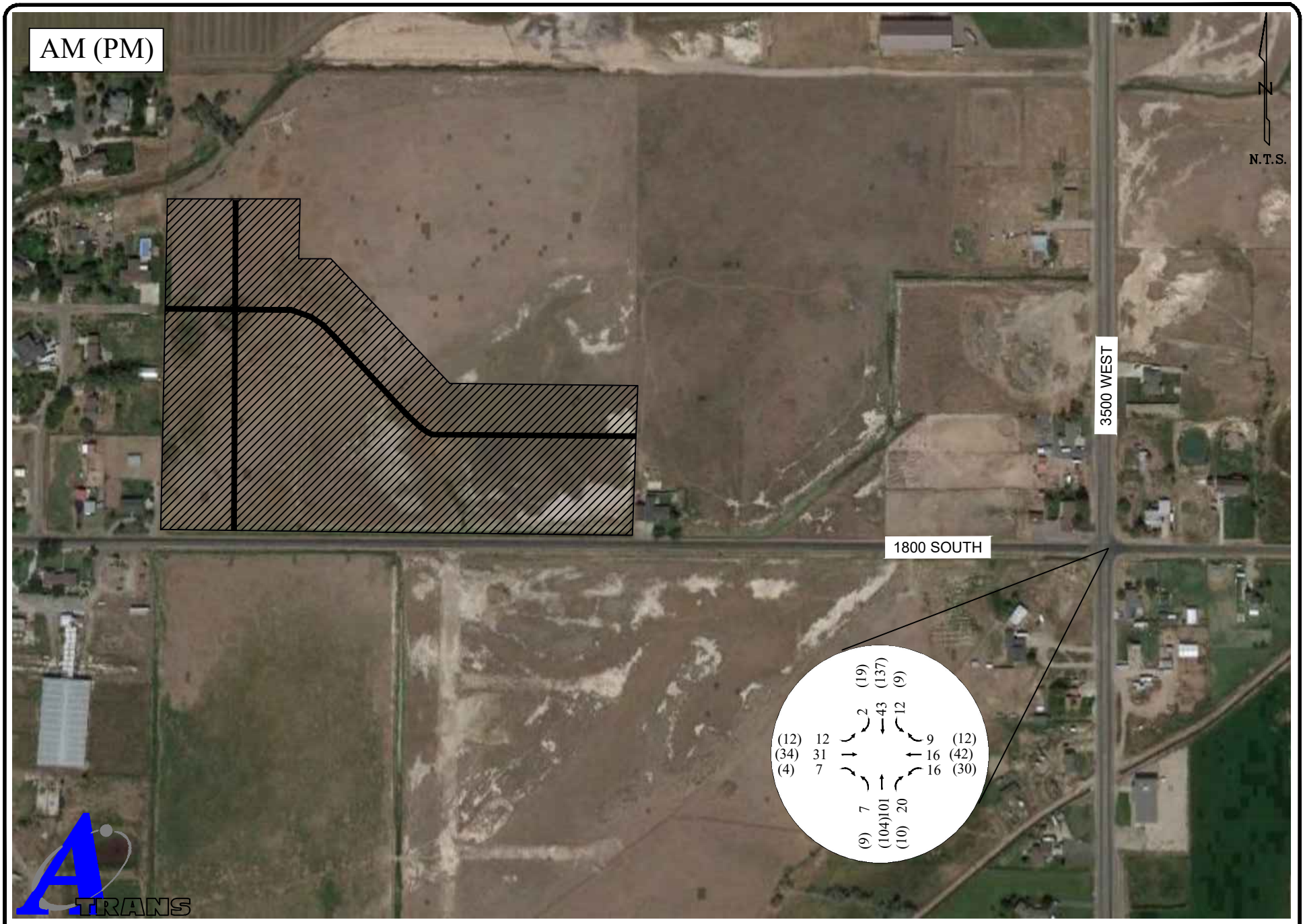

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Figure 8

2027 Background Traffic

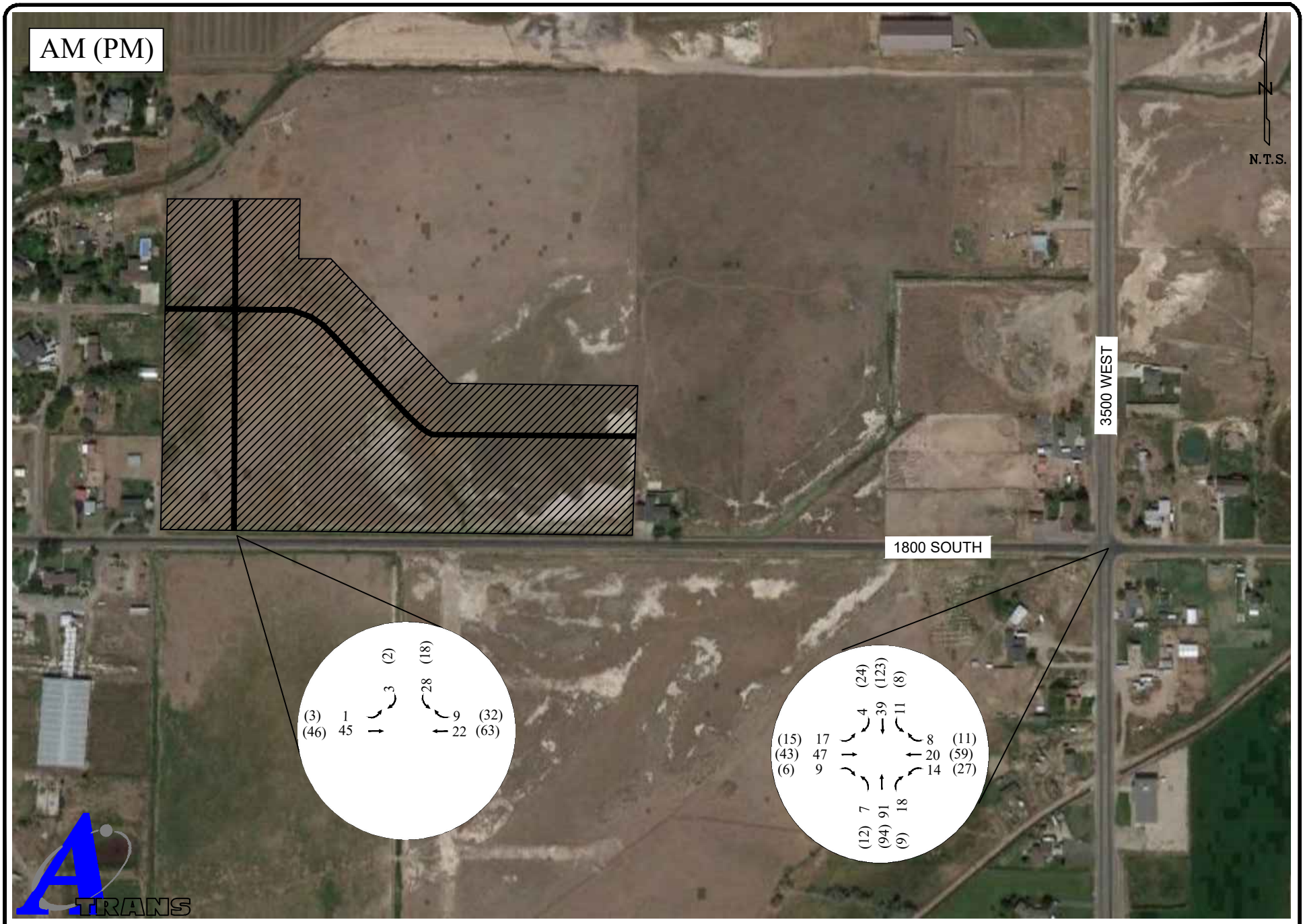

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Figure 9

2022 Total Traffic

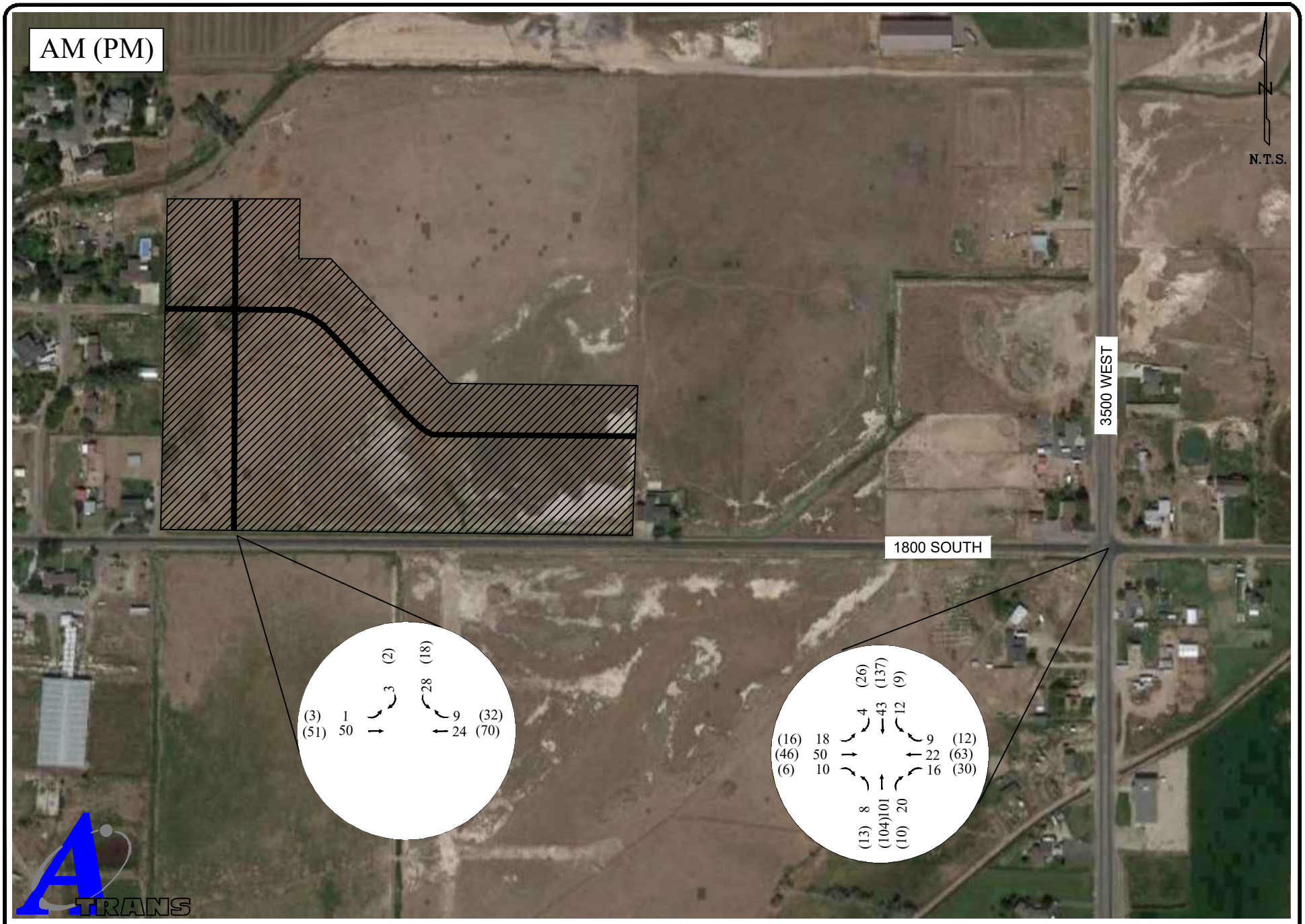

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Figure 10

2027 Total Traffic

VII. Traffic Analysis

A. Level of Service Analysis

The intersection and access analysis evaluates the performance of each intersection and access using the measure of performance of delay and level of service (LOS). Tables 5-7 show the intersection and access analysis.

Analysis Results

- 3500 West / 1800 South currently operates with SBLTR at LOS B in the AM and LOS B in the PM peak period. This is maintained with the addition of the site. In 2027 with and without the site the intersection operates with SBLTR at LOS B in the AM and LOS B in the PM peak period. Site traffic increases the total intersection traffic by 15% in the AM peak period and 13% in the PM peak period.
- 3800 West / 1800 South operates with LOS B or better for all movements in 2022 and 2027.

Table 5: 1800 South / 3500 West Intersection Analysis

		NBLTR		EBLTR		WBLTR		SBLTR	
2021 Existing	AM	10.4	B	7.3	A	7.3	A	10.2	B
	PM	11.2	B	7.3	A	7.3	A	11.6	B
2022 Total	AM	10.8	B	7.3	A	7.4	A	10.6	B
	PM	11.8	B	7.4	A	7.4	A	12.1	B
2027 Background	AM	10.6	B	7.3	A	7.3	A	10.4	B
	PM	11.6	B	7.3	A	7.4	A	12.1	B
2027 Total	AM	11.1	B	7.3	A	7.4	A	10.8	B
	PM	12.3	B	7.4	A	7.4	A	12.7	B

Table 6: 1800 South / 3800 West Intersection Analysis

		EBL		SBLR	
2022 Total	AM	7.3	A	9.0	A
	PM	7.4	A	9.3	A
2027 Total	AM	7.3	A	9.1	A
	PM	7.5	A	9.4	A

B. Queue Analysis

Based on the projected traffic, queue storage length requirements can be evaluated to determine if sufficient storage space exists to accommodate the projected demand. The intersection and accesses included in this traffic study are analyzed for queue storage capacity utilizing the HCM analysis and are done through Synchro.

VIII. Conclusions

This analysis is for the proposed This traffic impact analysis is for the proposed Stagecoach Estates Subdivision located on the north side of 1800 South at 3800 West in Weber County, Utah. The site is planned to include 56 single family units and is projected to generated 41 AM and 55 PM peak hour trips and 529 daily trips. The site is planning 1 access to 1800 South and secondary access to 1700 South to the west and 1750 South when the property to the east develops.

The following comments are made about the site:

- 3500 West / 1800 South currently operates with SBLTR at LOS B in the AM and LOS B in the PM peak period. This is maintained with the addition of the site. In 2027 with and without the site the intersection operates with SBLTR at LOS B in the AM and LOS B in the PM peak period. Site traffic increases the total intersection traffic by 15% in the AM peak period and 13% in the PM peak period.

- 3800 West / 1800 South operates with LOS B or better for all movements in 2022 and 2027.

- There are no auxiliary lanes within the study area and none are recommended at the site access and therefore no queueing deficiencies are projected.

Summary Comments

- The key issue is the proposed 12 lots that access directly onto 1800 South. From an access management aspect, this is discouraged as these vehicles will be backing onto the roadway. If an internal roadway can be developed to provide access to these units and direct them to a City street to access 1800 N, this would be preferred.

- The intersection operations and projected traffic levels indicate that there are no offsite improvements related to this site.

APPENDICES

Appendix A Traffic Counts and Projections
Appendix B Without Site Intersection Analyses
Appendix C With Site Intersection Analysis

Appendix A Traffic Counts and Projections

AM PEAK HOUR VOLUMES

Ped = 0

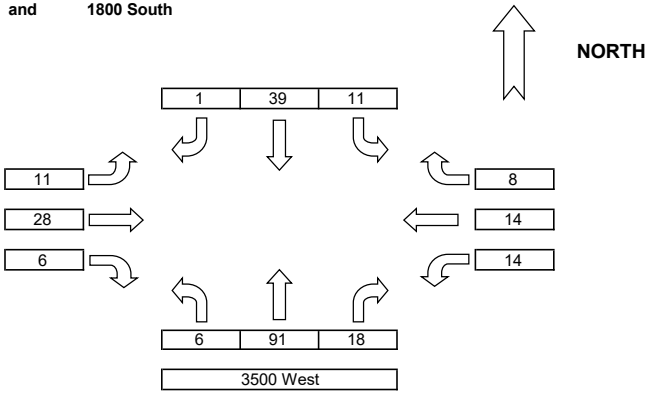
INTERSECTION: **3500 West** **and** **1800 South**

N-S STREET: **3500 West**
E-W STREET: **1800 South**

COUNT DATE: **August 11, 2021**
Day of the Week: **Wednesday**
NOTES:

COUNT TIME:
FROM: **7:00 AM**
TO: **9:00 AM**

PK HR VOLUME:	247
PHF:	0.87
PEAK HOUR:	
FROM: 7:40 AM	TO: 8:40 AM



AM Traffic

COUNT DATA INPUT: Name: Leisel Name: Leisel Name: Leisel Name: Leisel

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
7:00 AM	7:05 AM	1	3	2	1	2	1	0	6	0	0	3	0	19	62	0	0
7:05 AM	7:10 AM	1	9	0	0	3	0	0	4	1	0	0	0	18	58	0	0
7:10 AM	7:15 AM	0	5	8	2	3	1	0	3	0	2	1	0	25	59	0	0
7:15 AM	7:20 AM	1	4	1	0	4	0	0	3	0	1	1	0	15	53	0	0
7:20 AM	7:25 AM	0	5	0	3	4	0	1	2	0	1	3	0	19	55	0	0
7:25 AM	7:30 AM	0	8	0	1	3	1	0	2	1	0	3	0	19	50	0	0
7:30 AM	7:35 AM	0	6	2	1	2	0	0	4	0	1	1	0	17	58	0	0
7:35 AM	7:40 AM	0	6	3	2	1	0	0	2	0	0	0	0	14	59	0	0
7:40 AM	7:45 AM	1	12	2	2	4	0	1	2	0	0	2	1	27	71	0	0
7:45 AM	7:50 AM	0	6	2	2	0	0	1	3	0	1	2	1	18	62	0	0
7:50 AM	7:55 AM	0	8	1	1	2	0	1	8	1	3	1	0	26	69	0	0
7:55 AM	8:00 AM	0	8	2	0	0	0	1	3	0	0	2	2	18	58	0	0
8:00 AM	8:05 AM	0	10	2	0	5	1	2	1	0	1	1	2	25	57	0	0
8:05 AM	8:10 AM	1	6	0	1	2	0	1	2	0	1	1	0	15	53	0	0
8:10 AM	8:15 AM	0	7	1	1	5	1	1	0	0	1	0	0	17	64	0	0
8:15 AM	8:20 AM	0	8	1	3	2	2	0	3	0	2	0	0	21	62	0	0
8:20 AM	8:25 AM	1	9	2	0	4	0	1	6	0	1	2	0	26	58	0	0
8:25 AM	8:30 AM	1	4	2	0	1	2	0	3	0	1	1	0	15	54	0	0
8:30 AM	8:35 AM	0	5	1	1	3	0	1	5	0	1	0	0	17	58	0	0
8:35 AM	8:40 AM	2	8	2	0	0	0	1	3	0	2	2	2	22	56	0	0
8:40 AM	8:45 AM	1	5	0	1	4	2	0	2	1	0	3	0	19	51	0	0
8:45 AM	8:50 AM	0	5	1	0	2	0	0	3	1	1	1	1	15	49	0	0
8:50 AM	8:55 AM	0	4	0	0	3	2	1	3	1	0	1	2	17	34	0	0
8:55 AM	9:00 AM	0	9	0	1	1	0	1	1	0	0	4	0	17	17	0	0

PM PEAK HOUR VOLUMES

Ped = 0

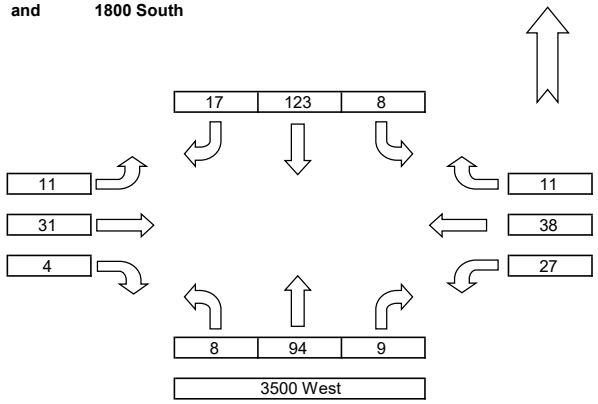
INTERSECTION: **3500 West** **and** **1800 South**

N-S STREET: **3500 West**
E-W STREET: **1800 South**

COUNT DATE: **August 11, 2021**
Day of the Week: **Wednesday**
NOTES:

COUNT TIME:
FROM: **4:00 PM**
TO: **6:00 PM**

PK HR VOLUME:	381
PHF:	0.87
PEAK HOUR:	
FROM:	TO:
4:10 PM	5:10 PM



PM Traffic

COUNT DATA INPUT: Name: Leisel Name: Leisel Name: Leisel Name: Leisel

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 5'	TOTAL 15'	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR	VOLUMES	VOLUMES	E/W	N/S
4:00 PM	4:05 PM	0	6	0	0	2	1	1	9	0	1	2	3	25	91	0	0
4:05 PM	4:10 PM	0	9	2	0	3	0	2	12	0	1	1	2	32	103	0	0
4:10 PM	4:15 PM	0	10	2	0	3	0	0	14	2	2	0	1	34	110	0	0
4:15 PM	4:20 PM	0	14	0	0	4	0	0	14	0	2	3	0	37	107	0	0
4:20 PM	4:25 PM	1	7	2	1	1	0	2	9	3	5	6	2	39	101	0	0
4:25 PM	4:30 PM	1	4	1	1	1	0	1	13	1	6	2	0	31	89	0	0
4:30 PM	4:35 PM	2	5	1	0	5	0	2	8	1	3	2	2	31	82	0	0
4:35 PM	4:40 PM	0	5	0	1	3	0	1	13	1	1	2	0	27	81	0	0
4:40 PM	4:45 PM	0	8	0	0	3	1	1	6	2	0	3	0	24	90	0	0
4:45 PM	4:50 PM	0	7	1	0	2	0	0	10	2	3	4	1	30	98	0	0
4:50 PM	4:55 PM	2	13	0	1	2	1	0	8	1	1	6	1	36	94	0	0
4:55 PM	5:00 PM	1	11	1	0	3	1	0	8	2	2	3	0	32	92	0	0
5:00 PM	5:05 PM	0	2	1	1	3	0	0	11	1	1	4	2	26	87	0	0
5:05 PM	5:10 PM	1	8	0	6	1	1	1	9	1	1	3	2	34	92	0	0
5:10 PM	5:15 PM	0	6	0	1	0	1	1	13	1	1	2	1	27	86	0	0
5:15 PM	5:20 PM	2	4	1	0	1	1	0	13	0	4	3	2	31	93	0	0
5:20 PM	5:25 PM	2	9	1	2	1	1	0	9	0	0	1	2	28	91	0	0
5:25 PM	5:30 PM	2	12	1	1	1	0	1	9	1	4	1	1	34	95	0	0
5:30 PM	5:35 PM	0	7	3	2	4	1	0	8	2	0	2	0	29	94	0	0
5:35 PM	5:40 PM	1	2	0	0	4	0	0	19	0	2	4	0	32	93	0	0
5:40 PM	5:45 PM	0	5	1	0	1	0	2	11	6	3	2	2	33	89	0	0
5:45 PM	5:50 PM	0	5	0	1	3	0	1	9	2	1	6	0	28	82	0	0
5:50 PM	5:55 PM	0	8	1	0	2	1	1	5	0	4	4	2	28	54	0	0
5:55 PM	6:00 PM	1	9	0	0	2	0	2	6	1	3	2	0	26	26	0	0

TRIP GENERATION

			Trip Rate			Trips			In / Out %				New			
ITE 10th Ed	Size	Land Use	AM	PM	Daily	AM	PM	Daily	AM IN	AM Out	PM IN	PM OUT	AM IN	AM Out	PM IN	PM OUT
Single Family	56.000	210	0.74	0.99	9.44	41	55	529	25%	75%	63%	37%	10	31	35	20
			0	0	0	0	0	0	0%	0%	0%	0%	0	0	0	0
			0	0	0	0	0	0	0%	0%	0%	0%	0	0	0	0
Total						**41**	**55**	**529**					**10**	**31**	**35**	**20**

Long Term Growth

1.68%	Growth Factor	Years	Analysis Year
	1.02	1	2022
	1.11	6	2027
	1.37	19	2040

Straight line growth assumed between 2016 and 2040

3500 West (North)			
2019	2,300	Traffic on Utah Highways	
2050	4,700	Wasatch Front Regional Council	
growth	2.33%		

2019	77.42	2300	
2020	77.42	2377	3.37%
2021	77.42	2455	3.26%
2022	77.42	2532	3.15%
2023	77.42	2610	3.06%
2024	77.42	2687	2.97%
2025	77.42	2765	2.88%
2026	77.42	2842	2.80%
2027	77.42	2919	2.72%
2028	77.42	2997	2.65%
2029	77.42	3074	2.58%
2030	77.42	3152	2.52%
2031	77.42	3229	2.46%
2032	77.42	3306	2.40%
2033	77.42	3384	2.34%
2034	77.42	3461	2.29%
2035	77.42	3539	2.24%
2036	77.42	3616	2.19%
2037	77.42	3694	2.14%
2038	77.42	3771	2.10%
2039	77.42	3848	2.05%
2040	77.42	3926	2.01%
2041	77.42	4003	1.97%
2042	77.42	4081	1.93%
2043	77.42	4158	1.90%
2044	77.42	4235	1.86%
2045	77.42	4313	1.83%
2046	77.42	4390	1.80%
2047	77.42	4468	1.76%
2048	77.42	4545	1.73%
2049	77.42	4623	1.70%
2050	77.42	4700	1.67%
			2.33%

3500 West (South)			
2019	2,400	Traffic on Utah Highways	
2050	5,200	Wasatch Front Regional Council	
growth	2.53%		

2019	90.32	2400	
2020	90.32	2490	3.76%
2021	90.32	2581	3.63%
2022	90.32	2671	3.50%
2023	90.32	2761	3.38%
2024	90.32	2852	3.27%
2025	90.32	2942	3.17%
2026	90.32	3032	3.07%
2027	90.32	3123	2.98%
2028	90.32	3213	2.89%
2029	90.32	3303	2.81%
2030	90.32	3394	2.73%
2031	90.32	3484	2.66%
2032	90.32	3574	2.59%
2033	90.32	3665	2.53%
2034	90.32	3755	2.46%
2035	90.32	3845	2.41%
2036	90.32	3935	2.35%
2037	90.32	4026	2.30%
2038	90.32	4116	2.24%
2039	90.32	4206	2.19%
2040	90.32	4297	2.15%
2041	90.32	4387	2.10%
2042	90.32	4477	2.06%
2043	90.32	4568	2.02%
2044	90.32	4658	1.98%
2045	90.32	4748	1.94%
2046	90.32	4839	1.90%
2047	90.32	4929	1.87%
2048	90.32	5019	1.83%
2049	90.32	5110	1.80%
2050	90.32	5200	1.77%
			2.53%

1800 South (West)			
2019	3,500	Traffic on Utah Highways	
2050	5,100	Wasatch Front Regional Council	
growth	1.22%		

2019	51.61	3500	
2020	51.61	3552	1.47%
2021	51.61	3603	1.45%
2022	51.61	3655	1.43%
2023	51.61	3706	1.41%
2024	51.61	3758	1.39%
2025	51.61	3810	1.37%
2026	51.61	3861	1.35%
2027	51.61	3913	1.34%
2028	51.61	3965	1.32%
2029	51.61	4016	1.30%
2030	51.61	4068	1.29%
2031	51.61	4119	1.27%
2032	51.61	4171	1.25%
2033	51.61	4223	1.24%
2034	51.61	4274	1.22%
2035	51.61	4326	1.21%
2036	51.61	4377	1.19%
2037	51.61	4429	1.18%
2038	51.61	4481	1.17%
2039	51.61	4532	1.15%
2040	51.61	4584	1.14%
2041	51.61	4635	1.13%
2042	51.61	4687	1.11%
2043	51.61	4739	1.10%
2044	51.61	4790	1.09%
2045	51.61	4842	1.08%
2046	51.61	4894	1.07%
2047	51.61	4945	1.05%
2048	51.61	4997	1.04%
2049	51.61	5048	1.03%
2050	51.61	5100	1.02%
			1.22%

1800 South (East)			
2019	3,400	Traffic on Utah Highwa	
2050	4,200	Wasatch Front Region	
growth	0.65%		

2019	25.81	3400	
2020	25.81	3426	0.76%
2021	25.81	3452	0.75%
2022	25.81	3477	0.75%
2023	25.81	3503	0.74%
2024	25.81	3529	0.74%
2025	25.81	3555	0.73%
2026	25.81	3581	0.73%
2027	25.81	3606	0.72%
2028	25.81	3632	0.72%
2029	25.81	3658	0.71%
2030	25.81	3684	0.71%
2031	25.81	3710	0.70%
2032	25.81	3735	0.70%
2033	25.81	3761	0.69%
2034	25.81	3787	0.69%
2035	25.81	3813	0.68%
2036	25.81	3839	0.68%
2037	25.81	3865	0.67%
2038	25.81	3890	0.67%
2039	25.81	3916	0.66%
2040	25.81	3942	0.66%
2041	25.81	3968	0.65%
2042	25.81	3994	0.65%
2043	25.81	4019	0.65%
2044	25.81	4045	0.64%
2045	25.81	4071	0.64%
2046	25.81	4097	0.63%
2047	25.81	4123	0.63%
2048	25.81	4148	0.63%
2049	25.81	4174	0.62%
2050	25.81	4200	0.62%
			0.68%

Trip Distribution

1800 South / 3500 West				1.11	
	2021	Site	2022	2027	2027
AM	Existing	Traffic	Total	Growth	Total
EBL	11	6	17	12	18
EBT	28	19	47	31	50
EBR	6	3	9	7	10
WBL	14		14	16	16
WBT	14	6	20	16	22
WBR	8		8	9	9
NBL	6	1	7	7	8
NBT	91		91	101	101
NBR	18		18	20	20
SBL	11		11	12	12
SBT	39		39	43	43
SBR	2	2	4	2	4
East	93			103	
West	67			74	
North	162			180	
South	174			193	

14.92%

1800 South / 3800 West				1.11	
	2021	Site	2022	2027	2027
AM	Existing	Traffic	Total	Growth	Total
EBL		1	1	0	1
EBT	45		45	50	50
EBR			0	0	0
WBL			0	0	0
WBT	22		22	24	24
WBR		9	9	0	9
NBL			0	0	0
NBT			0	0	0
NBR			0	0	0
SBL		28	28	0	28
SBT			0	0	0
SBR		3	3	0	3
East	67			74	
West	67			74	
North	0			0	
South	0			0	

61.19%

	2021	Site	2022	2027	2027
PM	Existing	Traffic	Total	Growth	Total
EBL	11	4	15	12	16
EBT	31	12	43	34	46
EBR	4	2	6	4	6
WBL	27		27	30	30
WBT	38	21	59	42	63
WBR	11		11	12	12
NBL	8	4	12	9	13
NBT	94		94	104	104
NBR	9		9	10	10
SBL	8		8	9	9
SBT	123		123	137	137
SBR	17	7	24	19	26
East	124			138	
West	109			121	
North	264			293	
South	265			294	

13.12%

	2021	Site	2022	2027	2027
PM	Existing	Traffic	Total	Growth	Total
EBL		3	3	0	3
EBT	46		46	51	51
EBR			0	0	0
WBL			0	0	0
WBT	63		63	70	70
WBR		32	32	0	32
NBL			0	0	0
NBT			0	0	0
NBR			0	0	0
SBL		18	18	0	18
SBT			0	0	0
SBR		2	2	0	2
East	109			121	
West	109			121	
North	0			0	
South	0			0	

50.46%

Appendix B Without Site Intersection Analyses

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	28	6	14	14	8	6	91	18	11	39	2
Future Vol, veh/h	11	28	6	14	14	8	6	91	18	11	39	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	32	7	16	16	9	7	105	21	13	45	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	16	0	0	39	0	0	134	110	36	178	118	21
Stage 1	-	-	-	-	-	-	62	62	-	53	53	-
Stage 2	-	-	-	-	-	-	72	48	-	125	65	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1602	-	-	1571	-	-	838	780	1037	784	772	1056
Stage 1	-	-	-	-	-	-	949	843	-	960	851	-
Stage 2	-	-	-	-	-	-	938	855	-	879	841	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1602	-	-	1571	-	-	788	766	1037	679	758	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	788	766	-	679	758	-
Stage 1	-	-	-	-	-	-	941	836	-	952	842	-
Stage 2	-	-	-	-	-	-	877	846	-	748	834	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2.8	10.4	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	800	1602	-	-	1571	-	-	748
HCM Lane V/C Ratio	0.165	0.008	-	-	0.01	-	-	0.08
HCM Control Delay (s)	10.4	7.3	0	-	7.3	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	31	4	27	38	11	8	94	9	8	123	17
Future Vol, veh/h	11	31	4	27	38	11	8	94	9	8	123	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	36	5	31	44	13	9	108	10	9	141	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	41	0	0	252	171	39	237	180	51
Stage 1	-	-	-	-	-	-	65	65	-	113	113	-
Stage 2	-	-	-	-	-	-	187	106	-	124	67	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1564	-	-	1568	-	-	701	722	1033	717	714	1017
Stage 1	-	-	-	-	-	-	946	841	-	892	802	-
Stage 2	-	-	-	-	-	-	815	807	-	880	839	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1564	-	-	1568	-	-	567	701	1033	612	693	1017
Mov Cap-2 Maneuver	-	-	-	-	-	-	567	701	-	612	693	-
Stage 1	-	-	-	-	-	-	937	833	-	884	786	-
Stage 2	-	-	-	-	-	-	642	791	-	751	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2.6	11.2	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	707	1564	-	-	1568	-	-	714
HCM Lane V/C Ratio	0.18	0.008	-	-	0.02	-	-	0.238
HCM Control Delay (s)	11.2	7.3	0	-	7.3	0	-	11.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.9

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	28	6	14	14	8	6	91	18	11	39	2
Future Vol, veh/h	11	28	6	14	14	8	6	91	18	11	39	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	36	8	18	18	10	8	116	23	14	50	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	18	0	0	44	0	0	149	122	40	197	131	23
Stage 1	-	-	-	-	-	-	68	68	-	59	59	-
Stage 2	-	-	-	-	-	-	81	54	-	138	72	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1599	-	-	1564	-	-	819	768	1031	762	760	1054
Stage 1	-	-	-	-	-	-	942	838	-	953	846	-
Stage 2	-	-	-	-	-	-	927	850	-	865	835	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1599	-	-	1564	-	-	763	752	1031	646	744	1054
Mov Cap-2 Maneuver	-	-	-	-	-	-	763	752	-	646	744	-
Stage 1	-	-	-	-	-	-	934	830	-	944	836	-
Stage 2	-	-	-	-	-	-	859	840	-	721	827	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2.8	10.6	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	786	1599	-	-	1564	-	-	729
HCM Lane V/C Ratio	0.187	0.009	-	-	0.011	-	-	0.091
HCM Control Delay (s)	10.6	7.3	0	-	7.3	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	31	4	27	38	11	8	94	9	8	123	17
Future Vol, veh/h	11	31	4	27	38	11	8	94	9	8	123	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	40	5	34	48	14	10	120	11	10	157	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	48	0	0	45	0	0	277	187	43	259	196	55
Stage 1	-	-	-	-	-	-	71	71	-	123	123	-
Stage 2	-	-	-	-	-	-	206	116	-	136	73	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1559	-	-	1563	-	-	675	708	1027	694	699	1012
Stage 1	-	-	-	-	-	-	939	836	-	881	794	-
Stage 2	-	-	-	-	-	-	796	800	-	867	834	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1559	-	-	1563	-	-	530	685	1027	580	677	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	530	685	-	580	677	-
Stage 1	-	-	-	-	-	-	931	828	-	873	776	-
Stage 2	-	-	-	-	-	-	607	782	-	727	826	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2.6	11.6	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	689	1559	-	-	1563	-	-	697
HCM Lane V/C Ratio	0.206	0.009	-	-	0.022	-	-	0.271
HCM Control Delay (s)	11.6	7.3	0	-	7.4	0	-	12.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	1.1

Appendix C With Site Intersection Analyses

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	17	47	9	14	20	8	7	91	18	11	39	4
Future Vol, veh/h	17	47	9	14	20	8	7	91	18	11	39	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	54	10	16	23	9	8	105	21	13	45	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	64	0	0	179	154	59	222	164	28
Stage 1	-	-	-	-	-	-	99	99	-	60	60	-
Stage 2	-	-	-	-	-	-	80	55	-	162	104	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1592	-	-	1538	-	-	783	738	1007	734	729	1047
Stage 1	-	-	-	-	-	-	907	813	-	951	845	-
Stage 2	-	-	-	-	-	-	929	849	-	840	809	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1592	-	-	1538	-	-	729	720	1007	628	712	1047
Mov Cap-2 Maneuver	-	-	-	-	-	-	729	720	-	628	712	-
Stage 1	-	-	-	-	-	-	895	802	-	939	836	-
Stage 2	-	-	-	-	-	-	866	840	-	706	798	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	2.5	10.8	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	754	1592	-	-	1538	-	-	709
HCM Lane V/C Ratio	0.177	0.012	-	-	0.01	-	-	0.088
HCM Control Delay (s)	10.8	7.3	0	-	7.4	0	-	10.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	45	22	9	28	3
Future Vol, veh/h	1	45	22	9	28	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	52	25	10	32	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	35	0	-	0	84	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1576	-	-	-	918	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	969	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1576	-	-	-	917	1044
Mov Cap-2 Maneuver	-	-	-	-	917	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	969	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1576	-	-	-	928
HCM Lane V/C Ratio	0.001	-	-	-	0.038
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	15	43	6	27	59	11	12	94	9	8	123	24
Future Vol, veh/h	15	43	6	27	59	11	12	94	9	8	123	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	49	7	31	68	13	14	108	10	9	141	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	56	0	0	302	217	53	283	227	75
Stage 1	-	-	-	-	-	-	87	87	-	137	137	-
Stage 2	-	-	-	-	-	-	215	130	-	146	90	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1533	-	-	1549	-	-	650	681	1014	669	672	986
Stage 1	-	-	-	-	-	-	921	823	-	866	783	-
Stage 2	-	-	-	-	-	-	787	789	-	857	820	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1549	-	-	514	659	1014	565	650	986
Mov Cap-2 Maneuver	-	-	-	-	-	-	514	659	-	565	650	-
Stage 1	-	-	-	-	-	-	911	814	-	856	767	-
Stage 2	-	-	-	-	-	-	611	772	-	728	811	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	2.1	11.8	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	658	1533	-	-	1549	-	-	681
HCM Lane V/C Ratio	0.201	0.011	-	-	0.02	-	-	0.262
HCM Control Delay (s)	11.8	7.4	0	-	7.4	0	-	12.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	46	63	32	18	2
Future Vol, veh/h	3	46	63	32	18	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	53	72	37	21	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	109	0	-	0	150	91
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1481	-	-	-	842	967
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	964	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1481	-	-	-	840	967
Mov Cap-2 Maneuver	-	-	-	-	840	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	964	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1481	-	-	-	851
HCM Lane V/C Ratio	0.002	-	-	-	0.027
HCM Control Delay (s)	7.4	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	50	10	16	22	9	8	101	20	12	43	4
Future Vol, veh/h	18	50	10	16	22	9	8	101	20	12	43	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	57	11	18	25	10	9	116	23	14	49	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	68	0	0	193	166	63	240	176	30
Stage 1	-	-	-	-	-	-	105	105	-	66	66	-
Stage 2	-	-	-	-	-	-	88	61	-	174	110	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1589	-	-	1533	-	-	767	727	1002	714	717	1044
Stage 1	-	-	-	-	-	-	901	808	-	945	840	-
Stage 2	-	-	-	-	-	-	920	844	-	828	804	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1589	-	-	1533	-	-	708	708	1002	598	698	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	708	708	-	598	698	-
Stage 1	-	-	-	-	-	-	888	797	-	932	830	-
Stage 2	-	-	-	-	-	-	851	834	-	681	793	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	2.5	11.1	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	742	1589	-	-	1533	-	-	690
HCM Lane V/C Ratio	0.2	0.013	-	-	0.012	-	-	0.098
HCM Control Delay (s)	11.1	7.3	0	-	7.4	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	50	24	9	28	3
Future Vol, veh/h	1	50	24	9	28	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	57	28	10	32	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	92	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1572	-	-	-	908	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	964	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1572	-	-	-	907	1041
Mov Cap-2 Maneuver	-	-	-	-	907	-
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	964	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1572	-	-	-	918
HCM Lane V/C Ratio	0.001	-	-	-	0.039
HCM Control Delay (s)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	46	6	30	63	12	13	104	10	9	137	26
Future Vol, veh/h	16	46	6	30	63	12	13	104	10	9	137	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	53	7	34	72	14	15	120	11	10	157	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	60	0	0	327	233	57	305	243	79
Stage 1	-	-	-	-	-	-	93	93	-	147	147	-
Stage 2	-	-	-	-	-	-	234	140	-	158	96	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1528	-	-	1544	-	-	626	667	1009	647	659	981
Stage 1	-	-	-	-	-	-	914	818	-	856	775	-
Stage 2	-	-	-	-	-	-	769	781	-	844	815	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1528	-	-	1544	-	-	478	644	1009	534	636	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	478	644	-	534	636	-
Stage 1	-	-	-	-	-	-	903	808	-	846	757	-
Stage 2	-	-	-	-	-	-	577	763	-	702	805	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	2.1	12.3	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	639	1528	-	-	1544	-	-	665
HCM Lane V/C Ratio	0.228	0.012	-	-	0.022	-	-	0.297
HCM Control Delay (s)	12.3	7.4	0	-	7.4	0	-	12.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	1.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	51	70	32	18	2
Future Vol, veh/h	3	51	70	32	18	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	59	80	37	21	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	117	0	-	0	164	99
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	65	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1471	-	-	-	827	957
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1471	-	-	-	825	957
Mov Cap-2 Maneuver	-	-	-	-	825	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1471	-	-	-	837
HCM Lane V/C Ratio	0.002	-	-	-	0.027
HCM Control Delay (s)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1