Kimley»Horn

April 18, 2024

Mr. Louis Ferrante
UDON Holdings, LLC
5801 N. Union Boulevard
Suite 100
Colorado Springs, CO 80918

Re: UDON Rezone Traffic Study
El Paso County, Colorado

Dear Mr. Ferrante:

This traffic study has been prepared for a proposed UDON Rezoning project to be located at 12150 State Highway 94-(SH-94) on the north side of SH-94 and 12265 SH-94 on the south side of SH-94 in El Paso County, Colorado. The existing property contains one residence at 12150 SH-94 and one residence at 12265 SH-94. Of note, the northern portion of this project at 12150 SH-94 is proposed to rezone the existing 15.74-acre property from Residential Rural (RR5) to Commercial Service (CS). For purposes of this study, it was assumed that the area on the south side of SH-94 would be developed first as phase one with 860 spaces for vehicle, boat, and RV storage. The north side of the development was studied with two alternatives for the full buildout scenario; the proposed use which includes 1,000 storage units and the highest use which includes a 16 fueling position gas station and approximately 150,000 square feet of retail.

A vicinity map illustrating the location of the property is attached as **Figure 1**. The surrounding area primarily consists of rural residences, vacant and agricultural land, industrial uses, and Aztec Family Raceway. There are auto salvage yards located to the east of the site.

This traffic study identifies the amount of traffic associated with this proposed project and the expected trip distribution and traffic assignment along with an operational analysis for the project access intersection along State Highway 94 (SH-94). The project access to the site is proposed to be located approximately 200 feet west of the existing west access at the 12265 SH-94 site. The existing east access will be closed with development of the project. It is expected that project construction of the development area south of SH-94 will be completed within the next couple years; therefore, analysis was performed for the 2026 Phase 1 horizon. The development area to the north of SH-94 is expected to follow phase 1 by a couple years and was evaluated as a full buildout horizon in 2028. Lastly, a 2045 long-term twenty-year horizon was also evaluated.

EXISTING ROADWAY NETWORK AND TRAFFIC COUNTS

Regional access to the UDON Rezoning project is provided by SH-94. Direct access to the development will be provided by an access driveway along the south side of SH-94 for the Phase 1 development and an access driveway along the north side of SH-94 to align with the Phase 1 access for the buildout scenario. SH-94 extends primarily east-west with one through lane in each direction with a speed limit of 65 miles per hour eastbound and 60 miles per hour westbound. SH-94 provides a double yellow striped centerline within the project limits. Both Table 4: 2045 Roadway Improvement Projects of the 2016 El Paso County Major Transportation Corridor Plan (MTCP) and the State Highway 94 Access Management Plan show that SH-94 will be widened from two lanes to four lanes within the project limits sometime in the future.

Existing daily and peak hour bi-directional count data was obtained from CDOT traffic information along SH-94 to the east of Space Village Avenue, which is in nearby vicinity of the existing UDON Rezoning property project access. These counts were collected on Thursday, July 11, 2019 and were conducted in one-hour intervals for 24 hours. These counts were adjusted by the annual growth rate (described in the next section) to calculate existing 2024 volumes. Of note, more recent count data along SH-94 reports less traffic volumes compared to the 2019 traffic counts; therefore, the 2019 count data grown to 2024 was utilized to provide a conservative analysis. The daily counts from the Colorado Department of Transportation (CDOT) Online Transportation Information System (OTIS) were used as a basis for providing a directional split of project traffic. Existing lane configuration, and the existing peak hour counts are shown in attached **Figure 2**, with count information attached as well.

UNSPECIFIED DEVELOPMENT TRAFFIC GROWTH

Based on information provided on the website for the Colorado Department of Transportation, the 20-year growth factor along SH-94 adjacent to the study area is 1.21 which equates to an annual growth rate of approximately one (1) percent per year. Traffic information from the CDOT Online Transportation Information System (OTIS) is attached. Based on this, a one (1) percent annual growth rate was used to calculate future background traffic volumes at the study area access intersection. This annual growth rate was used to estimate 2026 Phase 1, 2028 Buildout, and long term 2045 background traffic volumes at the key intersection.

TRIP GENERATION

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the Trip Generation Manual[1] published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rates for Mini-Warehouse (ITE Code 151) for phase 1 and the proposed buildout, and Shopping Center (ITE Code 820) and Convenience Store/Gas Station (ITE Code 945) for the north development area under the highest use buildout scenario.

Since the highest use buildout scenario is a commercial development, pass-by trips are expected. These pass-by trips are vehicles already on the street network that will be attracted to the project site in route to a final destination.

The UDON Rezoning Phase 1 is expected to generate approximately 156 daily weekday driveway trips, with 10 of these trips occurring during the morning peak hour and 14 trips occurring during the afternoon peak hour. The proposed buildout is expected to generate 336 daily weekday driveway trips, with 23 of these trips occurring during the morning peak hour and 32 trips occurring during the afternoon peak hour.

The UDON Rezoning Highest Use Buildout scenario is expected to generate approximately 9,666 daily weekday driveway trips to the north driveway, with 559 of these trips occurring during the morning peak hour and 874 trips occurring during the afternoon peak hour. Accounting for pass-by, expected net new (non pass-by) trips to the surrounding street network results in approximately 4,970 weekday daily trips, of which 193 trips and 454 trips are anticipated during the weekday morning and afternoon peak hours, respectively. **Table 1** summarizes the estimated trip generation for the UDON Rezoning project. The trip generation worksheets are attached.

[1] Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

Table 1 – UDON Rezoning Project Weekday Traffic Generation

Land Use and Size	Daily Vehicle Trips	Weekday Vehicle Trips					
		AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Phase 1 – South Development							
Mini-Warehouse (ITE 151) – 860 Units	156	5	5	10	7	7	14
Buildout – Proposed Use (North and South Development)							
Mini-Warehouse (ITE 151) – 1,860 Units	336	12	11	23	16	16	32
Buildout – Highest Use (North Development)							
Shopping Center (ITE 820) – 150,000 Square Feet	5,552	78	48	126	245	265	510
Convenience Store/Gas Station (ITE 945) – 16 Fueling Positions	4,114	216	217	433	182	182	364
Total Project Trips – Highest Use	**9,666**	**294**	**265**	**559**	**427**	**447**	**874**
Total Project Trips after Pass-By – Highest Use	**4,970**	**107**	**86**	**193**	**220**	**234**	**454**

DISTRIBUTION, ASSIGNMENT, AND TOTAL TRAFFIC

Distribution of site traffic was based on the area street system characteristics, existing traffic patterns and volumes, and the proposed access system for the project. As mentioned previously, the traffic volumes from CDOT OTIS were used as a basis for providing a directional split of project traffic. The distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. Project traffic originating from either direction can access the site. As identified from the counts from CDOT OTIS, approximately 63 percent of the UDON Rezone trips arrive from and depart to the west and 37 percent of trips arrive and depart from the east. **Figure 3** illustrates the expected non pass-by trip distribution for Phase 1 (South Development), **Figure 4** shows the expected non pass-by trip distribution for the proposed buildout (North and South Development), and **Figure 5** illustrates the expected non pass-by trip distribution for the highest use buildout (North Development).

Since the highest use buildout scenario is a commercial development, a certain amount of traffic attracted to the site will already be passing by the site. This pass-by distribution is a means to quantify the amount of traffic arriving to the site from a given direction and then leaving the site in the same original direction of travel, continuing the driver's trip. The expected weekday morning and afternoon peak hour pass-by trip distributions were calculated based on existing traffic volumes along SH-94 in the site vicinity. Directional differences in the morning and afternoon peak hours were accounted for in the pass-by distributions as shown in **Figures 6** and **7**, respectively.

Project traffic assignment was obtained by applying the project trip distribution to the estimated project traffic generation of the development scenarios shown in the trip generation table. The non pass-by traffic assignment is shown in **Figure 8** for Phase 1 (South Development), **Figure 9** for the proposed buildout (North and South Development), and **Figure 10** for the highest use buildout (North Development). The pass-by traffic assignment is shown in **Figure 11** for the highest use buildout scenario (North Development).

Site traffic volumes were added to the 2026, 2028, and 2045 background volumes to represent estimated Phase 1, build-out year, and long-term traffic conditions. These total traffic volumes are shown for 2026 Phase 1 in **Figure 12**, 2028 Proposed Buildout in **Figure 13**, 2028 Highest Use

Scenario in **Figure 14**, 2045 Proposed Buildout in **Figure 15**, and 2045 Highest Use Scenario in **Figure 16**.

TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies at the project key intersections for the 2026 Phase 1, 2028 Buildout, and 2045 long term horizons. The acknowledged source for determining overall capacity is the *Highway Capacity Manual*[2].

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections and roadways in this study area, typical traffic study practice identifies overall intersection LOS D and movement or approach LOS E as the minimum thresholds for acceptable operations. The following **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

SH-94 Project Access Intersection

With the initial phase, the proposed project access along SH-94 will be a T-intersection with a south leg and will operate with stop control along the northbound exiting approach. With completion of Phase 1 of the rezone project, it is recommended that the northbound access approach be designated with one lane for all movements and be stop-controlled with installation of a R1-1 "STOP" sign. With the proposed buildout by 2028 on the north side of SH-94, it is recommended that the southbound access be designated with one lane for all movements and be stop-controlled with installation of a R1-1 "STOP" sign.

With the highest use scenario, it is anticipated that an eastbound left turn lane, a westbound right turn lane, and a southbound to westbound right turn acceleration will be needed based on CDOT standards. With these improvements, the northbound and southbound approaches are anticipated to operate poorly at LOS F under stop control during both the morning and afternoon peak hours in 2028. A signal warrant analysis was completed for this intersection, and it was found that a signal is warrant by 2028 for this highest use scenario. Therefore, it is recommended that this intersection be signalized if the highest use scenario is the future development program. Signal warrant analysis worksheets are attached. If this intersection is signalized, it is recommended that left turn lanes be designated on all four approaches. With these improvements this intersection is anticipated to operate acceptably throughout 2028.

2 Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.

Both Table 4: 2045 Roadway Improvement Projects of the 2016 El Paso County Major Transportation Corridor Plan (MTCP) and the State Highway 94 Access Management Plan show that SH-94 will be widened from two lanes to four lanes within the project limits sometime in the future. Therefore, this intersection was analyzed with two eastbound and westbound through lanes for the 2045 horizon in both scenarios. With the recommended improvements and the addition of project traffic, all movements at the proposed access intersection are expected to operate acceptably the 2045 horizon for both buildout scenarios. **Table 3** provides the results of the level of service analysis for this intersection with LOS worksheets attached.

Table 3 – SH-94 and Project Access Intersection LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Phase 1 – South Development				
2026 Background Plus Project				
Northbound Approach	27.3	D	22.9	C
Westbound Left	10.3	B	8.2	A
Buildout – Proposed Use				
2028 Background Plus Project				
Northbound Approach	35.9	E	30.8	D
Eastbound Left	8.4	A	10.5	B
Westbound Left	10.4	B	8.3	A
Southbound Approach	23.3	C	27.3	D
2045 Background Plus Project #				
Northbound Approach	38.5	E	21.9	C
Eastbound Left	8.7	A	11.5	B
Westbound Left	11.4	B	8.5	A
Southbound Approach	17.9	C	26.8	D
Buildout – Highest Use				
2028 Background Plus Project ##				
Northbound Approach	56.0	F	60.8	F
Eastbound Left	9.4	A	14.0	B
Westbound Left	9.8	A	8.1	A
Southbound Approach	>300	F	>300	F
2028 Background Plus Project ###	25.0	C	27.9	C
2045 Background Plus Project ####	43.8	D	51.9	D

= Two eastbound and westbound through lanes
= Eastbound left, westbound left and right, northbound and southbound approaches with left turn lane and shared through/right turn lane, southbound to westbound right turn acceleration lane
= ## + Signalized
= ### + Two eastbound and westbound through lanes

CDOT ACCESS PERMIT AND TURN LANE EVALUATION

The need or threshold for requiring an access permit along CDOT roadways occurs when a new access is proposed or if project traffic is anticipated to increase existing access traffic volumes by more than 20 percent. Therefore, it is believed that an access permit will be needed for both the north and south accesses along SH-94 for both development scenarios.

Since SH-94 is a state owned and maintained facility, it is recommended that auxiliary turn lanes along SH-94 be constructed in accordance with the current CDOT State Highway Access Code (SHAC). CDOT categorizes the segment of SH-94 adjacent to the property as NR-A: Non-Rural

Principal Highway. SH-94 has a posted speed limit of 65 miles per hour (mph) eastbound and 60 miles per hour westbound within the project limits. According to the State Highway Access Code for category NR-A roadways, the following thresholds apply:

- A left turn deceleration lane is required for any access with a projected average peak hour left turn ingress volume greater than 10 vehicles per hour (vph).
- A right turn deceleration lane is required for any access with a projected peak hour right turning volume greater than 25 vph.
- A right turn acceleration lane is required for any access with a projected peak hour right turning volume greater than 50 vph when the posted speed on the highway is greater than 40 mph.

Based on traffic projections and the above thresholds, auxiliary turn lane requirements were calculated for the SH-94 full movement access to the property. As such, turn lane requirements at the study area intersection along SH-94 are as follows:

Proposed Buildout:

- An eastbound right turn deceleration lane **is not** warranted based on projected 2028 background plus project traffic being four (4) right turns during the peak hour and the threshold being 25 vehicles per hour.
- An eastbound left turn deceleration lane **is not** warranted based on projected 2028 background plus project traffic being six (6) left turns during the peak hour and the threshold being 10 vehicles per hour.
- A westbound right turn deceleration lane **is not** warranted based on projected 2028 background plus project traffic being three (3) right turns during the peak hour and the threshold being 25 vehicles per hour.
- A westbound left turn deceleration lane **is not** warranted based on projected 2028 background plus project traffic being three (3) left turns during the peak hour and the threshold being 10 vehicles per hour.
- An eastbound acceleration lane along SH-94 from the project access northbound right turn **is not** warranted based on projected 2028 background plus project traffic being three (3) right turns during the peak hour and the threshold being 50 vehicles per hour.
- A westbound acceleration lane along SH-94 from the project access southbound right turn **is not** warranted based on projected 2028 background plus project traffic being six (6) right turns during the peak hour and the threshold being 50 vehicles per hour.

Highest Use:

- An eastbound right turn deceleration lane **is not** warranted based on projected 2028 background plus project traffic being four (4) right turns during the peak hour and the threshold being 25 vehicles per hour.
- An eastbound left turn deceleration lane **is** warranted based on projected 2028 background plus project traffic being 201 left turns during the peak hour. Since SH-94 has a category of NR-A, the left turn lane requirement is deceleration and storage lengths. Based on the 65-mile per hour speed limit, the deceleration lane length is 800 feet plus 200 feet of storage for a total length of 1,000 feet (which includes the 300-foot taper). Therefore, it is recommended that this lane be constructed to 700 feet plus 300-foot taper by 2028.
- A westbound right turn deceleration lane **is** warranted based on projected 2028 background plus project traffic being 226 right turns during the peak hour. Since SH-94 has a category of NR-A the right turn lane requirement is deceleration length. Based on the 60-mile per hour speed limit, the deceleration lane length is 700 feet. Therefore, it is recommended that this lane be constructed to 700 feet (which includes the 300-foot taper) by 2028.
- A westbound left turn deceleration lane **is not** warranted based on projected 2028 background plus project traffic being three (3) right turns during the peak hour and the threshold being 25

vehicles per hour. However, if an eastbound left turn lane is constructed at this access intersection, a substandard westbound left turn lane could be implemented within the shadow of the widening needed in association with the eastbound left turn lane.

- An eastbound acceleration lane along SH-94 from the project access northbound right turn **is not** warranted based on projected 2028 background plus project traffic being three (3) right turns during the peak hour and the threshold being 50 vehicles per hour.
- A westbound acceleration lane along SH-94 from the project access southbound right turn **is** warranted based on projected 2028 background plus project traffic being 296 right turns during the peak hour. Since SH-94 has a category of NR-A the right turn lane requirement is deceleration length. Based on the 60-mile per hour speed limit, the acceleration lane length is 1,170 feet. Therefore, it is recommended that this lane be constructed to 1,170 feet (which includes the 300-foot taper) by 2028.

SIGHT DISTANCE EVALUATION

Access for this project will be approximately 625 feet from the westernmost property line. It is believed that this access is appropriate at this location to provide the necessary sight distance needed. It is recommended that appropriate sight distance triangles be provided at all site access points to give drivers exiting the development areas a clear view of oncoming traffic. Landscaping and objects within sight triangles must not obstruct drivers' views of the adjacent travel lanes. Intersection sight distances for left turn from stop and right turn from stop were analyzed for the proposed project accesses along SH-94.

With AASHTO standards and a design speed of 65 miles per hour eastbound along SH-94, the intersection sight distance for a vehicle turning left from stop is 720 feet, while the sight distance for a vehicle turning right from stop is 625 feet. Therefore, all obstructions for left turning vehicles from stop should be clear to the right within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way (typical position of the minor road driver's eye when stopped) and a line of sight distance of 720 feet located in the middle of the eastbound through lane along SH-94. Likewise, all obstructions for right turning vehicles from stop should be clear to the left within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way and a line of sight distance of 625 feet located in the middle of the westbound through lane along SH-94.

With AASHTO standards and a design speed of 60 miles per hour westbound along SH-94, the intersection sight distance for a vehicle turning left from stop is 665 feet, while the sight distance for a vehicle turning right from stop is 575 feet. Therefore, all obstructions for left turning vehicles from stop should be clear to the right within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way (typical position of the minor road driver's eye when stopped) and a line of sight distance of 665 feet located in the middle of the westbound through lane along SH-94. Likewise, all obstructions for right turning vehicles from stop should be clear to the left within the triangle created with a vertex point located 14.5 feet from the edge of the major road traveled way and a line of sight distance of 575 feet located in the middle of the eastbound through lane along SH-94.

BICYCLE AND PEDESTRIAN ACCESS

Bicycle and pedestrian access evaluations were conducted for the UDON Rezone project. This focused on the areas of SH-94 adjacent to the site development areas. The following provides a description of the assessment.

Adjacent to the site, there are no bicycle lanes or sidewalks along SH-94. Although there are no bicycle lanes or sidewalks that exist within the study area there are very few destinations along SH-

94. By 2045, the MTCP states that the secondary regional trail is proposed along SH-94 within the project limits.

CONCLUSIONS AND RECOMMENDATIONS

In summary, this traffic study provides project traffic generation estimates to identify potential project traffic related impacts on the local street system with the proposed UDON Rezoning project for the proposed buildout and highest use scenarios. Kimley-Horn believes the proposed UDON Rezoning project will be successfully incorporated into the existing and future roadway network.

Based on the results of this study and the proposed use scenario, it is recommended that the access intersection along SH-94 be stop controlled with a R1-1 “STOP” sign installed on the northbound and southbound exiting approaches. Of note, this access will initially be a T-intersection with only the south area developing in Phase 1. The recommended intersection lane configurations and control for the project development are illustrated in **Figure 17** for the 2026 horizon and **Figure 18** for the 2028 horizon.

If the alternative highest use scenario develops, it is recommended that the access intersection along SH-94 be signalized with 700-foot plus 300-foot taper eastbound left turn lane, a 150-foot westbound left turn lane, a 400-foot plus 300-foot taper westbound right turn lane, a 870-foot with 300-foot taper westbound acceleration lane from the southbound right turn, and a left turn lane on the northbound and southbound approaches exiting the site. The recommended intersection lane configurations and control for the project development under the highest use scenario are illustrated in **Figure 19** for the 2028.

By 2045, it is anticipated that SH-94 will be reconstructed with two through lanes in each direction. The recommended 2045 intersection lane configurations and control for the project development are illustrated in **Figure 20** for the proposed buildout and **Figure 21** for the highest use scenario. If you have any questions or require anything further, please feel free to call me at (720) 943-9962.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Jeffrey R. Planck

Jeffrey R. Planck, P.E.
Project Traffic Engineer

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

Jeffrey R. Planck

Jeffrey R. Planck, P.E., PE #53006

April 18, 2024
Date

Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

Mr. Louis Ferrante
UDON Holdings, LLC
5801 N. Union Boulevard
Suite 100
Colorado Springs, CO 80918

Date

Figures

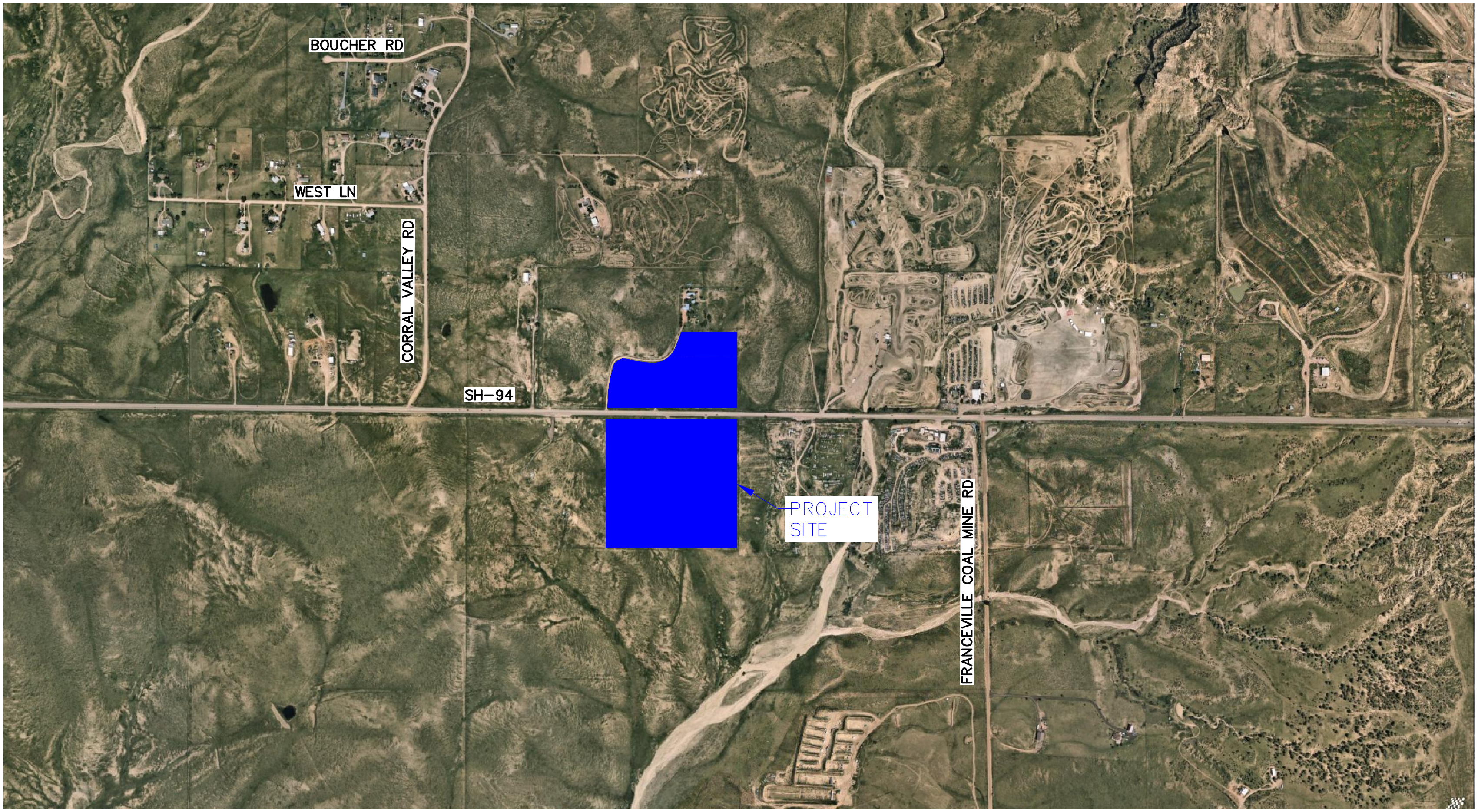
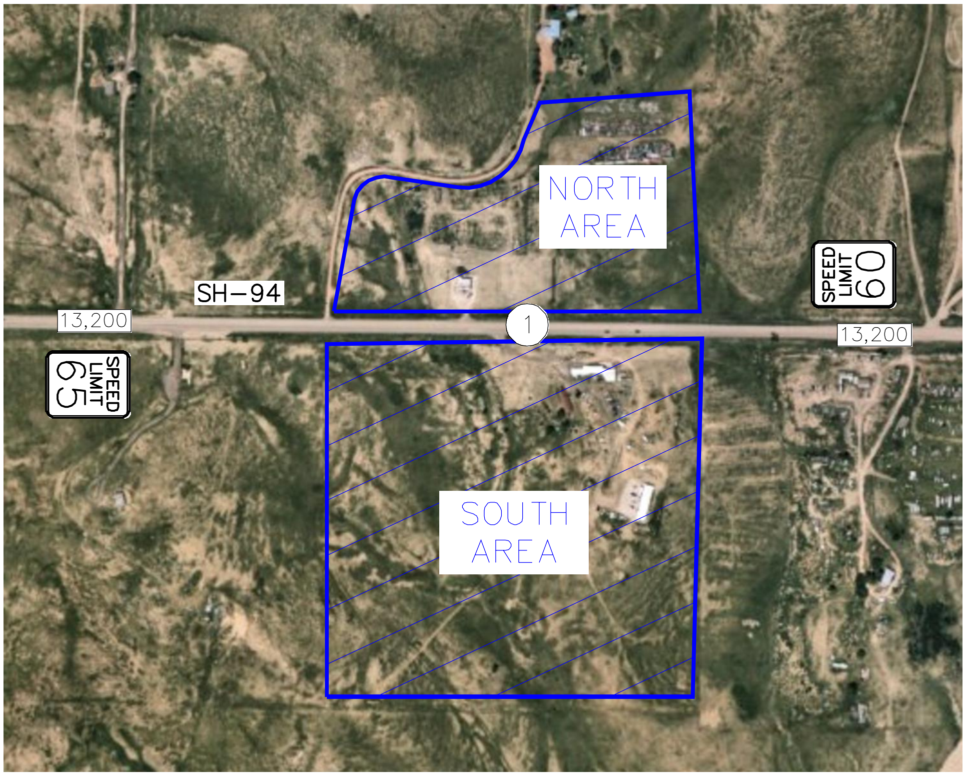


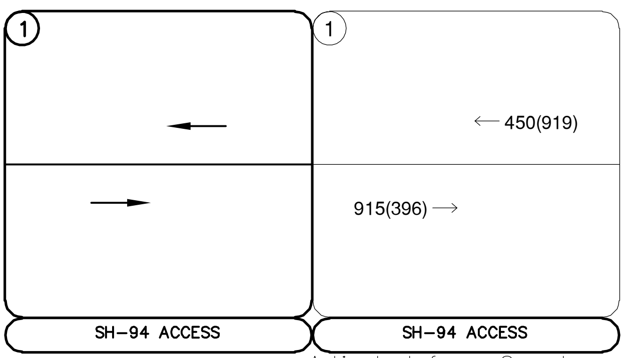
FIGURE 1
UDON REZONE
EL PASO COUNTY, COLORADO
VICINITY MAP

NORTH
NTS 196020000

Kimley»Horn

NORTH
NTS 196020000





Adjusted from Counts on
Thurs, July 11, 2019
7:00 to 8:00AM
(4:00 to 5:00PM)

LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume
SPEED LIMIT XX	Roadway Speed Limit

FIGURE 2
UDON REZONE
EL PASO COUNTY, COLORADO
2024 EXISTING LANE CONFIGURATIONS
AND TRAFFIC VOLUMES

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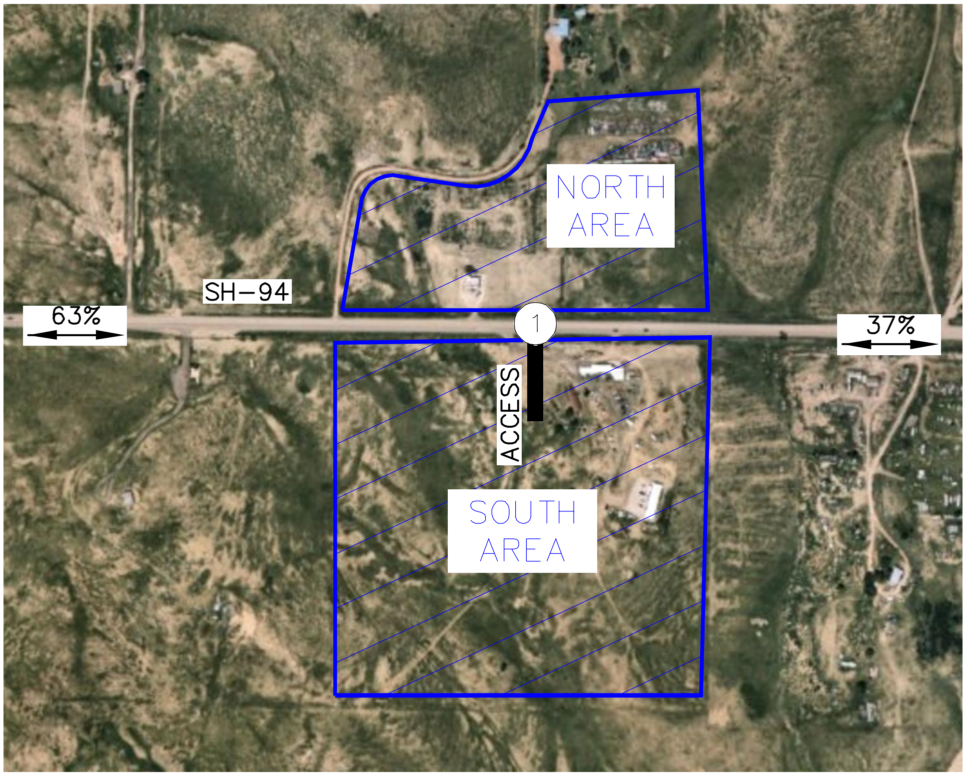


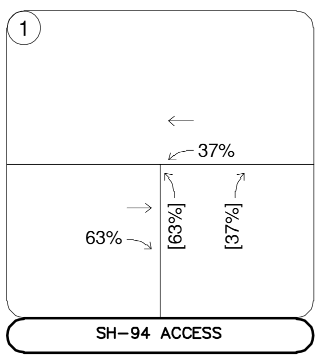
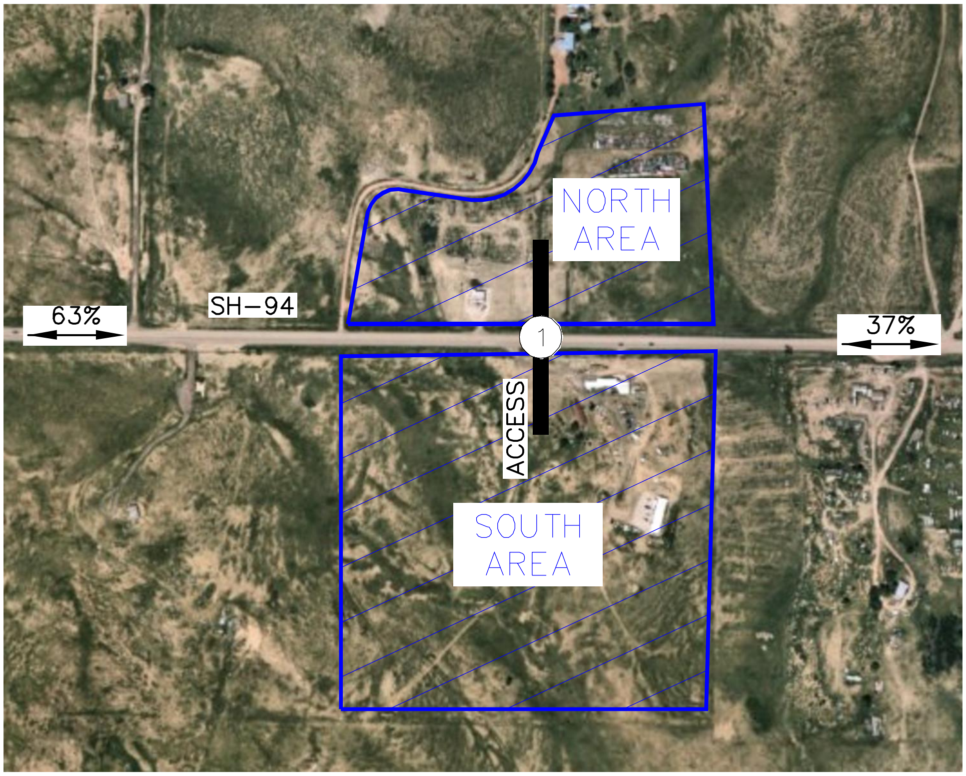


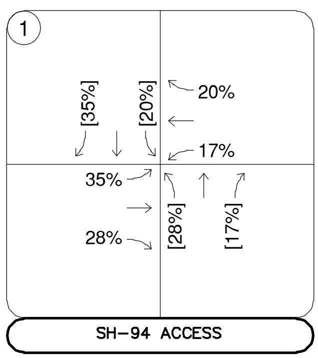
FIGURE 3
UDON REZONE
EL PASO COUNTY, COLORADO
NON PASS-BY PROJECT TRIP DISTRIBUTION - SOUTH AREA

LEGEND

X	Study Area Key Intersection
XX%	External Trip Distribution Percentage
XX%[XX%]	Entering[Exiting] Trip Distribution Percentage

Kimley»Horn

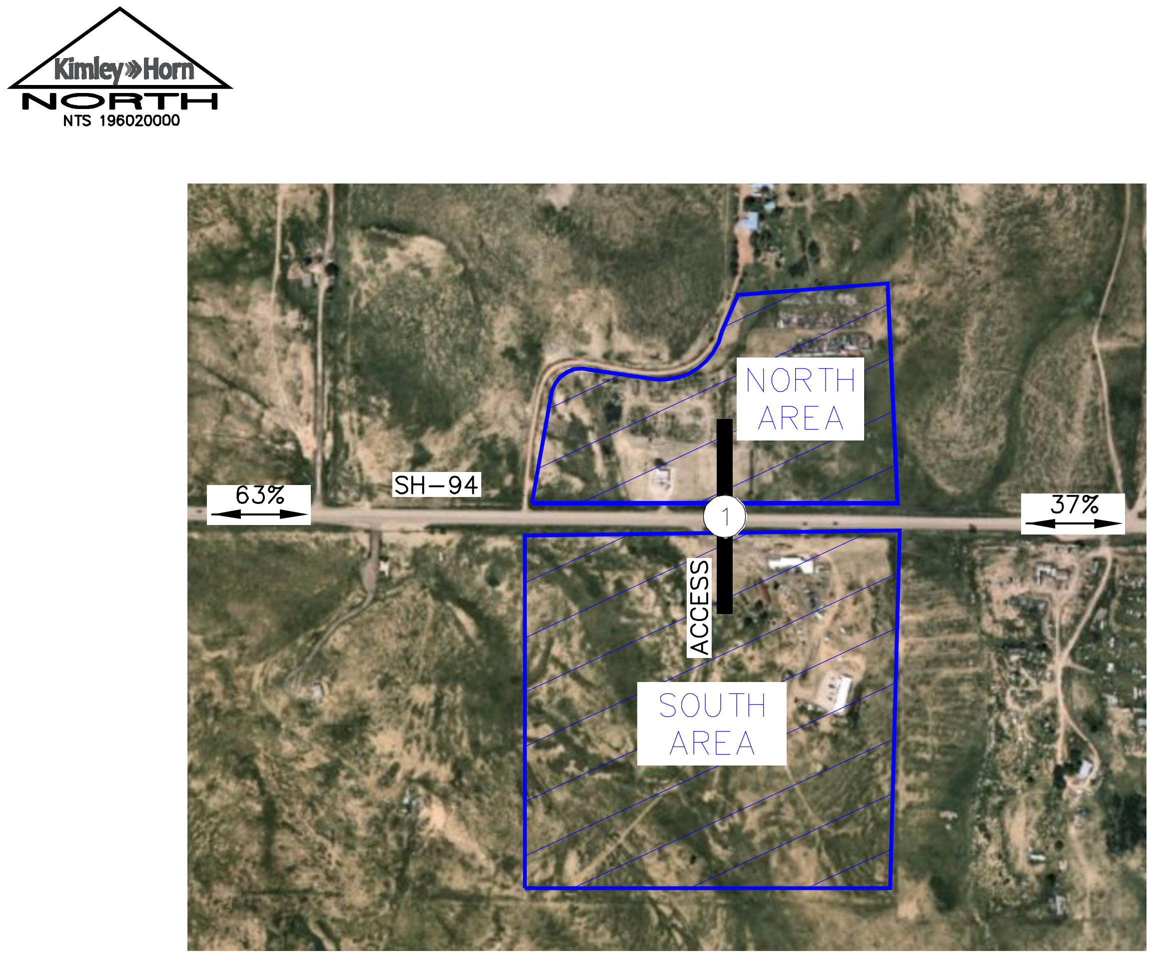




LEGEND

X	Study Area Key Intersection
XX%	External Trip Distribution Percentage
XX%[XX%]	Entering[Exiting] Trip Distribution Percentage

FIGURE 4
UDON REZONE
EL PASO COUNTY, COLORADO
NON PASS-BY PROJECT TRIP DISTRIBUTION - PROPOSED BUILDOUT



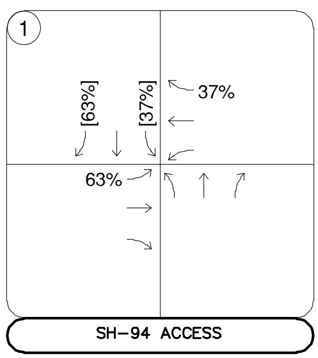
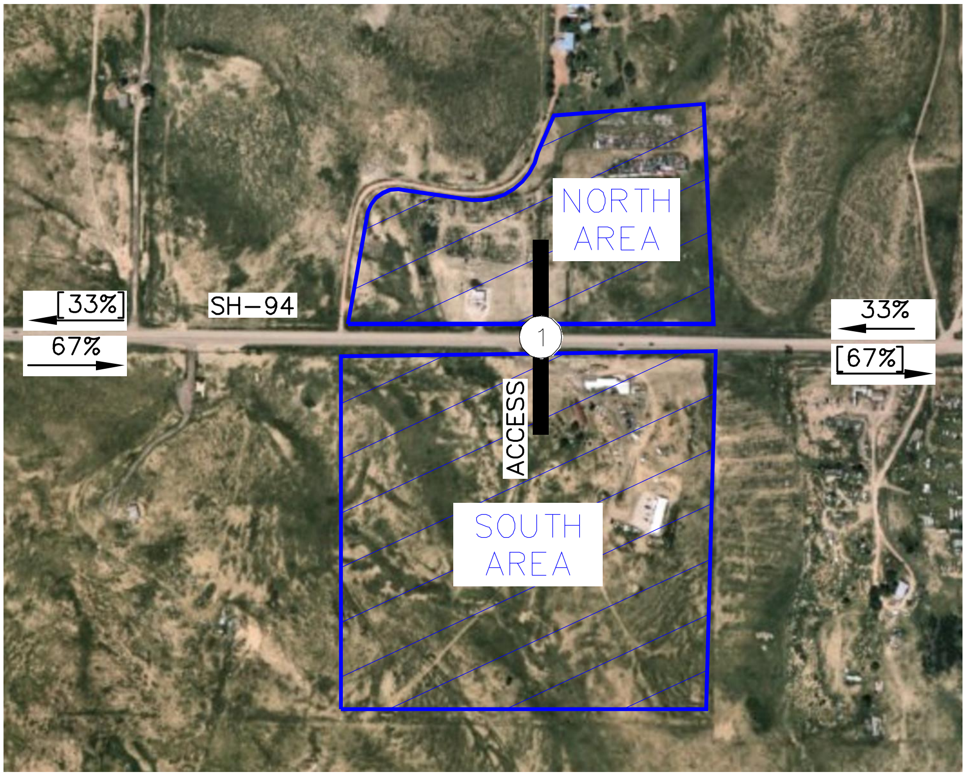


FIGURE 5
UDON REZONE
EL PASO COUNTY, COLORADO
NON PASS-BY PROJECT TRIP DISTRIBUTION – NORTH AREA – HIGHEST USE

LEGEND

X	Study Area Key Intersection
XX%	External Trip Distribution Percentage
XX%[XX%]	Entering[Exiting] Trip Distribution Percentage

Kimley»Horn



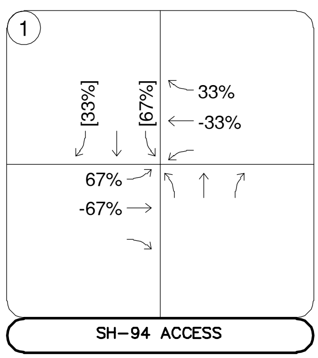
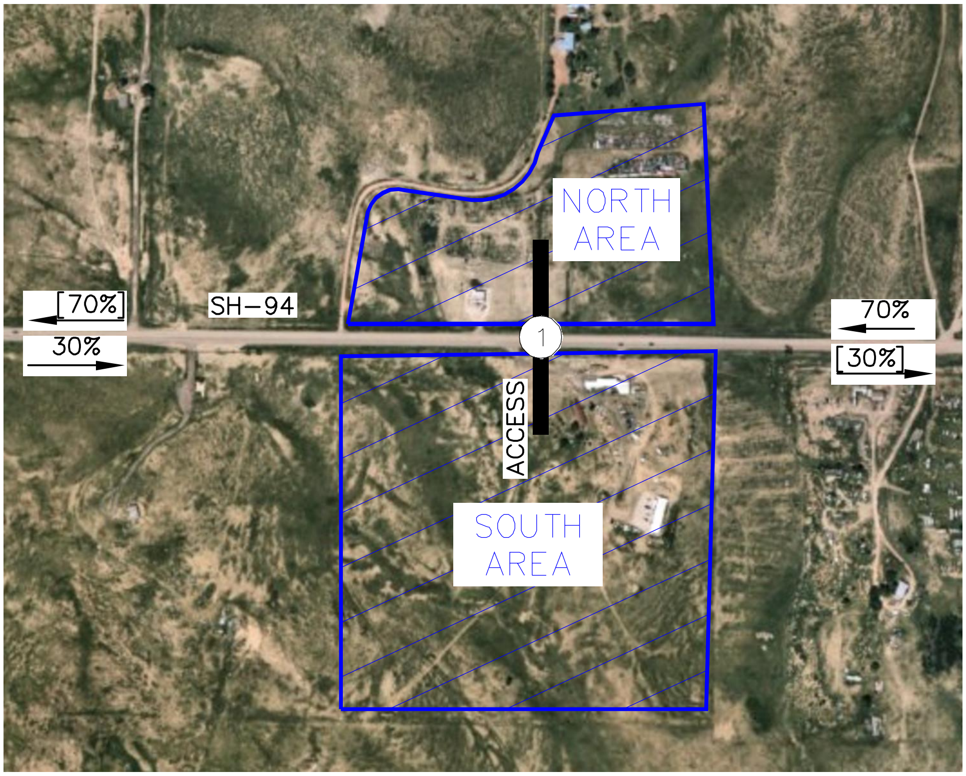


FIGURE 6
UDON REZONE
EL PASO COUNTY, COLORADO
AM PASS-BY PROJECT TRIP DISTRIBUTION – NORTH AREA – HIGHEST USE

LEGEND

X	Study Area Key Intersection
XX%	External Trip Distribution Percentage
XX%[XX%]	Entering[Exiting] Trip Distribution Percentage

Kimley»Horn



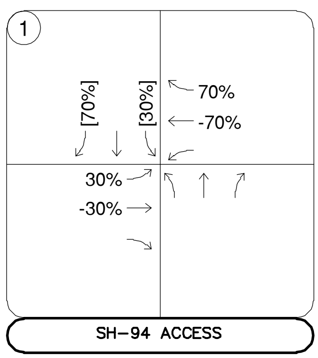
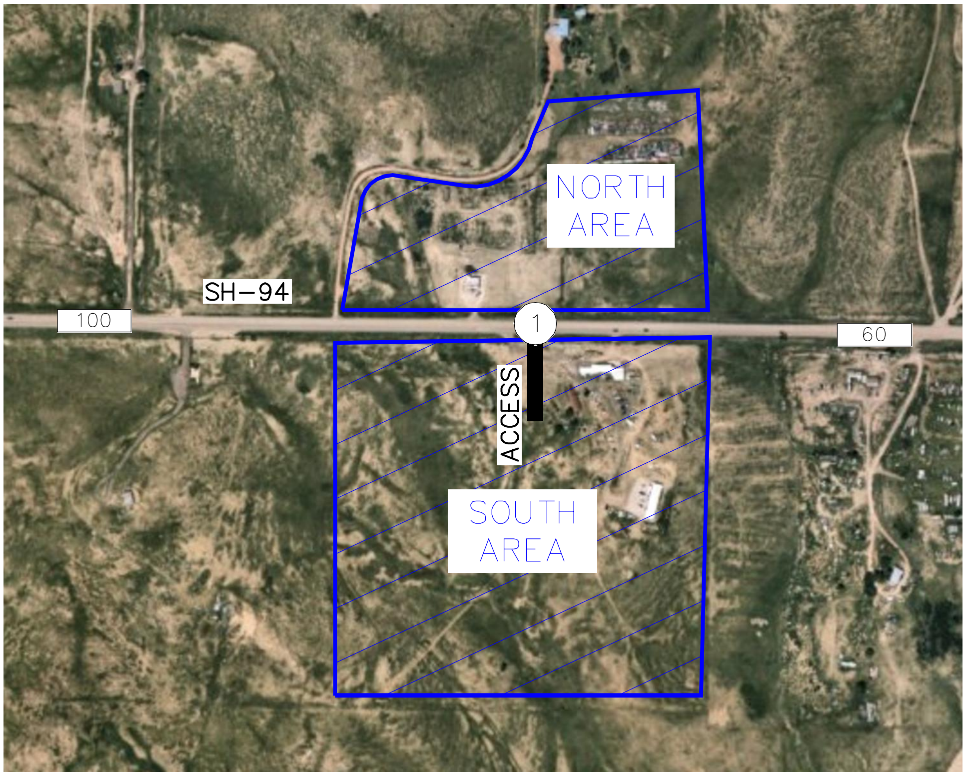


FIGURE 7
UDON REZONE
EL PASO COUNTY, COLORADO
PM PASS–BY PROJECT TRIP DISTRIBUTION – NORTH AREA – HIGHEST USE

LEGEND

X	Study Area Key Intersection
XX%	External Trip Distribution Percentage
XX%[XX%]	Entering[Exiting] Trip Distribution Percentage



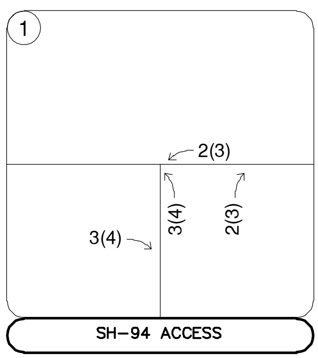
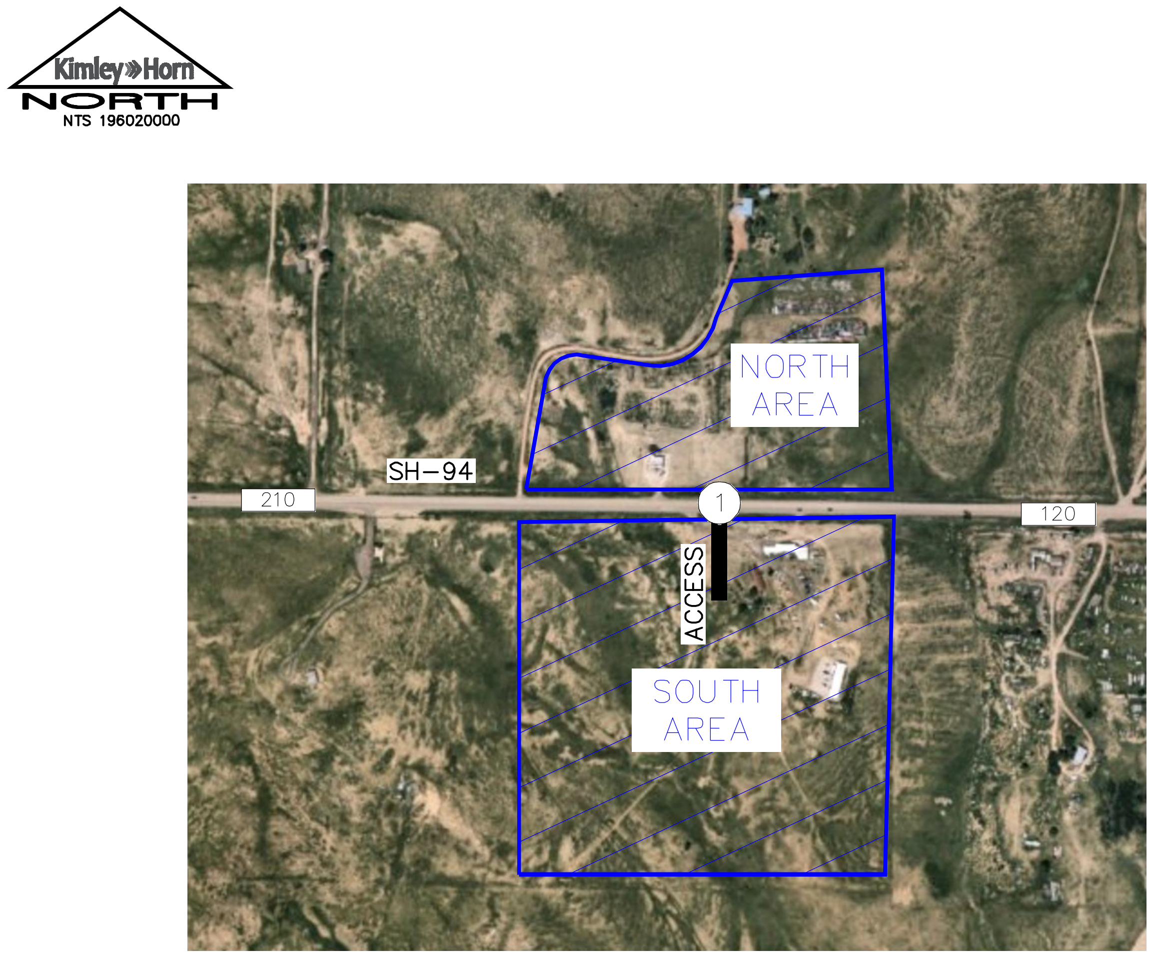


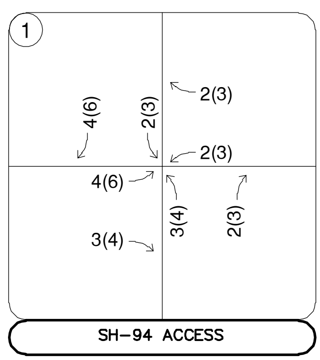
FIGURE 8
UDON REZONE
EL PASO COUNTY, COLORADO
NON PASS-BY PROJECT TRAFFIC
ASSIGNMENT - SOUTH AREA

LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

Kimley»Horn





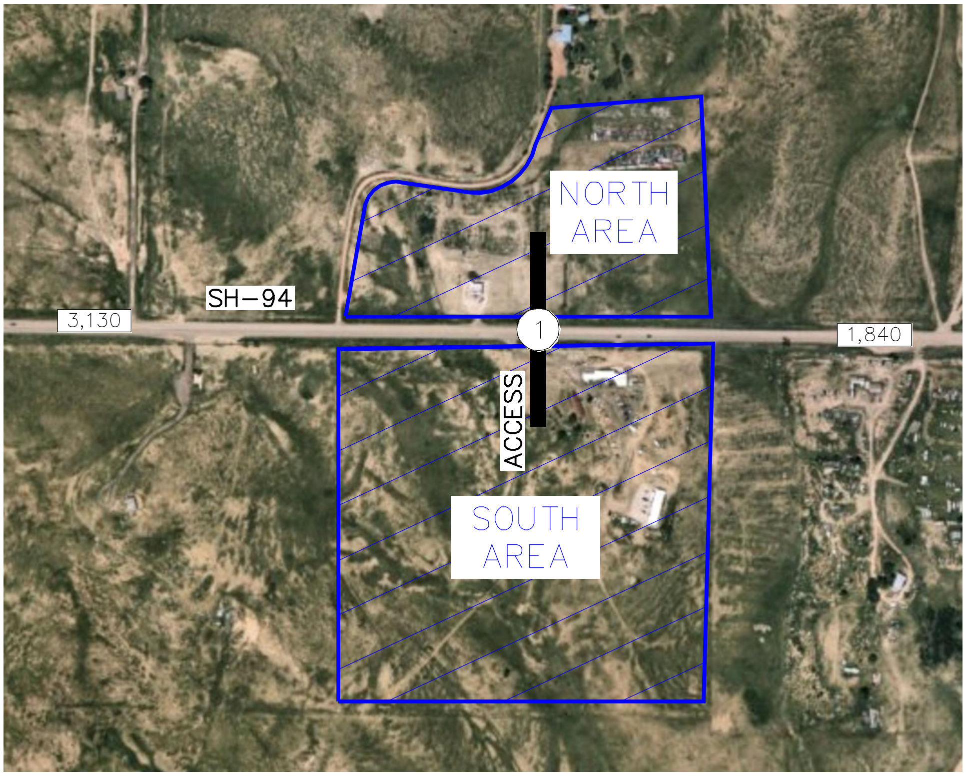
LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

FIGURE 9
UDON REZONE
EL PASO COUNTY, COLORADO
NON PASS-BY PROJECT TRAFFIC
ASSIGNMENT – PROPOSED BUILDOUT

Kimley»Horn

NORTH
NTS 196020000



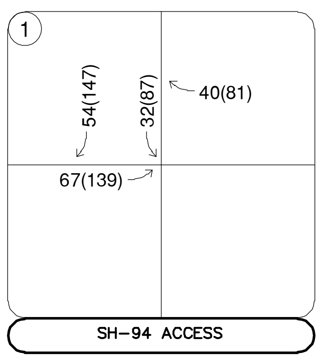
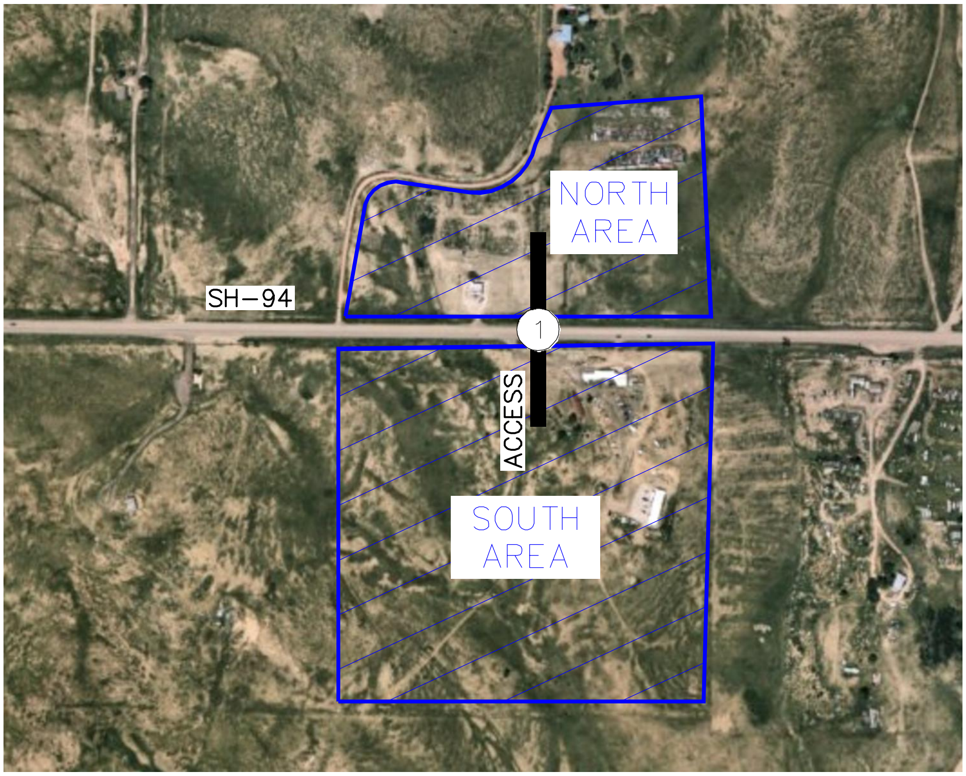


FIGURE 10
UDON REZONE
EL PASO COUNTY, COLORADO
NON PASS-BY PROJECT TRAFFIC
ASSIGNMENT - NORTH AREA -
HIGHEST USE

LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

Kimley»Horn



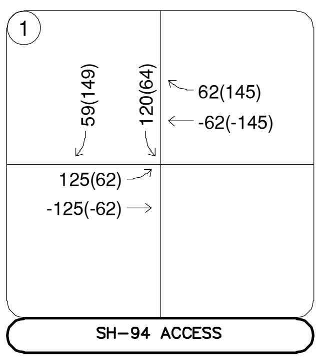


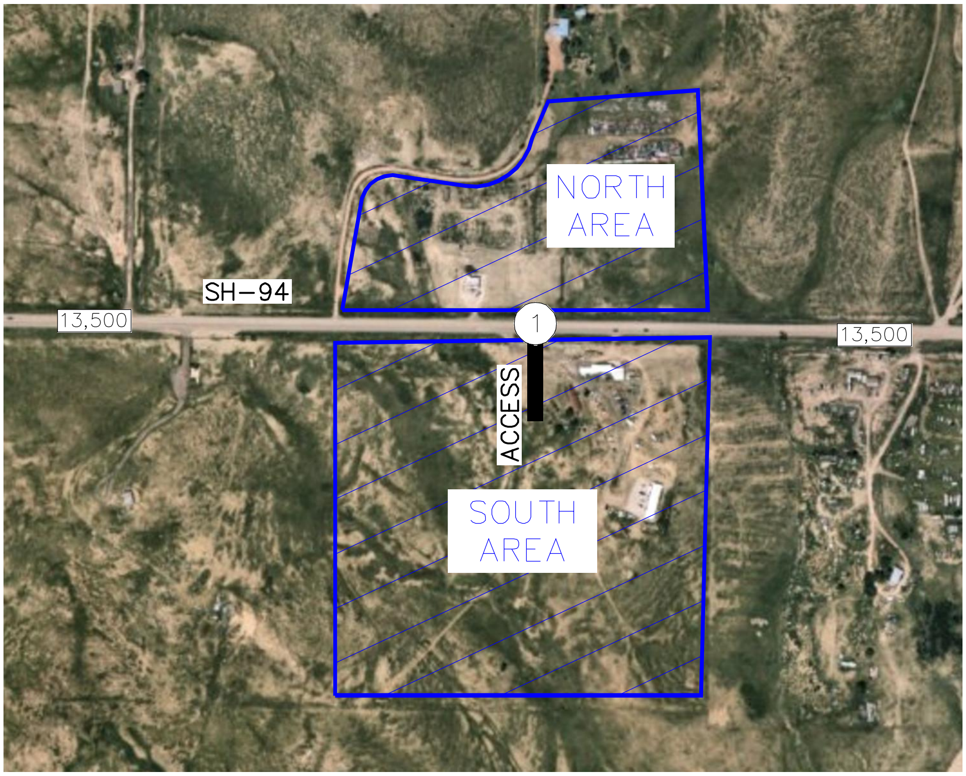
FIGURE 11
UDON REZONE
EL PASO COUNTY, COLORADO
PASS-BY PROJECT TRAFFIC ASSIGNMENT – NORTH AREA – HIGHEST USE

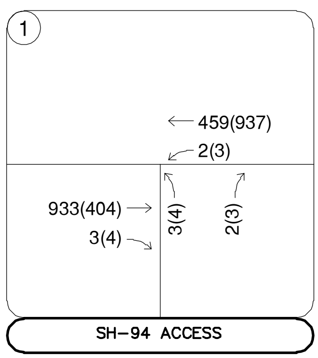
LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes

Kimley»Horn

NORTH
NTS 196020000





LEGEND

X Study Area Key Intersection

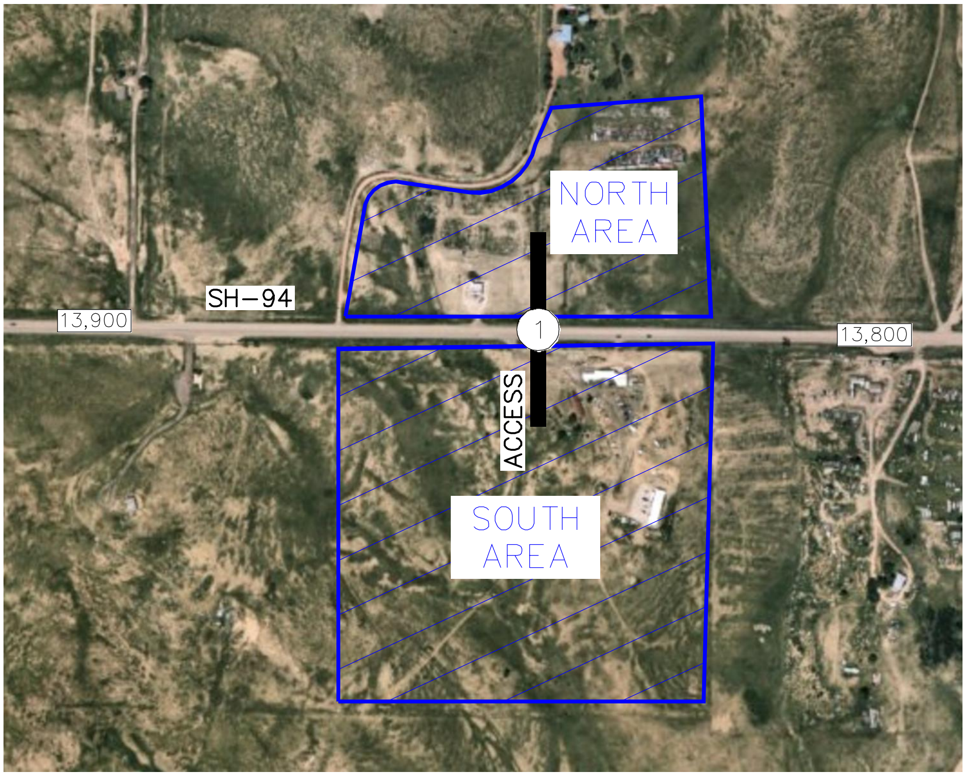
XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes

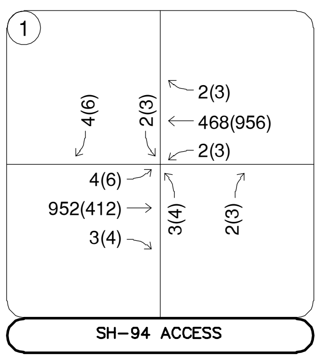
XX,X00 Estimated Daily Traffic Volume

FIGURE 12
UDON REZONE
EL PASO COUNTY, COLORADO
2026 TOTAL TRAFFIC VOLUMES – PHASE 1

Kimley»Horn

Kimley»Horn
NORTH
NTS 196020000





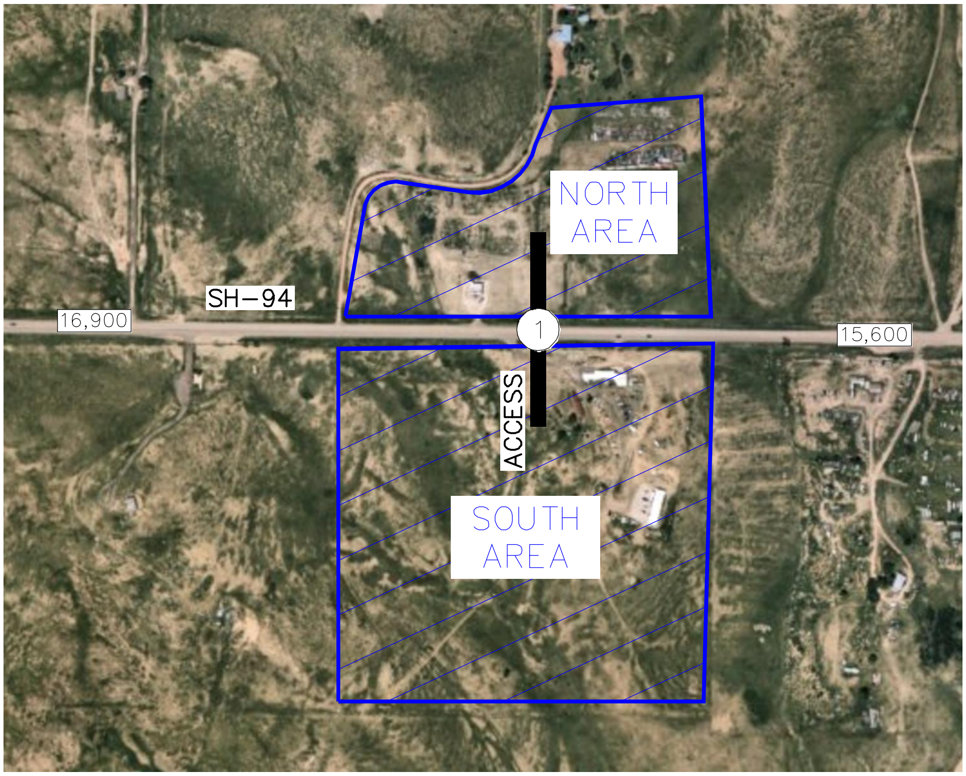
LEGEND

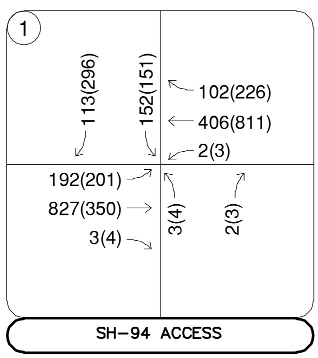
X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

FIGURE 13
UDON REZONE
EL PASO COUNTY, COLORADO
2028 TOTAL TRAFFIC VOLUMES – PROPOSED BUILDOUT

Kimley»Horn

NORTH
NTS 196020000



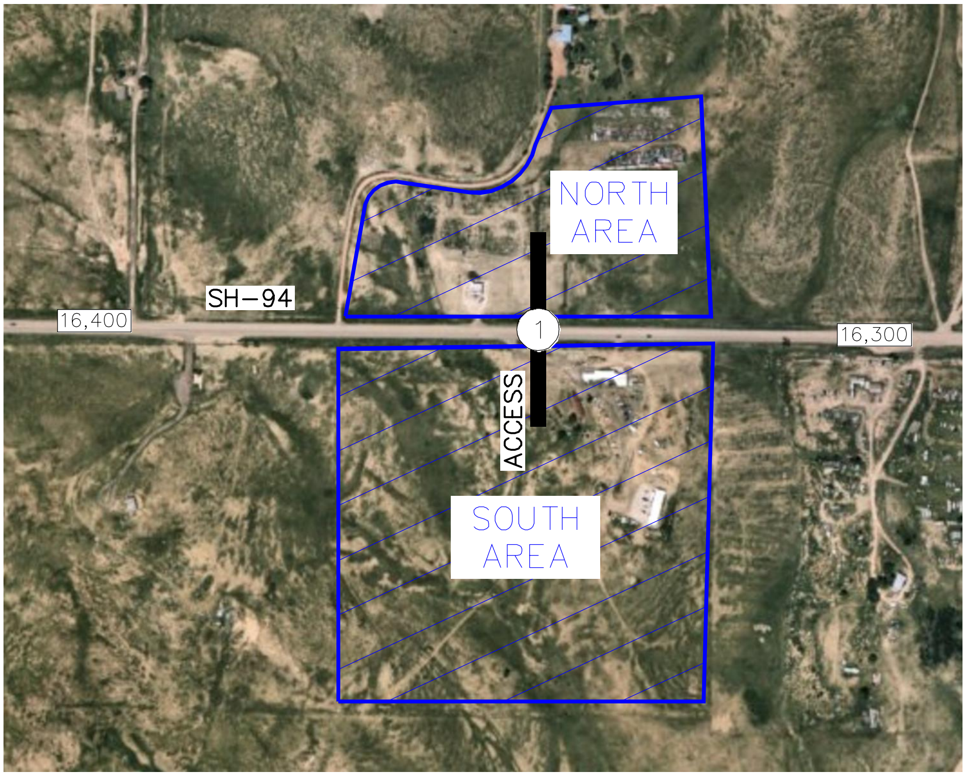


LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

FIGURE 14
UDON REZONE
EL PASO COUNTY, COLORADO
2028 TOTAL TRAFFIC VOLUMES – HIGHEST USE

Kimley»Horn



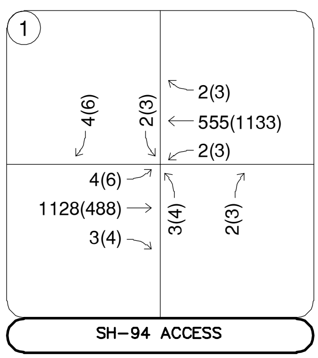


FIGURE 15
UDON REZONE
EL PASO COUNTY, COLORADO
2045 TOTAL TRAFFIC VOLUMES –
PROPOSED BUILDOUT

LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

Kimley»Horn

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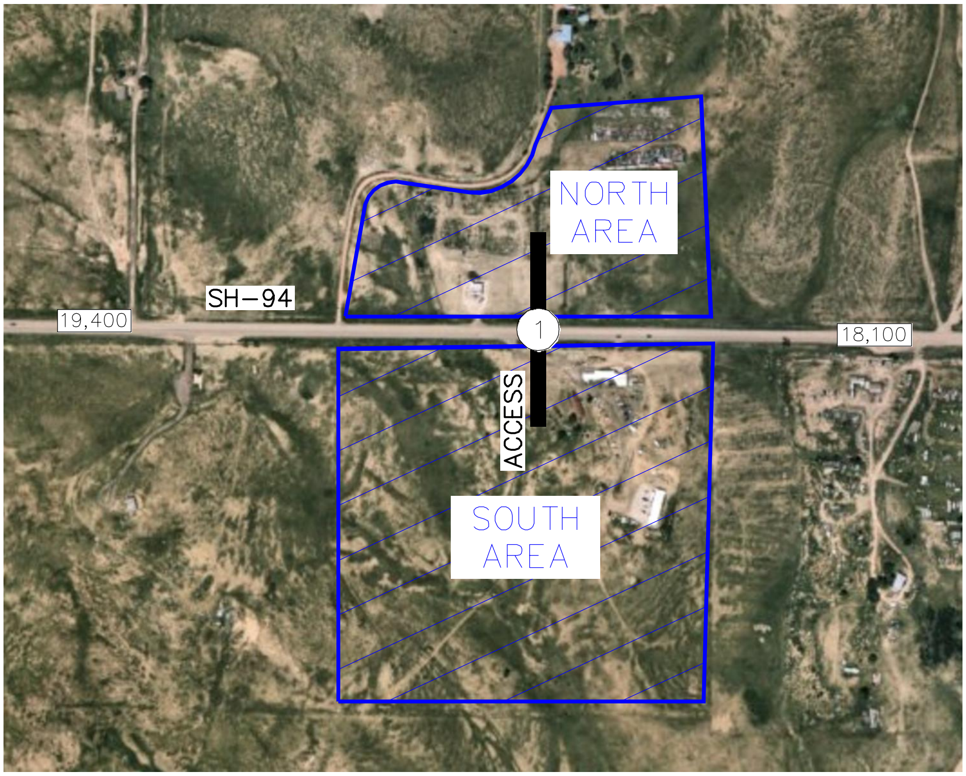
NORTH
NTS 196020000



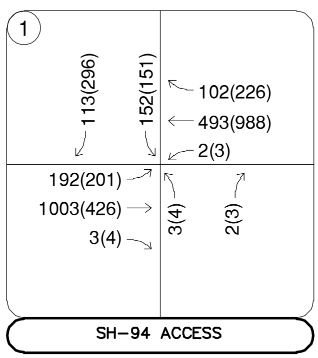
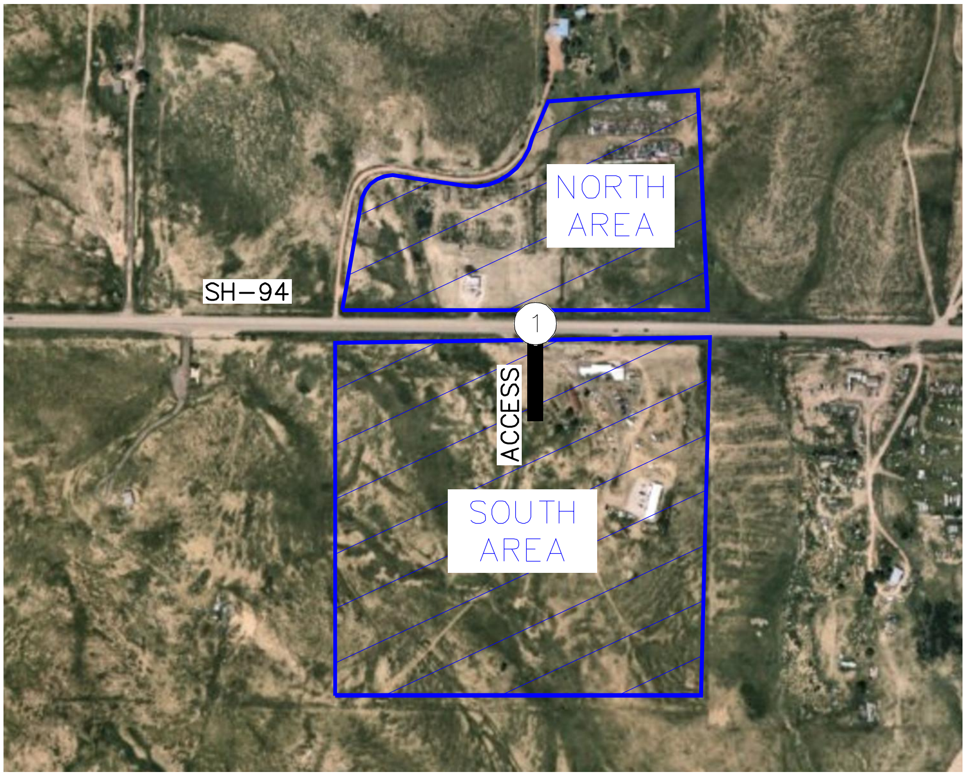


FIGURE 16
UDON REZONE
EL PASO COUNTY, COLORADO
2045 TOTAL TRAFFIC VOLUMES – HIGHEST USE

LEGEND

X	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

Kimley»Horn



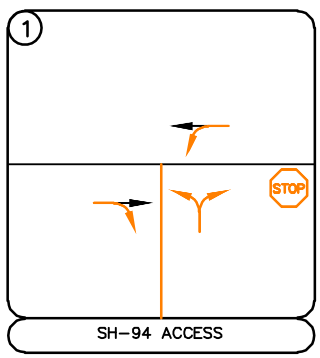


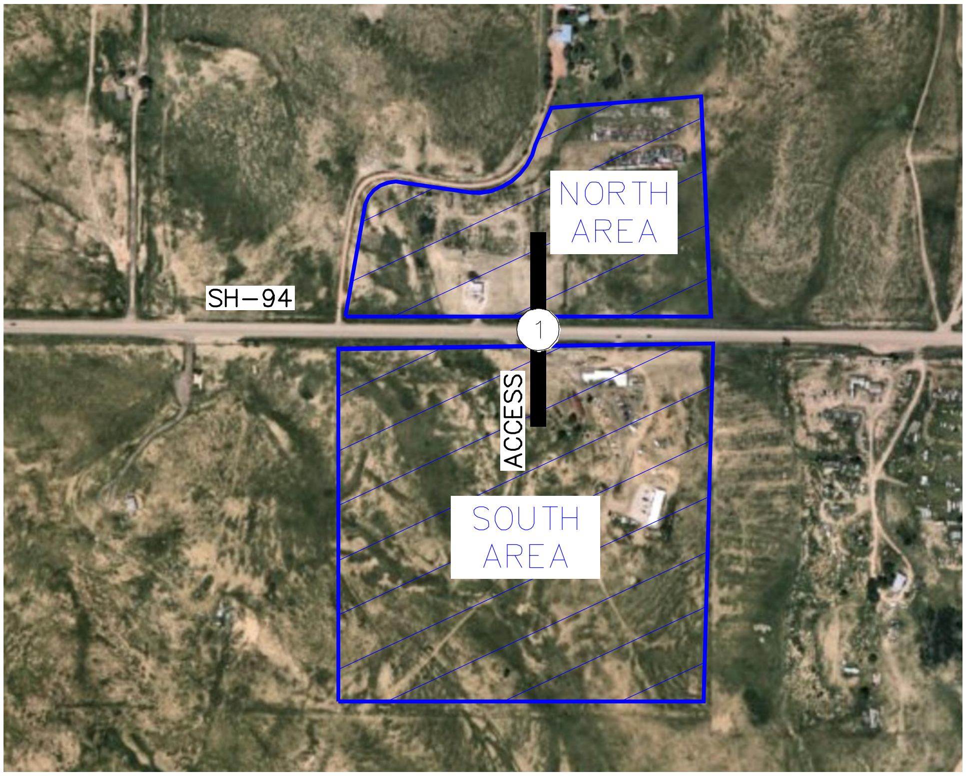
FIGURE 17
UDON REZONE
EL PASO COUNTY, COLORADO
2026 RECOMMENDED GEOMETRY & CONTROL - PHASE 1

LEGEND

- Study Area Key Intersection
- Stop Controlled Approach
- Improvement

NORTH
NTS 196020000

Kimley»Horn



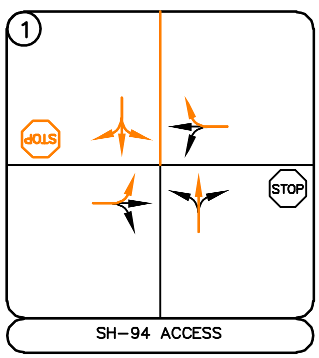


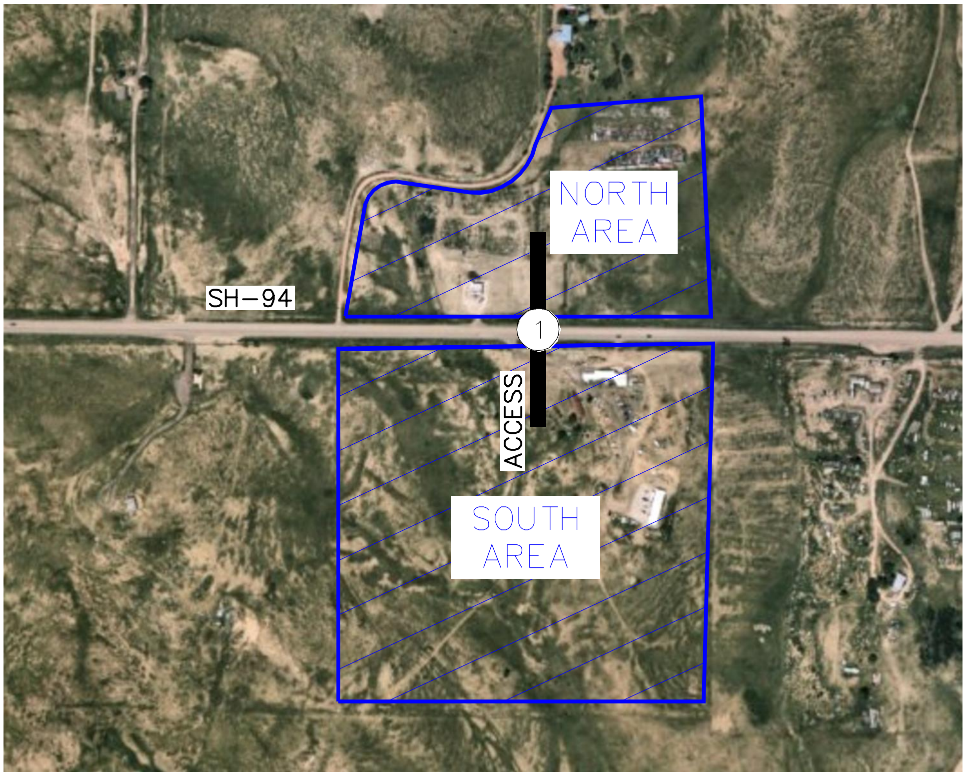
FIGURE 18
UDON REZONE
EL PASO COUNTY, COLORADO
2028 RECOMMENDED GEOMETRY &
CONTROL – PROPOSED BUILDOUT

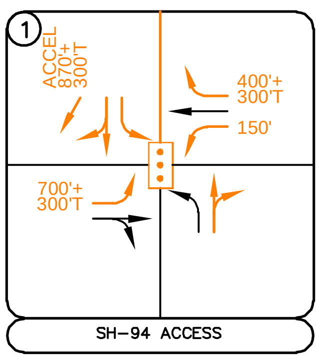
LEGEND

X	Study Area Key Intersection
(orange arrow)	Improvement
100'	Turn Lane Length (feet)

Kimley»Horn

NORTH
NTS 196020000



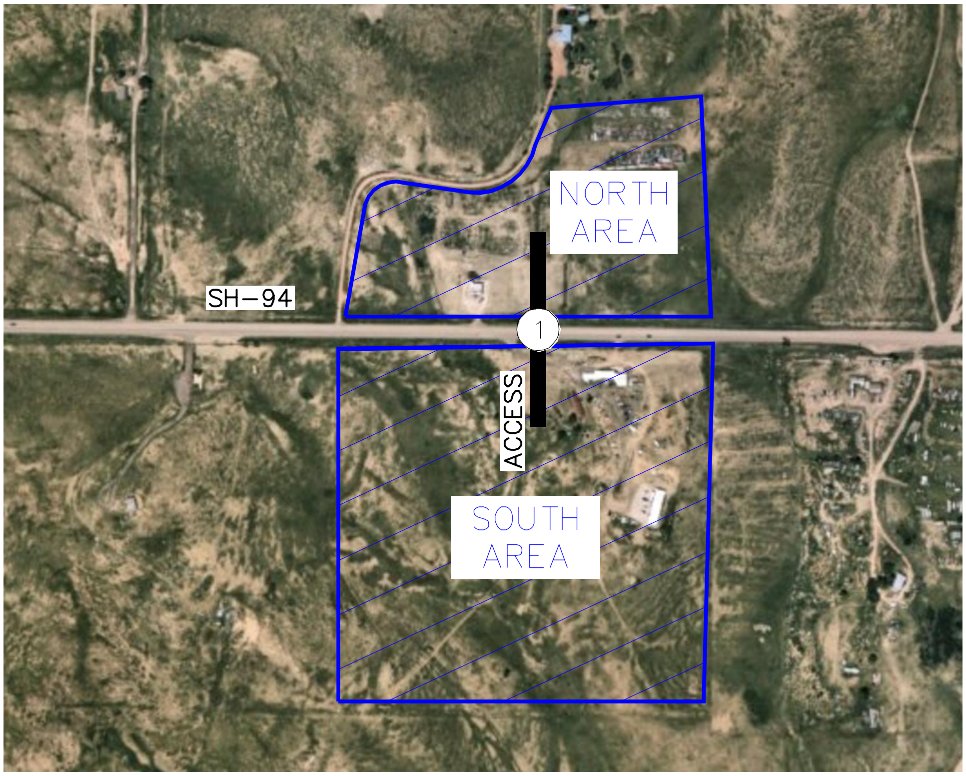


LEGEND

X	Study Area Key Intersection
	Signalized Intersection
	Improvement
100'	Turn Lane Length (feet)

FIGURE 19
UDON REZONE
EL PASO COUNTY, COLORADO
2028 RECOMMENDED GEOMETRY & CONTROL – HIGHEST USE

Kimley»Horn



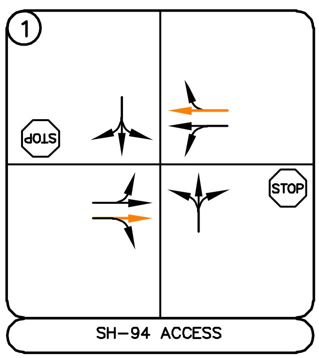


FIGURE 20
UDON REZONE
EL PASO COUNTY, COLORADO
2045 RECOMMENDED GEOMETRY &
CONTROL - PROPOSED BUILDOUT

LEGEND

(X)	Study Area Key Intersection
	Improvement
100'	Turn Lane Length (feet)

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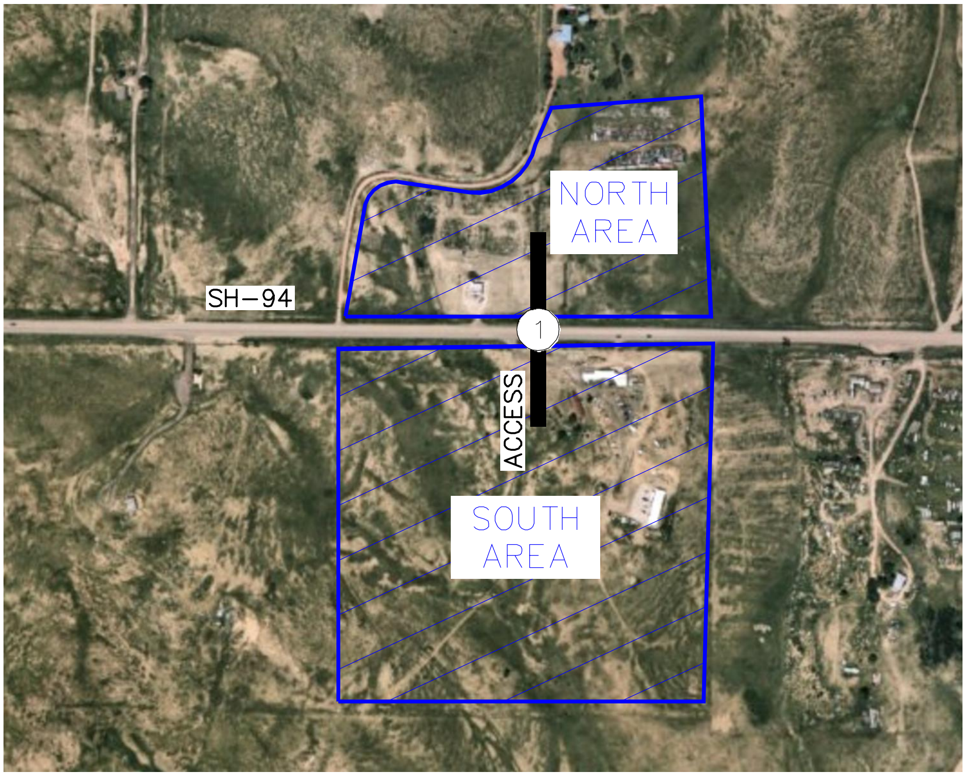
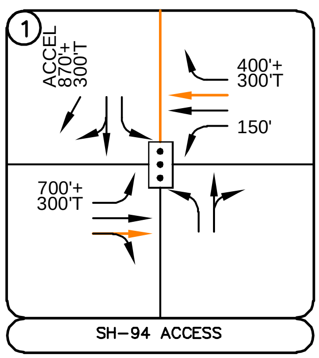
NORTH
NTS 196020000





LEGEND

- X Study Area Key Intersection
- Signalized Intersection
- Improvement
- 100' Turn Lane Length (feet)

FIGURE 21
UDON REZONE
EL PASO COUNTY, COLORADO
2045 RECOMMENDED GEOMETRY & CONTROL – HIGHEST USE

Kimley»Horn

Intersection Count Sheets

2019 CDOT Traffic Volume Data
Thursday, July 11, 2019
On SH-94 E/O Space Village Ave CR 2804

COUNTDIR	HOUR0	HOUR1	HOUR2	HOUR3	HOUR4	HOUR5	HOUR6	HOUR7	HOUR8	HOUR9	HOUR10	HOUR11	HOUR12	HOUR13	HOUR14	HOUR15	HOUR16	HOUR17	HOUR18	HOUR19	HOUR20	HOUR21	HOUR22	HOUR23	Total
P (EB)	22	23	16	13	93	272	747	871	439	262	248	222	286	246	282	292	377	429	309	224	155	129	95	52	6104
S (WB)	17	6	9	14	48	169	370	425	316	293	274	325	289	297	443	670	874	572	320	150	94	56	39	50	6120
Total	39	29	25	27	141	441	1117	1296	755	555	522	547	575	543	725	962	1251	1001	629	374	249	185	134	102	12224
Hour	12:00-1:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00	5:00-6:00	6:00-7:00	7:00-8:00	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	12:00-1:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00	5:00-6:00	6:00-7:00	7:00-8:00	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	

Traffic Projections

CDOT OTIS TRAFFIC PROJECTIONS: UDON REZONE

ROUTE	REFPT	ENDREFPT	LENGTH	AADT	AADTYR	YR20FACTOR	GROWTH RATE	LOCATION
094A	1	8.085	7.077	11000	2022	1.21	1.0%	ON SH 94 E/O SPACE VILLAGE AVE CR 2804

Trip Generation Worksheets

Kimley»Horn

Project	UDON Rezone (South - Proposed)				
Subject	Trip Generation for Mini Warehouse				
Designed by	TES	*Date*	March 14, 2024	*Job No.*	196020000
Checked by		*Date*		*Sheet No.*	of

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Mini-Warehouse (151)

Independent Variable - 100 Storage Units (X)
Storage Units = 860
X = 8.6
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Page 120)

Weekday Average
T = 1.21 (X)
T = 1.21 * 8.60

Directional Distribution: 51% ent. 49% exit.
T = 10 Average Vehicle Trip Ends
5 entering 5 exiting

5 + 5 = 10

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Page 121)

Weekday Average
T = 1.68 (X)
T = 1.68 * 8.6

Directional Distribution: 50% ent. 50% exit.
T = 14 Average Vehicle Trip Ends
7 entering 7 exiting

7 + 7 = 14

AM Peak Hour of Generator (Page 122)

Weekday Average
T = 2.04 (X)
T = 2.04 * 8.60

Directional Distribution: 58% ent. 42% exit.
T = 18 Average Vehicle Trip Ends
10 entering 8 exiting

10 + 8 = 18

PM Peak Hour of Generator (Page 123)

Weekday Average
T = 2.07 (X)
T = 2.07 * 8.6

Directional Distribution: 48% ent. 52% exit.
T = 17 Average Vehicle Trip Ends
8 entering 9 exiting

8 + 9 = 17

Weekday (Page 119)

Weekday Average
T = 17.96 (X)
T = 17.96 * 8.6

Directional Distribution: 50% entering, 50% exiting
T = 156 Average Vehicle Trip Ends
78 entering 78 exiting

78 + 78 = 156

Saturday (Page 124)

T = 16.29 (X)
T = 16.29 * 8.6

Directional Distribution: 50% entering, 50% exiting
T = 142 Average Vehicle Trip Ends
71 entering 71 exiting

71 + 71 = 142

Saturday Peak Hour of Generator (Page 125)

T = 2.67 (X)
T = 2.67 * 8.6

Directional Distribution: 56% entering, 44% exiting
T = 24 Average Vehicle Trip Ends
13 entering 11 exiting

13 + 11 = 24

Kimley»Horn

Project	UDON Rezone (North/South - Proposed)				
Subject	Trip Generation for Mini Warehouse				
Designed by	TES	*Date*	March 14, 2024	*Job No.*	196020000
Checked by		*Date*		*Sheet No.*	of

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Mini-Warehouse (151)

Independent Variable - 100 Storage Units (X)
Storage Units = 1,860
X = 18.6
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Page 120)

Weekday Average
T = 1.21 (X)
T = 1.21 * 18.60

Directional Distribution: 51% ent. 49% exit.
T = 23 Average Vehicle Trip Ends
12 entering 11 exiting

12 + 11 (*) = 23
(*) TRIP END WAS CHANGED BY 1 TO SATISFY THE TOTAL

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Page 121)

Weekday Average
T = 1.68 (X)
T = 1.68 * 18.6

Directional Distribution: 50% ent. 50% exit.
T = 31 Average Vehicle Trip Ends
16 entering 16 exiting

16 + 16 = not ok

AM Peak Hour of Generator (Page 122)

Weekday Average
T = 2.04 (X)
T = 2.04 * 18.60

Directional Distribution: 58% ent. 42% exit.
T = 38 Average Vehicle Trip Ends
22 entering 16 exiting

22 + 16 = 38

PM Peak Hour of Generator (Page 123)

Weekday Average
T = 2.07 (X)
T = 2.07 * 18.6

Directional Distribution: 48% ent. 52% exit.
T = 38 Average Vehicle Trip Ends
18 entering 20 exiting

18 + 20 = 38

Weekday (Page 119)

Weekday Average
T = 17.96 (X)
T = 17.96 * 18.6

Directional Distribution: 50% entering, 50% exiting
T = 336 Average Vehicle Trip Ends
168 entering 168 exiting

168 + 168 = 336

Saturday (Page 124)

T = 16.29 (X)
T = 16.29 * 18.6

Directional Distribution: 50% entering, 50% exiting
T = 304 Average Vehicle Trip Ends
152 entering 152 exiting

152 + 152 = 304

Saturday Peak Hour of Generator (Page 125)

T = 2.67 (X)
T = 2.67 * 18.6

Directional Distribution: 56% entering, 44% exiting
T = 50 Average Vehicle Trip Ends
28 entering 22 exiting

28 + 22 = 50

Trip Generation Planner (ITE 11th Edition) - Summary Report

Kimley»Horn

Weekday Trip Generation
Trips Based on Average Rates/Equations

Project Name **UDON Rezone - North - Highest Use**
Project Number **196020000**

							Rates			Total Trips							Net Trips after Pass-By						
ITE Code	**Internal Capture Land Use**	**Land Use Description**	**Independent Variable**	**Setting/Location**	**No. of Units**	**Avg Rate or Eq**	**Daily Rate**	**AM Rate**	**PM Rate**	**Daily Trips**	**AM Trips**	**PM Trips**	**AM Trips In**	**AM Trips Out**	**PM Trips In**	**PM Trips Out**	**Daily Trips**	**AM Trips**	**PM Trips**	**AM Trips In**	**AM Trips Out**	**PM Trips In**	**PM Trips Out**
820	Select Use	Shopping Center (>150k)	1,000 Sq Ft GLA	General Urban/Suburban	150	Avg	37.01	0.84	3.40	5,552	126	510	78	48	245	265	3,942	89	362	55	34	174	188
945	Select Use	Convenience Store/Gas Station	Fueling Position(s)	General Urban/Suburban	16	Avg	257.13	27.04	22.76	4,114	433	364	216	217	182	182	1,028	104	92	52	52	46	46
									Grand Total	9,666	559	874	294	265	427	447	4,970	193	454	107	86	220	234

Kimley»Horn

Project	UDON Rezone (North - Highest Use)				
Subject	Trip Generation for Shopping Center (>150k)				
Designed by	TES	*Date*	March 14, 2024	*Job No.*	196020000
Checked by		*Date*		*Sheet No.*	*of*

<u>TRIP GENERATION MANUAL TECHNIQUES</u>

ITE <u>Trip Generation Manual</u> 11th Edition, Average Rate Equations

Land Use Code - Shopping Center (>150k) (820)

Independent Variable - 1000 Square Feet Gross Leasable Area (X)

Gross Leasable Area = 150,000 Square Feet
X = 150.000
T = Average Vehicle Trip Ends

<u>Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 178)</u>

Average Weekday		Directional Distribution:	62% ent. 38% exit.
T = 0.84 * (X)		T = 126	Average Vehicle Trip Ends
T = 0.84 *	150	78 entering	48 exiting
		78 + 48 = 126	

<u>Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series page 179)</u>

Average Weekday		Directional Distribution:	48% ent. 52% exit.
T = 3.40 * (X)		T = 510	Average Vehicle Trip Ends
T = 3.40 *	150	245 entering	265 exiting
		245 + 265 = 510	

<u>Weekday (800 Series page 177)</u>

Average Weekday		Directional Distribution:	50% entering, 50% exiting
T = 37.01 * (X)		T = 5552	Average Vehicle Trip Ends
T = 37.01 *	150	2776 entering	2776 exiting
		2776 + 2776 = 5552	

<u>Non Pass-By Trip Volumes (Between 150 and 300k) (Per ITE Trip Generation Manual, 11th Edition)</u>

AM Peak Hour = 71% Non-Pass By   PM Peak Hour = 71% Non-Pass By

	IN	Out	Total	
AM Peak	55	34	89	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak	174	188	363	
Daily	1971	1971	3942	PM Peak Hour Rate Applied to Daily

<u>Pass-By Trip Volumes (Between 150 and 300k) (Per ITE Trip Generation Manual, 11th Edition)</u>

AM Peak Hour = 29% Pass By   PM Peak Hour = 29% Pass By

	IN	Out	Total	
AM Peak	23	14	37	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak	71	77	148	
Daily	805	805	1610	PM Peak Hour Rate Applied to Daily

<u>Non Pass-By Trip Volumes (Between 300 and 900k) (Per ITE Trip Generation Manual, 11th Edition)</u>

AM Peak Hour = 81% Non-Pass By   PM Peak Hour = 81% Non-Pass By

	IN	Out	Total	
AM Peak	63	39	102	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak	198	215	414	
Daily	2249	2249	4498	PM Peak Hour Rate Applied to Daily

<u>Pass-By Trip Volumes (Between 300 and 900k) (Per ITE Trip Generation Manual, 11th Edition)</u>

AM Peak Hour = 19% Pass By   PM Peak Hour = 19% Pass By

	IN	Out	Total	
AM Peak	15	9	24	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak	47	50	97	
Daily	527	527	1054	PM Peak Hour Rate Applied to Daily

Kimley»Horn

Project	UDON Rezone (North - Highest Use)				
Subject	Trip Generation for Gasoline/Service Station with Convenience Market				
Designed by	TES	*Date*	March 14, 2024	*Job No.*	196020000
Checked by		*Date*		*Sheet No.*	of

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Convenience Store/Gas Station - GFA (4-5.5K) (945)

Independent Variable - Vehicle Fueling Positions (X)

Vehicle Fueling Positions= 16 Positions
X = 16
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Page 873)

Average Weekday
T = 27.04 (X)
T = 27.04 * 16

Directional Distribution: 50% ent. 50% exit.
T = 433 Average Vehicle Trip Ends
216 entering 217 exiting

216 + 217 = 433

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Page 874)

Average Weekday
T = 22.76 (X)
T = 22.76 * 16.000

Directional Distribution: 50% ent. 50% exit.
T = 364 Average Vehicle Trip Ends
182 entering 182 exiting

182 + 182 = 364

Weekday (Page 872)

Average Weekday
T = 257.13 (X)
T = 257.13 * 16.000

Directional Distribution: 50% entering, 50% exiting
T = 4114 Average Vehicle Trip Ends
2057 entering 2057 exiting

2057 + 2057 = 4114

Non Pass-By Trip Volumes (Per ITE Trip Generation Manual, 11th Edition)

PM Peak Hour = 25% Non-Pass By AM Peak Hour = 24% Non-Pass By

	IN	Out	Total	
AM Peak	52	52	104	
PM Peak	46	46	91	
Daily	514	514	1028	PM Peak Hour Rate Applied to Daily

Pass-By Trip Volumes (Per ITE Trip Generation Manual, 11th Edition)

PM Peak Hour = 75% Pass By AM Peak Hour = 76% Pass By

	IN	Out	Total	
AM Peak	164	165	329	
PM Peak	137	137	273	
Daily	1543	1543	3086	PM Peak Hour Rate Applied to Daily

Intersection Capacity Analysis Outputs

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	933	3	2	459	3	2
Future Vol, veh/h	933	3	2	459	3	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1014	3	2	499	3	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1017	0	1519	1016
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	503	-
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	-	-	682	-	131	289
Stage 1	-	-	-	-	350	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	682	-	130	289
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	350	-
Stage 2	-	-	-	-	605	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	27.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	167	-	-	682	-
HCM Lane V/C Ratio	0.033	-	-	0.003	-
HCM Control Delay (s)	27.3	-	-	10.3	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	404	4	3	937	4	3
Future Vol, veh/h	404	4	3	937	4	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	439	4	3	1018	4	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	443	0	1465	441
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	1024	-
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	-	-	1117	-	141	616
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	347	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1117	-	140	616
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	345	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	209	-	-	1117	-
HCM Lane V/C Ratio	0.036	-	-	0.003	-
HCM Control Delay (s)	22.9	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

2028 Total AM - Buildout - Proposed Use

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	952	3	2	468	2	3	0	2	2	0	4
Future Vol, veh/h	4	952	3	2	468	2	3	0	2	2	0	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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1035	3	2	509	2	3	0	2	2	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	511	0	0	1038	0	0	1561	1560	1037	1560	1560	510
Stage 1	-	-	-	-	-	-	1045	1045	-	514	514	-
Stage 2	-	-	-	-	-	-	516	515	-	1046	1046	-
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	1054	-	-	670	-	-	91	112	281	91	112	563
Stage 1	-	-	-	-	-	-	276	306	-	543	535	-
Stage 2	-	-	-	-	-	-	542	535	-	276	305	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1054	-	-	670	-	-	89	111	281	89	111	563
Mov Cap-2 Maneuver	-	-	-	-	-	-	89	111	-	89	111	-
Stage 1	-	-	-	-	-	-	274	303	-	538	533	-
Stage 2	-	-	-	-	-	-	536	533	-	271	302	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	35.9	23.3
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	122	1054	-	-	670	-	-	203
HCM Lane V/C Ratio	0.045	0.004	-	-	0.003	-	-	0.032
HCM Control Delay (s)	35.9	8.4	0	-	10.4	0	-	23.3
HCM Lane LOS	E	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	412	4	3	956	3	4	0	3	3	0	6
Future Vol, veh/h	6	412	4	3	956	3	4	0	3	3	0	6
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	448	4	3	1039	3	4	0	3	3	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1042	0	0	452	0	0	1514	1512	450	1513	1513	1041
Stage 1	-	-	-	-	-	-	464	464	-	1047	1047	-
Stage 2	-	-	-	-	-	-	1050	1048	-	466	466	-
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	667	-	-	1109	-	-	98	120	609	98	120	279
Stage 1	-	-	-	-	-	-	578	564	-	276	305	-
Stage 2	-	-	-	-	-	-	275	305	-	577	562	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	667	-	-	1109	-	-	94	118	609	96	118	279
Mov Cap-2 Maneuver	-	-	-	-	-	-	94	118	-	96	118	-
Stage 1	-	-	-	-	-	-	570	556	-	272	303	-
Stage 2	-	-	-	-	-	-	267	303	-	566	554	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	30.8	27.3
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	147	667	-	-	1109	-	-	171
HCM Lane V/C Ratio	0.052	0.01	-	-	0.003	-	-	0.057
HCM Control Delay (s)	30.8	10.5	0	-	8.3	0	-	27.3
HCM Lane LOS	D	B	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1128	3	2	555	2	3	0	2	2	0	4
Future Vol, veh/h	4	1128	3	2	555	2	3	0	2	2	0	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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1226	3	2	603	2	3	0	2	2	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	605	0	0	1229	0	0	1542	1845	615	1229	1845	303
Stage 1	-	-	-	-	-	-	1236	1236	-	608	608	-
Stage 2	-	-	-	-	-	-	306	609	-	621	1237	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	969	-	-	563	-	-	78	74	434	134	74	693
Stage 1	-	-	-	-	-	-	187	246	-	450	484	-
Stage 2	-	-	-	-	-	-	679	484	-	442	246	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	969	-	-	563	-	-	76	73	434	131	73	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	76	73	-	131	73	-
Stage 1	-	-	-	-	-	-	185	243	-	444	482	-
Stage 2	-	-	-	-	-	-	671	482	-	434	243	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	38.5	17.9
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	113	969	-	-	563	-	-	285
HCM Lane V/C Ratio	0.048	0.004	-	-	0.004	-	-	0.023
HCM Control Delay (s)	38.5	8.7	0.1	-	11.4	0	-	17.9
HCM Lane LOS	E	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	488	4	3	1133	3	4	0	3	3	0	6
Future Vol, veh/h	6	488	4	3	1133	3	4	0	3	3	0	6
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	530	4	3	1232	3	4	0	3	3	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1235	0	0	534	0	0	1168	1787	267	1519	1788	618
Stage 1	-	-	-	-	-	-	546	546	-	1240	1240	-
Stage 2	-	-	-	-	-	-	622	1241	-	279	548	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	560	-	-	1030	-	-	149	80	731	82	80	432
Stage 1	-	-	-	-	-	-	490	516	-	186	245	-
Stage 2	-	-	-	-	-	-	441	245	-	704	515	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	560	-	-	1030	-	-	144	78	731	80	78	432
Mov Cap-2 Maneuver	-	-	-	-	-	-	144	78	-	80	78	-
Stage 1	-	-	-	-	-	-	481	507	-	183	243	-
Stage 2	-	-	-	-	-	-	430	243	-	688	506	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	21.9	26.8
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	220	560	-	-	1030	-	-	175
HCM Lane V/C Ratio	0.035	0.012	-	-	0.003	-	-	0.056
HCM Control Delay (s)	21.9	11.5	0.1	-	8.5	0	-	26.8
HCM Lane LOS	C	B	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	99.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	192	827	3	2	406	102	3	0	2	152	0	113
Future Vol, veh/h	192	827	3	2	406	102	3	0	2	152	0	113
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	-	-	None	-	-	None	-	-	Free
Storage Length	600	-	-	-	-	400	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	209	899	3	2	441	111	3	0	2	165	0	123

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	552	0	0	902	0	0	1820	1875	901	1765	1765	-
Stage 1	-	-	-	-	-	-	1319	1319	-	445	445	-
Stage 2	-	-	-	-	-	-	501	556	-	1320	1320	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	-
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	-
Pot Cap-1 Maneuver	1018	-	-	754	-	-	60	72	337	~ 65	84	0
Stage 1	-	-	-	-	-	-	193	227	-	592	575	0
Stage 2	-	-	-	-	-	-	552	513	-	193	226	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1018	-	-	754	-	-	50	57	337	~ 54	67	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	57	-	~ 54	67	-
Stage 1	-	-	-	-	-	-	153	180	-	471	573	-
Stage 2	-	-	-	-	-	-	550	511	-	~ 152	180	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0	56	$ 1088.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	76	1018	-	-	754	-	-	54	-
HCM Lane V/C Ratio	0.072	0.205	-	-	0.003	-	-	3.06	-
HCM Control Delay (s)	56	9.4	-	-	9.8	0	-	$ 1088.7	0
HCM Lane LOS	F	A	-	-	A	A	-	F	A
HCM 95th %tile Q(veh)	0.2	0.8	-	-	0	-	-	17.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	99.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	201	350	4	3	811	226	4	0	3	151	0	296
Future Vol, veh/h	201	350	4	3	811	226	4	0	3	151	0	296
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	-	-	None	-	-	None	-	-	Free
Storage Length	600	-	-	-	-	400	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	218	380	4	3	882	246	4	0	3	164	0	322

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1128	0	0	384	0	0	1829	1952	382	1708	1708	-
Stage 1	-	-	-	-	-	-	818	818	-	888	888	-
Stage 2	-	-	-	-	-	-	1011	1134	-	820	820	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	-
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	-
Pot Cap-1 Maneuver	619	-	-	1174	-	-	59	64	665	~ 72	91	0
Stage 1	-	-	-	-	-	-	370	390	-	338	362	0
Stage 2	-	-	-	-	-	-	289	278	-	369	389	0
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	619	-	-	1174	-	-	43	41	665	~ 52	59	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	43	41	-	~ 52	59	-
Stage 1	-	-	-	-	-	-	240	253	-	219	359	-
Stage 2	-	-	-	-	-	-	287	276	-	238	252	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.1	0	60.8	$ 1137.1
HCM LOS			F	F

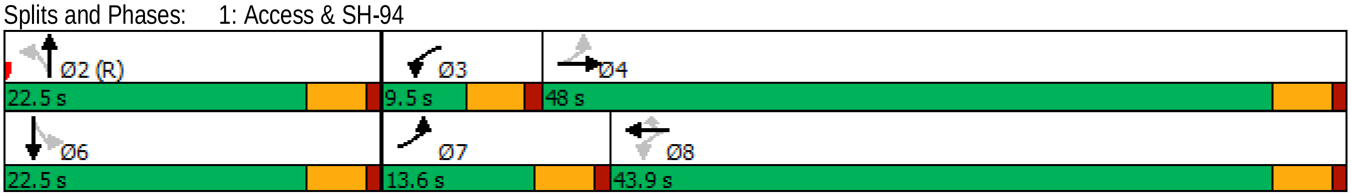
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	72	619	-	-	1174	-	-	52	-
HCM Lane V/C Ratio	0.106	0.353	-	-	0.003	-	-	3.156	-
HCM Control Delay (s)	60.8	14	-	-	8.1	0		$ 1137.1	0
HCM Lane LOS	F	B	-	-	A	A	-	F	A
HCM 95th %tile Q(veh)	0.3	1.6	-	-	0	-	-	17.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	192	827	2	406	102	3	0	152	0
Future Volume (vph)	192	827	2	406	102	3	0	152	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	13.6	48.0	9.5	43.9	43.9	22.5	22.5	22.5	22.5
Total Split (%)	17.0%	60.0%	11.9%	54.9%	54.9%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	C-Max	C-Max	Max	Max
Act Effct Green (s)	45.2	43.3	36.9	31.9	31.9	25.8	25.8	25.8	25.8
Actuated g/C Ratio	0.56	0.54	0.46	0.40	0.40	0.32	0.32	0.32	0.32
v/c Ratio	0.45	0.89	0.01	0.59	0.16	0.01	0.00	0.36	0.15
Control Delay	10.8	29.3	6.0	21.8	3.1	22.7	0.0	26.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	29.3	6.0	21.8	3.1	22.7	0.0	26.0	0.4
LOS	B	C	A	C	A	C	A	C	A
Approach Delay		25.8		18.0			13.6		15.1
Approach LOS		C		B			B		B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 22.0	Intersection LOS: C
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Access & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	827	3	2	406	102	3	0	2	152	0	113
Future Volume (veh/h)	192	827	3	2	406	102	3	0	2	152	0	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	209	899	3	2	441	111	3	0	2	165	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	462	958	3	133	805	682	535	0	498	533	588	
Arrive On Green	0.09	0.51	0.51	0.00	0.43	0.43	0.31	0.00	0.31	0.31	0.00	0.00
Sat Flow, veh/h	1781	1863	6	1781	1870	1585	1418	0	1585	1415	1870	0
Grp Volume(v), veh/h	209	0	902	2	441	111	3	0	2	165	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1869	1781	1870	1585	1418	0	1585	1415	1870	0
Q Serve(g_s), s	4.9	0.0	36.2	0.1	14.1	3.4	0.1	0.0	0.1	7.3	0.0	0.0
Cycle Q Clear(g_c), s	4.9	0.0	36.2	0.1	14.1	3.4	0.1	0.0	0.1	7.3	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	462	0	961	133	805	682	535	0	498	533	588	
V/C Ratio(X)	0.45	0.00	0.94	0.02	0.55	0.16	0.01	0.00	0.00	0.31	0.00	
Avail Cap(c_a), veh/h	511	0	1016	239	921	781	535	0	498	533	588	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.6	0.0	18.2	18.3	17.0	14.0	18.9	0.0	18.8	21.3	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	15.2	0.0	0.6	0.1	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	17.8	0.0	5.8	1.2	0.0	0.0	0.0	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	0.0	33.4	18.4	17.6	14.1	18.9	0.0	18.9	22.9	0.0	0.0
LnGrp LOS	B	A	C	B	B	B	B	A	B	C	A	
Approach Vol, veh/h		1111			554			5			165	
Approach Delay, s/veh		29.4			16.9			18.9			22.9	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		29.6	4.7	45.6		29.6	11.4	38.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	5.0	43.5		18.0	9.1	39.4				
Max Q Clear Time (g_c+I1), s		2.1	2.1	38.2		9.3	6.9	16.1				
Green Ext Time (p_c), s		0.0	0.0	2.9		0.3	0.1	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			25.0									
HCM 6th LOS			C									

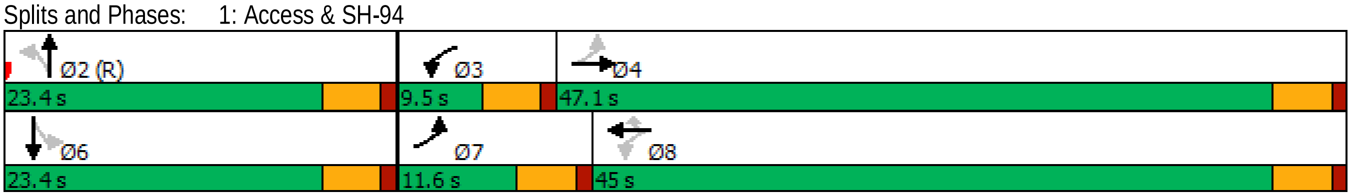
Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	201	350	3	811	226	4	0	151	0
Future Volume (vph)	201	350	3	811	226	4	0	151	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.6	47.1	9.5	45.0	45.0	23.4	23.4	23.4	23.4
Total Split (%)	14.5%	58.9%	11.9%	56.3%	56.3%	29.3%	29.3%	29.3%	29.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	C-Max	C-Max	Max	Max
Act Effct Green (s)	51.0	49.6	44.9	39.9	39.9	19.5	19.5	19.5	19.5
Actuated g/C Ratio	0.64	0.62	0.56	0.50	0.50	0.24	0.24	0.24	0.24
v/c Ratio	0.87	0.33	0.00	0.95	0.27	0.04	0.00	0.48	0.59
Control Delay	49.5	8.8	5.0	40.3	2.4	24.8	0.0	31.8	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	8.8	5.0	40.3	2.4	24.8	0.0	31.8	14.2
LOS	D	A	A	D	A	C	A	C	B
Approach Delay		23.5		32.0			14.1		20.1
Approach LOS		C		C			B		C

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Access & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	350	4	3	811	226	4	0	3	151	0	296
Future Volume (veh/h)	201	350	4	3	811	226	4	0	3	151	0	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	380	4	3	882	246	4	0	3	164	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	1058	11	559	927	786	451	0	404	448	476	
Arrive On Green	0.08	0.57	0.57	0.00	0.50	0.50	0.25	0.00	0.25	0.25	0.00	0.00
Sat Flow, veh/h	1781	1847	19	1781	1870	1585	1418	0	1585	1414	1870	0
Grp Volume(v), veh/h	218	0	384	3	882	246	4	0	3	164	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1867	1781	1870	1585	1418	0	1585	1414	1870	0
Q Serve(g_s), s	4.5	0.0	8.9	0.1	36.0	7.4	0.2	0.0	0.1	7.8	0.0	0.0
Cycle Q Clear(g_c), s	4.5	0.0	8.9	0.1	36.0	7.4	0.2	0.0	0.1	8.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	257	0	1069	559	927	786	451	0	404	448	476	
V/C Ratio(X)	0.85	0.00	0.36	0.01	0.95	0.31	0.01	0.00	0.01	0.37	0.00	
Avail Cap(c_a), veh/h	271	0	1069	663	947	802	451	0	404	448	476	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.0	0.0	9.2	10.1	19.3	12.0	22.3	0.0	22.3	25.2	0.0	0.0
Incr Delay (d2), s/veh	20.9	0.0	0.2	0.0	18.4	0.2	0.0	0.0	0.0	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	3.2	0.0	18.6	2.5	0.1	0.0	0.0	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	9.4	10.1	37.7	12.3	22.3	0.0	22.3	27.5	0.0	0.0
LnGrp LOS	D	A	A	B	D	B	C	A	C	C	A	
Approach Vol, veh/h		602			1131			7			164	
Approach Delay, s/veh		20.1			32.1			22.3			27.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.9	4.8	50.3		24.9	11.0	44.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.9	5.0	42.6		18.9	7.1	40.5				
Max Q Clear Time (g_c+I1), s		2.2	2.1	10.9		10.0	6.5	38.0				
Green Ext Time (p_c), s		0.0	0.0	2.5		0.3	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			27.9									
HCM 6th LOS			C									

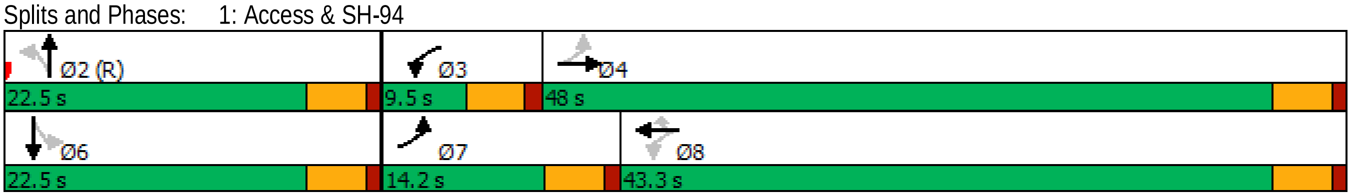
Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	192	1003	2	493	102	3	0	152	0
Future Volume (vph)	192	1003	2	493	102	3	0	152	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	14.2	48.0	9.5	43.3	43.3	22.5	22.5	22.5	22.5
Total Split (%)	17.8%	60.0%	11.9%	54.1%	54.1%	28.1%	28.1%	28.1%	28.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	C-Max	C-Max	Max	Max
Act Effct Green (s)	53.0	51.1	44.8	39.8	39.8	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.66	0.64	0.56	0.50	0.50	0.22	0.22	0.22	0.22
v/c Ratio	0.41	0.92	0.01	0.58	0.13	0.01	0.00	0.52	0.19
Control Delay	7.6	28.0	5.0	17.6	1.6	24.3	0.0	34.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	28.0	5.0	17.6	1.6	24.3	0.0	34.0	0.7
LOS	A	C	A	B	A	C	A	C	A
Approach Delay		24.8		14.8			14.6		19.8
Approach LOS		C		B			B		B

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 21.2 | Intersection LOS: C
Intersection Capacity Utilization 83.5% | ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Access & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	1003	3	2	493	102	3	0	2	152	0	113
Future Volume (veh/h)	192	1003	3	2	493	102	3	0	2	152	0	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	209	1090	3	2	536	111	3	0	2	165	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	432	1014	3	95	866	734	494	0	451	492	533	
Arrive On Green	0.08	0.54	0.54	0.00	0.46	0.46	0.28	0.00	0.28	0.28	0.00	0.00
Sat Flow, veh/h	1781	1864	5	1781	1870	1585	1418	0	1585	1415	1870	0
Grp Volume(v), veh/h	209	0	1093	2	536	111	3	0	2	165	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1869	1781	1870	1585	1418	0	1585	1415	1870	0
Q Serve(g_s), s	4.6	0.0	43.5	0.0	17.3	3.2	0.1	0.0	0.1	7.6	0.0	0.0
Cycle Q Clear(g_c), s	4.6	0.0	43.5	0.0	17.3	3.2	0.1	0.0	0.1	7.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	432	0	1017	95	866	734	494	0	451	492	533	
V/C Ratio(X)	0.48	0.00	1.08	0.02	0.62	0.15	0.01	0.00	0.00	0.34	0.00	
Avail Cap(c_a), veh/h	500	0	1017	201	907	769	494	0	451	492	533	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.5	0.0	18.3	20.0	16.2	12.4	20.5	0.0	20.5	23.2	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	50.7	0.1	1.2	0.1	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	30.5	0.0	7.1	1.1	0.0	0.0	0.0	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	0.0	69.0	20.1	17.4	12.5	20.5	0.0	20.5	25.1	0.0	0.0
LnGrp LOS	B	A	F	C	B	B	C	A	C	C	A	
Approach Vol, veh/h		1302			649			5			165	
Approach Delay, s/veh		59.9			16.5			20.5			25.1	
Approach LOS		E			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.3	4.7	48.0		27.3	11.2	41.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		18.0	5.0	43.5		18.0	9.7	38.8
Max Q Clear Time (g_c+I1), s		2.1	2.0	45.5		9.6	6.6	19.3
Green Ext Time (p_c), s		0.0	0.0	0.0		0.3	0.2	3.8

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

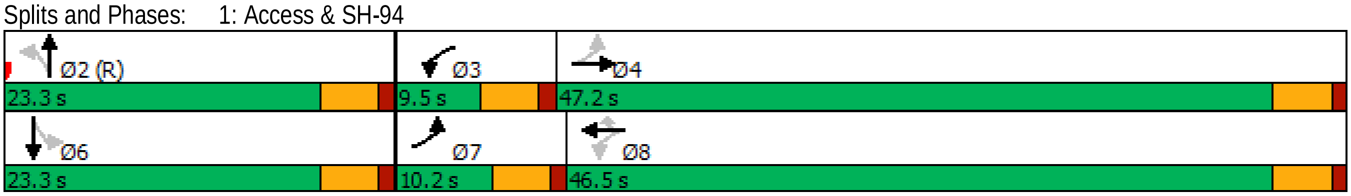
Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	201	426	3	988	226	4	0	151	0
Future Volume (vph)	201	426	3	988	226	4	0	151	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	10.2	47.2	9.5	46.5	46.5	23.3	23.3	23.3	23.3
Total Split (%)	12.8%	59.0%	11.9%	58.1%	58.1%	29.1%	29.1%	29.1%	29.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	C-Max	C-Max	Max	Max
Act Effct Green (s)	51.4	50.3	47.0	42.0	42.0	18.8	18.8	18.8	18.8
Actuated g/C Ratio	0.64	0.63	0.59	0.52	0.52	0.24	0.24	0.24	0.24
v/c Ratio	1.03	0.40	0.01	1.10	0.26	0.03	0.00	0.50	0.63
Control Delay	92.8	9.3	5.0	81.0	2.2	24.8	0.0	32.6	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.8	9.3	5.0	81.0	2.2	24.8	0.0	32.6	18.3
LOS	F	A	A	F	A	C	A	C	B
Approach Delay		35.9		66.2			14.1		23.1
Approach LOS		D		E			B		C

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 49.4	Intersection LOS: D
Intersection Capacity Utilization 92.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 1: Access & SH-94



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	426	4	3	988	226	4	0	3	151	0	296
Future Volume (veh/h)	201	426	4	3	988	226	4	0	3	151	0	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	218	463	4	3	1074	246	4	0	3	164	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	1096	9	520	982	832	423	0	372	420	440	
Arrive On Green	0.07	0.59	0.59	0.00	0.52	0.52	0.23	0.00	0.23	0.23	0.00	0.00
Sat Flow, veh/h	1781	1851	16	1781	1870	1585	1418	0	1585	1414	1870	0
Grp Volume(v), veh/h	218	0	467	3	1074	246	4	0	3	164	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1867	1781	1870	1585	1418	0	1585	1414	1870	0
Q Serve(g_s), s	5.7	0.0	10.9	0.1	42.0	7.0	0.2	0.0	0.1	8.0	0.0	0.0
Cycle Q Clear(g_c), s	5.7	0.0	10.9	0.1	42.0	7.0	0.2	0.0	0.1	8.2	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	217	0	1106	520	982	832	423	0	372	420	440	
V/C Ratio(X)	1.00	0.00	0.42	0.01	1.09	0.30	0.01	0.00	0.01	0.39	0.00	
Avail Cap(c_a), veh/h	217	0	1106	624	982	832	423	0	372	420	440	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.4	0.0	8.9	9.1	19.0	10.7	23.5	0.0	23.5	26.6	0.0	0.0
Incr Delay (d2), s/veh	62.4	0.0	0.3	0.0	57.8	0.2	0.0	0.0	0.0	2.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	3.9	0.0	31.6	2.3	0.1	0.0	0.0	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.8	0.0	9.1	9.1	76.8	10.9	23.5	0.0	23.5	29.3	0.0	0.0
LnGrp LOS	F	A	A	A	F	B	C	A	C	C	A	
Approach Vol, veh/h		685			1323			7			164	
Approach Delay, s/veh		33.5			64.4			23.5			29.3	
Approach LOS		C			E			C			C	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	23.3	4.8	51.9		23.3	10.2	46.5
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	18.8	5.0	42.7		18.8	5.7	42.0
Max Q Clear Time (g_c+I1), s	2.2	2.1	12.9		10.2	7.7	44.0
Green Ext Time (p_c), s	0.0	0.0	3.2		0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D

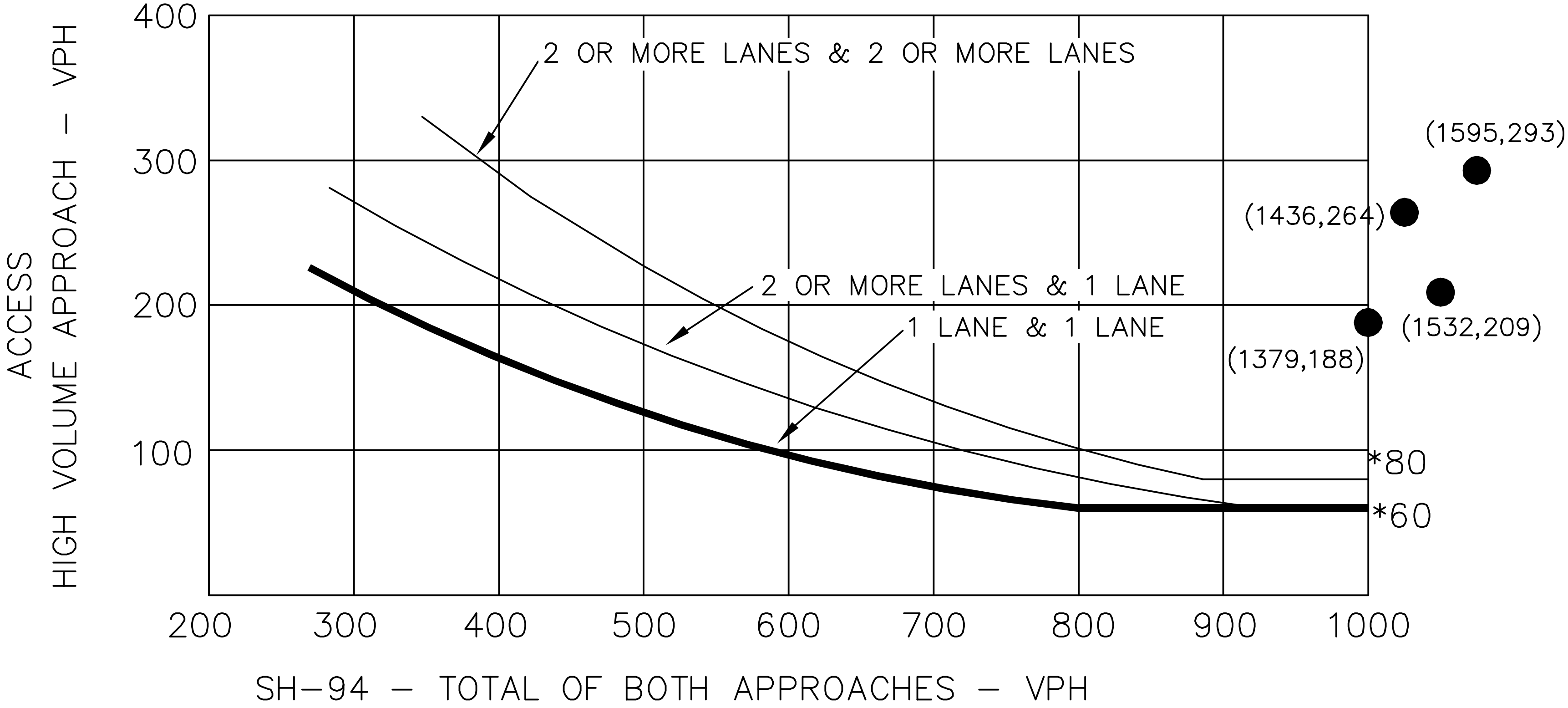
Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Signal Warrant Analysis Worksheet

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

SH–94 ACCESS
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2028 TOTAL TRAFFIC DATA POINT WITH PROJECT – HIGHEST USE

Source: Manual of Uniform Traffic Control Devices 2009

Queue Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	209	902	2	441	111	3	2	165	123
v/c Ratio	0.45	0.89	0.01	0.59	0.16	0.01	0.00	0.36	0.15
Control Delay	10.8	29.3	6.0	21.8	3.1	22.7	0.0	26.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	29.3	6.0	21.8	3.1	22.7	0.0	26.0	0.4
Queue Length 50th (ft)	50	366	0	175	0	1	0	61	0
Queue Length 95th (ft)	60	#637	2	216	24	8	0	134	0
Internal Link Dist (ft)		1750		1759			261		205
Turn Bay Length (ft)	600				400				
Base Capacity (vph)	473	1039	194	917	835	406	666	454	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.87	0.01	0.48	0.13	0.01	0.00	0.36	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	218	384	3	882	246	4	3	164	322
v/c Ratio	0.87	0.33	0.00	0.95	0.27	0.04	0.00	0.48	0.59
Control Delay	49.5	8.8	5.0	40.3	2.4	24.8	0.0	31.8	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	8.8	5.0	40.3	2.4	24.8	0.0	31.8	14.2
Queue Length 50th (ft)	55	74	1	390	0	2	0	71	43
Queue Length 95th (ft)	#184	166	3	#652	33	9	0	131	124
Internal Link Dist (ft)		1750		1759			261		205
Turn Bay Length (ft)	600				400				
Base Capacity (vph)	250	1153	607	943	922	114	769	343	549
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.33	0.00	0.94	0.27	0.04	0.00	0.48	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	209	1093	2	536	111	3	2	165	123
v/c Ratio	0.41	0.92	0.01	0.58	0.13	0.01	0.00	0.52	0.19
Control Delay	7.6	28.0	5.0	17.6	1.6	24.3	0.0	34.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	28.0	5.0	17.6	1.6	24.3	0.0	34.0	0.7
Queue Length 50th (ft)	35	387	0	181	0	1	0	73	0
Queue Length 95th (ft)	60	#851	2	282	16	8	0	134	0
Internal Link Dist (ft)		1750		1759			261		205
Turn Bay Length (ft)	600				400				
Base Capacity (vph)	531	1190	195	927	859	277	504	317	632
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.92	0.01	0.58	0.13	0.01	0.00	0.52	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

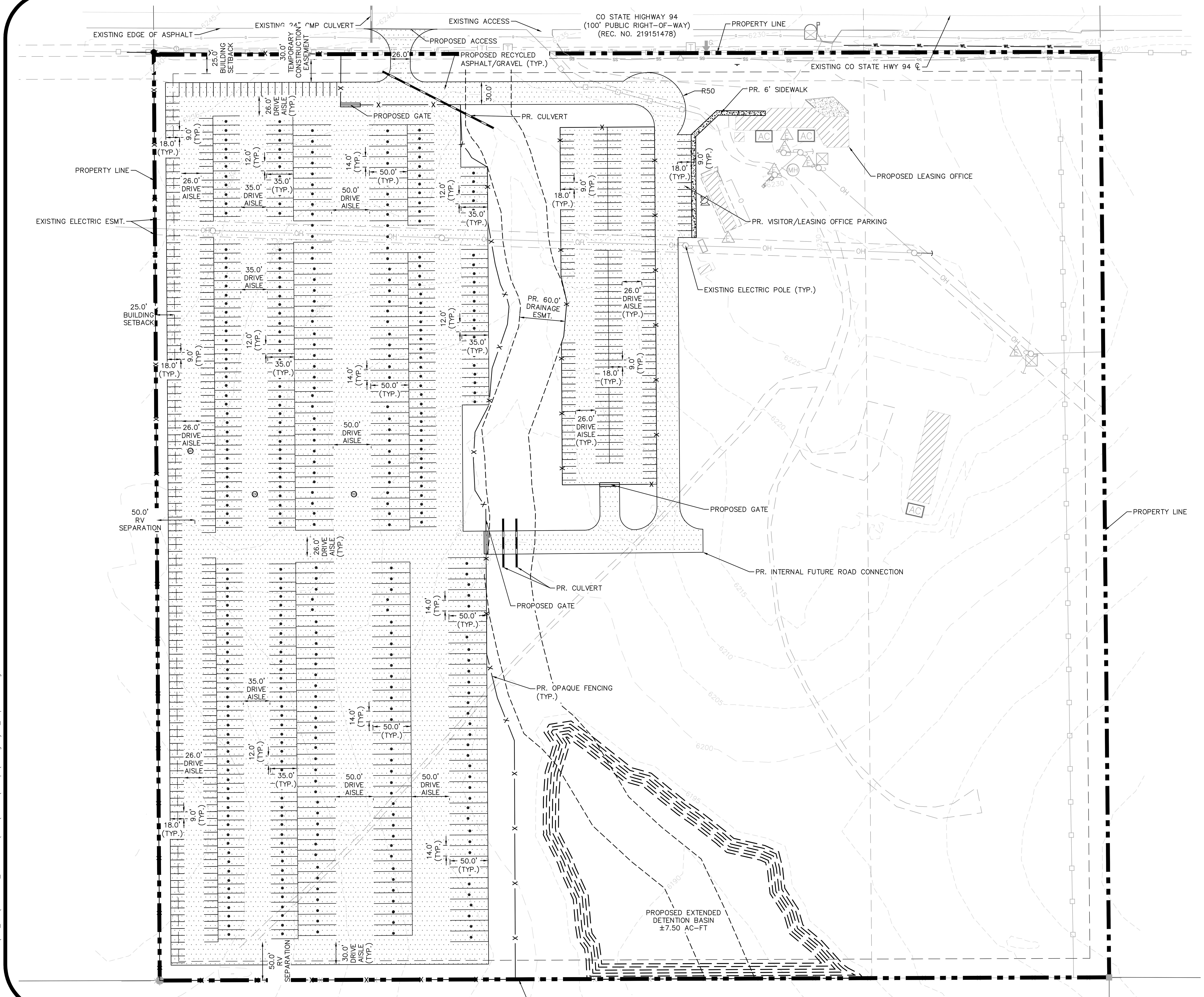
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	218	467	3	1074	246	4	3	164	322
v/c Ratio	1.03	0.40	0.01	1.10	0.26	0.03	0.00	0.50	0.63
Control Delay	92.8	9.3	5.0	81.0	2.2	24.8	0.0	32.6	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.8	9.3	5.0	81.0	2.2	24.8	0.0	32.6	18.3
Queue Length 50th (ft)	~66	94	1	~618	0	2	0	71	60
Queue Length 95th (ft)	#213	209	3	#848	32	9	0	131	146
Internal Link Dist (ft)		1750		1759			261		205
Turn Bay Length (ft)	600				400				
Base Capacity (vph)	211	1170	582	978	947	115	703	330	509
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.40	0.01	1.10	0.26	0.03	0.00	0.50	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Conceptual Site Plan



NORTH

GRAPHIC SCALE IN FEET
0 30 60 120

ALTERNATIVE 2 – PARKING LAYOUT WITH FUTURE ACCESS

PARKING DATA:

PARKING STALL SIZE	NO. OF STALLS
18.0' X 9.0'	447
35.0' X 12.0'	230
50.0' X 14.0'	183
TOTAL	860

UDON SOUTH - CONCEPT SITE LAYOUT

Kimley»Horn

2 N NEVADA AVE., SUITE 900, COLORADO SPRINGS, 80903
PHONE: 719-453-0180

Date: March 12, 2024 – 9:02am / User: Drew.McClain
Path: K:\COS_Civil\196020003_UDON South\CADD\Exhibits\Concept\Parking Layout_Prop Access.dwg

UDON NORTH - PRELIMINARY CONCEPT PLAN

Kimley»Horn

2 N NEVADA AVE., SUITE 900, COLORADO SPRINGS, 80903
PHONE: 719-453-0180

Date: March 13, 2024 - 4:03pm / User: Drew.McClain
Path: K:\COS_Civil\196020003_UDON South\CADD\Exhibits\Concept\UDON-North.dwg