

TRAFFIC IMPACT STUDY

Trinity Ranch

El Paso County, Colorado

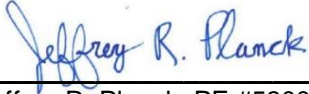
Prepared for:
20165 Howle Street, LLC

Kimley»Horn

T R A F F I C I M P A C T S T U D Y

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, PE #53006

May 30, 2025

Date

Developer's Statement

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

Mr. Terry Street
20165 Howle Street, LLC
8576 Via Gwynn Way
Fair Oaks, CA 95528

Date

Trinity Ranch

El Paso County, Colorado

Prepared for
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May 2025



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1.0 EXECUTIVE SUMMARY

Trinity Ranch is proposed to be located near the northeast corner of the State Highway 94 (SH-94) and Peyton Highway intersection in El Paso County, Colorado. The project is proposed to contain single-family homes and mini-warehouse uses on approximately 150 acres. For the purpose of this analysis, the project is anticipated to include approximately 40 single-family homes and 1,250 storage units. It is expected that the project will be completed in the next several years. Therefore, analysis was conducted for the 2030 short-term buildout horizon as well as the 2050 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The intersection of SH-94 and Peyton Highway was incorporated into this traffic study in accordance with El Paso County and State of Colorado Department of Transportation (CDOT) standards and requirements. In addition, the proposed access along SH-94 was evaluated.

Regional access to Trinity Ranch will be provided by Interstate 25 (I-25) and US-94. Primary access will be provided by SH-94 and Peyton Highway. Direct access will be provided by a full movement access located approximately three-quarters of a mile east of the SH-94 and Peyton Highway intersection.

Trinity Ranch is expected to generate approximately 660 weekday daily trips, with 47 of these trips occurring during the morning peak hour and 63 of these trips occurring during the afternoon peak hour.

Based on the analysis presented in this report, Kimley-Horn believes Trinity Ranch will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

- With completion of the Trinity Ranch project, a public street access intersection is proposed along the north side of SH-94. It is recommended that the public street access intersection operate with stop control with installation of a R1-1 “STOP” sign the southbound exiting approach. A separate eastbound left turn lane is warranted at the project access based on CDOT criteria and the left turn traffic volume projections along SH-94. This eastbound left turn lane should provide a length of 530 feet plus a 300-foot taper.
- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Based on traffic projections, the addition of project traffic on the north and south legs of SH-94 at Peyton Highway are not anticipated to increase existing access traffic volumes by more than 20 percent, with the maximum expected increase at six (6) percent on the north leg (7/124) and three (3) percent on the south leg (3/86). Therefore, a CDOT access permit is not anticipated to be required at the SH-94 and Peyton Highway intersection in association with this project. An access permit will be required for the north leg of the proposed project access along SH-94.
- If future long term planning level 2050 traffic volume projections are realized, the intersection of SH-94 and Peyton Highway will meet warrants for signalization. Therefore, signalization may be the appropriate control at this intersection by the long-term horizon. If signal control is implemented at the SH-94 and Peyton Highway intersection in the future, northbound and southbound left turn lanes should be incorporated coinciding with signal control to avoid split phasing signal timing at this intersection.
- Any on-site or offsite improvements should be incorporated into the Civil Drawings and conform to standards of El Paso County, CDOT, and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

2.0 INTRODUCTION

Kimley-Horn has prepared this report to document the results of a Traffic Impact Study for Trinity Ranch proposed to be located on near the northeast corner of the State Highway 94 (SH-94) and Peyton Highway intersection in El Paso County, Colorado. A vicinity map illustrating the project development location is shown in **Figure 1**. The project is proposed to include approximately 150 acres of single-family homes and mini-warehouse storage units. A conceptual site plan is attached in **Appendix A**. It is expected that the project will be completed in the next several years; therefore, analysis was conducted for the 2030 short-term buildout horizon as well as the 2050 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The intersection of SH-94 and Peyton Highway was incorporated into this traffic study in accordance with El Paso County and CDOT standards and requirements. In addition, the proposed access along SH-94 was evaluated.

Regional access to the site will be provided by Interstate 25 (I-25) and US-94. Primary access will be provided by SH-94 and Peyton Highway. Direct access will be provided by a full movement access located approximately three-quarters of a mile east of the SH-94 and Peyton Highway intersection.



FIGURE 1

Trinity Ranch
El Paso County, CO
Vicinity Map

3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Study Area

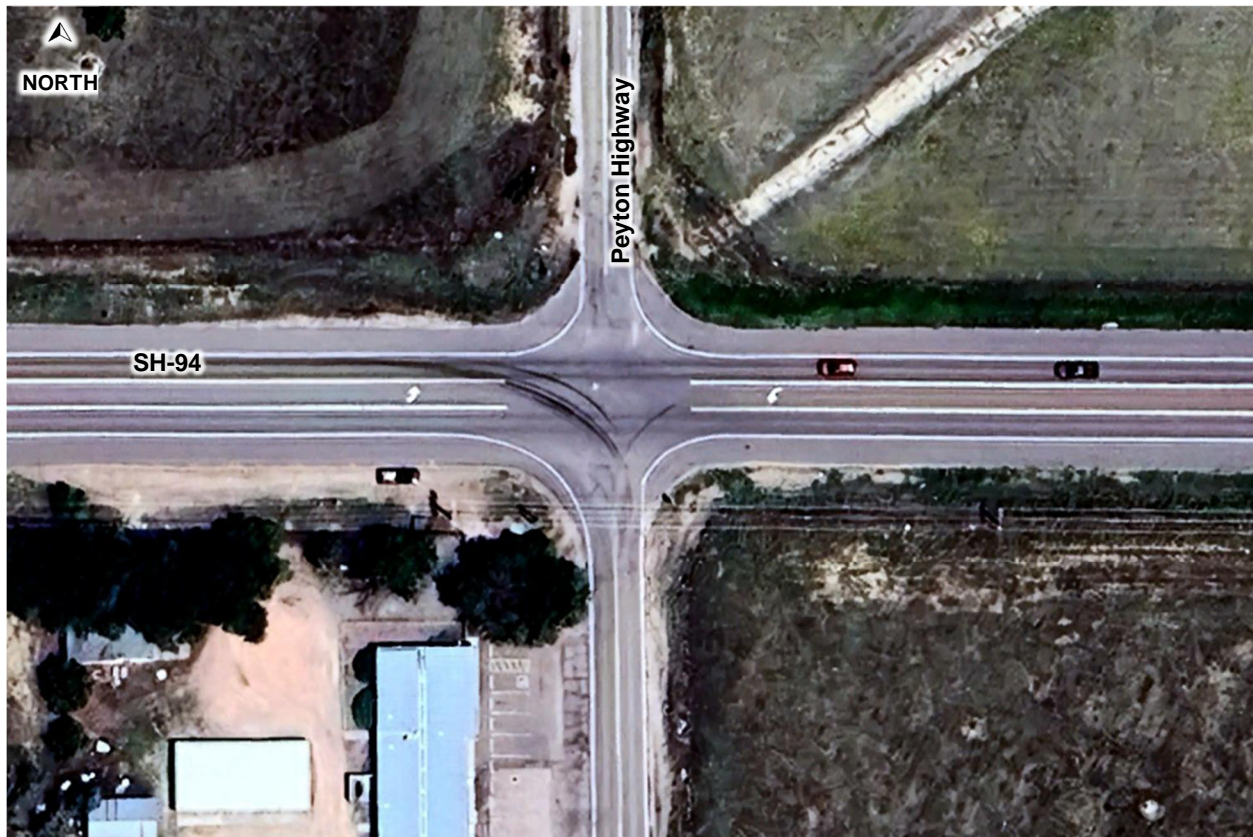
The existing site consists of vacant land. Directly east of the site is a single-family residential development with large lots. The surrounding area consists of single-family homes and vacant parcels.

3.2 Existing Roadway Network

State Highway 94 (SH-94) extends in the east-west direction as a two-lane roadway and has a posted speed limit of 65 miles per hour near the project site. The El Paso County Major Transportation Corridor Plan (MTCP) identifies SH-94 as a “Principal Arterial” roadway while CDOT categorizes SH-94 as a NR-A: Non-Rural Principal Highway.

Peyton Highway extends northbound and southbound with one lane in each direction and has a posted speed limit of 55 miles per hour within the project limits. The MTCP identifies Peyton Highway as a “Minor Arterial” roadway.

The intersection of SH-94 and Peyton Highway operates with stop control on the northbound and southbound approaches of Peyton Highway. The eastbound and westbound approaches both provide a left turn lane and a shared through/right turn lane. The northbound and southbound approaches of Peyton Highway each provides a shared lane for all movements. An aerial photo of the existing intersection configuration is below (north is up - typical).



SH-94 & Peyton Highway

The intersection lane configuration and control for the study area intersections are shown in **Figure 2**.

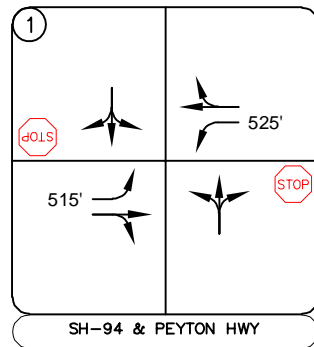


FIGURE 2

Trinity Ranch
El Paso County, CO
Existing Geometry and Control

LEGEND	
(X)	Study Area Key Intersection
STOP	Stop-Controlled Approach
XX	Roadway Speed Limit
100'	100' Turn Lane Length (feet)

3.3 Existing Traffic Volumes

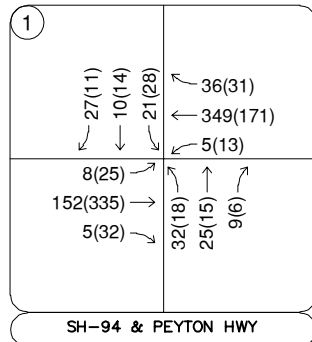
Existing turning movement counts were conducted at the study intersections on Tuesday, April 29, 2025 during the weekday morning and afternoon peak hours. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on this count date. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix B**.

3.4 Unspecified Development Traffic Growth

According to information provided on the website for the Colorado Department of Transportation (CDOT), the 20-year growth factor along SH-94 in the vicinity of the site is between 1.23. The 20-year growth factor equates to an annual growth rate of one (1) percent along SH-94.

According to traffic projections from the El Paso County Major Transportation Corridor Plan (MTCP) traffic model, Peyton Highway is expected to have an average 15-year growth factor of 2.6. Peyton Highway growth factor equates to an annual growth rate of 6.5 percent. Therefore, the eastbound and westbound through volumes along SH-94 used a one (1) percent annual growth rate and the movements to and from Peyton Highway used a 6.5 percent annual growth rate.

Future traffic projections and growth rate are included in **Appendix C**. These annual growth rates were used to estimate near-term 2030 and long-term 2050 traffic volume projections at the key intersections. Background traffic volumes for 2030 and 2050 are shown in **Figure 4** and **Figure 5**, respectively.



Tuesday, April 29, 2025
7:00 to 8:00AM (4:00 to 5:00PM)



FIGURE 3

Trinity Ranch
El Paso County, CO
2025 Existing Traffic Volumes

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

<p>①</p> <p>37(15) 14(19) 29(38)</p>	<p>49(42) 367(180) 7(18)</p>
<p>11(34) 160(352) 7(44)</p>	<p>44(25) 34(21) 12(8)</p>

SH-94 & PEYTON HWY

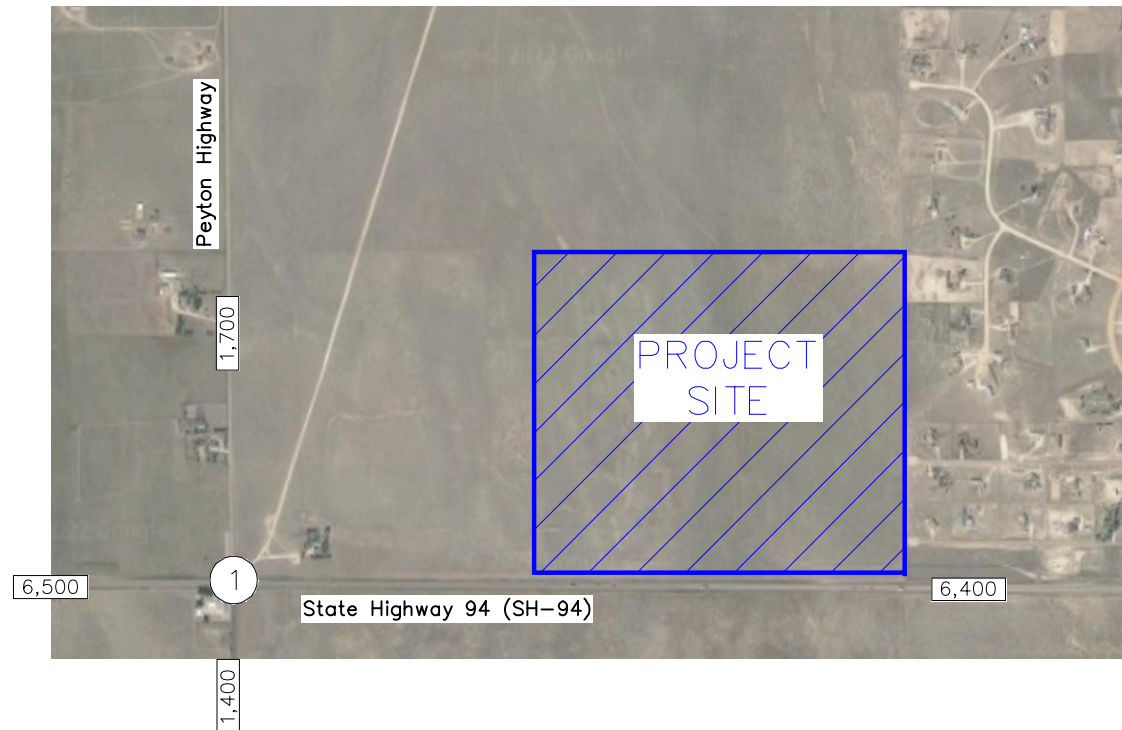


FIGURE 4

Trinity Ranch
El Paso County, CO
2030 Background Traffic Volumes

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

1	
130(63) 48(68) 101(135)	174(150) 448(219) 24(63)
39(121) 195(430) 24(154)	154(87) 121(72) 43(29)
SH-94 & PEYTON HWY	

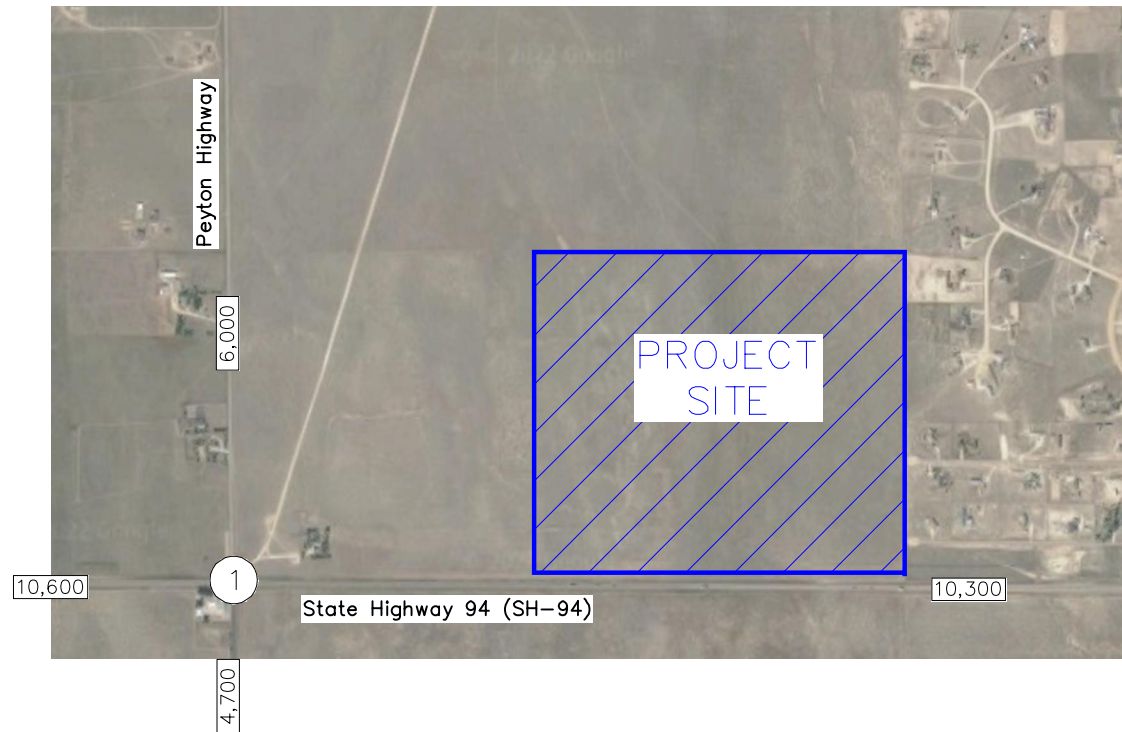


FIGURE 5

Trinity Ranch
El Paso County, CO
2050 Background Traffic Volumes

LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 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 that apply to Mini-Warehouse (ITE Land Use Code 151) and fitted-curve equations that apply to Single-Family Detached Housing (ITE 210) for traffic associated with the development.

Trinity Ranch is expected to generate approximately 660 weekday daily trips, with 47 of these trips occurring during the morning peak hour and 63 of these trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 11th Edition – Volume 1: User's Guide and Handbook*, 2021. **Table 1** summarizes the estimated trip generation for the site. The trip generation worksheets are included in **Appendix D**.

Table 1 – Trinity Ranch Traffic Generation

Land Use and Size	Weekday Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Mini-Warehouse (ITE 151) – 1,250 Storage Units	226	8	7	15	11	10	21
Single-Family Detached Housing (ITE 210) – 40 Dwelling Units	434	8	24	32	26	16	42
Total Project Trips	660	16	31	47	37	26	63

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding employment, school, and attraction information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a

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

given direction and departs the site back to the original source. The project trip distribution for the proposed development is illustrated in **Figure 6**.

4.3 Traffic Assignment

The project's traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in Table 1. Traffic assignment is shown in **Figure 7**.

4.4 Total (Background Plus Project) Traffic

Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short-term 2030 buildout horizon and long-term 2050 twenty-year planning horizon. These total traffic volumes for the study area are illustrated for the 2030 and 2050 horizon years in **Figure 8** and **Figure 9**, respectively.

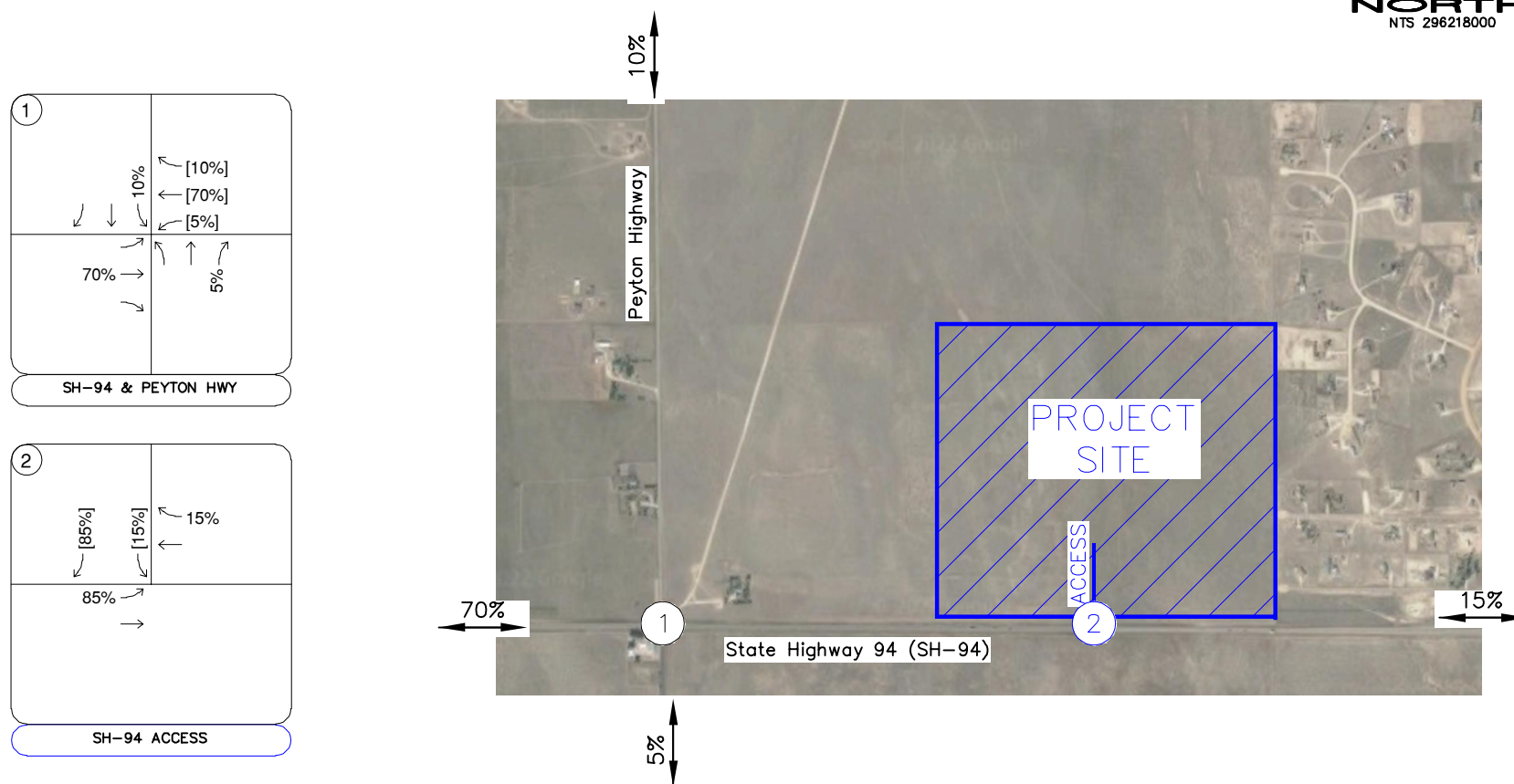


FIGURE 6

Trinity Ranch
El Paso County, CO
Project Trip Distribution

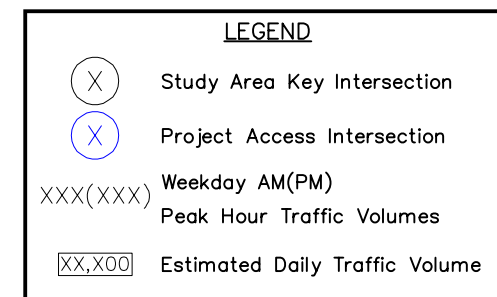
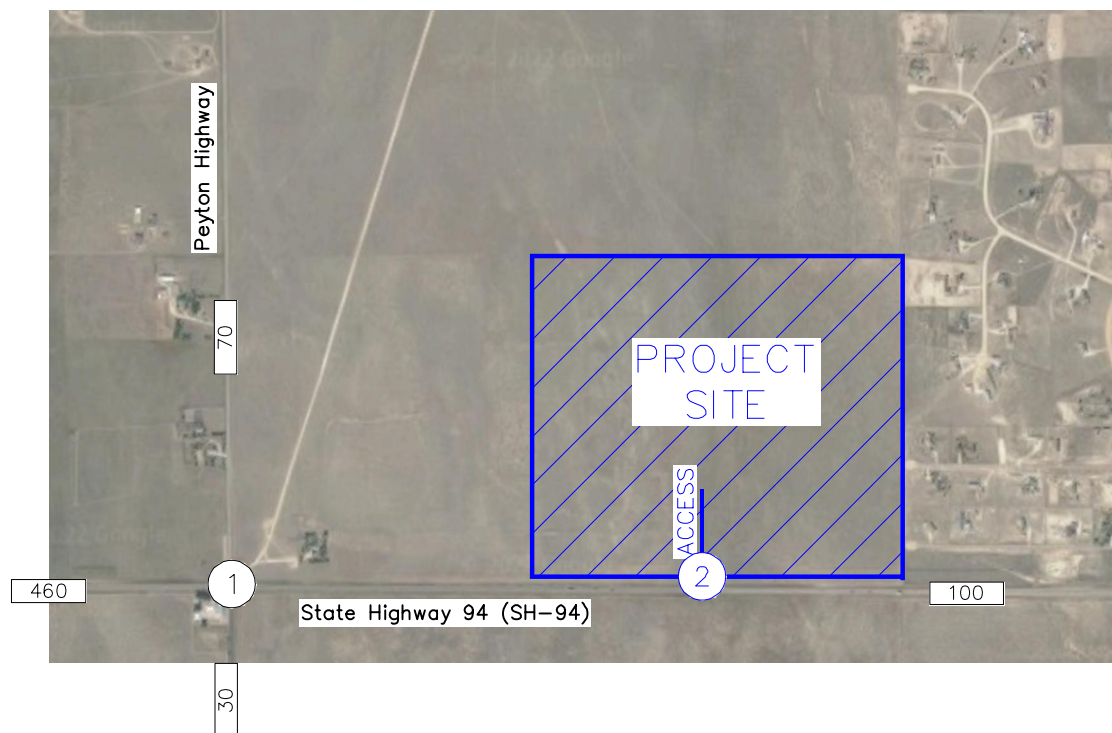
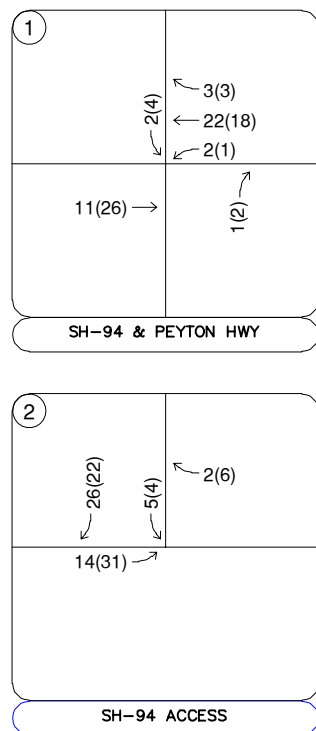


FIGURE 7

Trinity Ranch
El Paso County, CO
Project Traffic Assignment

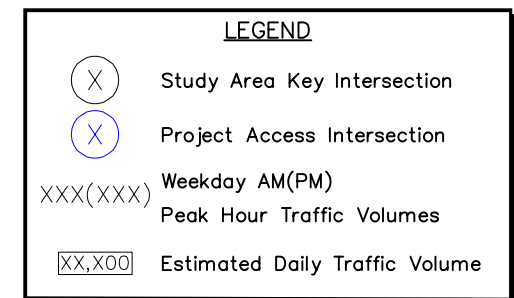
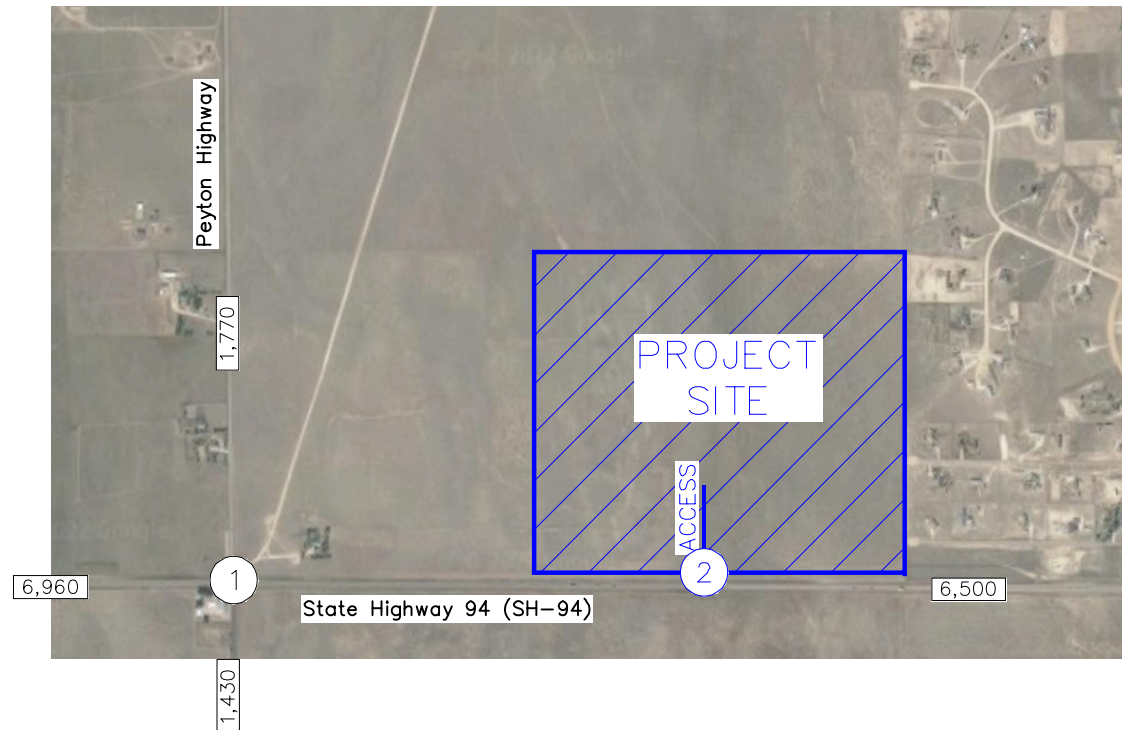
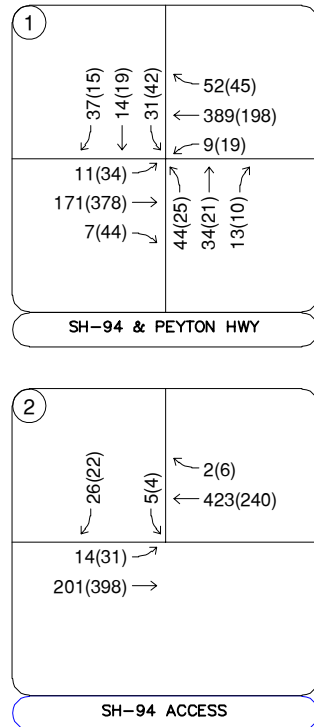


FIGURE 8

Trinity Ranch
El Paso County, CO
2030 Total Traffic Volumes

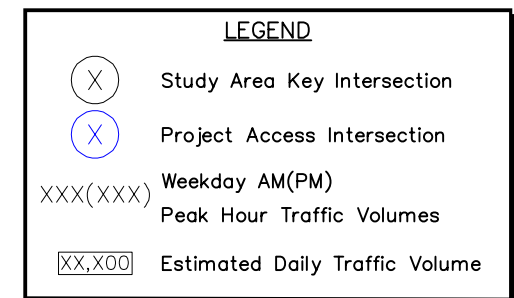
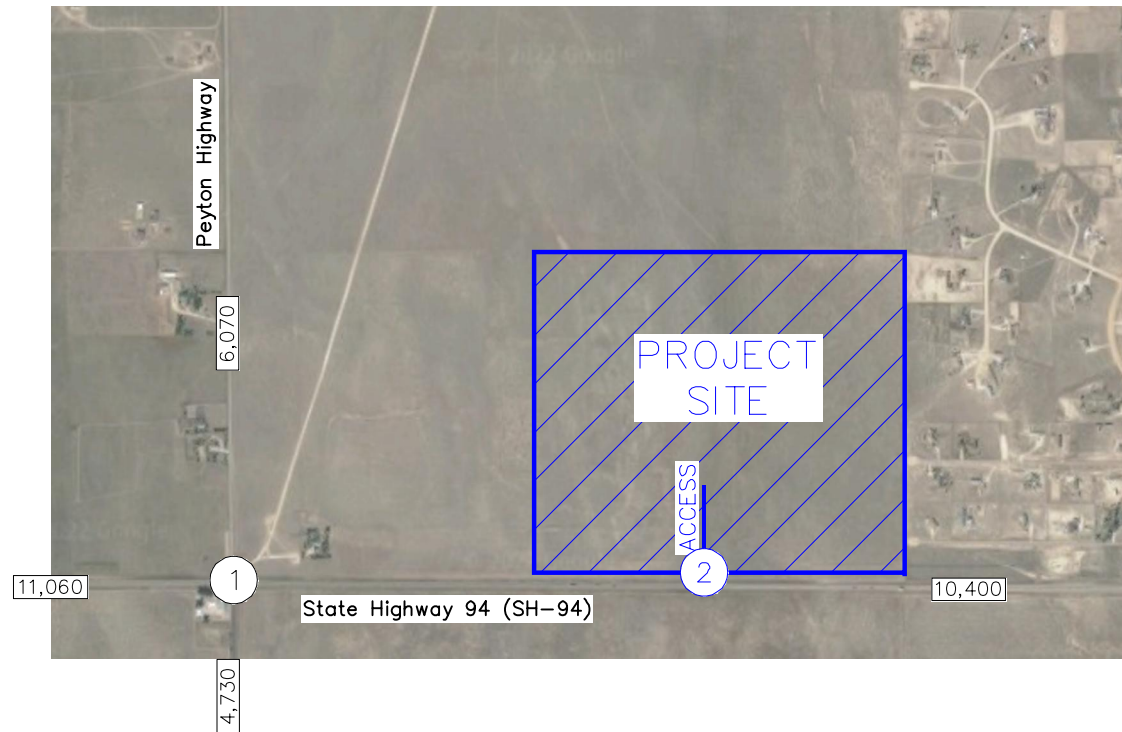
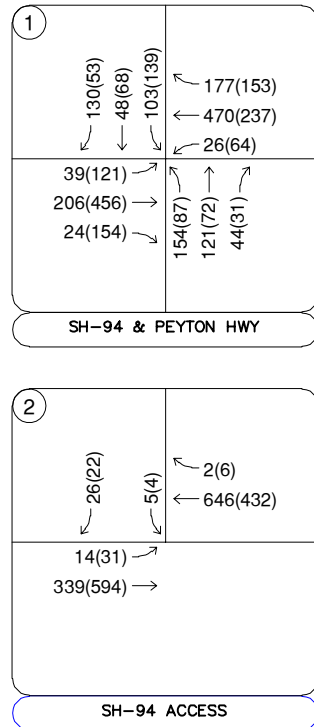


FIGURE 9

Trinity Ranch
El Paso County, CO
2050 Total Traffic Volumes

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2030 and 2050 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual (HCM)*².

5.1 Analysis Methodology

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). Based on El Paso County standards, the threshold for acceptable LOS is not less than LOS D during peak hours **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

Definitions provided from the Highway Capacity Manual, Seventh Edition, Transportation Research Board, 2022.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole. LOS for signalized, roundabout, and all-way stop controlled intersections are defined for each approach and for the overall intersection.

² Transportation Research Board, *Highway Capacity Manual*, Seventh Edition, Washington DC, 2022.

5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix E**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Existing peak hour factors were utilized in the analysis. Synchro traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM level of service.

SH-94 and Peyton Highway

The intersection of SH-94 and Peyton Highway operates with stop control on the northbound and southbound approaches of Peyton Highway. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With the existing geometry and project traffic, all movements are anticipated to continue operating at an acceptable level of service in 2030.

If 2050 traffic volume projections are realized, the intersection operates with unacceptable LOS on the northbound and southbound approaches. Therefore, an MUTCD Four Hour Signal Warrant Analysis was completed based on the long-term traffic volumes with and without project traffic. From the signal warrant analysis, all four hours are anticipated to meet warrants for signalization. It is recommended that CDOT and El Paso County monitor traffic volumes at this intersection in the future to determine if and when a traffic signal becomes warranted. If signal control is implemented at the SH-94 and Peyton Highway intersection in the future, northbound and southbound left turn lanes should be incorporated coinciding with signal control to avoid split phasing signal timing at this intersection. A signal warrant analysis figure is included in **Appendix F**. **Table 3** provides the results of the LOS analysis conducted at this intersection.

Table 3 – SH-94 & Peyton Highway LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2025 Existing				
Northbound Approach	13.5	B	13.3	B
Eastbound Left	8.3	A	7.7	A
Westbound Left	7.6	A	8.1	A
Southbound Approach	12.6	B	13.2	B
2030 Background				
Northbound Approach	14.8	B	14.4	B
Eastbound Left	8.4	A	7.8	A
Westbound Left	7.6	A	8.2	A
Southbound Approach	13.5	B	14.4	B
2030 Background Plus Project				
Northbound Approach	15.3	C	14.9	B
Eastbound Left	8.5	A	7.8	A
Westbound Left	7.6	A	8.3	A
Southbound Approach	14.0	B	15.2	C
2050 Background				
Northbound Approach	188.5	F	79.1	F
Eastbound Left	9.3	A	8.5	A
Westbound Left	7.8	A	9.1	A
Southbound Approach	60.6	F	219.4	F
2050 Background Plus Project¹	24.9	C	20.0	B

¹Signalized

Project Accesses Intersection

With completion of the Trinity Ranch project, a public street access intersection is proposed along the north side of SH-94. It is recommended that the public street access intersection operate with stop control with installation of a R1-1 “STOP” sign the southbound exiting approach. A separate eastbound left turn lane is warranted at the project access based on CDOT criteria and the left turn traffic volume projections along SH-94. **Table 4** provides the results of the level of service for this project access intersection. As shown in the table, the project access intersections are anticipated to have all movements operating with acceptable LOS C or better during the peak hours in both the buildout year 2030 and the 2050 long-term horizons.

Table 4 – Project Access Level of Service Results

Intersection	2030 Total				2050 Total			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
SH-94 Access								
Eastbound Left	8.4	A	7.9	A	9.2	A	8.5	A
Southbound Approach	12.1	B	10.8	B	15.8	C	13.7	B

5.3 CDOT Auxiliary Turn Lane Warrant & Length Evaluation

The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Based on traffic projections, the addition of project traffic on the north and south legs of SH-94 at Peyton Highway are not anticipated to increase existing access traffic volumes by more than 20 percent, with the maximum expected increase at six (6) percent on the north leg (7/124) and three (3) percent on the south leg (3/86). Therefore, a CDOT access permit is not anticipated to be required at the SH-94 and Peyton Highway intersection in association with this project. Of note, turn lane improvements are needed based on CDOT criteria with existing traffic volume conditions. An access permit will be required for the north leg of the proposed project access along SH-94.

SH-94 is categorized as an NR-A: Non-Rural Principal Highway roadway and has a 65 mile per hour speed limit within the project area. According to the State Highway Access Code for category Non-Rural Principal Highway (NR-A) roadways, the turn lane warrants are as follows:

- A left turn deceleration lane and taper with storage length is required for any access with a projected peak hour ingress turning volume greater than 10 vph. The taper length will be included within the required deceleration length.
- A right turn deceleration lane and taper is required for any access with a projected peak hour ingress turning volume greater than 25 vph. The taper length will be included within the required deceleration length.
- Right turn acceleration lane and taper 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. The taper length will be included within the required acceleration length.

Based on traffic projections and the above thresholds, auxiliary turn lane requirements were for the proposed project access along SH-94 and are as follows:

SH-94 Project Access

- An eastbound left turn lane is warranted at the SH-94 Access intersection based on projected 2050 background plus project traffic volumes being 31 eastbound left turns during the peak hour and the threshold being 10 vph. Based on the 65 mile per hour speed limit, the deceleration length is 500 feet, plus a 300-foot taper. In addition, a 30-foot

storage length is required based on the peak hour left turn entering volume. Therefore, the eastbound left turn lane is recommended to provide a length of 530 feet plus a 300-foot taper to meet CDOT turn lane standards.

- A westbound right turn lane **is not** warranted at the SH-94 Access intersection based on projected 2050 background plus project traffic volumes being six (6) westbound right turns during the peak hour and the threshold being 25 vph. Therefore, a turn lane is not required based on CDOT Access Code turn lane requirements.
- A westbound acceleration lane along SH-94 from the Access southbound right turn **is not** warranted based on projected 2050 background plus project traffic volumes being 26 southbound right turns during the peak hour and the threshold being 50 vph. Therefore, an acceleration lane is not required based on CDOT Access Code turn lane requirements.

5.4 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 5** with calculations provided within the level of service operational sheets in **Appendix E**.

Table 5 – Turn Lane Queuing Analysis Results

Intersection Turn Lane	Existing Turn Lane Length	2030 Calculated Queue (AM/PM)	2030 Recommended Length	2050 Calculated Queue (AM/PM)	2050 Recommended Length
SH-94 & Peyton Hwy					
Eastbound Left	515'	25'/25'	515'	25'/50'	100'
Westbound Left	525'	25'/25'	525'	25'/25'	75'
Northbound Left	DNE	DNE	DNE	175'/100'	310'
Southbound Left	DNE	DNE	DNE	100'/150'	310'
SH-94 Access					
Eastbound Left	DNE	25'/25'	530'+300'T	25'/25'	530'+300'T

DNE = Does Not Exist; **Blue** Text = Recommendation

All vehicle queues are anticipated to be managed within the existing or recommended turn lane lengths through 2050.

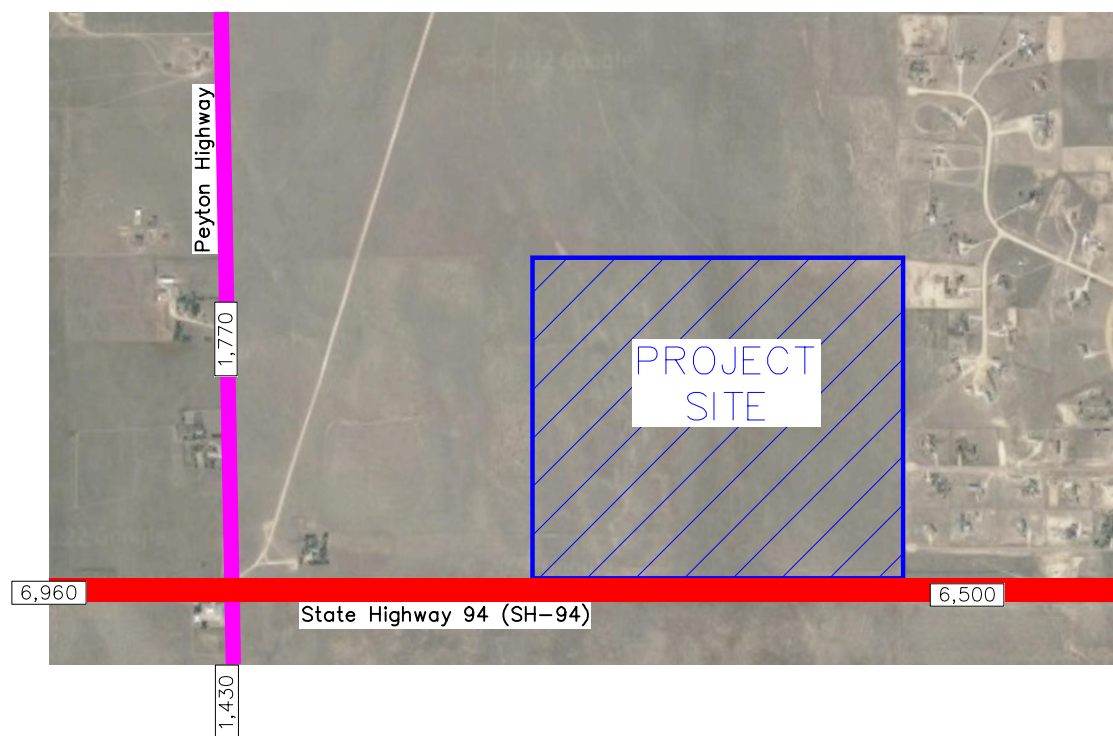
5.5 Access Spacing Requirements and Internal Roadway Classifications

According to El Paso County 2016 Major Transportation Corridors Plan Update, SH-94 is classified as a Principal Arterial roadway and Peyton Highway is classified as a Minor Arterial roadway. The following identifies the intersection spacing requirements for the access intersections associated with the project:

SH-94 Access

The proposed Access along SH-94 is located approximately 0.75 miles east of the SH-94/Peyton Highway intersection (measured centerline to centerline) and 0.75 miles west of the SH-94/Antelope Drive intersection (measured centerline to centerline). According to the El Paso County Engineering Criteria Manual, spacing of intersections along rural Major Arterial roadways should be a half-mile between intersection. Therefore, the proposed Access meets ECM standards.

SH-94 is classified as a Rural Principal Arterial and Peyton Highway is classified as a Rural Minor Arterial. The project access has been classified as a Rural Local roadway. **Figure 10** illustrates the circulation plan and street classification map for roadways internal and external to the Trinity Ranch project.



LEGEND	
	RURAL PRINCIPAL ARTERIAL
	RURAL MINOR ARTERIAL
	LOCAL
XX,X00	ESTIMATED 2030 DAILY TRAFFIC VOLUME

FIGURE 10

Trinity Ranch
El Paso County, CO
Roadway Classification

5.6 Sight Distance Evaluation

It is recommended that sight triangles be provided at all site access points to give drivers exiting the site a clear view of oncoming traffic. Landscaping and objects within sight triangles must not obstruct drivers' views of the adjacent travel lanes. ECM design sight distances for left turn from stop from public street intersections (Table 2-21) was evaluated at the public access intersection along SH-94. ECM does not provide sight distances for right-turning vehicles from stop for public street intersections; therefore, AASHTO standards were used for right-turn from stop distances at the public access intersection along SH-94. The following identifies sight distance requirements for the access intersection:

SH-94 Access

With El Paso County standards and a roadway design speed of 65 miles per hour, the intersection sight distance for a vehicle turning left from stop is not provided but can be determined by extrapolating data. Therefore, the intersection sight distance for a vehicle turning left from stop is 720 feet. Since the access along SH-94 will have a left turn lane, exiting left turn movements will cross one extra lane and additional sight distance needs to be added based on factors from AASHTO. According to AASHTO 9.5.3.2.1 Case B1 – Left Turn from the Minor Road, for left turns onto two-way roadways with more than two lanes, including turn lanes, 0.5 seconds should be added to the time gap for passenger cars for each additional lane. Based on this, one additional lane accounts for an additional 0.5 seconds and approximately 50 feet of sight distance ($0.5 \text{ sec} * 65 \text{ mph} * 5280 \text{ ft/mi} / 3600 \text{ sec/hr} = 47.66 \text{ feet}$) and a total of 770 feet of sight distance (720 feet + 50 feet). The AASHTO standards for 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 13 feet from the edge of the major road traveled way and a line-of-sight distance of 770 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 13 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 eastbound through lane along SH-94. Therefore, it is believed that the proposed access along SH-94 Parkway is appropriately located to provide necessary sight distances.

5.7 Bicycle and Pedestrian Access

Sidewalks are not present on either side of SH-94 or Peyton Highway. The surrounding area is rural and does not provide pedestrian or bicycle connections.

5.8 Road Impact Fees

Road impact fees were evaluated based on the El Paso County Road Impact Fee Schedule. Based on these fee schedule guidelines, the fee per single family dwelling unit is \$4,101 and for mini-warehouse it is \$447 per 1,000 square feet. Therefore, the road impact fee for the proposed 48 single family development is anticipated to be \$253,440. Road impact fee calculations are shown in **Table 6**. During the final plat process, the project team will determine if the impact fees are paid up front or if the property will be included in one of the available public improvement districts with reduced upfront costs. The project team will determine payment methods with the final plat.

Table 6 – Road Impact Fees

Use	Units	Fee / Unit	Total Fee
Single Family Housing (DU)	40	\$4,101	\$164,040
Mini-Warehouse (KSF)	200	\$447	\$89,400
Total Fee			\$253,440

5.9 Improvement Summary

Based on the results of the intersection operational, turn lane evaluations, and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 11** for 2030 and **Figure 12** for 2050.

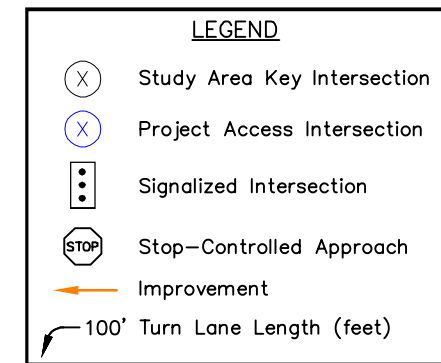
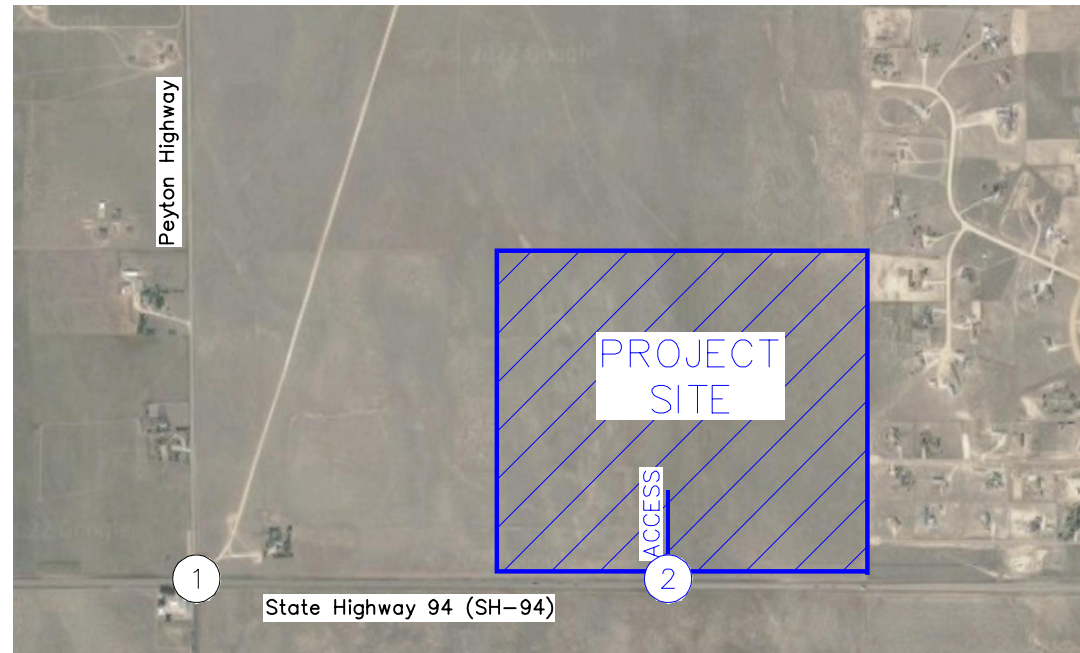
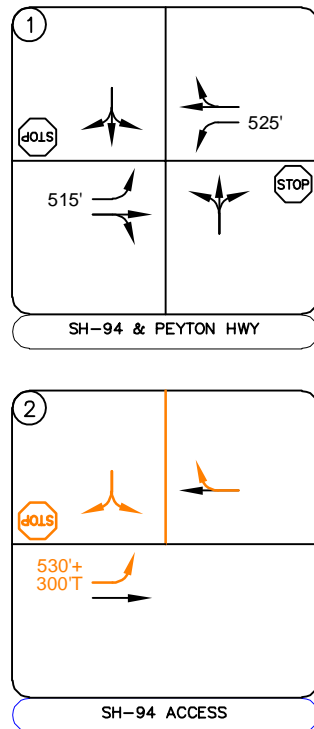


FIGURE 11
Trinity Ranch
El Paso County, CO
2030 Recommended Geometry and Control

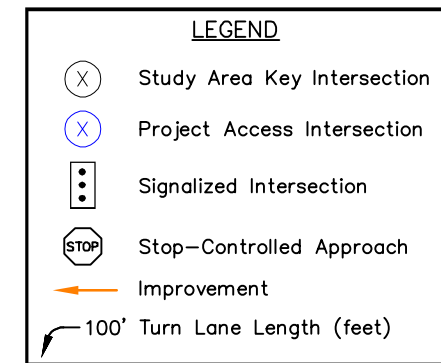
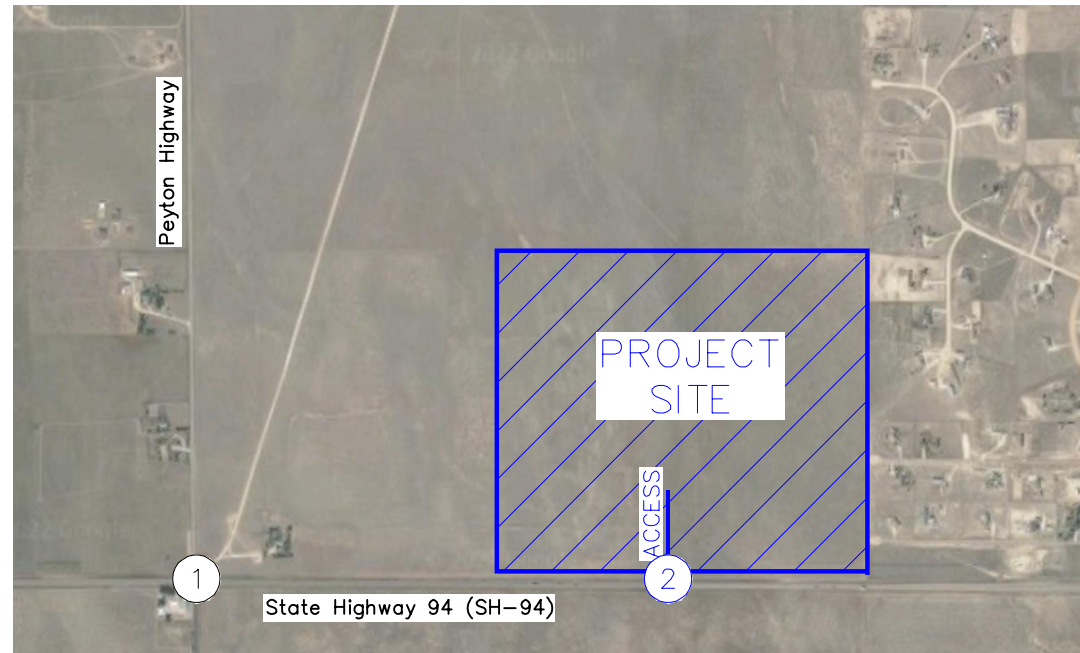
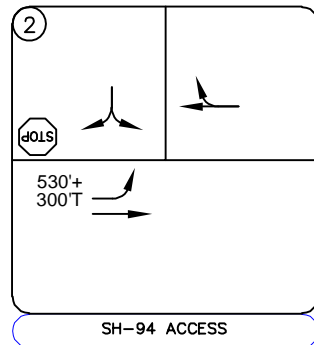
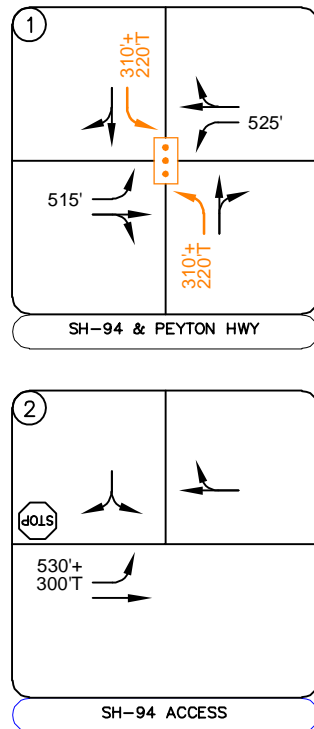


FIGURE 12
Trinity Ranch
El Paso County, CO
2050 Recommended Geometry and Control

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes Trinity Ranch will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

- With completion of the Trinity Ranch project, a public street access intersection is proposed along the north side of SH-94. It is recommended that the public street access intersection operate with stop control with installation of a R1-1 “STOP” sign the southbound exiting approach. A separate eastbound left turn lane is warranted at the project access based on CDOT criteria and the left turn traffic volume projections along SH-94. This eastbound left turn lane should provide a length of 530 feet plus a 300-foot taper.
- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Based on traffic projections, the addition of project traffic on the north and south legs of SH-94 at Peyton Highway are not anticipated to increase existing access traffic volumes by more than 20 percent, with the maximum expected increase at six (6) percent on the north leg (7/124) and three (3) percent on the south leg (3/86). Therefore, a CDOT access permit is not anticipated to be required at the SH-94 and Peyton Highway intersection in association with this project. An access permit will be required for the north leg of the proposed project access along SH-94.
- If future long term planning level 2050 traffic volume projections are realized, the intersection of SH-94 and Peyton Highway will meet warrants for signalization. Therefore, signalization may be the appropriate control at this intersection by the long-term horizon. If signal control is implemented at the SH-94 and Peyton Highway intersection in the future, northbound and southbound left turn lanes should be incorporated coinciding with signal control to avoid split phasing signal timing at this intersection.
- Any on-site or offsite improvements should be incorporated into the Civil Drawings and conform to standards of El Paso County, CDOT, and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

Appendix A: Conceptual Site Plan

RR-5 Zoning
102.92 Acres

Community
Commercial (CC)
Zoning
35 Acres

GOLDENEAGLE
DRIVE

CHELSEY
DRIVE

Through
Access

Full Movement
Access

HWY 94

SITE DATA

Schematic Plan:
Parcel Number:
Current Zoning:
Proposed Use:
Total Acres:

Trinity Ranch
3400000455
RR05
Community Commercial (CC)
35.0 Acres

APPROVAL STAMP

URBAN
Landscapes
DESIGN REVOLUTION

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TRINITY
RANCH

El Paso County,
Colorado

ZONING SITE PLAN
Date Submitted: APR, 18 2025

SD1
SITE PLAN
SHEET 1 OF 1

Not For Construction
El Paso County Land Use Review
File Number(s): PPRXXXXX

Drawing Scale & North Arrow

0' 50' 100' 200' 300'
Scale: 1" = 100'-0"





Appendix B: Intersection Count Sheets



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

Location: 1 PEYTON HWY & SH94 AM

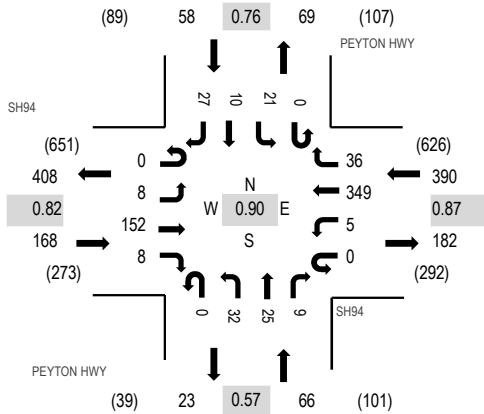
Date: Tuesday, April 29, 2025

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

Peak Hour

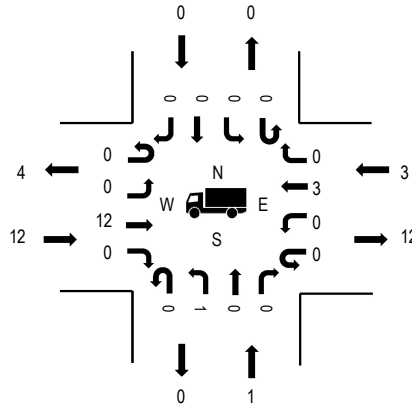
Motorized Vehicles



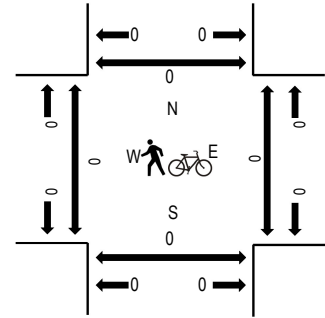
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	7.1%	0.82
WB	0.8%	0.87
NB	1.5%	0.57
SB	0.0%	0.76
All	2.3%	0.90

Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

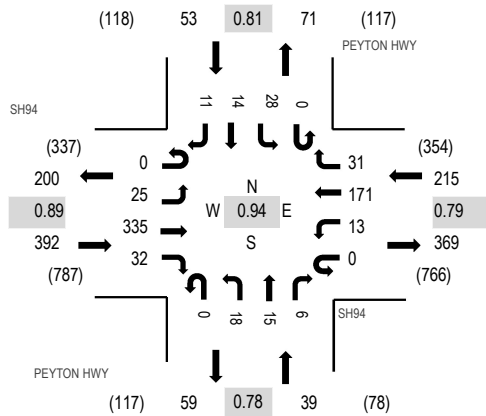
Interval Start Time	SH94 Eastbound				SH94 Westbound				PEYTON HWY Northbound				PEYTON HWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	2	46	3	0	0	88	9	0	9	15	5	0	3	2	8	190	682
7:15 AM	0	0	45	2	0	2	99	11	0	11	4	1	0	7	2	6	190	601
7:30 AM	0	1	38	1	0	2	89	9	0	9	4	3	0	10	3	6	175	528
7:45 AM	0	5	23	2	0	1	73	7	0	3	2	0	0	1	3	7	127	440
8:00 AM	0	2	24	0	0	2	58	7	0	3	3	1	0	4	1	4	109	407
8:15 AM	0	0	27	2	0	2	57	7	0	6	4	1	0	0	2	9	117	
8:30 AM	0	0	19	2	0	1	42	5	0	9	0	3	0	4	1	1	87	
8:45 AM	0	4	23	2	0	1	49	5	0	3	1	1	0	3	0	2	94	
Count Total	0	14	245	14	0	11	555	60	0	53	33	15	0	32	14	43	1,089	
Peak Hour	0	8	152	8	0	5	349	36	0	32	25	9	0	21	10	27	682	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	2	0	0	0	2	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:15 AM	0	0	1	0	1	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:30 AM	4	1	2	0	7	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:45 AM	6	0	0	0	6	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
8:00 AM	10	0	1	0	11	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:15 AM	6	1	2	0	9	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:30 AM	1	1	3	0	5	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:45 AM	4	1	5	0	10	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
Count Total	33	4	14	0	51	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	12	1	3	0	16	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Peak Hour

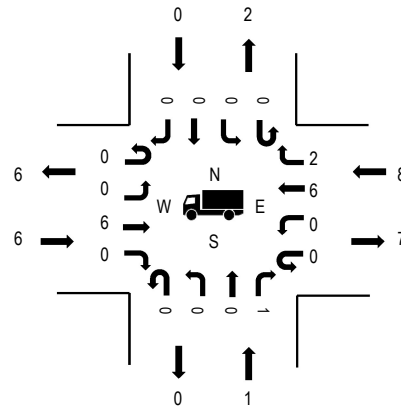
Motorized Vehicles



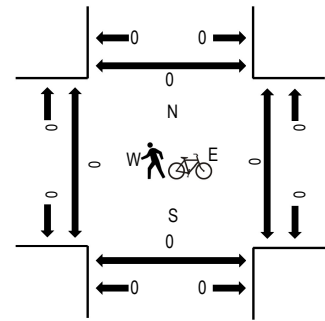
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.5%	0.89
WB	3.7%	0.79
NB	2.6%	0.78
SB	0.0%	0.81
All	2.1%	0.94

Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	SH94				SH94				PEYTON HWY				PEYTON HWY				Total	Rolling Hour
	Eastbound				Westbound				Northbound				Southbound					
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	4	75	13	0	3	47	12	0	2	1	0	0	4	5	1	167	699
4:15 PM	0	5	80	3	0	3	52	13	0	7	4	4	0	7	3	5	186	684
4:30 PM	0	8	88	5	0	5	42	5	0	7	7	0	0	6	3	1	177	676
4:45 PM	0	8	92	11	0	2	30	1	0	2	3	2	0	11	3	4	169	646
5:00 PM	0	4	67	9	0	3	35	7	0	6	4	1	0	9	5	2	152	638
5:15 PM	0	4	97	13	0	0	31	5	0	6	2	3	0	11	6	0	178	
5:30 PM	0	5	88	7	0	0	23	4	0	4	2	2	0	7	2	3	147	
5:45 PM	0	3	91	7	0	2	26	3	0	1	3	5	0	16	4	0	161	
Count Total	0	41	678	68	0	18	286	50	0	35	26	17	0	71	31	16	1,337	
Peak Hour	0	25	335	32	0	13	171	31	0	18	15	6	0	28	14	11	699	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	6	0	7	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:15 PM	2	1	1	0	4	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:30 PM	1	0	1	0	2	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:45 PM	2	0	0	0	2	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
5:00 PM	1	0	1	0	2	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:15 PM	0	0	3	5	8	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	2	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
Count Total	7	1	12	7	27	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	6	1	8	0	15	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



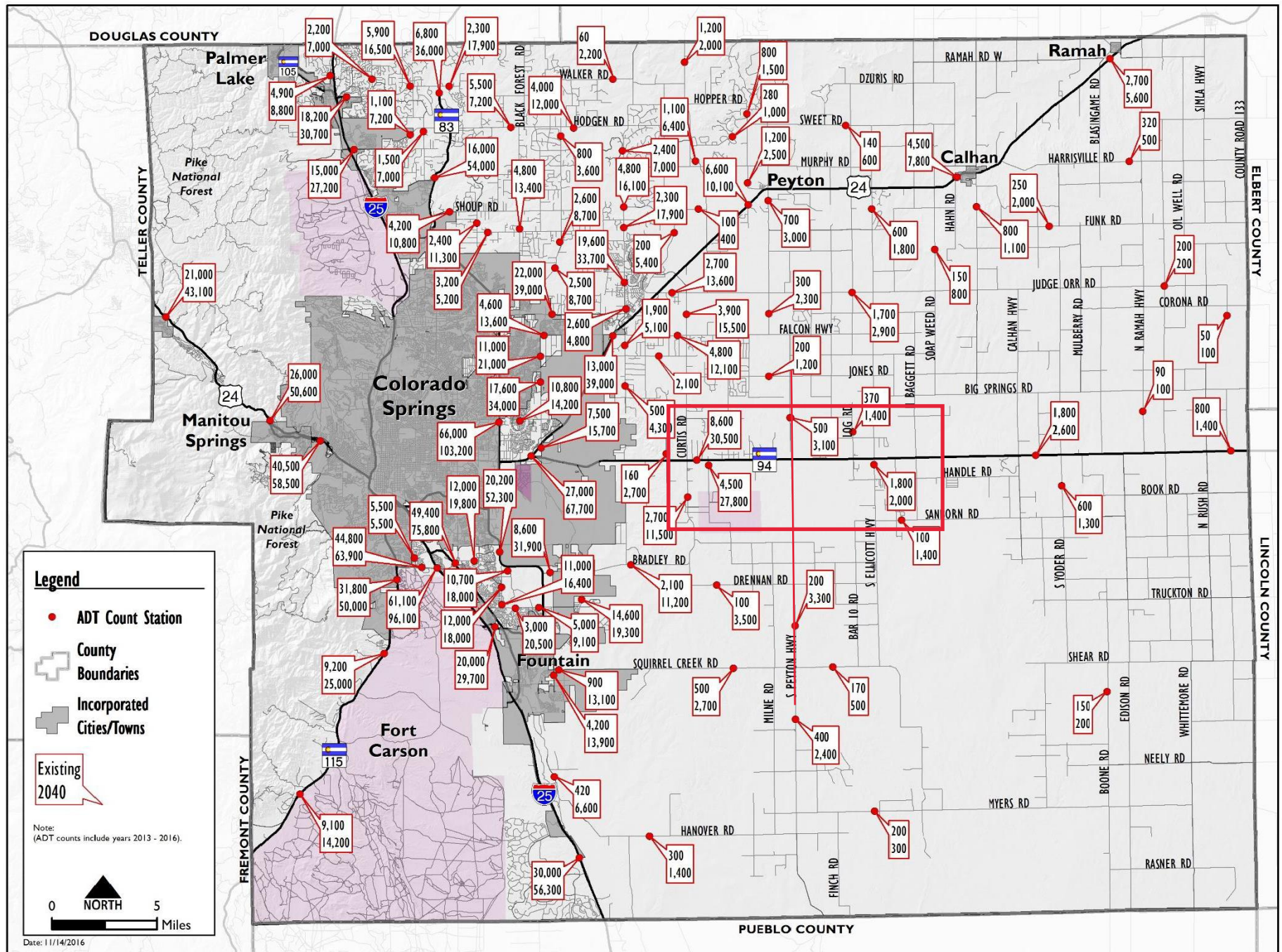
Appendix C: Future Traffic Projections

CDOT OTIS: Trinity Ranch

ROUTE	REFPT	ENDREFPT	LENGTH	AADT	AADTYR	COUNTYEAR	DHTRK	OFFPKTRK	YR20FACTOR	ANNUAL GROWTH RATE	DHV	DD	LOCATION
094A	13.095	17.1	3.993	4500	2023	2022	0.3	6.6	1.23	1%	11	57	ON SH 94 E/O PEYTON HWY CR 463

El Paso County Traffic Projections

	2025	2040	Growth	Growth
	Existing	Future	Factor	Rate
Peyton Highway	1,200	3,100	2.6	6.5%



Map 9: Existing and 2040 Traffic Volumes



Appendix D: Trip Generation Worksheets

Trinity Ranch Weekday Trip Generation Calculations

TRIP GENERATION CHARACTERISTICS									DIRECTIONAL DISTRIBUTION		BASELINE TRIPS		
	Land Use + Code	Land Use	Subcategory	Source	ITE LUC	Scale	ITE Unit	Equation/Rate	Entering %	Exiting %	In	Out	Total
1	(151) Mini-Warehouse	Mini-Warehouse	All Sites	ITE 11th Ed	151	12.5	CSU	$T = 17.96(X)$	50%	50%	113	112	225
2	(210) Single-Family Detached Housing	Single-Family Detached Housing	All Sites	ITE 11th Ed	210	40	DU	$\ln(T) = 0.92 \ln(X) + 2.68$	50%	50%	217	217	434
Total:											330	329	659

Trinity Ranch AM Peak Hour Trip Generation Calculations







TRIP GENERATION CHARACTERISTICS									DIRECTIONAL DISTRIBUTION		BASELINE TRIPS		
	Land Use + Code	Land Use	Subcategory	Source	ITE LUC	Scale	ITE Unit	Equation/Rate	Entering %	Exiting %	In	Out	Total
1	(151) Mini-Warehouse	Mini-Warehouse	All Sites	ITE 11th Ed	151	12.5	CSU	$T = 1.21(X)$	51%	49%	8	7	15
2	(210) Single-Family Detached Housing	Single-Family Detached Housing	All Sites	ITE 11th Ed	210	40	DU	$\ln(T) = 0.91 \ln(X) + 0.12$	25%	75%	8	24	32
Total:											16	31	47

Trinity Ranch PM Peak Hour Trip Generation Calculations

TRIP GENERATION CHARACTERISTICS									DIRECTIONAL DISTRIBUTION		BASELINE TRIPS		
	Land Use + Code	Land Use	Subcategory	Source	ITE LUC	Scale	ITE Unit	Equation/Rate	Entering %	Exiting %	In	Out	Total
1	(151) Mini-Warehouse	Mini-Warehouse	All Sites	ITE 11th Ed	151	12.5	CSU	$T = 1.68(X)$	50%	50%	11	10	21
2	(210) Single-Family Detached Housing	Single-Family Detached Housing	All Sites	ITE 11th Ed	210	40	DU	$\ln(T) = 0.94 \ln(X) + 0.27$	63%	37%	26	16	42
Total:											37	26	63









Appendix E: Intersection Analysis Worksheets







Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	152	5	5	349	36	32	25	9	21	10	27
Future Vol, veh/h	8	152	5	5	349	36	32	25	9	21	10	27
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	7	7	7	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	169	6	6	388	40	36	28	10	23	11	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	428	0	0	174	0	0	594	628	172	619	611	408
Stage 1	-	-	-	-	-	-	189	189	-	419	419	-
Stage 2	-	-	-	-	-	-	404	439	-	201	192	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1105	-	-	1402	-	-	417	399	872	401	409	643
Stage 1	-	-	-	-	-	-	812	743	-	612	590	-
Stage 2	-	-	-	-	-	-	623	578	-	801	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1105	-	-	1402	-	-	383	395	872	368	404	643
Mov Cap-2 Maneuver	-	-	-	-	-	-	469	465	-	471	476	-
Stage 1	-	-	-	-	-	-	806	737	-	609	588	-
Stage 2	-	-	-	-	-	-	580	576	-	756	735	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.4			0.1			13.46			12.58		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	499	1105	-	-	1402	-	-	539
HCM Lane V/C Ratio	0.147	0.008	-	-	0.004	-	-	0.12
HCM Ctrl Dly (s/v)	13.5	8.3	-	-	7.6	-	-	12.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.4







Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	335	32	13	171	31	18	15	6	28	14	11
Future Vol, veh/h	25	335	32	13	171	31	18	15	6	28	14	11
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	2	2	2
Mvmt Flow	27	356	34	14	182	33	19	16	6	30	15	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	215	0	0	390	0	0	644	669	373	644	670	198
Stage 1	-	-	-	-	-	-	427	427	-	226	226	-
Stage 2	-	-	-	-	-	-	217	243	-	418	444	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.518	4.018	3.318
Pot Cap-1 Maneuver	1355	-	-	1157	-	-	385	377	670	386	378	843
Stage 1	-	-	-	-	-	-	604	584	-	777	717	-
Stage 2	-	-	-	-	-	-	783	703	-	613	575	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1355	-	-	1157	-	-	355	365	670	358	366	843
Mov Cap-2 Maneuver	-	-	-	-	-	-	455	446	-	452	444	-
Stage 1	-	-	-	-	-	-	592	572	-	767	708	-
Stage 2	-	-	-	-	-	-	747	695	-	578	564	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.49			0.49			13.3			13.16		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	475	1355	-	-	1157	-	-	497				
HCM Lane V/C Ratio	0.087	0.02	-	-	0.012	-	-	0.113				
HCM Ctrl Dly (s/v)	13.3	7.7	-	-	8.1	-	-	13.2				
HCM Lane LOS	B	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.4				

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	160	7	7	367	49	44	34	12	29	14	37
Future Vol, veh/h	11	160	7	7	367	49	44	34	12	29	14	37
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	7	7	7	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	178	8	8	408	54	49	38	13	32	16	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	462	0	0	186	0	0	637	684	182	672	661	435
Stage 1	-	-	-	-	-	-	206	206	-	451	451	-
Stage 2	-	-	-	-	-	-	431	478	-	221	210	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1073	-	-	1389	-	-	390	371	861	370	383	621
Stage 1	-	-	-	-	-	-	796	731	-	588	571	-
Stage 2	-	-	-	-	-	-	603	556	-	781	728	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1073	-	-	1389	-	-	346	365	861	328	376	621
Mov Cap-2 Maneuver	-	-	-	-	-	-	435	441	-	440	455	-
Stage 1	-	-	-	-	-	-	787	723	-	585	568	-
Stage 2	-	-	-	-	-	-	544	553	-	721	720	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.52			0.13			14.77			13.5		
HCM LOS							B			B		







Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	468	1073	-	-	1389	-	-	512
HCM Lane V/C Ratio	0.214	0.011	-	-	0.006	-	-	0.174
HCM Ctrl Dly (s/v)	14.8	8.4	-	-	7.6	-	-	13.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0.6

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	352	44	18	180	42	25	21	8	38	19	15
Future Vol, veh/h	34	352	44	18	180	42	25	21	8	38	19	15
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	2	2	2
Mvmt Flow	36	374	47	19	191	45	27	22	9	40	20	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	236	0	0	421	0	0	710	745	398	710	746	214
Stage 1	-	-	-	-	-	-	470	470	-	252	252	-
Stage 2	-	-	-	-	-	-	240	274	-	458	494	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.518	4.018	3.318
Pot Cap-1 Maneuver	1331	-	-	1127	-	-	347	341	650	348	342	826
Stage 1	-	-	-	-	-	-	572	558	-	752	698	-
Stage 2	-	-	-	-	-	-	761	681	-	583	547	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1331	-	-	1127	-	-	310	326	650	312	327	826
Mov Cap-2 Maneuver	-	-	-	-	-	-	417	414	-	411	410	-
Stage 1	-	-	-	-	-	-	556	543	-	739	686	-
Stage 2	-	-	-	-	-	-	712	669	-	536	532	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.62			0.62			14.43			14.41		
HCM LOS							B			B		







Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	439	1331	-	-	1127	-	-	459
HCM Lane V/C Ratio	0.131	0.027	-	-	0.017	-	-	0.167
HCM Ctrl Dly (s/v)	14.4	7.8	-	-	8.2	-	-	14.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.6

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	171	7	9	389	52	44	34	13	31	14	37
Future Vol, veh/h	11	171	7	9	389	52	44	34	13	31	14	37
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	7	7	7	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	190	8	10	432	58	49	38	14	34	16	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	490	0	0	198	0	0	678	728	194	714	703	461
Stage 1	-	-	-	-	-	-	218	218	-	481	481	-
Stage 2	-	-	-	-	-	-	460	510	-	233	222	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1048	-	-	1375	-	-	366	350	848	346	362	600
Stage 1	-	-	-	-	-	-	784	722	-	566	554	-
Stage 2	-	-	-	-	-	-	581	538	-	770	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1048	-	-	1375	-	-	323	343	848	304	355	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	416	423	-	420	438	-
Stage 1	-	-	-	-	-	-	775	714	-	562	550	-
Stage 2	-	-	-	-	-	-	522	534	-	708	711	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.49			0.15			15.26			14.02		
HCM LOS							C			B		







Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	451	1048	-	-	1375	-	-	490
HCM Lane V/C Ratio	0.224	0.012	-	-	0.007	-	-	0.186
HCM Ctrl Dly (s/v)	15.3	8.5	-	-	7.6	-	-	14
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0.7

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	378	44	19	198	45	25	21	10	42	19	15
Future Vol, veh/h	34	378	44	19	198	45	25	21	10	42	19	15
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	2	2	2
Mvmt Flow	36	402	47	20	211	48	27	22	11	45	20	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	259	0	0	449	0	0	759	797	426	761	796	235
Stage 1	-	-	-	-	-	-	498	498	-	275	275	-
Stage 2	-	-	-	-	-	-	261	299	-	486	521	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.518	4.018	3.318
Pot Cap-1 Maneuver	1306	-	-	1101	-	-	322	318	627	322	320	804
Stage 1	-	-	-	-	-	-	553	543	-	731	683	-
Stage 2	-	-	-	-	-	-	742	664	-	563	531	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1306	-	-	1101	-	-	286	304	627	286	305	804
Mov Cap-2 Maneuver	-	-	-	-	-	-	398	396	-	390	393	-
Stage 1	-	-	-	-	-	-	537	528	-	718	670	-
Stage 2	-	-	-	-	-	-	692	652	-	515	517	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.58			0.6			14.85			15.16		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	425	1306	-	-	1101	-	-	435
HCM Lane V/C Ratio	0.14	0.028	-	-	0.018	-	-	0.186
HCM Ctrl Dly (s/v)	14.9	7.8	-	-	8.3	-	-	15.2
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	0.7







Intersection												
Int Delay, s/veh	51.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	195	24	24	448	174	154	121	43	101	48	130
Future Vol, veh/h	39	195	24	24	448	174	154	121	43	101	48	130
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	7	7	7	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	217	27	27	498	193	171	134	48	112	53	144

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	691	0	0	243	0	0	894	1061	230	1018	978	594
Stage 1	-	-	-	-	-	-	317	317	-	648	648	-
Stage 2	-	-	-	-	-	-	578	744	-	371	330	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	881	-	-	1323	-	-	262	224	809	216	251	505
Stage 1	-	-	-	-	-	-	695	654	-	459	466	-
Stage 2	-	-	-	-	-	-	502	421	-	650	646	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	881	-	-	1323	-	-	~ 148	208	809	~ 106	233	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	223	296	-	249	338	-
Stage 1	-	-	-	-	-	-	660	622	-	450	457	-
Stage 2	-	-	-	-	-	-	310	413	-	456	614	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.41	0.29	188.46	60.58
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	276	881	-	-	1323	-	-	346
HCM Lane V/C Ratio	1.281	0.049	-	-	0.02	-	-	0.895
HCM Ctrl Dly (s/v)	188.5	9.3	-	-	7.8	-	-	60.6
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	17.3	0.2	-	-	0.1	-	-	8.7

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

Intersection												
Int Delay, s/veh	45.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	121	430	154	63	219	150	87	72	29	135	68	53
Future Vol, veh/h	121	430	154	63	219	150	87	72	29	135	68	53
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	515	-	-	525	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	2	2	2
Mvmt Flow	129	457	164	67	233	160	93	77	31	144	72	56

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	393	0	0	621	0	0	1200	1323	539	1200	1326	313
Stage 1	-	-	-	-	-	-	797	797	-	447	447	-
Stage 2	-	-	-	-	-	-	403	527	-	753	879	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.518	4.018	3.318
Pot Cap-1 Maneuver	1166	-	-	950	-	-	161	155	540	162	156	727
Stage 1	-	-	-	-	-	-	379	397	-	591	574	-
Stage 2	-	-	-	-	-	-	622	527	-	402	365	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	950	-	-	~ 85	128	540	~ 88	129	727
Mov Cap-2 Maneuver	-	-	-	-	-	-	191	222	-	161	207	-
Stage 1	-	-	-	-	-	-	337	353	-	549	533	-
Stage 2	-	-	-	-	-	-	461	490	-	264	325	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.45	1.32	79.09	219.41
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	226	1166	-	-	950	-	-	206
HCM Lane V/C Ratio	0.886	0.11	-	-	0.071	-	-	1.321
HCM Ctrl Dly (s/v)	79.1	8.5	-	-	9.1	-	-	219.4
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	7.2	0.4	-	-	0.2	-	-	15.1

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

Timings

1: SH-94 & Peyton Highway

2050 Total AM

05/30/2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	39	206	26	470	154	121	103	48
Future Volume (vph)	39	206	26	470	154	121	103	48
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	5	2	1	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	11.0	24.0	24.0	24.0	24.0
Total Split (s)	11.0	51.0	11.0	51.0	28.0	28.0	28.0	28.0
Total Split (%)	12.2%	56.7%	12.2%	56.7%	31.1%	31.1%	31.1%	31.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 79.3

Natural Cycle: 70

Control Type: Actuated-Uncoordinated





















Splits and Phases: 1: SH-94 & Peyton Highway

	Ø1		Ø2		Ø4
11 s		51 s		28 s	
	Ø5		Ø6		Ø8
11 s		51 s		28 s	

HCM 7th Signalized Intersection Summary

1: SH-94 & Peyton Highway

2050 Total AM
05/30/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	206	24	26	470	177	154	121	44	103	48	130
Future Volume (veh/h)	39	206	24	26	470	177	154	121	44	103	48	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1796	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	229	27	29	522	197	171	134	49	114	53	144
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	7	7	7	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	811	96	619	655	247	260	328	120	281	112	304
Arrive On Green	0.04	0.51	0.51	0.03	0.51	0.51	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1711	1577	186	1781	1294	488	1186	1307	478	1201	445	1208
Grp Volume(v), veh/h	43	0	256	29	0	719	171	0	183	114	0	197
Grp Sat Flow(s),veh/h/ln	1711	0	1763	1781	0	1782	1186	0	1784	1201	0	1653
Q Serve(g_s), s	1.0	0.0	7.2	0.7	0.0	29.2	12.5	0.0	7.5	7.7	0.0	8.9
Cycle Q Clear(g_c), s	1.0	0.0	7.2	0.7	0.0	29.2	21.4	0.0	7.5	15.1	0.0	8.9
Prop In Lane	1.00		0.11	1.00		0.27	1.00		0.27	1.00		0.73
Lane Grp Cap(c), veh/h	267	0	906	619	0	902	260	0	448	281	0	415
V/C Ratio(X)	0.16	0.00	0.28	0.05	0.00	0.80	0.66	0.00	0.41	0.41	0.00	0.47
Avail Cap(c_a), veh/h	301	0	906	669	0	916	260	0	448	281	0	415
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	0.0	12.1	9.9	0.0	17.9	36.9	0.0	27.3	33.7	0.0	27.8
Incr Delay (d2), s/veh	0.3	0.0	0.8	0.0	0.0	4.9	5.9	0.0	0.6	0.9	0.0	0.8
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(95%),veh/ln	0.7	0.0	5.2	0.5	0.0	18.0	7.2	0.0	5.8	4.1	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.9	0.0	12.9	9.9	0.0	22.8	42.9	0.0	27.9	34.6	0.0	28.7
LnGrp LOS	B		B	A		C	D		C	C		C
Approach Vol, veh/h	299			748			354			311		
Approach Delay, s/veh	13.2			22.3			35.1			30.9		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	51.0		28.0	9.2	50.3		28.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	45.0		22.0	5.0	45.0		22.0				
Max Q Clear Time (g_c+I1), s	2.7	9.2		23.4	3.0	31.2		17.1				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	4.5		0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.9											
HCM 7th LOS	C											

Timings

1: SH-94 & Peyton Highway

2050 Total PM

05/30/2025



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	121	456	64	237	87	72	139	68
Future Volume (vph)	121	456	64	237	87	72	139	68
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	5	2	1	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	12.0	53.0	11.0	52.0	26.0	26.0	26.0	26.0
Total Split (%)	13.3%	58.9%	12.2%	57.8%	28.9%	28.9%	28.9%	28.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	None	None	None	None

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 84.7

Natural Cycle: 65

Control Type: Actuated-Uncoordinated





















Splits and Phases: 1: SH-94 & Peyton Highway





	Ø1		Ø2		Ø4
11 s		53 s		26 s	
	Ø5		Ø6		Ø8
12 s		52 s		26 s	





HCM 7th Signalized Intersection Summary

1: SH-94 & Peyton Highway

2050 Total PM
05/30/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	456	154	64	237	153	87	72	31	139	68	53
Future Volume (veh/h)	121	456	154	64	237	153	87	72	31	139	68	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1841	1841	1841	1856	1856	1856	1870	1870	1870
Adj Flow Rate, veh/h	129	485	164	68	252	163	93	77	33	148	72	56
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	2	2	2
Cap, veh/h	566	734	248	391	564	365	247	239	102	264	189	147
Arrive On Green	0.06	0.55	0.55	0.05	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	1337	452	1753	1044	675	1252	1232	528	1283	975	759
Grp Volume(v), veh/h	129	0	649	68	0	415	93	0	110	148	0	128
Grp Sat Flow(s),veh/h/ln	1781	0	1789	1753	0	1719	1252	0	1760	1283	0	1734
Q Serve(g_s), s	2.7	0.0	22.0	1.4	0.0	12.5	6.0	0.0	4.6	9.6	0.0	5.5
Cycle Q Clear(g_c), s	2.7	0.0	22.0	1.4	0.0	12.5	11.5	0.0	4.6	14.2	0.0	5.5
Prop In Lane	1.00		0.25	1.00		0.39	1.00		0.30	1.00		0.44
Lane Grp Cap(c), veh/h	566	0	982	391	0	928	247	0	342	264	0	336
V/C Ratio(X)	0.23	0.00	0.66	0.17	0.00	0.45	0.38	0.00	0.32	0.56	0.00	0.38
Avail Cap(c_a), veh/h	591	0	982	411	0	928	296	0	411	315	0	405
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	13.7	10.5	0.0	11.9	35.0	0.0	29.7	35.8	0.0	30.0
Incr Delay (d2), s/veh	0.2	0.0	3.5	0.2	0.0	1.6	1.0	0.0	0.5	1.9	0.0	0.7
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(95%),veh/ln	1.7	0.0	13.9	0.9	0.0	8.4	3.3	0.0	3.5	5.5	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.8	0.0	17.2	10.7	0.0	13.5	36.0	0.0	30.2	37.6	0.0	30.7
LnGrp LOS	A		B	B		B	D		C	D		C
Approach Vol, veh/h	778			483			203			276		
Approach Delay, s/veh	15.8			13.1			32.8			34.4		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	53.0		22.6	10.8	52.2		22.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	5.0	47.0		20.0	6.0	46.0		20.0				
Max Q Clear Time (g_c+I1), s	3.4	24.0		13.5	4.7	14.5		16.2				
Green Ext Time (p_c), s	0.0	4.8		0.4	0.0	3.0		0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	20.0											
HCM 7th LOS	B											





Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	201	423	2	5	26
Future Vol, veh/h	14	201	423	2	5	26
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	226	475	2	6	29
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	478	0	-	0	734	476
Stage 1	-	-	-	-	476	-
Stage 2	-	-	-	-	257	-
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	1085	-	-	-	387	589
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	786	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1085	-	-	-	382	589
Mov Cap-2 Maneuver	-	-	-	-	382	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	786	-
Approach	EB	WB		SB		
HCM Ctrl Dly, s/v	0.54	0		12.11		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1085	-	-	-	541	
HCM Lane V/C Ratio	0.015	-	-	-	0.064	
HCM Ctrl Dly (s/v)	8.4	-	-	-	12.1	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	398	240	6	4	22
Future Vol, veh/h	31	398	240	6	4	22
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	447	270	7	4	25

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	276	0	-	0	790
Stage 1	-	-	-	-	273
Stage 2	-	-	-	-	517
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1287	-	-	-	359
Stage 1	-	-	-	-	773
Stage 2	-	-	-	-	599
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1287	-	-	-	349
Mov Cap-2 Maneuver	-	-	-	-	349
Stage 1	-	-	-	-	752
Stage 2	-	-	-	-	599

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.57	0	10.83
HCM LOS			B





Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1287	-	-	-	647
HCM Lane V/C Ratio	0.027	-	-	-	0.045
HCM Ctrl Dly (s/v)	7.9	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	339	646	2	5	26
Future Vol, veh/h	14	339	646	2	5	26
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	381	726	2	6	29

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	728	0	0 1139 727
Stage 1	-	-	- - 727 -
Stage 2	-	-	- - 412 -
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	875	-	- - 222 424
Stage 1	-	-	- - 478 -
Stage 2	-	-	- - 668 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	875	-	- - 218 424
Mov Cap-2 Maneuver	-	-	- - 218 -
Stage 1	-	-	- - 470 -
Stage 2	-	-	- - 668 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.36	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	875	-	-	-	368
HCM Lane V/C Ratio	0.018	-	-	-	0.095
HCM Ctrl Dly (s/v)	9.2	-	-	-	15.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	594	432	6	4	22
Future Vol, veh/h	31	594	432	6	4	22
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	667	485	7	4	25

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	492	0	0 1226 489
Stage 1	-	-	- 489 -
Stage 2	-	-	- 737 -
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	1071	-	- 197 579
Stage 1	-	-	- 617 -
Stage 2	-	-	- 473 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1071	-	- 191 579
Mov Cap-2 Maneuver	-	-	- 191 -
Stage 1	-	-	- 597 -
Stage 2	-	-	- 473 -

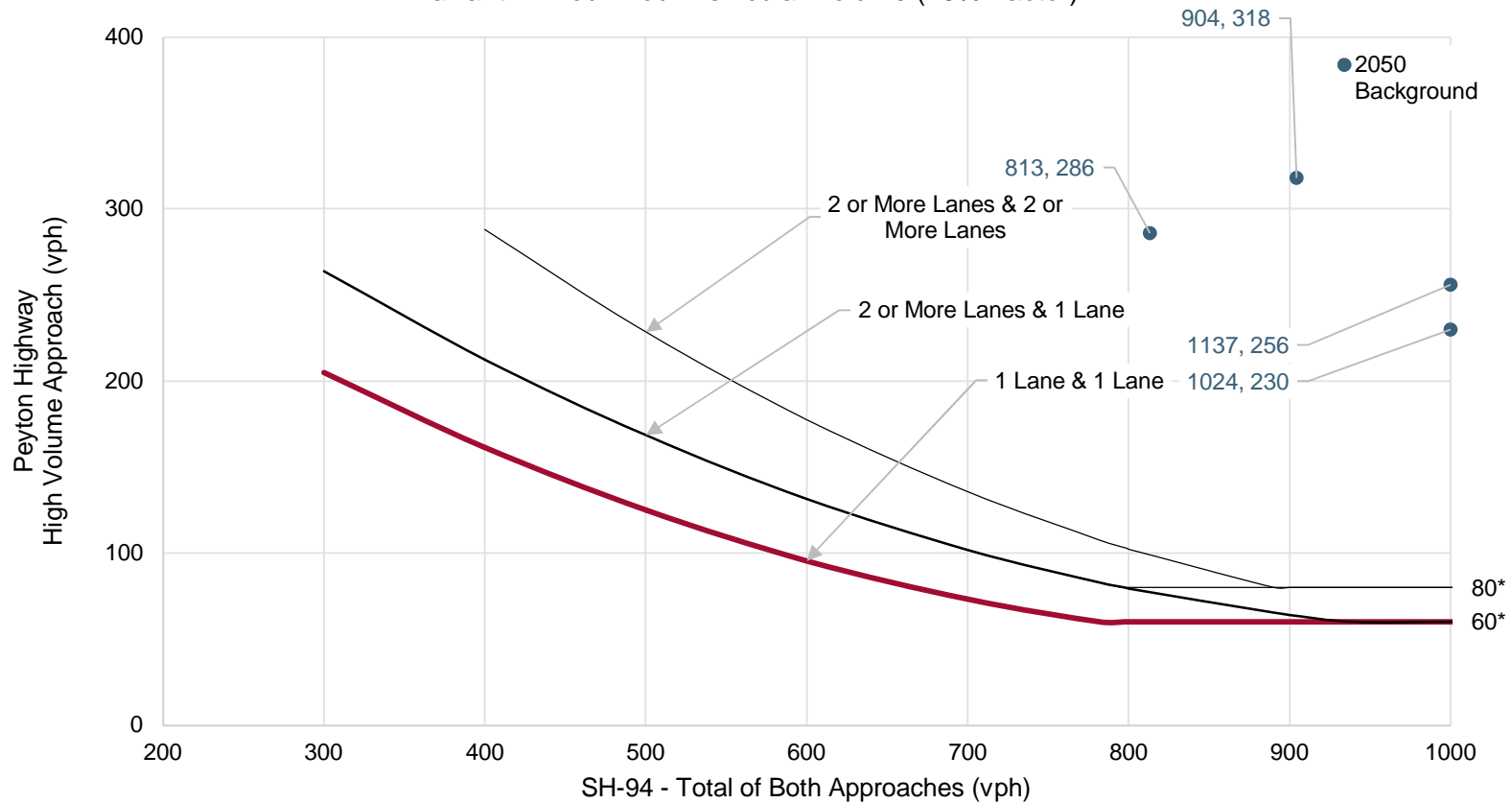
Approach	EB	WB	SB
HCM Control Delay, s/v	0.42	0	13.74
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1071	-	-	-	441
HCM Lane V/C Ratio	0.033	-	-	-	0.066
HCM Control Delay (s/veh)	8.5	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2



Appendix F: Signal Warrant Analysis Worksheet

Warrant 2 - Four-Hour Vehicular Volume (70% Factor)



*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 approach with one lane.

SH-94 & Peyton Highway
Signal Warrant Analysis
Four-Hour Volume Warrant

Source: Manual on Uniform Traffic Control Devices 2009

Figure 1