16850 Steppler Road
Traffic Study Memorandum

PCD File No. P233

El Paso County, Colorado

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

August 2, 2023
Date

Developer's Statement

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

Charlie Stewart

Aug 1, 2023
Date

Mr. Charlie Stewart
16850 Steppler Road
Colorado Springs, Colorado 80908

August 2, 2023

Mr. Charlie Stewart
16850 Steppler Road
Colorado Springs, CO 80908

Re: 16850 Steppler Road – Traffic Study Memorandum
El Paso County, Colorado

Dear Mr. Stewart,

This memorandum documents the results of a traffic study including trip generation, trip distribution, traffic assignment, and intersection analysis for the proposed 16850 Steppler Road single family development along Settlers Ranch Road to the north of Hodgen Road in El Paso County, Colorado. A road impact fee assessment as well as a sight distance evaluation are also both included in this traffic study. This study supports a rezoning effort for the 36.2-acre parcel which has the potential to include approximately 14 single-family homes, each on approximately 2.5-acre lots. No subdivision plat is proposed at this stage. Of note, most of the single-family homes in the surrounding area are also on 2.5-acre lots. A vicinity map is attached in **Figure 1**. A conceptual site plan for the project is attached.

For purposes of this study, it was assumed that this project will be completed in the next several years. Therefore, analysis was conducted for the 2026 short-term horizon as well as a 2045 long-term horizon, at the request of El Paso County staff. This study follows El Paso County guidelines to serve as a Traffic Memorandum based on the daily trip generation being between 100 and 500 trips per day.

The intersection of Hodgen Road & Timber Meadow Drive (Intersection #1) and the Settlers Ranch Road & Timber Meadow Drive (#2) intersection are incorporated into this traffic study in accordance with El Paso County standards and requirements. The planned future intersection of Settlers Ranch Road and Steppler Road (#3) was also evaluated for the long-term 2045 horizon. Access to the development is anticipated to be along Settlers Ranch Road and this access is also included for evaluation in this traffic study.

Regional access to 16850 Steppler Road will be provided by Interstate 25 (I-25), State Highway 83 (SH-83), and SH-105 while primary access to the site will be provided by SH-83, Hodgen Road, and Steppler Road. Direct access to the site will be provided by a proposed future access along Settlers Ranch Road to the northeast of the Settlers Ranch Rd & Timber Meadow Drive (#2) intersection.

EXISTING AND FUTURE ROADWAY NETWORK

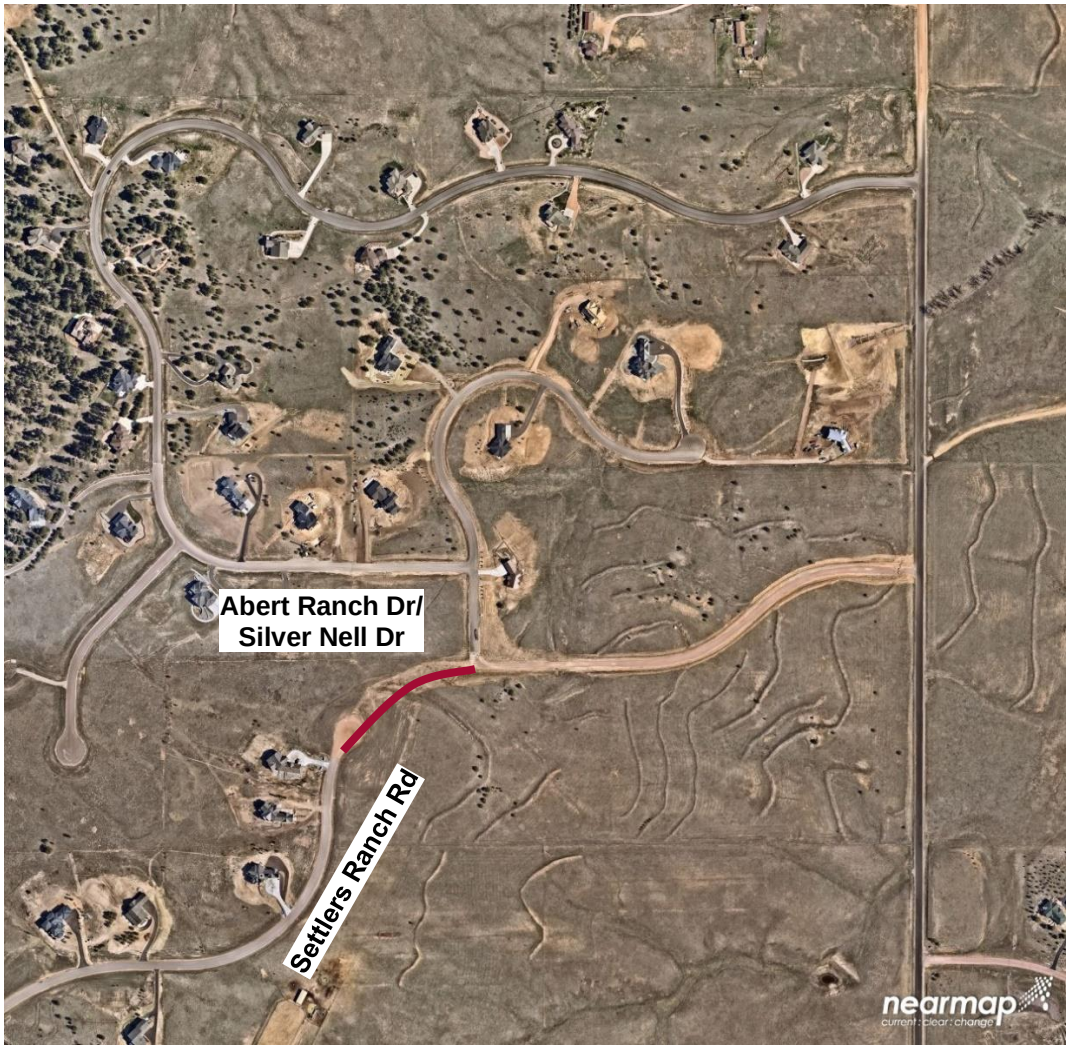
Hodgen Road is an east-west roadway with one through lane in each direction and a posted speed limit of 55 miles per hour within the study area. The El Paso County Major Transportation Corridor Plan (MTCP) identifies Hodgen Road as a minor arterial through the 2060 horizon.

Timber Meadow Drive is a north-south roadway with one through lane in each direction and a posted speed limit of 30 miles per hour. This roadway operates as a rural collector as identified in previous traffic studies in the area and per the existing average daily traffic volume (ADT) of approximately 1,500 vehicles per day.

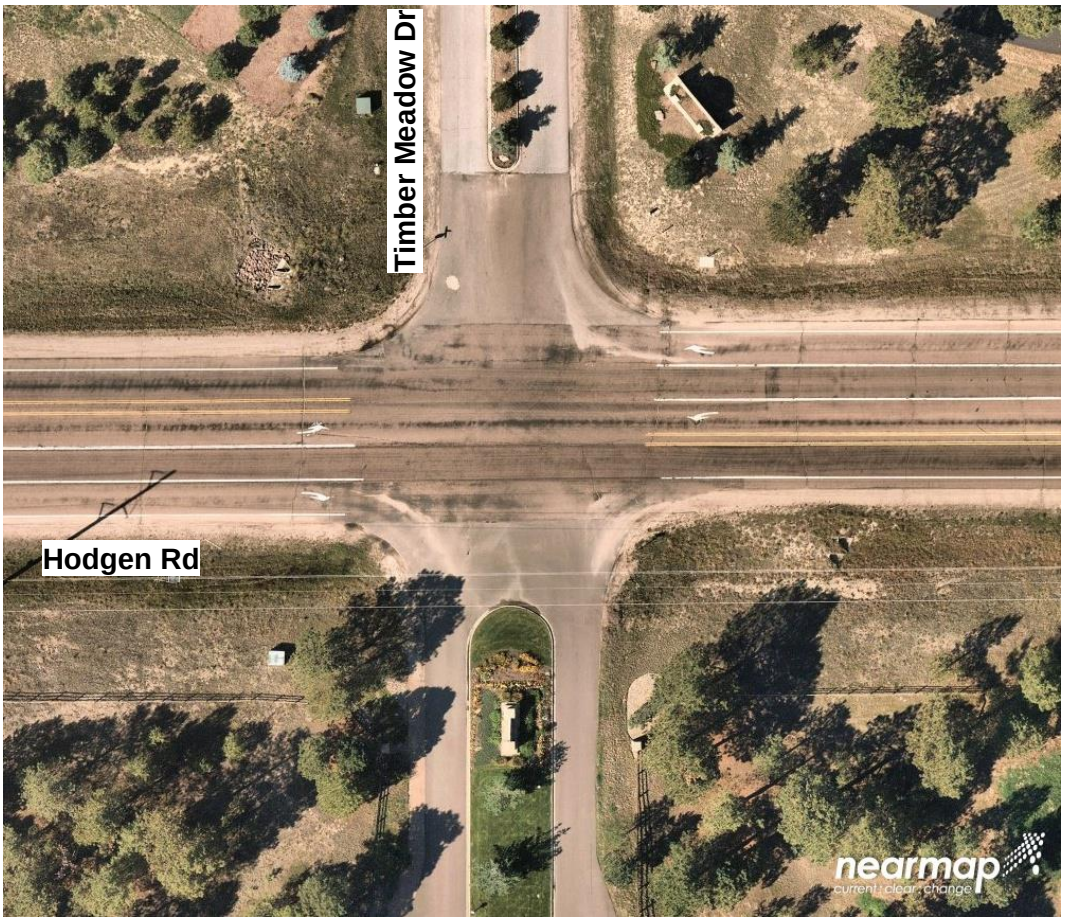
Settlers Ranch Road provides one through lane in each direction. No posted speed limit along Settlers Ranch Road could be determined from Google Street View, but based on discussion with El Paso County staff, rural local roadways such as this have a 30 mile-per-hour design and posted speed. This roadway operates as a two-lane rural local roadway classification based on the existing and future traffic volumes.

Of note, per El Paso County standards a maximum of 25 lots on a dead-end roadway are permitted to be on the roadway, and it is anticipated that the maximum number of lots may be achieved along Settlers Ranch Road prior to construction of this project. As such, secondary access is anticipated to be able to occur from a continuation of Settlers Ranch Road onto Abert Ranch Drive/Silver Nell Drive would provide a secondary access that would exit onto Steppler Road.

It is noted that if the connection between Settlers Ranch Road and Abert Ranch Drive/Silver Nell Drive is not yet constructed by the time this proposed project is constructed, that this project may be required to extend Settlers Ranch Road to Abert Ranch Drive/Silver Nell Drive, which would consist of approximately a 600-foot extension, as shown in red in the image below (north is up). Per the aforementioned El Paso County standards, this connection would be required once more than 25 homes exist on Settlers Ranch Road. As of April 2023, there are 21 homes along Settlers Ranch Road currently constructed. If fewer than 25 homes are present at the time this project is built, then this project may need to provide this connection of Settlers Ranch Road.



The intersection of Hodgen Road & Timber Meadow Drive (#1) is an unsignalized intersection with stop control on the northbound and southbound Timber Meadow Drive approaches to the intersection. The eastbound and westbound Hodgen Road approaches each provide a left turn lane, a through lane, and a right turn lane in each direction. The northbound and southbound approaches each provide one lane for shared left/through/right turning movements in each direction. An aerial photo that illustrates the existing intersection configuration is below (north is up).



Hodgen Road & Timber Meadow Drive (#1)

The intersection of Settlers Ranch Road & Timber Meadow Drive (#2) is an unsignalized 'T'-intersection with stop control on the westbound Settlers Ranch Road approach to the intersection. Each approach to the intersection provides one through lane for shared turning movements in each direction. An aerial photo that illustrates the existing intersection configuration is below.

Settlers Ranch Road & Timber Meadow Drive (#2)

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

PEDESTRIAN AND BICYCLE FACILITIES REVIEW

There are no pedestrian and bicycle facilities along the roadways within the study area. This project is not anticipated to create the need for these alternate travel mode facilities.

PUBLIC TRANSPORTATION SERVICES FACILITY REVIEW

There is no public transportation service in this area. With the rural nature of the site, it is believed that public transportation to serve this area is not feasible.

EXISTING AND FUTURE TRAFFIC VOLUMES

Existing turning movement counts were conducted at the study intersections on Thursday, April 6, 2023 during the morning peak hour and Wednesday, April 5, 2023 during the afternoon peak hour. The counts were conducted on separate days because of inclement weather conditions during the other periods of these days that would have likely reduced the turning movement counts at these intersections. 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 these count dates. The existing intersection traffic volumes are also shown in attached **Figure 3** with count sheets attached. For purposes of this analysis, the volume traveling eastbound and westbound along Settlers Ranch Road from these traffic counts were conservatively assumed to carry through the project access along Settlers Ranch Road.

According to traffic projections provided by CDOT Online Transportation Information System (OTIS), SH-83 approximately two-thirds of a mile to the west of the site is expected to have an average 20-year growth factor of approximately 1.56. This equates to an annual growth rate of approximately 2.23 percent. CDOT traffic projection information is attached. This annual growth rate was used to calculate short-term 2026 and 2045 background traffic projections for through movements along Hodgen Road and Steppler Road, while all other movements at the study area intersections assumed a 0.50 percent annual growth rate as these turning movements into the developments are not anticipated to experience the same level of ongoing growth. In addition to this background growth rate, however, the background traffic volumes incorporated in this study also include traffic anticipated to generated by the following developments, each of which are attached to this study:

- Settlers Ranch Traffic Impact Study, November 2004 with additional information from:
    - Settlers Ranch Filing 2C – Traffic Memorandum, March 2019, PCD File No. SF-1818 for areas remaining to be developed
- Settlers View Transportation Memorandum, December 2018, PCD File No. SF-1841
- Abert Ranch Transportation Memorandum, February 2019, PCD File No. SF1911

Figure 4 includes the 2026 background traffic volumes while **Figure 5** illustrates the 2045 background traffic volumes. Of note, it was conservatively assumed that the Settlers Ranch Road connection to Steppler Road would not yet be completed by the 2026 short-term horizon to provide a conservative analysis for results at the Hodgen Road & Timber Meadow Drive (#1) intersection, while this connection was assumed to be completed by the long-term 2045 horizon. While not needed by the traffic generated by this project, it was also assumed that by 2045, Steppler Road would be paved for any area not yet paved today to the north of Settlers Ranch Road. This is assumed to be constructed by others—if not constructed by this horizon, it is likely that nearly all vehicle trips generated by this development would continue using the Hodgen Road & Timber Meadow Drive (#1) intersection to travel to their destination. Per coordination with El Paso County staff, it should be noted that at the time of subdivision, an analysis of this subdivision's fair share contribution for the paving of Steppler Road will be provided, as the adjacent subdivisions of Abert Ranch and Settlers View have each provided fair share contributions. It is also understood that a transportation memorandum will be required with the subdivision application to finalize details with the proposed design.

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 Manual fitted curve equations that apply to Single-Family Detached Housing (ITE Code 210) for traffic associated with this development. The following **Table 1** summarizes the estimated trip generation for traffic associated with the development (calculations attached).

Table 1 – 16850 Steppler Road Traffic Generation

Land Use and Size	Weekday Vehicles Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Single Family Detached Housing - 14 Dwelling Units (ITE 210)	166	3	9	12	10	6	16

As shown in the table and based on ITE Trip Generation calculations, 16850 Steppler Road is expected to generate approximately 166 weekday daily trips, with 12 of these trips occurring during the morning peak hour and 16 of these trips occurring during the afternoon peak hour.

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic 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 given direction and departs the site back to the original source. The traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. **Figure 6** illustrates the 2026 trip distribution with **Figure 7** displaying the 2045 trip distribution with the assumed Settlers Ranch Road & Steppler Road (Intersection #3) connection. **Figures 8** and **9** illustrate the 2026 and 2045 traffic assignment for this project, respectively.

TOTAL (BACKGROUND PLUS PROJECT) TRAFFIC

Site traffic volumes were added to the background volumes to represent estimated total traffic conditions for the 2026 and 2045 horizons. These total traffic volumes for the study area are illustrated for the 2026 horizon year in **Figure 10** and in **Figure 11** for the 2045 horizon year.

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

TRAFFIC OPERATIONS ANALYSIS METHODOLOGY

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 opening year horizon and 2045 long-term horizon. 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, standard traffic engineering practice recommends LOS D as the minimum threshold for acceptable operations for intersections and LOS E for movements. **Table 2** below shows the definition of level of service for unsignalized intersections.

Table 2 - Level of Service Definitions

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

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

Study area intersections were analyzed based on average total delay analysis for 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.

Calculations for the level of service at the key intersections identified for the study are attached. The traffic analysis is based on the lane geometry and intersection control shown in **Figure 2**. The peak hour factor by intersection approach were used as determined by the existing turning movement counts. Synchro traffic analysis software was used to analyze the study area key intersections for level of service. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection delay and level of service.

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

Hodgen Road & Timber Meadow Drive (#1)

The intersection of Hodgen Road & Timber Meadow Drive (#1) is unsignalized with stop control on the northbound and southbound Timber Meadow Drive approaches to the intersection. The intersection movements currently operate acceptably at LOS C or better during both peak hours. With the addition of project traffic, the intersection movements are anticipated to continue operating at an acceptable level of service through the 2045 horizon. Therefore, improvements or modifications are not anticipated to be needed at this intersection based on the addition of project traffic. **Table 3** provides the results of the level of service at this intersection. Of note, although the southbound right turning volume at this intersection may meet warrants for a right turn lane, no southbound through movements are observed to occur and the southbound left turning movements are anticipated to be fewer than 10 vehicles per hour during the morning and afternoon peak hours through the 2045 horizon. As such, it is believed that this southbound approach to the intersection operates as a de-facto southbound right turn lane and the existing pavement width present today is sufficient through the 2045 horizon. Based on the Settlers Ranch Traffic Memorandum completed in 2004, the southbound approach of Timber Meadow Drive at Hodgen Road was constructed with adequate pavement width and widened radius to allow for left and right turning vehicles to occupy space for two egress lanes. Further, the 95th percentile vehicle queues are reported as one vehicle on the southbound exiting approach of this intersection; therefore, the need for an extended right turn lane is not believed to be necessary.

Table 3 – Hodgen Road & Timber Meadow Drive (#1) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2022 Existing				
Northbound Approach	13.9	B	20.4	C
Eastbound Left	7.8	A	8.0	A
Westbound Left	7.6	A	8.5	A
Southbound Approach	10.3	B	11.4	B
2026 Background				
Northbound Approach	14.9	B	22.7	C
Eastbound Left	7.9	A	8.0	A
Westbound Left	7.6	A	8.6	A
Southbound Approach	10.5	B	11.7	B
2026 Background Plus Project				
Northbound Approach	15.3	C	23.6	C
Eastbound Left	7.9	A	8.1	A
Westbound Left	7.6	A	8.6	A
Southbound Approach	10.7	B	12.0	B
2045 Background				
Northbound Approach	21.0	C	24.5	C
Eastbound Left	8.3	A	8.5	A
Westbound Left	7.9	A	9.7	A
Southbound Approach	12.4	B	16.7	C
2045 Background Plus Project				
Northbound Approach	21.9	C	25.2	D
Eastbound Left	8.3	A	8.5	A
Westbound Left	7.9	A	9.7	A
Southbound Approach	12.5	B	16.9	C

Settlers Ranch Road & Timber Meadow Drive (#2)

The 'T'-intersection of Settlers Ranch Road & Timber Meadow Drive (#2) is unsignalized with stop control on the westbound Settlers Ranch Road approach to the intersection. The intersection movements currently operate acceptably at LOS A during both peak hours. With the addition of project traffic, the intersection movements are anticipated to continue operating at an acceptable level of service through the 2045 horizon. Therefore, improvements or modifications are not anticipated to be needed at this intersection based on the addition of project traffic. **Table 4** provides the results of the level of service at this intersection.

Table 4 – Settlers Ranch Road & Timber Meadow Drive (#2) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2022 Existing				
Westbound Approach	8.8	A	9.5	A
Southbound Left	7.3	A	0.0	A
2026 Background				
Westbound Approach	9.0	A	9.7	A
Southbound Left	7.3	A	0.0	A
2026 Background Plus Project				
Westbound Approach	9.1	A	9.9	A
Southbound Left	7.3	A	0.0	A
2045 Background				
Westbound Approach	9.1	A	10.1	B
Southbound Left	7.3	A	0.0	A
2045 Background Plus Project				
Westbound Approach	9.2	A	10.2	B
Southbound Left	7.3	A	0.0	A

Settlers Ranch Road & Steppler Road (#3)

The Settlers Ranch Road & Steppler Road (#3) intersection does not yet exist today, and to provide a conservative analysis of 2026 conditions, it is assumed to not yet be constructed by the 2026 short-term horizon, with all traffic being routed through the Hodgen Road & Timber Meadow Drive (#1) intersection in this horizon.

Based on information found in the Abert Ranch Transportation Memorandum, the eastern portion of Settlers Ranch Road connecting to Steppler Road is anticipated to be constructed with completion of Filing 2 of Settlers Ranch development. The traffic volume along Steppler Road is not anticipated to be high enough to warrant a northbound left or a southbound right turn lane. The eastbound approach is anticipated to operate well with one lane for shared eastbound left and right turning movements with a posted R1-1 "STOP" sign on the eastbound approach to the intersection. With this configuration, the intersection is anticipated to operate well through the 2045 horizon with the addition of project traffic. **Table 5** provides the results of the level of service at this intersection.

Table 5 – Settlers Ranch Road & Steppler Road (#3) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2045 Background				
Northbound Left	7.3	A	7.3	A
Eastbound Approach	8.7	A	8.7	A
2045 Background Plus Project				
Northbound Left	7.3	A	7.3	A
Southbound Left	8.7	A	8.8	A

Settlers Ranch Road & Project Access (#4)

The proposed 'T'-intersection of Settlers Ranch Road & Project Access (#4) is anticipated to be an unsignalized intersection with stop control on the northbound project access approach to the intersection with a recommended R1-1 "STOP" sign posted. The intersection is anticipated to operate well with one lane in each direction for shared turning movements and turn lanes are not anticipated to be needed or warranted at this intersection. With the addition of project traffic to this proposed intersection, the intersection movements are anticipated to operate at an acceptable LOS A through the 2045 horizon. **Table 6** provides the results of the level of service at this intersection.

Table 6 – Settlers Ranch Road & Project Access (#4) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2026 Background Plus Project				
Northbound Approach	8.6	A	8.7	A
Westbound Left	0.0	A	0.0	A
2045 Background Plus Project				
Northbound Approach	8.7	A	8.7	A
Westbound Left	0.0	A	7.3	A

SIGHT DISTANCE EVALUATION

It is recommended that sight triangles be provided at the project access along Settlers Ranch Road to give drivers exiting the project access a clear view of oncoming traffic. Landscaping and objects within sight triangles must not obstruct drivers' views of the adjacent travel lanes. El Paso County standards were used along this roadway to determine the sight distance needs, including El Paso County Engineering Criteria Manual (ECM) Table 2-21, which provides intersection sight distance values for stop-controlled intersections. The following identifies sight distance requirements for the Settlers Ranch Road intersection associated with the project.

With ECM standards and an assumed design and posted speed limit of 30 miles per hour, the intersection sight distance for vehicles turning left or right from stop from the project access is 335 feet. Therefore, all obstructions for right turning vehicles from stop should be clear to the left within the triangle created with a vertex point located 10.0 feet from the edge of the major road traveled way and a line-of-sight distance of 335 feet located in the middle of the eastbound through lane along Settlers Ranch Road. All obstructions for left-turning vehicles from stop should be clear to the right within the triangle created with a vertex point located 10.0 from the edge of the major road traveled way and a line-of-sight distance of 335 feet located in the middle of the westbound through lane along Settlers Ranch Road.

Although the exact location of the proposed access along Settlers Ranch Road is not yet known at this time for the purposes of this traffic study, when this project access is determined and constructed, the sight triangles should be designated for vehicles turning out of the project access and onto Settlers Ranch Road. However, although the grade of Settlers Ranch Road varies along the roadway, it should be noted the existing roadway alignment has very little sight obstructions adjacent to the roadway and it is not anticipated that this will become an issue.

ROAD IMPACT FEE EVALUATION

At the request of El Paso County, a road impact fee evaluation was conducted for this project based on the anticipated 14 single-family homes proposed to be constructed in this project. The road impact fee per dwelling unit for single-family homes based on El Paso County Impact Fee Schedule guidelines is $3,830 per dwelling unit. Based on this per unit fee, this project would result in a total road impact fee of $53,620. Per discussion with El Paso County staff, road impact fees may be paid at time of building permit.

CONCLUSIONS AND RECOMMENDATIONS

Based on the traffic analysis presented in this report, Kimley-Horn and Associates, Inc. believes the 16850 Steppler Road project will be successfully incorporated into the existing and future roadway network. The following outlines the conclusions and recommendations from our traffic analysis:

- The project is proposed to construct approximately 14 single-family homes with project access anticipated to be gained along Settlers Ranch Road to the northeast of the Settlers Ranch Road & Timber Meadow Drive (#2) intersection. Access to the project is anticipated to be an unsignalized 'T'-intersection with stop control on the northbound project access approach to the intersection with an R1-1 "STOP" sign posted on this approach. Turn lanes are not warranted at this intersection.

- The project is anticipated to generate approximately 166 weekday daily trips, with 12 of these trips occurring during the morning peak hour and 16 of these trips occurring during the afternoon peak hour.

- No improvements are anticipated to be needed at the Hodgen Road & Timber Meadow Drive (#1) or Settlers Ranch Road & Timber Meadow Drive (#2) intersections through the 2045 horizon with the addition of project traffic.

- A new intersection at Settlers Ranch Road & Steppler Road (#3) is anticipated to constructed in coming years. This intersection, when built, should provide an R1-1 "STOP" sign on the eastbound Settlers Ranch Road approach to the 'T'-intersection while all approaches should operate well through the 2045 horizon with one lane for shared turning movements with turn lanes not anticipated to be needed or warranted.

- This study included the Settlers Ranch, Settlers View, and Abert Ranch traffic studies and their associated traffic volume in the background of this study. If fewer than 25 homes are built along Settlers Ranch Road from Timber Meadow Drive by the time this project is constructed, it is noted that this project may be responsible for provision of extending Settlers Ranch Road approximately 600 feet from the terminus cul-de-sac to Abert Ranch Drive to provide a required secondary point of access.

- Sight distance triangles should be provided at the proposed project access along Settlers Ranch Road, when constructed, based on the 335-foot intersection sight distance for vehicles turning from stop.

- The El Paso County road impact fee for the proposed 14 single-family homes in this project would result in a total of $53,620 based on the $3,830 per-unit fee for single-family homes.

- At the time of subdivision, an analysis of this subdivision's fair share contribution for the paving of Steppler Road will be provided, as the adjacent subdivisions of Abert Ranch and Settlers View have each provided fair share contributions. It is also understood that a transportation memorandum will be required with the subdivision application to finalize details with the proposed design.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

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

Figures

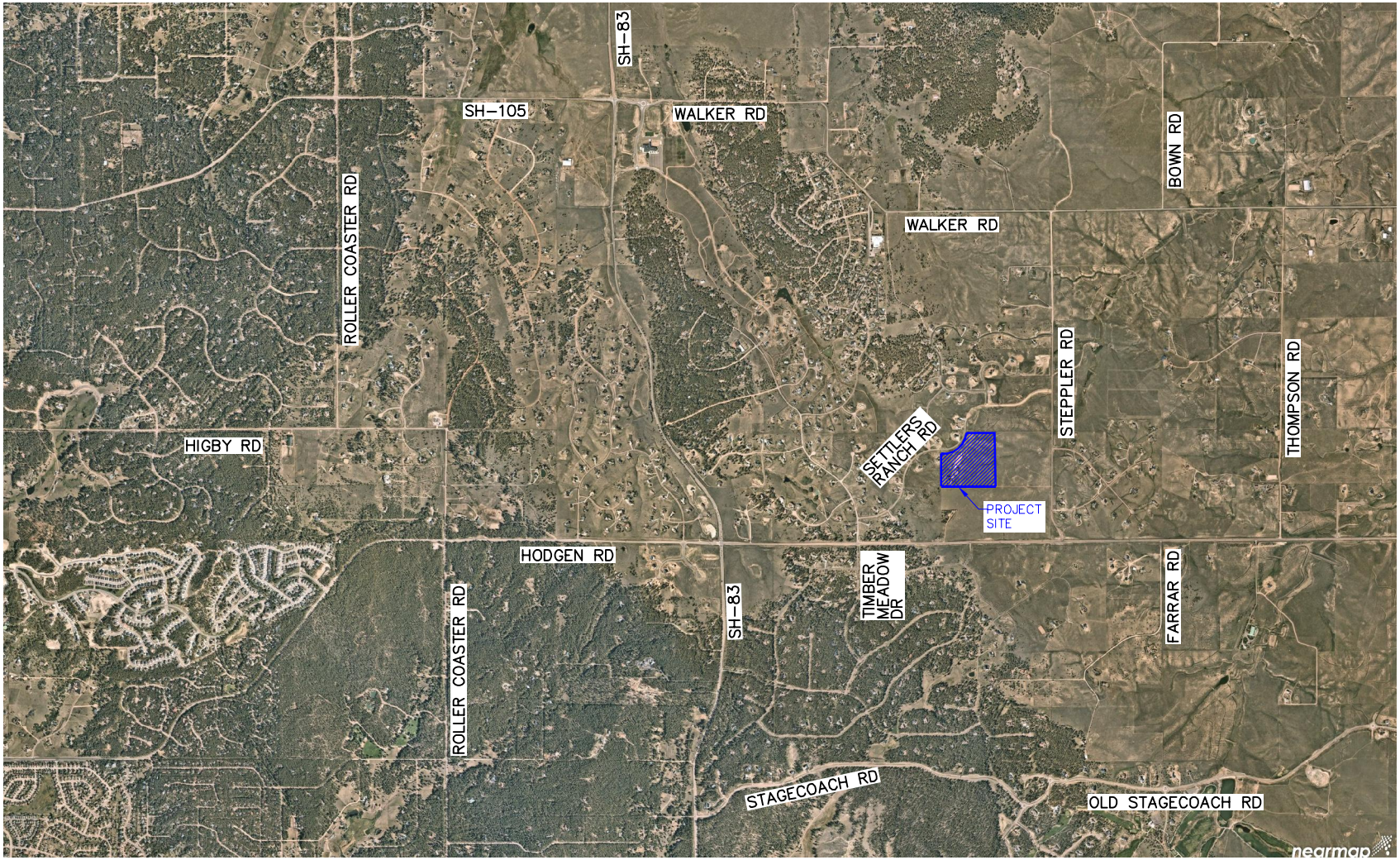
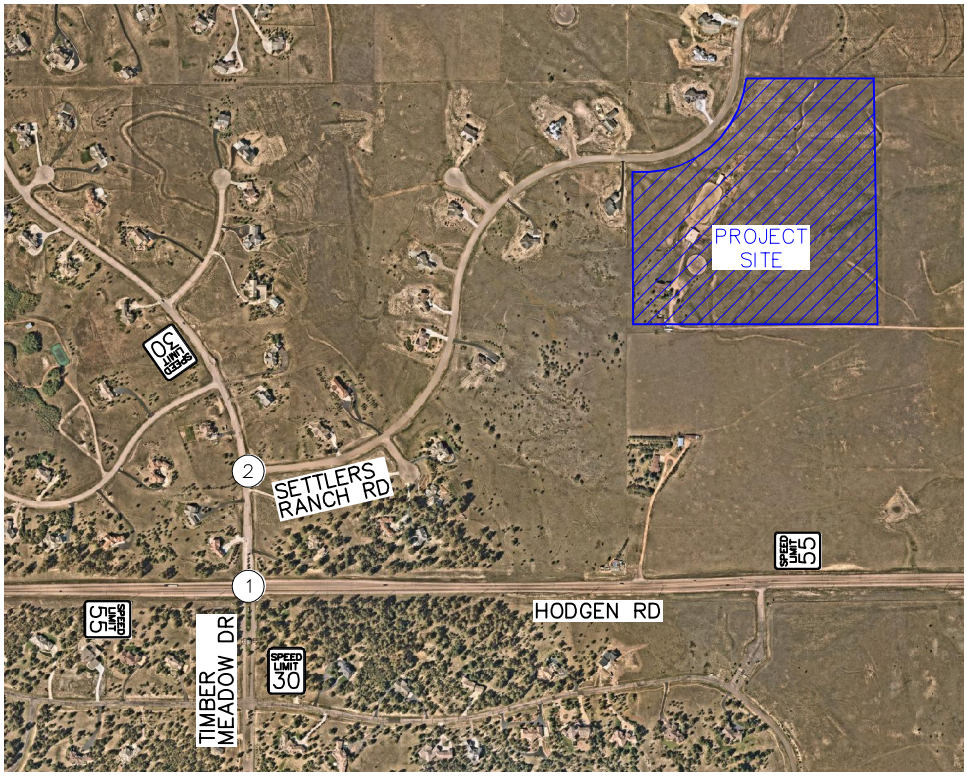
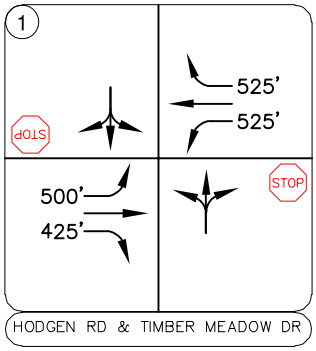
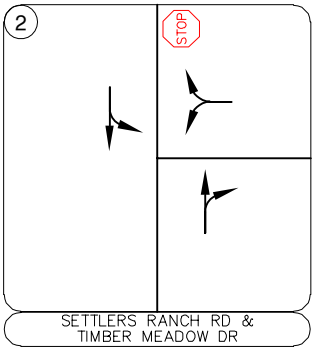


FIGURE 1
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
VICINITY MAP

Kimley»Horn
NORTH
NTS 196639000





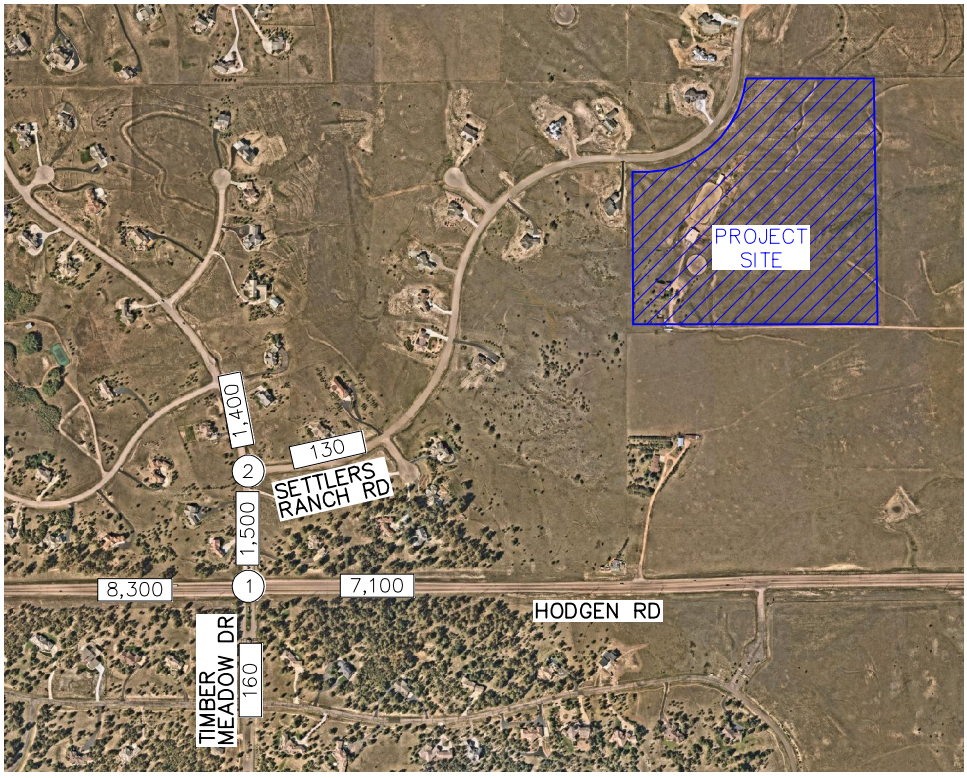


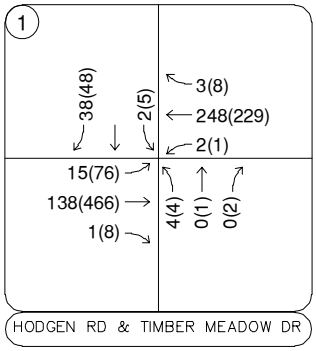
LEGEND
X — Study Area Key Intersection
Signalized Intersection
STOP — Stop Controlled Approach
SPEED LIMIT XX — Roadway Speed Limit
100' — Turn Lane Length (feet)

FIGURE 2
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
EXISTING GEOMETRY AND CONTROL

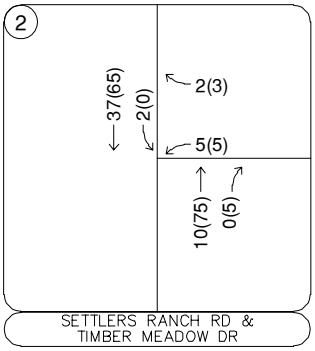
Kimley»Horn

Kimley»Horn NORTH
NTS 196639000





Thursday, April 6, 2023
(Wednesday, April 5, 2023)
8:00 to 9:00AM (4:30 to 5:30PM)



Thursday, April 6, 2023
(Wednesday, April 5, 2023)
7:00 to 8:00AM (4:00 to 5:00PM)

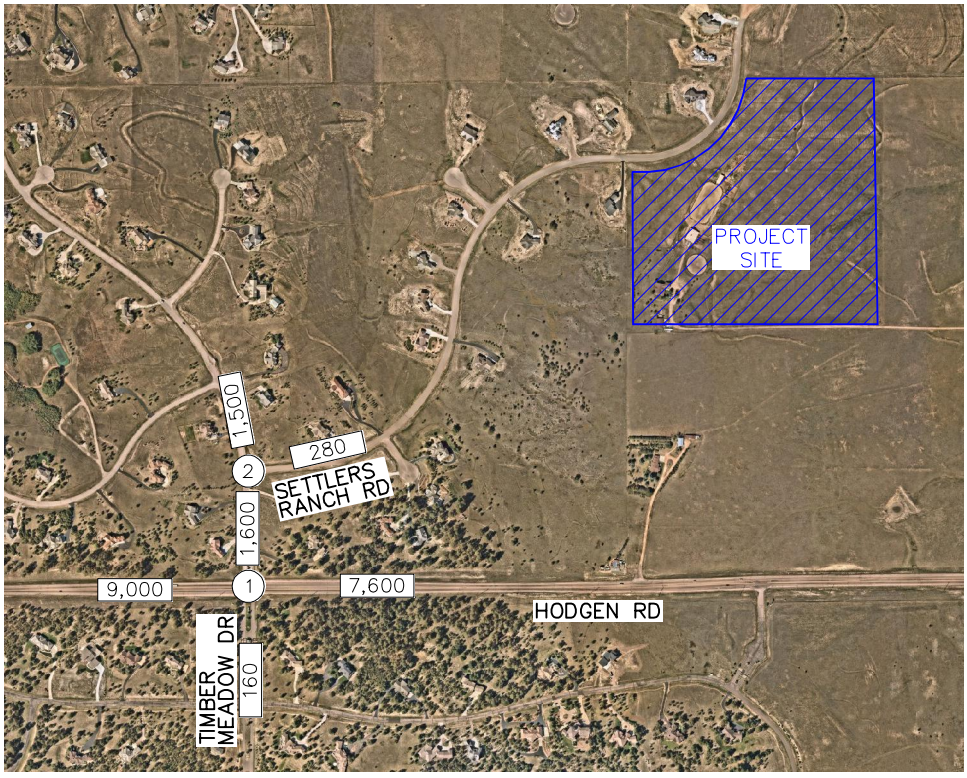
LEGEND

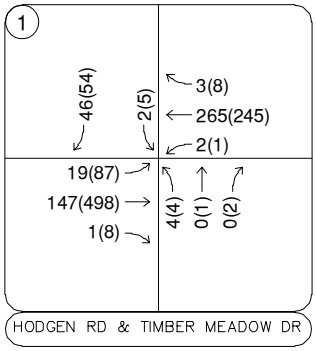
(X)	Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

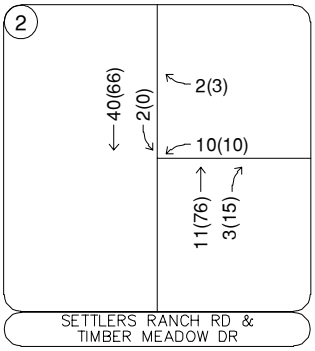
FIGURE 3
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2023 EXISTING TRAFFIC VOLUMES

Kimley»Horn

Kimley»Horn
NORTH
NTS 196639000







LEGEND

(X) Study Area Key Intersection

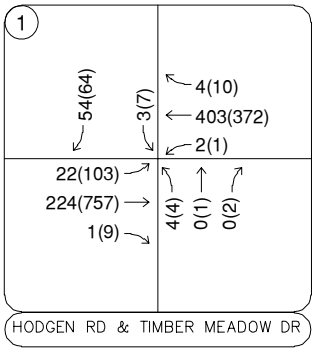
XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes

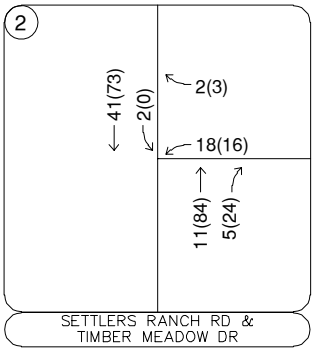
XX,X00 Estimated Daily Traffic Volume

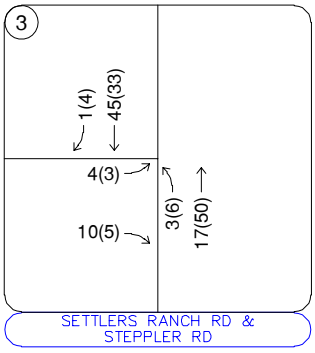
FIGURE 4
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2026 BACKGROUND TRAFFIC VOLUMES

Kimley»Horn

Kimley»Horn
NORTH
NTS 196639000





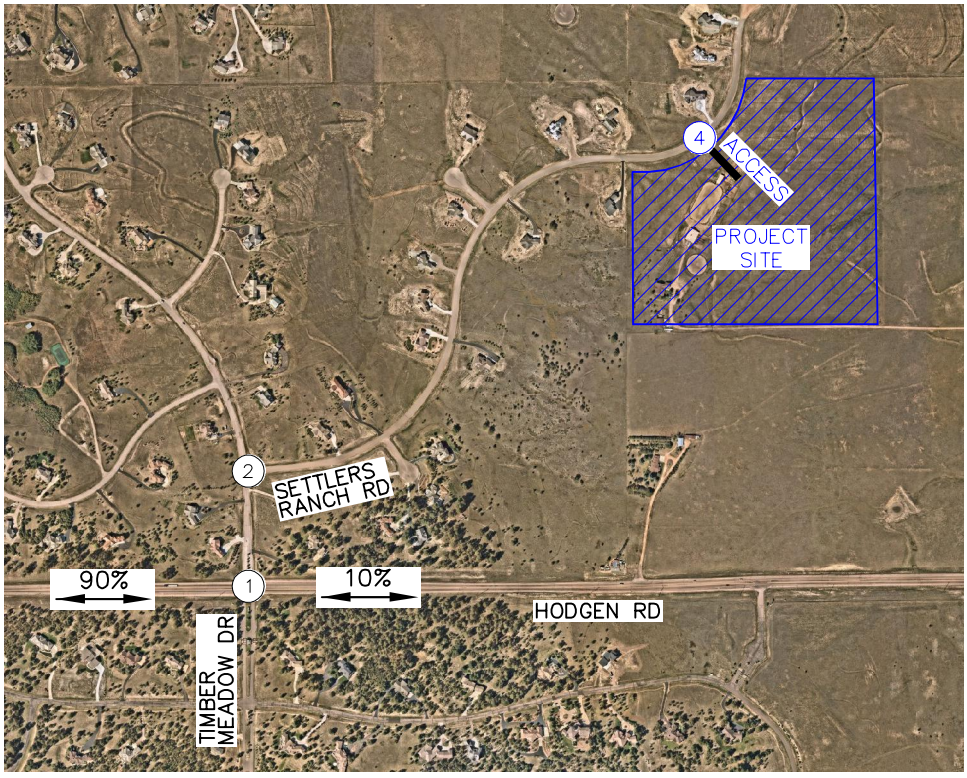


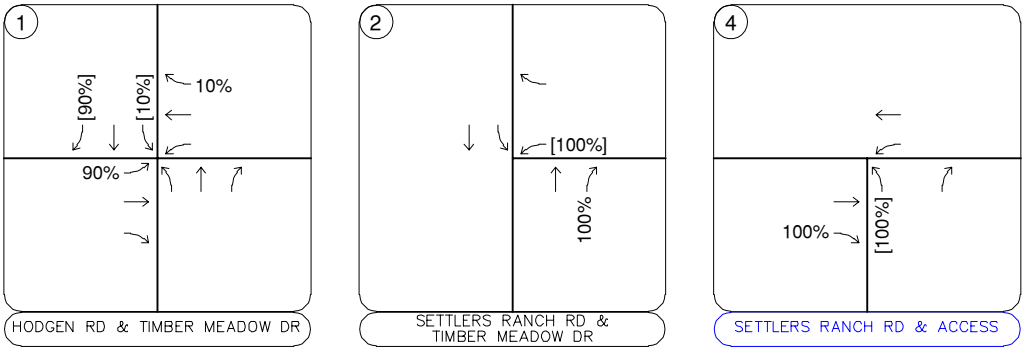
LEGEND

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

FIGURE 5
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2045 BACKGROUND TRAFFIC VOLUMES

Kimley»Horn



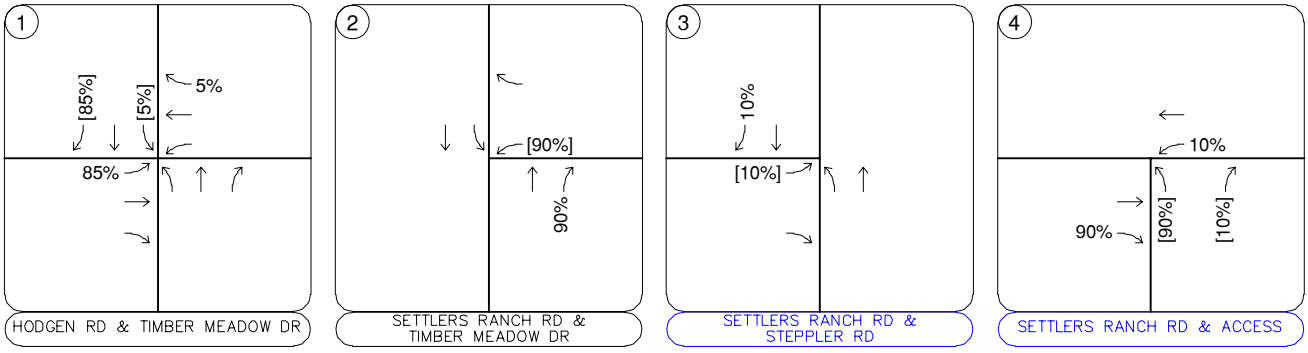


LEGEND

- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage

FIGURE 6
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2026 PROJECT TRIP DISTRIBUTION

Kimley»Horn
NORTH
NTS 196639000



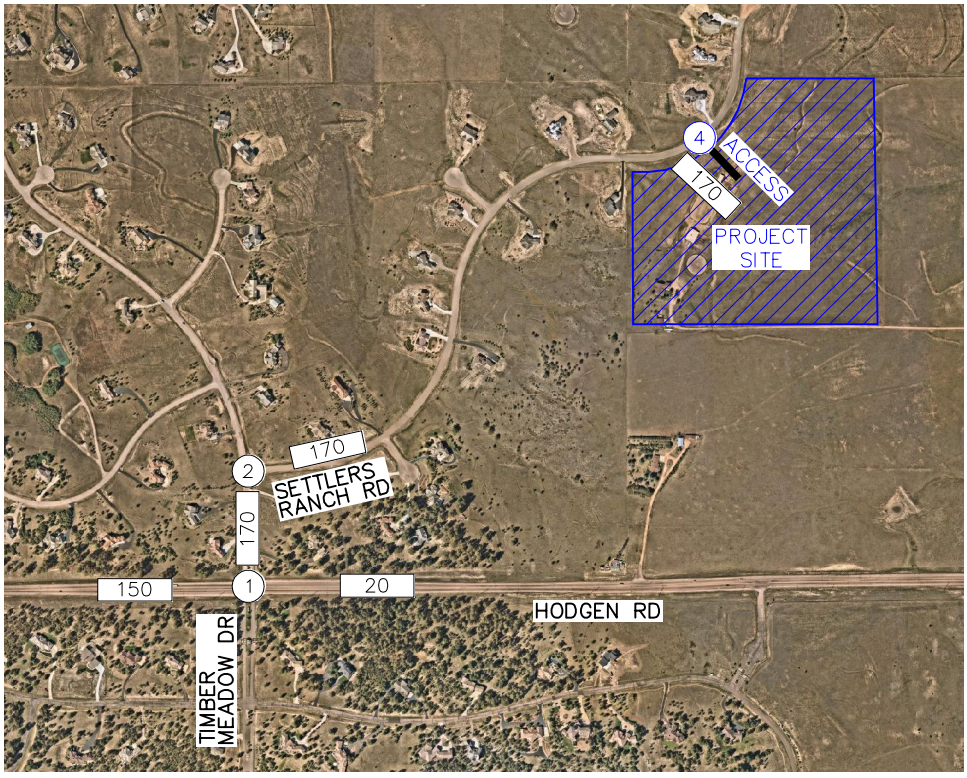
LEGEND

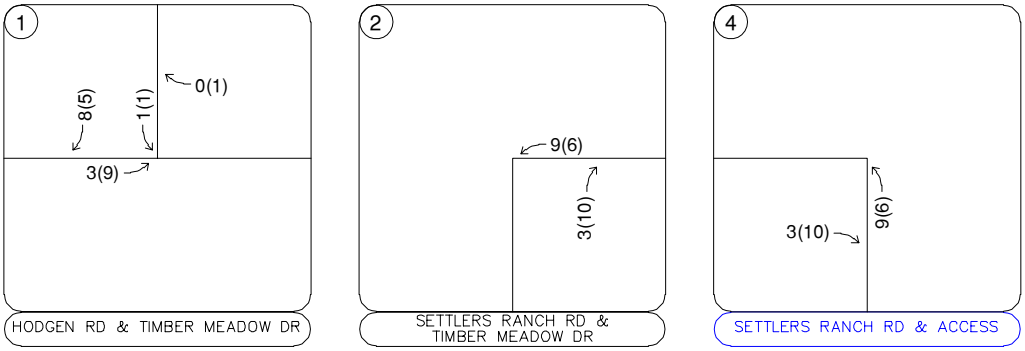
- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage

FIGURE 7
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2045 PROJECT TRIP DISTRIBUTION

Kimley»Horn

Kimley»Horn
NORTH
NTS 196639000





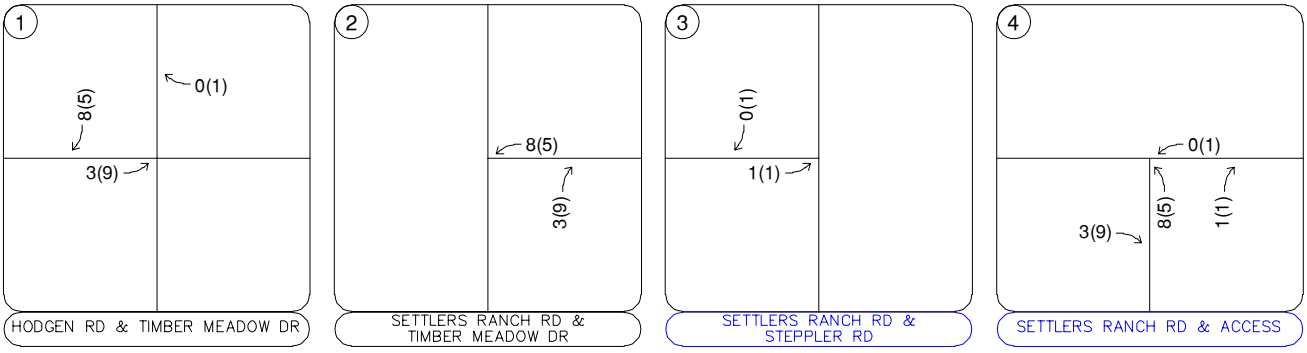
LEGEND

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

FIGURE 8
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2026 PROJECT TRAFFIC ASSIGNMENT

Kimley»Horn

Kimley»Horn
NORTH
NTS 196639000

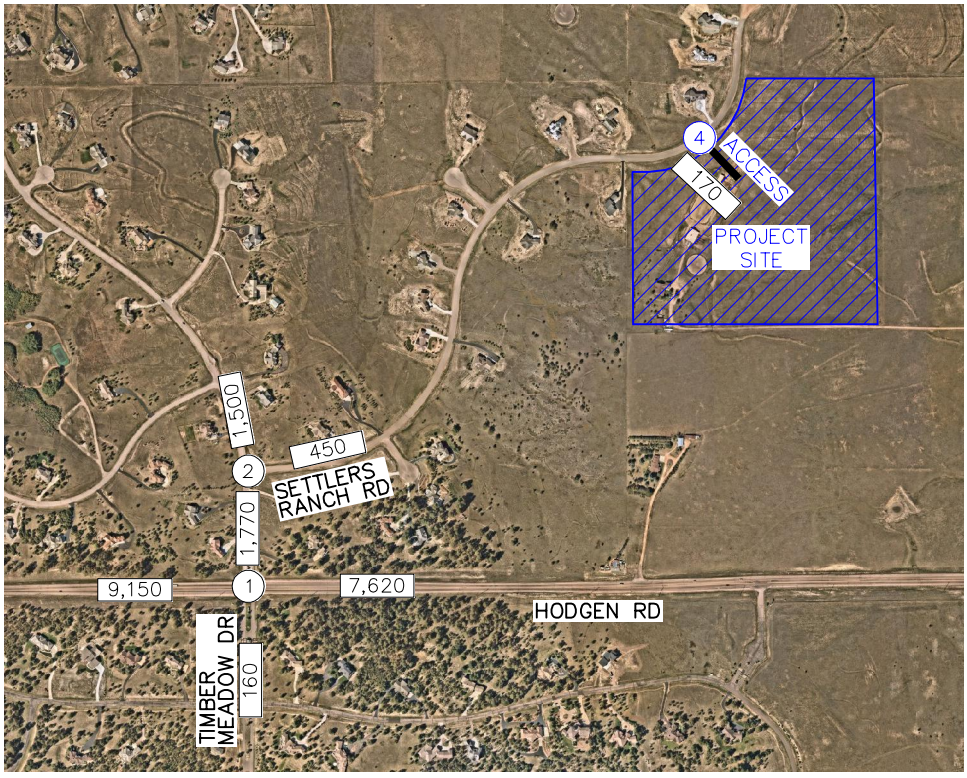


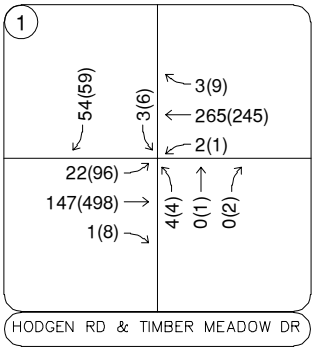
LEGEND

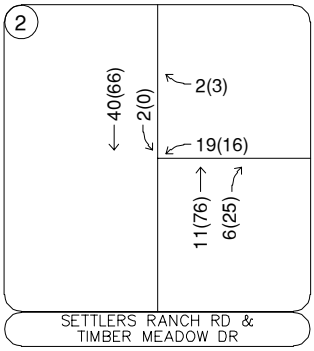
(X)	Study Area Key Intersection
(X)	Future Proposed Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

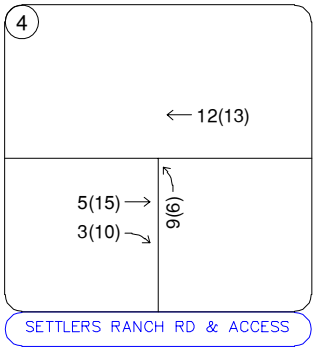
FIGURE 9
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2045 PROJECT TRAFFIC ASSIGNMENT

Kimley»Horn







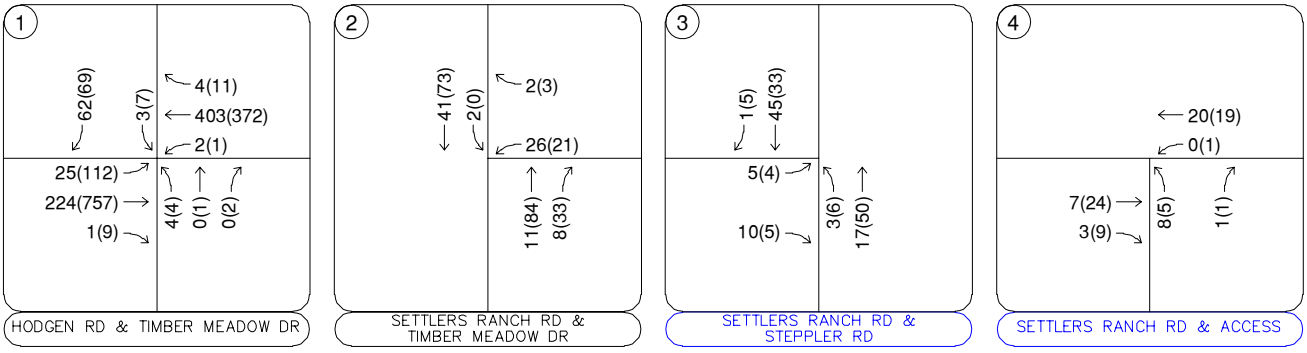


LEGEND

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

FIGURE 10
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2026 TOTAL TRAFFIC VOLUMES

Kimley»Horn
NORTH
NTS 196639000



LEGEND

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

FIGURE 11
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2045 TOTAL TRAFFIC VOLUMES

Kimley»Horn

Intersection Count Sheets

Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 1

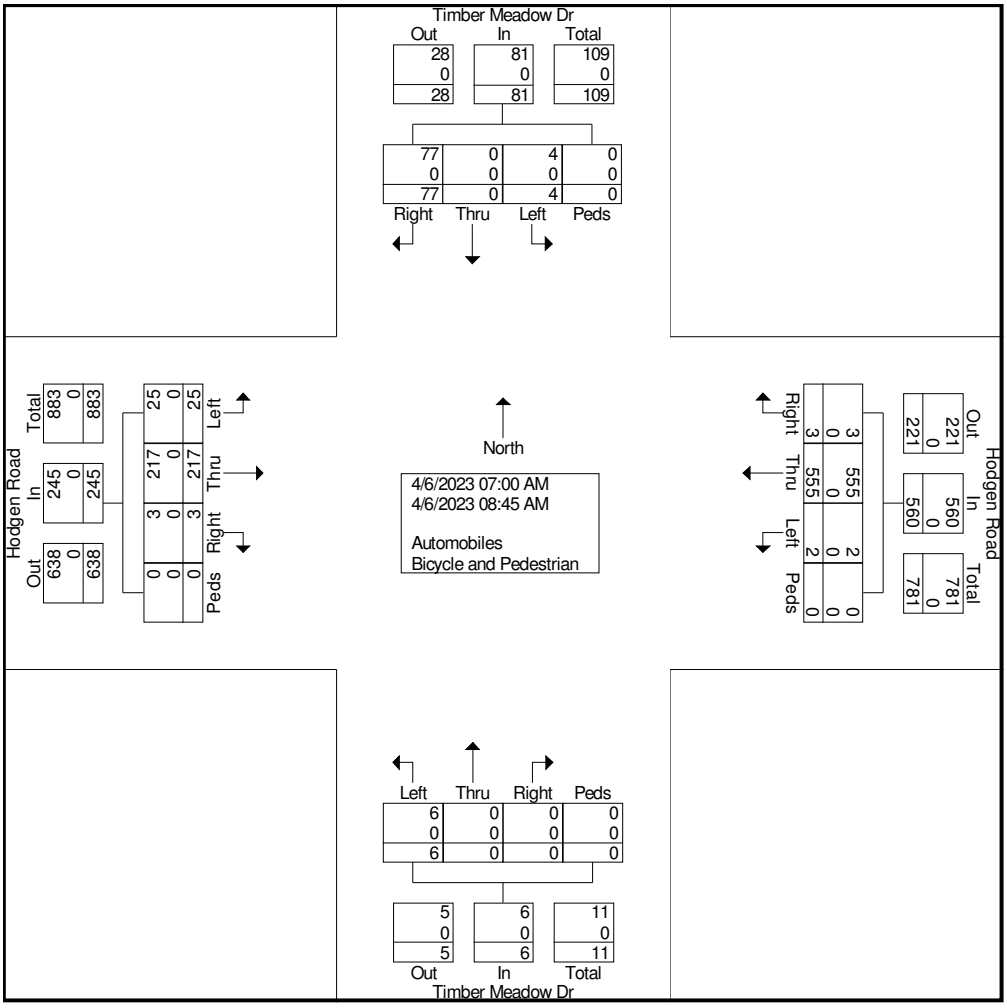
Groups Printed- Automobiles - Bicycle and Pedestrian

	Hodgen Road Eastbound					Hodgen Road Westbound					Timber Meadow Dr Northbound					Timber Meadow Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	15	1	0	16	0	66	0	0	66	0	0	0	0	0	0	0	7	0	7	89
07:15 AM	4	25	1	0	30	0	81	0	0	81	1	0	0	0	1	0	0	9	0	9	121
07:30 AM	4	16	0	0	20	0	71	0	0	71	0	0	0	0	0	1	0	18	0	19	110
07:45 AM	2	23	0	0	25	0	89	0	0	89	1	0	0	0	1	1	0	5	0	6	121
Total	10	79	2	0	91	0	307	0	0	307	2	0	0	0	2	2	0	39	0	41	441
08:00 AM	2	24	0	0	26	0	60	0	0	60	0	0	0	0	0	0	0	7	0	7	93
08:15 AM	5	21	0	0	26	1	56	0	0	57	0	0	0	0	0	2	0	10	0	12	95
08:30 AM	4	48	0	0	52	1	66	2	0	69	2	0	0	0	2	0	0	17	0	17	140
08:45 AM	4	45	1	0	50	0	66	1	0	67	2	0	0	0	2	0	0	4	0	4	123
Total	15	138	1	0	154	2	248	3	0	253	4	0	0	0	4	2	0	38	0	40	451
Grand Total	25	217	3	0	245	2	555	3	0	560	6	0	0	0	6	4	0	77	0	81	892
Apprch %	10.2	88.6	1.2	0		0.4	99.1	0.5	0		100	0	0	0		4.9	0	95.1	0		
Total %	2.8	24.3	0.3	0	27.5	0.2	62.2	0.3	0	62.8	0.7	0	0	0	0.7	0.4	0	8.6	0	9.1	
Automobiles	25	217	3	0	245	2	555	3	0	560	6	0	0	0	6	4	0	77	0	81	892
% Automobiles	100	100	100	0	100	100	100	100	0	100	100	0	0	0	100	100	0	100	0	100	100
Bicycle and Pedestrian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycle and Pedestrian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 2

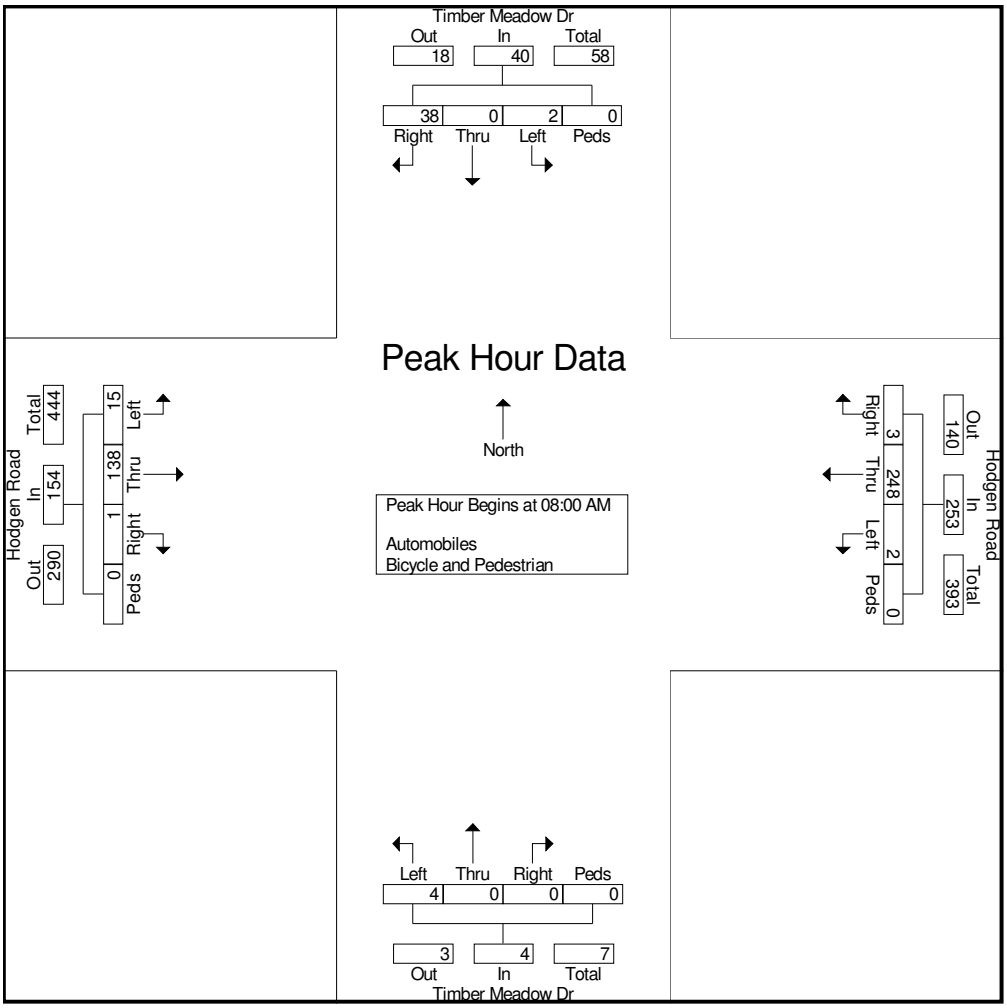


Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 3

	Hodgen Road Eastbound					Hodgen Road Westbound					Timber Meadow Dr Northbound					Timber Meadow Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	24	0	0	26	0	60	0	0	60	0	0	0	0	0	0	0	7	0	7	93
08:15 AM	**5**	21	0	0	26	**1**	56	0	0	57	0	0	0	0	0	**2**	0	10	0	12	95
08:30 AM	4	**48**	0	0	**52**	1	**66**	**2**	0	**69**	**2**	0	0	0	**2**	0	0	**17**	0	**17**	**140**
08:45 AM	4	45	**1**	0	50	0	66	1	0	67	2	0	0	0	2	0	0	4	0	4	123
Total Volume	15	138	1	0	154	2	248	3	0	253	4	0	0	0	4	2	0	38	0	40	451
% App. Total	9.7	89.6	0.6	0		0.8	98	1.2	0		100	0	0	0		5	0	95	0		
PHF	.750	.719	.250	.000	.740	.500	.939	.375	.000	.917	.500	.000	.000	.000	.500	.250	.000	.559	.000	.588	.805



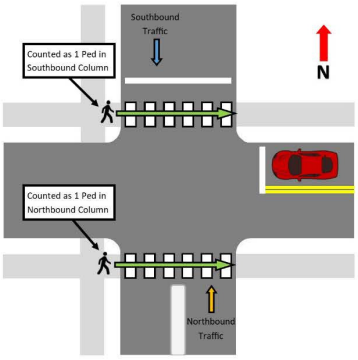
Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.



Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
PM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 1

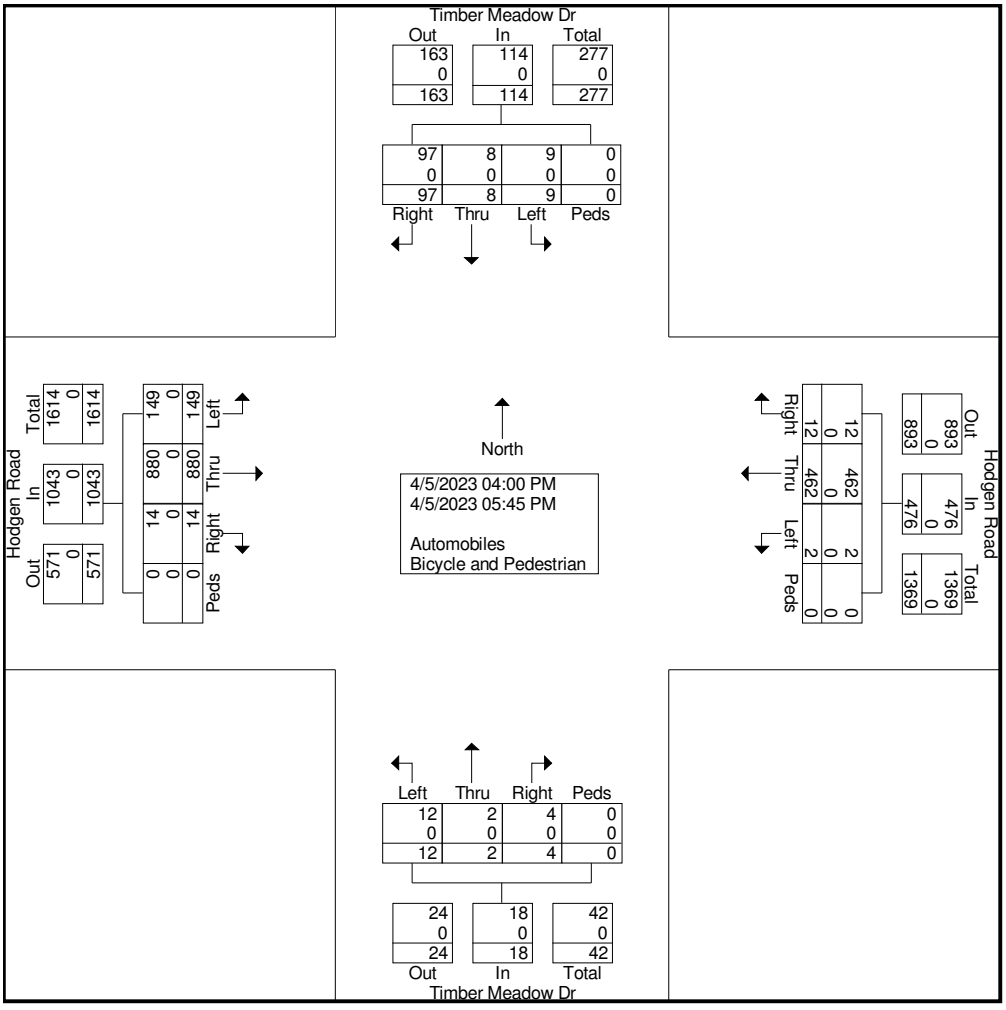
Groups Printed- Automobiles - Bicycle and Pedestrian

	Hodgen Road Eastbound					Hodgen Road Westbound					Timber Meadow Dr Northbound					Timber Meadow Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	1	103	1	0	105	0	59	0	0	59	1	1	2	0	4	1	6	24	0	31	199
04:15 PM	35	102	3	0	140	1	52	3	0	56	3	0	0	0	3	0	2	10	0	12	211
04:30 PM	13	115	4	0	132	0	62	1	0	63	2	0	1	0	3	0	0	10	0	10	208
04:45 PM	23	109	2	0	134	0	63	2	0	65	1	0	0	0	1	2	0	15	0	17	217
Total	72	429	10	0	511	1	236	6	0	243	7	1	3	0	11	3	8	59	0	70	835
05:00 PM	16	109	0	0	125	1	47	3	0	51	1	1	1	0	3	1	0	12	0	13	192
05:15 PM	24	133	2	0	159	0	57	2	0	59	0	0	0	0	0	2	0	11	0	13	231
05:30 PM	16	116	1	0	133	0	62	1	0	63	3	0	0	0	3	2	0	4	0	6	205
05:45 PM	21	93	1	0	115	0	60	0	0	60	1	0	0	0	1	1	0	11	0	12	188
Total	77	451	4	0	532	1	226	6	0	233	5	1	1	0	7	6	0	38	0	44	816
Grand Total	149	880	14	0	1043	2	462	12	0	476	12	2	4	0	18	9	8	97	0	114	1651
Apprch %	14.3	84.4	1.3	0		0.4	97.1	2.5	0		66.7	11.1	22.2	0		7.9	7	85.1	0		
Total %	9	53.3	0.8	0	63.2	0.1	28	0.7	0	28.8	0.7	0.1	0.2	0	1.1	0.5	0.5	5.9	0	6.9	
Automobiles	149	880	14	0	1043	2	462	12	0	476	12	2	4	0	18	9	8	97	0	114	1651
% Automobiles	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100	100	100	0	100	100
Bicycle and Pedestrian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycle and Pedestrian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
PM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 2

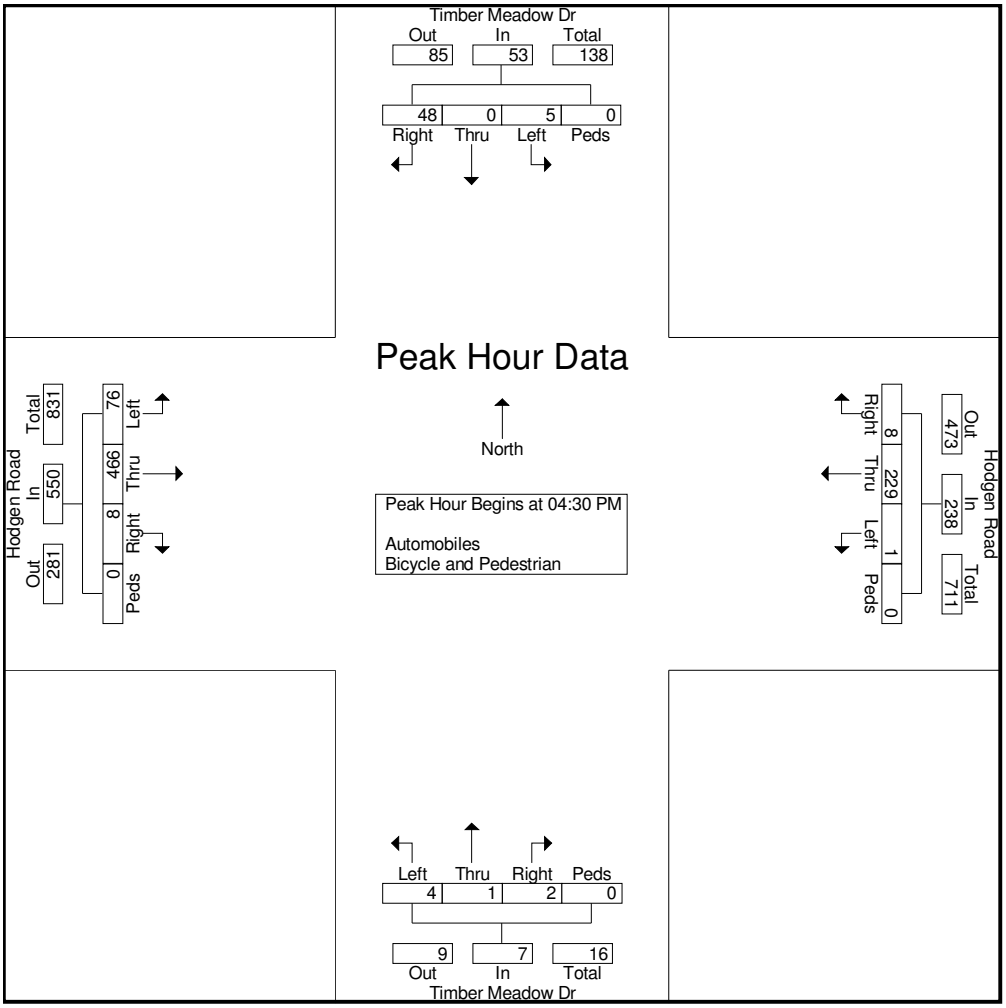


Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
PM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 3

	Hodgen Road Eastbound					Hodgen Road Westbound					Timber Meadow Dr Northbound					Timber Meadow Dr Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	13	115	**4**	0	132	0	62	1	0	63	**2**	0	**1**	0	**3**	0	0	10	0	10	208
04:45 PM	23	109	2	0	134	0	**63**	2	0	**65**	1	0	0	0	1	**2**	0	**15**	0	**17**	217
05:00 PM	16	109	0	0	125	**1**	47	**3**	0	51	1	**1**	1	0	3	1	0	12	0	13	192
05:15 PM	**24**	**133**	2	0	**159**	0	57	2	0	59	0	0	0	0	0	2	0	11	0	13	**231**
Total Volume	76	466	8	0	550	1	229	8	0	238	4	1	2	0	7	5	0	48	0	53	848
% App. Total	13.8	84.7	1.5	0		0.4	96.2	3.4	0		57.1	14.3	28.6	0		9.4	0	90.6	0		
PHF	.792	.876	.500	.000	.865	.250	.909	.667	.000	.915	.500	.250	.500	.000	.583	.625	.000	.800	.000	.779	.918



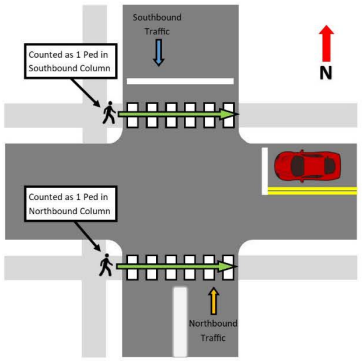
Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
PM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.



Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 1

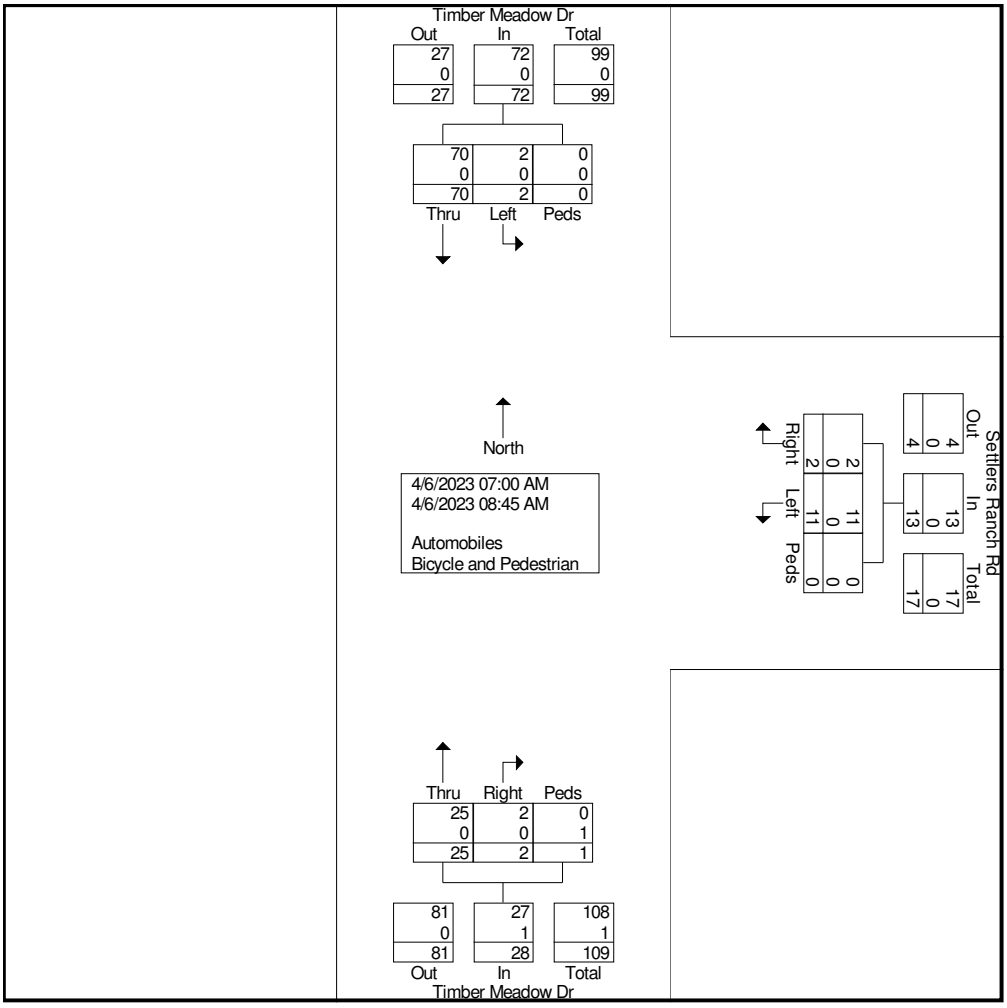
Groups Printed- Automobiles - Bicycle and Pedestrian

	Settlers Ranch Rd Westbound				Timber Meadow Dr Northbound				Timber Meadow Dr Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
07:00 AM	1	1	0	2	0	0	0	0	1	7	0	8	10
07:15 AM	1	1	0	2	4	0	1	5	1	8	0	9	16
07:30 AM	3	0	0	3	4	0	0	4	0	16	0	16	23
07:45 AM	0	0	0	0	2	0	0	2	0	6	0	6	8
Total	5	2	0	7	10	0	1	11	2	37	0	39	57
08:00 AM	1	0	0	1	1	0	0	1	0	5	0	5	7
08:15 AM	2	0	0	2	4	1	0	5	0	10	0	10	17
08:30 AM	3	0	0	3	5	1	0	6	0	14	0	14	23
08:45 AM	0	0	0	0	5	0	0	5	0	4	0	4	9
Total	6	0	0	6	15	2	0	17	0	33	0	33	56
Grand Total	11	2	0	13	25	2	1	28	2	70	0	72	113
Apprch %	84.6	15.4	0		89.3	7.1	3.6		2.8	97.2	0		
Total %	9.7	1.8	0	11.5	22.1	1.8	0.9	24.8	1.8	61.9	0	63.7	
Automobiles	11	2	0	13	25	2	0	27	2	70	0	72	112
% Automobiles	100	100	0	100	100	100	0	96.4	100	100	0	100	99.1
Bicycle and Pedestrian	0	0	0	0	0	0	1	1	0	0	0	0	1
% Bicycle and Pedestrian	0	0	0	0	0	0	100	3.6	0	0	0	0	0.9

Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 2

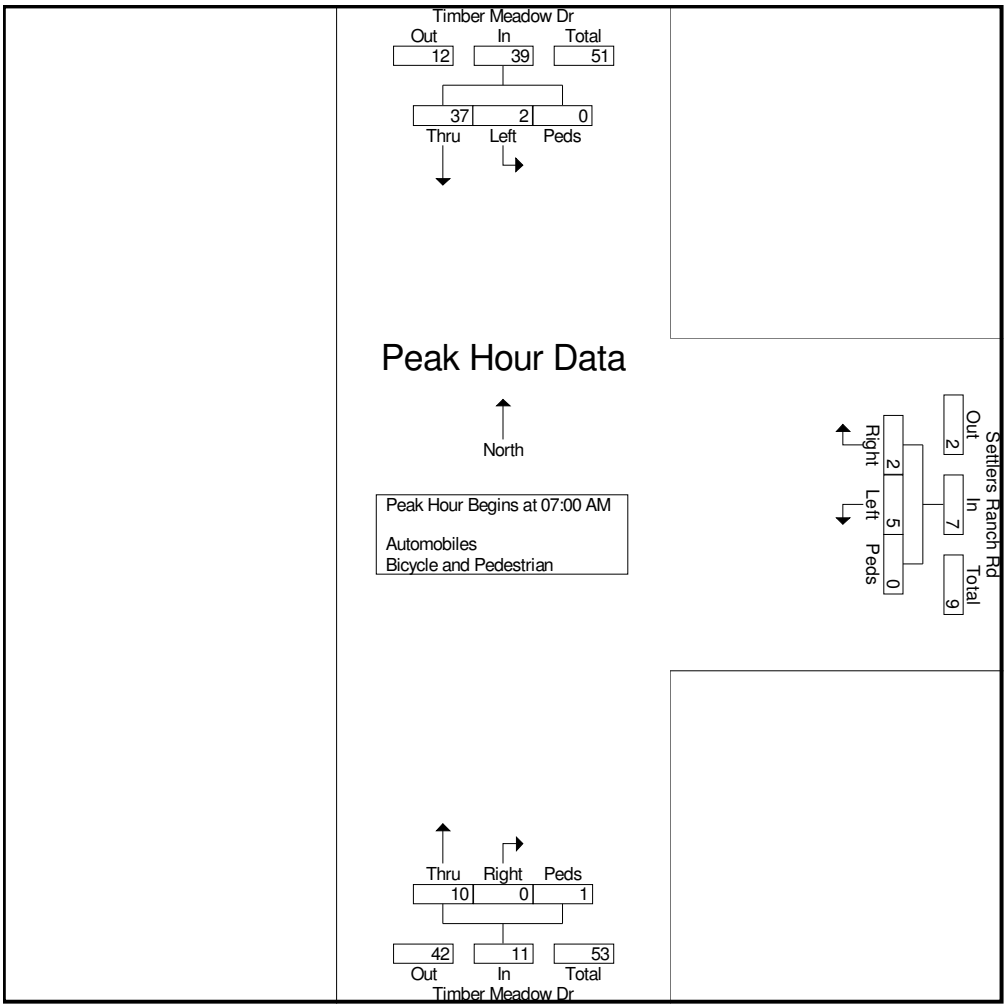


Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 3

	Settlers Ranch Rd Westbound				Timber Meadow Dr Northbound				Timber Meadow Dr Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	1	**1**	0	2	0	0	0	0	**1**	7	0	8	10
07:15 AM	1	1	0	2	**4**	0	**1**	**5**	1	8	0	9	16
07:30 AM	**3**	0	0	**3**	4	0	0	4	0	**16**	0	**16**	**23**
07:45 AM	0	0	0	0	2	0	0	2	0	6	0	6	8
Total Volume	5	2	0	7	10	0	1	11	2	37	0	39	57
% App. Total	71.4	28.6	0		90.9	0	9.1		5.1	94.9	0		
PHF	.417	.500	.000	.583	.625	.000	.250	.550	.500	.578	.000	.609	.620



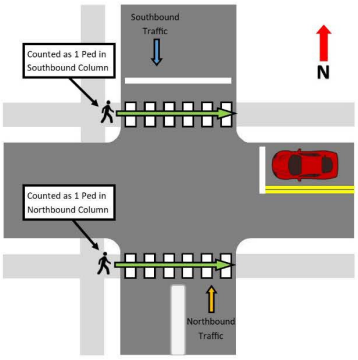
Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
AM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.



Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
PM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 1

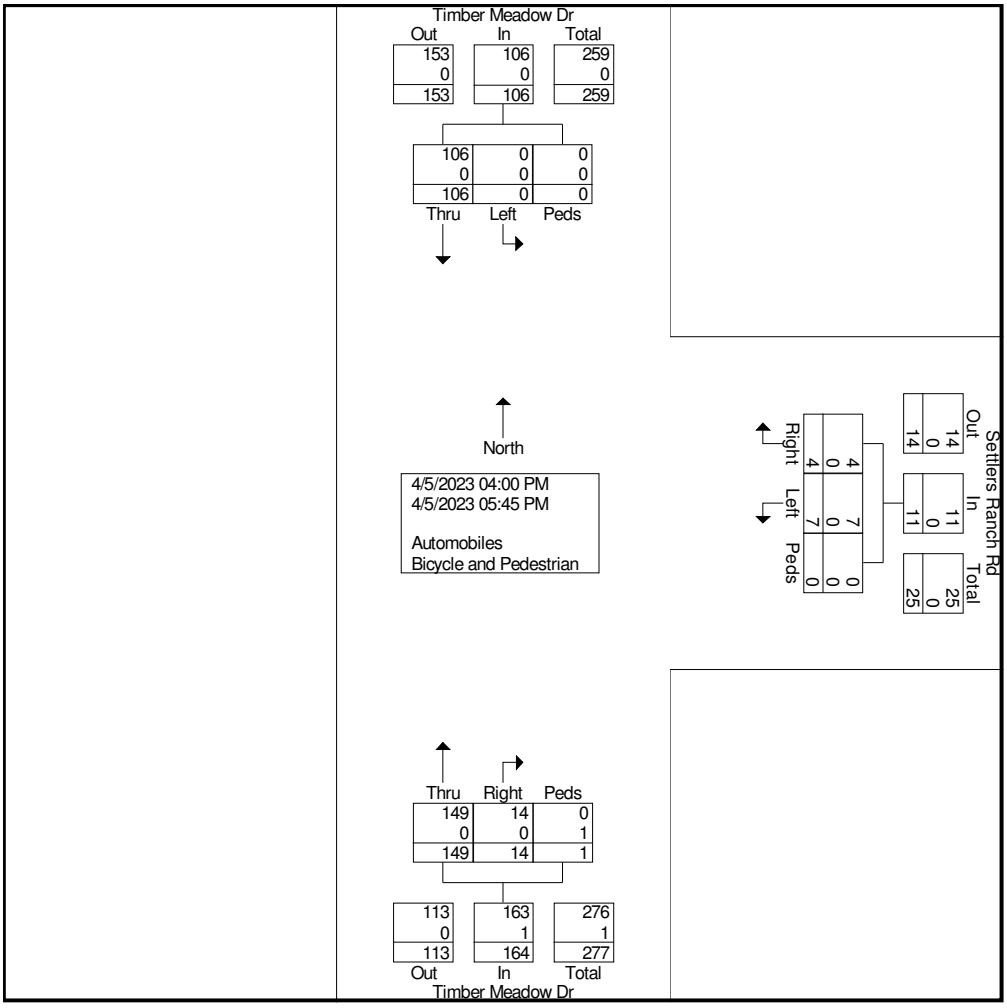
Groups Printed- Automobiles - Bicycle and Pedestrian

	Settlers Ranch Rd Westbound				Timber Meadow Dr Northbound				Timber Meadow Dr Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
04:00 PM	0	1	0	1	10	2	0	12	0	30	0	30	43
04:15 PM	4	0	0	4	25	2	1	28	0	11	0	11	43
04:30 PM	0	2	0	2	15	1	0	16	0	11	0	11	29
04:45 PM	1	0	0	1	25	0	0	25	0	13	0	13	39
Total	5	3	0	8	75	5	1	81	0	65	0	65	154
05:00 PM	0	0	0	0	18	2	0	20	0	12	0	12	32
05:15 PM	0	1	0	1	22	4	0	26	0	13	0	13	40
05:30 PM	2	0	0	2	14	2	0	16	0	4	0	4	22
05:45 PM	0	0	0	0	20	1	0	21	0	12	0	12	33
Total	2	1	0	3	74	9	0	83	0	41	0	41	127
Grand Total	7	4	0	11	149	14	1	164	0	106	0	106	281
Apprch %	63.6	36.4	0		90.9	8.5	0.6		0	100	0		
Total %	2.5	1.4	0	3.9	53	5	0.4	58.4	0	37.7	0	37.7	
Automobiles	7	4	0	11	149	14	0	163	0	106	0	106	280
% Automobiles	100	100	0	100	100	100	0	99.4	0	100	0	100	99.6
Bicycle and Pedestrian	0	0	0	0	0	0	1	1	0	0	0	0	1
% Bicycle and Pedestrian	0	0	0	0	0	0	100	0.6	0	0	0	0	0.4

Ridgeview Data Collection

El Paso County ,CO
16850 Stepplar Rd
PM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 2

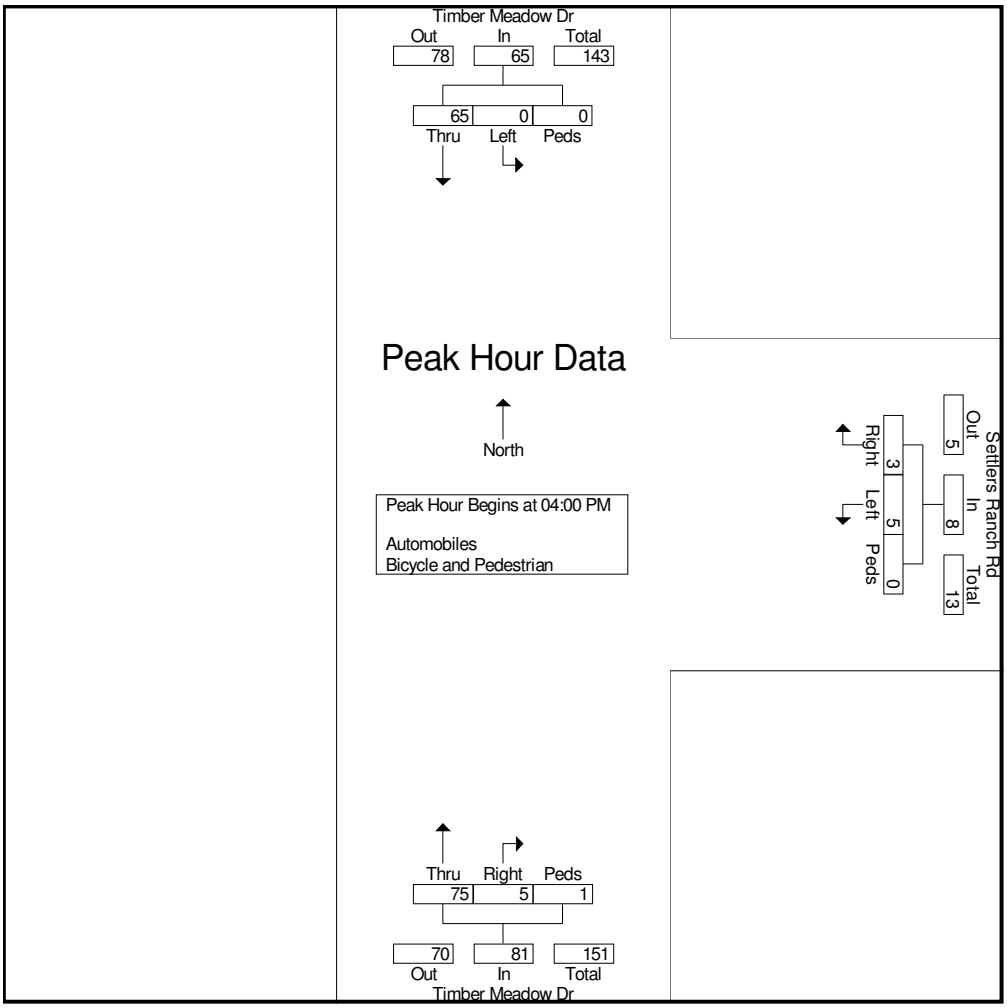


Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
PM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 3

	Settlers Ranch Rd Westbound				Timber Meadow Dr Northbound				Timber Meadow Dr Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	0	1	0	1	10	**2**	0	12	0	**30**	0	**30**	**43**
04:15 PM	**4**	0	0	**4**	**25**	2	**1**	**28**	0	11	0	11	43
04:30 PM	0	**2**	0	2	15	1	0	16	0	11	0	11	29
04:45 PM	1	0	0	1	25	0	0	25	0	13	0	13	39
Total Volume	5	3	0	8	75	5	1	81	0	65	0	65	154
% App. Total	62.5	37.5	0		92.6	6.2	1.2		0	100	0		
PHF	.313	.375	.000	.500	.750	.625	.250	.723	.000	.542	.000	.542	.895



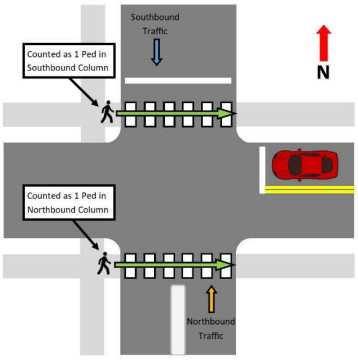
Ridgeview Data Collection

El Paso County ,CO
16850 Steppler Rd
PM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 4

Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.



Traffic Projections and Adjacent Traffic Studies

ROUTE	REFPT	ENDREFPT	AADT	YR20FACTOR	GROWTHRATE	DHV	LOCATION
083A	23.127	25.87	15000	1.55	2.22%	10	ON SH 83 N/O NORTH GATE RD
083A	25.87	28.132	14000	1.56	2.25%	10.5	ON SH 83 S/O SH 105 WALKER RD
Average				**1.555**	**2.23%**		

LSC TRANSPORTATION CONSULTANTS, INC.

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Colorado Springs, CO 80903
(719) 633-2868
FAX (719) 633-5430
E-mail: lsc@lsccs.com
Web Site: http://www.lsccs.com

TRANSPORTATION CONSULTANTS, INC.

MEMORANDUM

DATE: November 30, 2004

TO: Gary Hamacher

FROM: Jeff Hodsdon

SUBJECT: Settlers Ranch (LSC #036501)

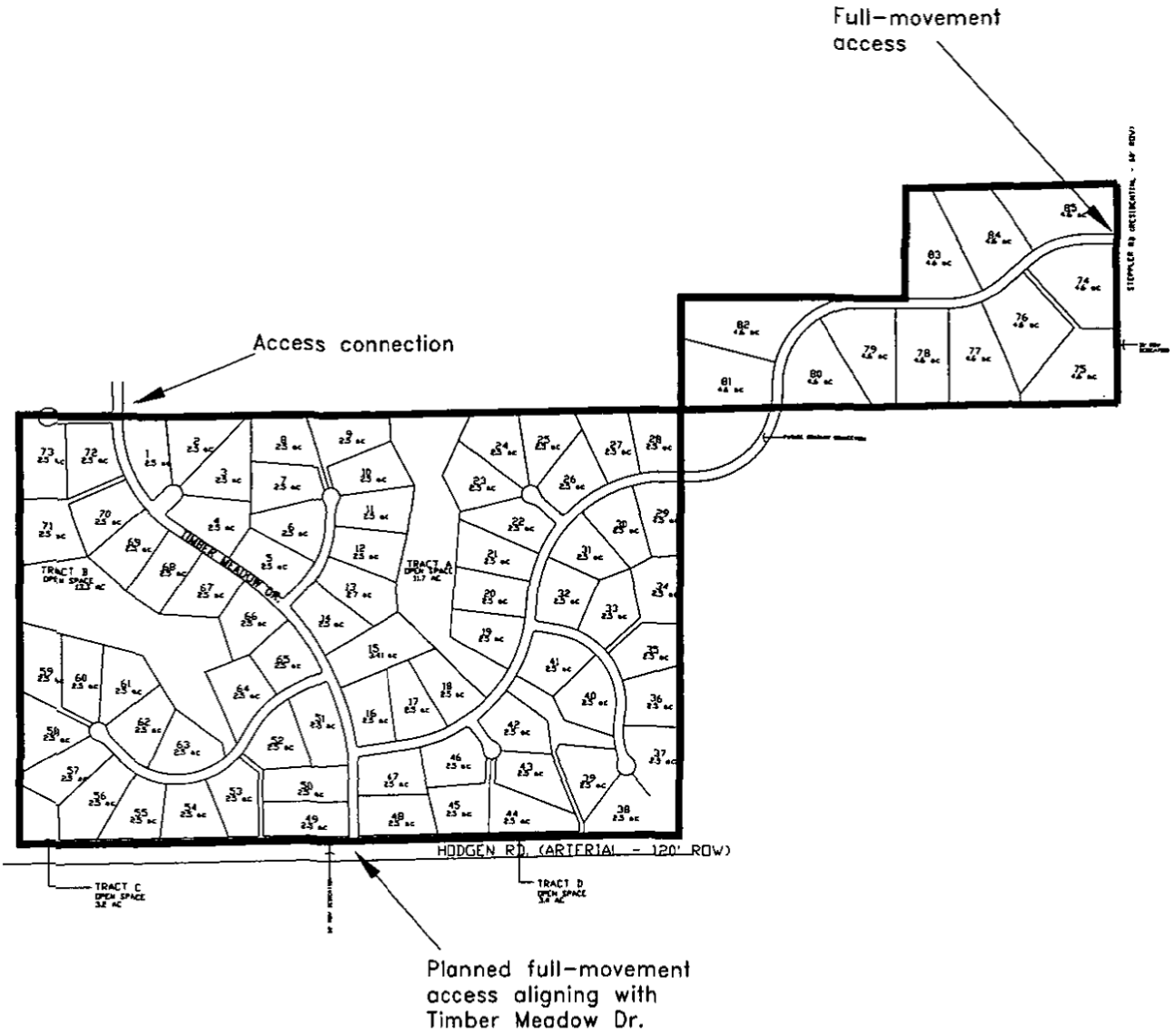
COLORADO REGISTERED JEFFREY C HODSDON 31684 PROFESSIONAL ENGINEER

This memorandum is in response to comments dated September 30, 2004 from the El Paso County Development Services Department, Engineering Division regarding Settlers Ranch. LSC prepared a revised traffic study for this development dated August 5, 2004. Following are the El Paso County comments followed by our responses.

2. *The traffic report needs to address the phases and triggering of improvements by the phases. Phases and triggering was provided in a memorandum. The eastbound right-turn at Hodgen Road and State Highway 83 was not addressed. Address this turn lane as required by CDOT and the opposing left-turn lane at Timber Meadow Drive (Walden Way).*

   The stop-sign controlled, single lane westbound approach to the Hodgen Road/SH 83intersection currently operates at LOS D. Based on 2003 traffic data (as shown in the August 5, 2004 report) **plus** the traffic generated by 65 lots, the LOS on this approach will just exceed LOS D at the end of Phase 3. However, additional growth in background traffic both since the year 2003 and in the years 2005 to 2006 (until Phase 3 is built out) may use up this existing small amount of excess capacity. LSC recommends that the morning peak-hour volumes be recounted prior to approval of each final plat to determine if the short right-turn lane at the Hodgen Road/SH 83 intersection is required at that time.

   The design of the left-turn lane at the Hodgen Road/Timber Meadow Drive intersection will include a 100-foot extension of the full-width painted median east of the intersection before beginning the redirect tapers to the east. This will facilitate striping of a short opposing left turn as requested.



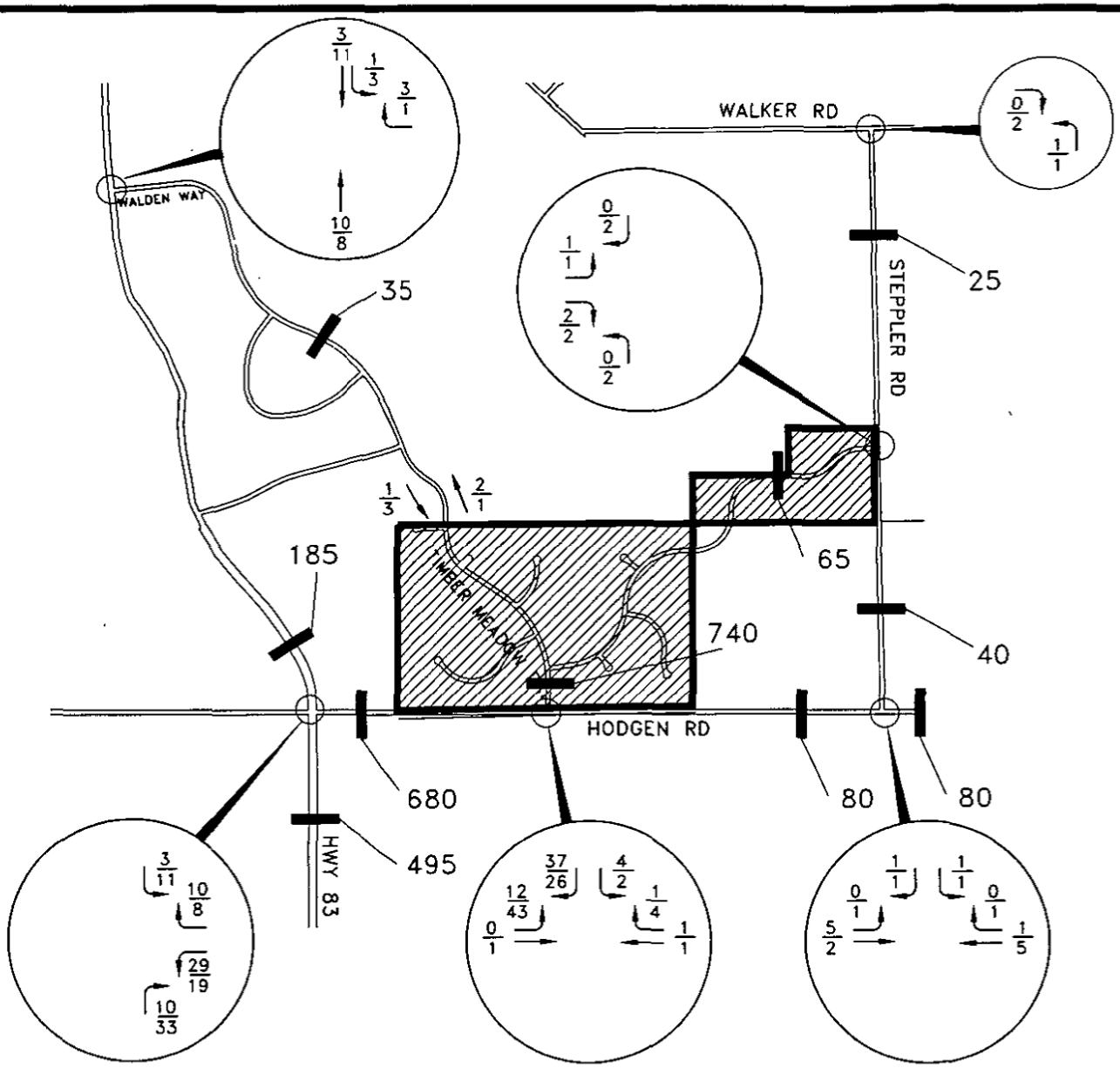
Not to Scale

Site Plan

Settlers Ranch

Figure 3
LSC # 036370

LSC TRANSPORTATION CONSULTANTS, INC.



Legend:

$\frac{xxx}{xxx}\ \frac{am}{pm}$ –Weekday peak–hour traffic (vehicles per hour)

XX,XXX –Average weekday traffic (vehicles per day)

Not to Scale

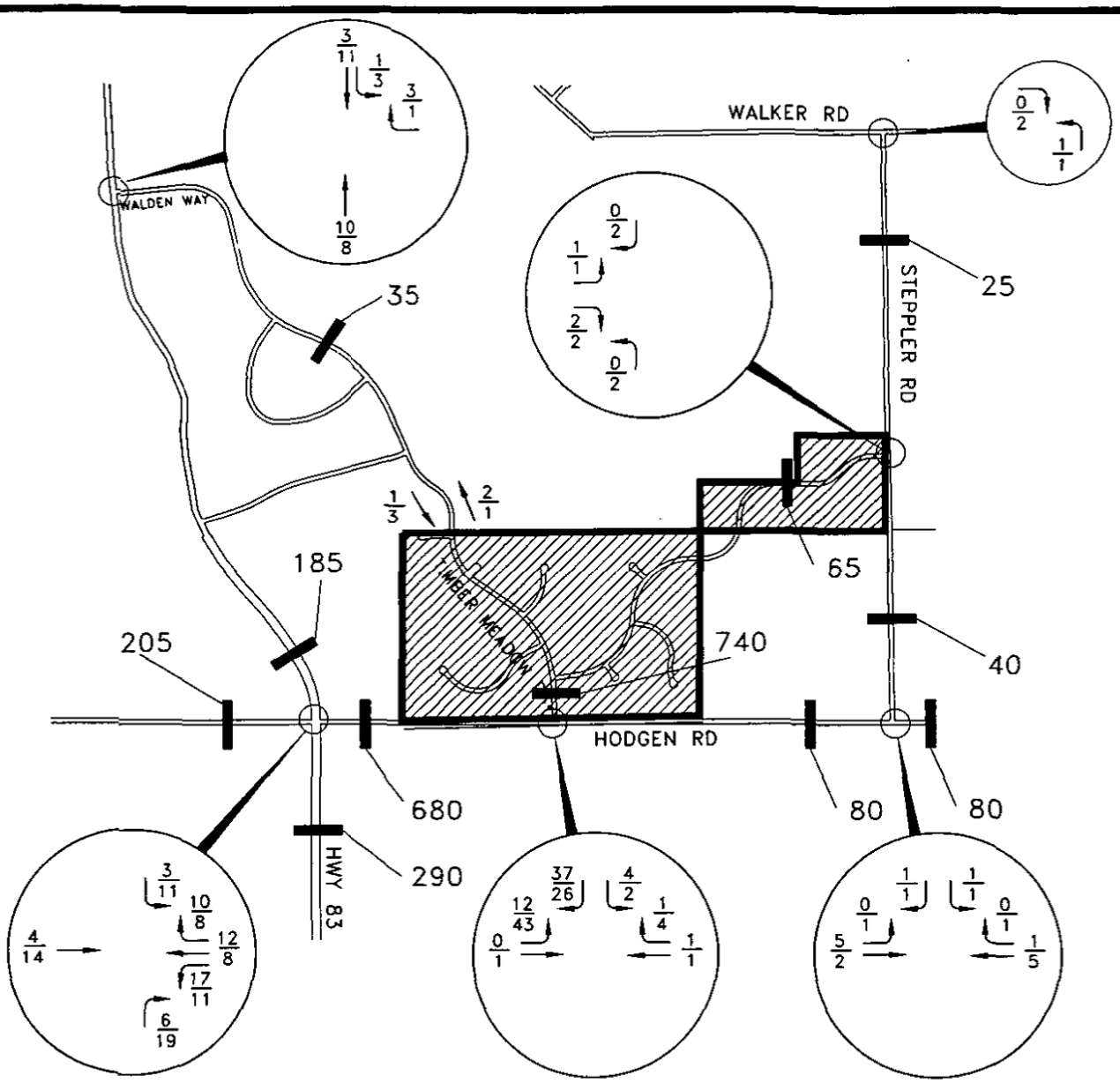
Year 2008 Assignment of Site-Generated Traffic

Figure 6

Settlers Ranch

LSC # 036370

LSC TRANSPORTATION CONSULTANTS, INC.



Legend:

$\frac{xxx}{xxx}\ \frac{am}{pm}$ –Weekday peak–hour traffic (vehicles per hour)

XX,XXX –Average weekday traffic (vehicles per day)

Not to Scale

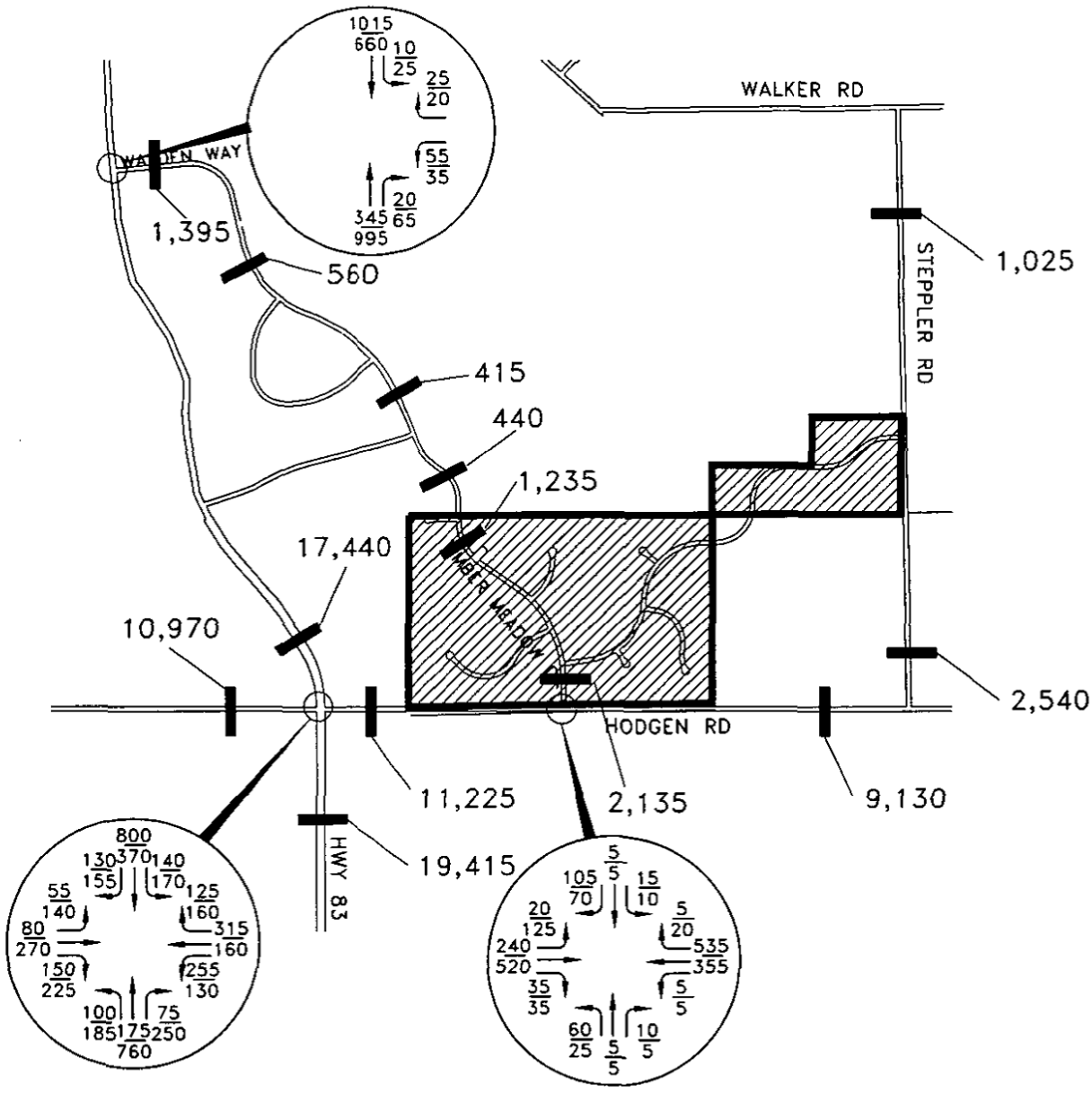
Year 2025 Assignment of Site-Generated Traffic

Figure 7

Settlers Ranch

LSC # 036370

TRANSPORTATION CONSULTANTS, INC.



Legend:

$\frac{xxx}{xxx}\ \frac{am}{pm}$ –Weekday peak–hour traffic (vehicles per hour)

XX,XXX –Average weekday traffic (vehicles per day)

Not to Scale

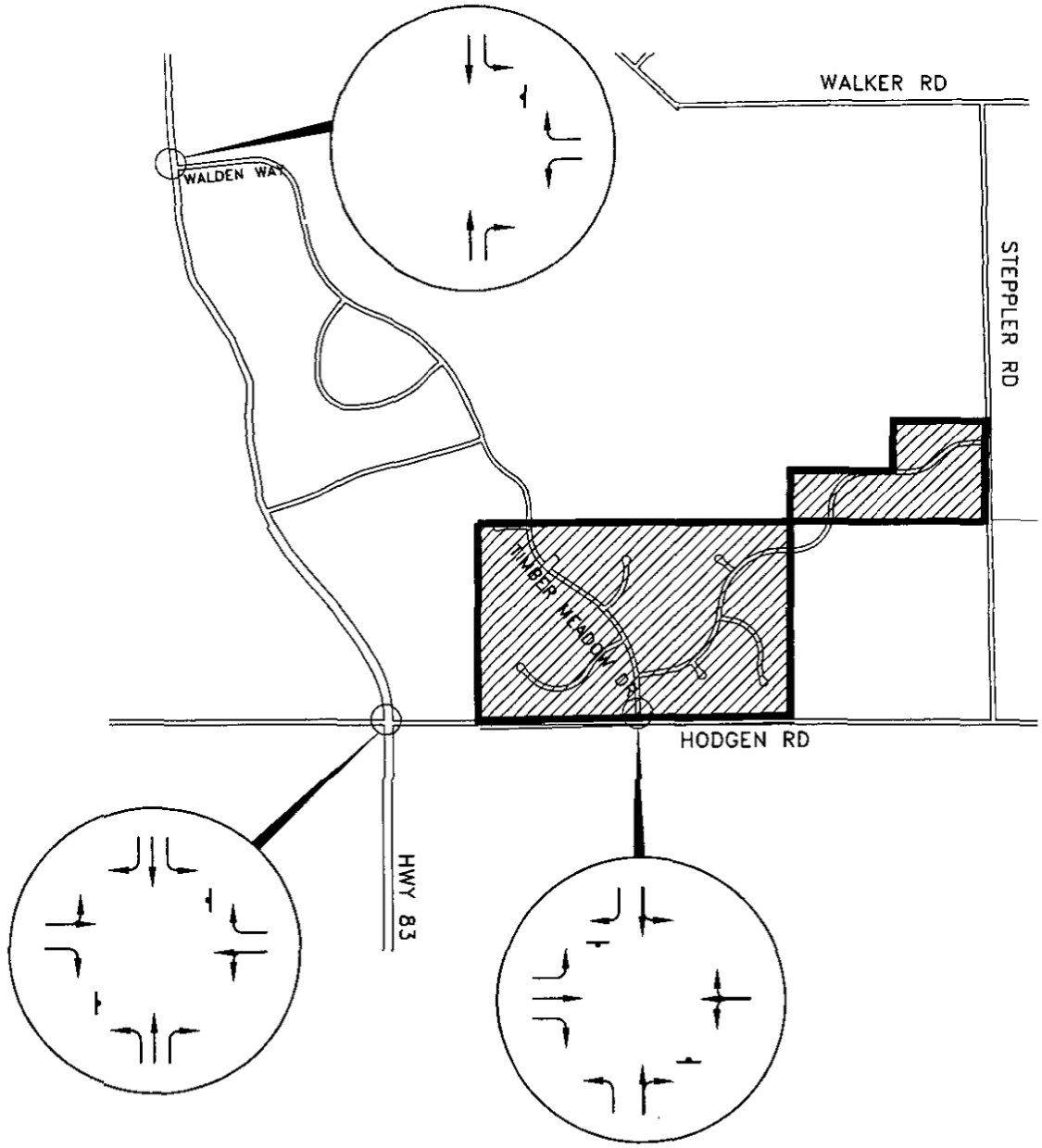
Year 2025 Total Traffic

Settlers Ranch

Figure 12

LSC # 036370

TRANSPORTATION CONSULTANTS, INC.



Legend:

⊣ –Stop sign

Not to Scale

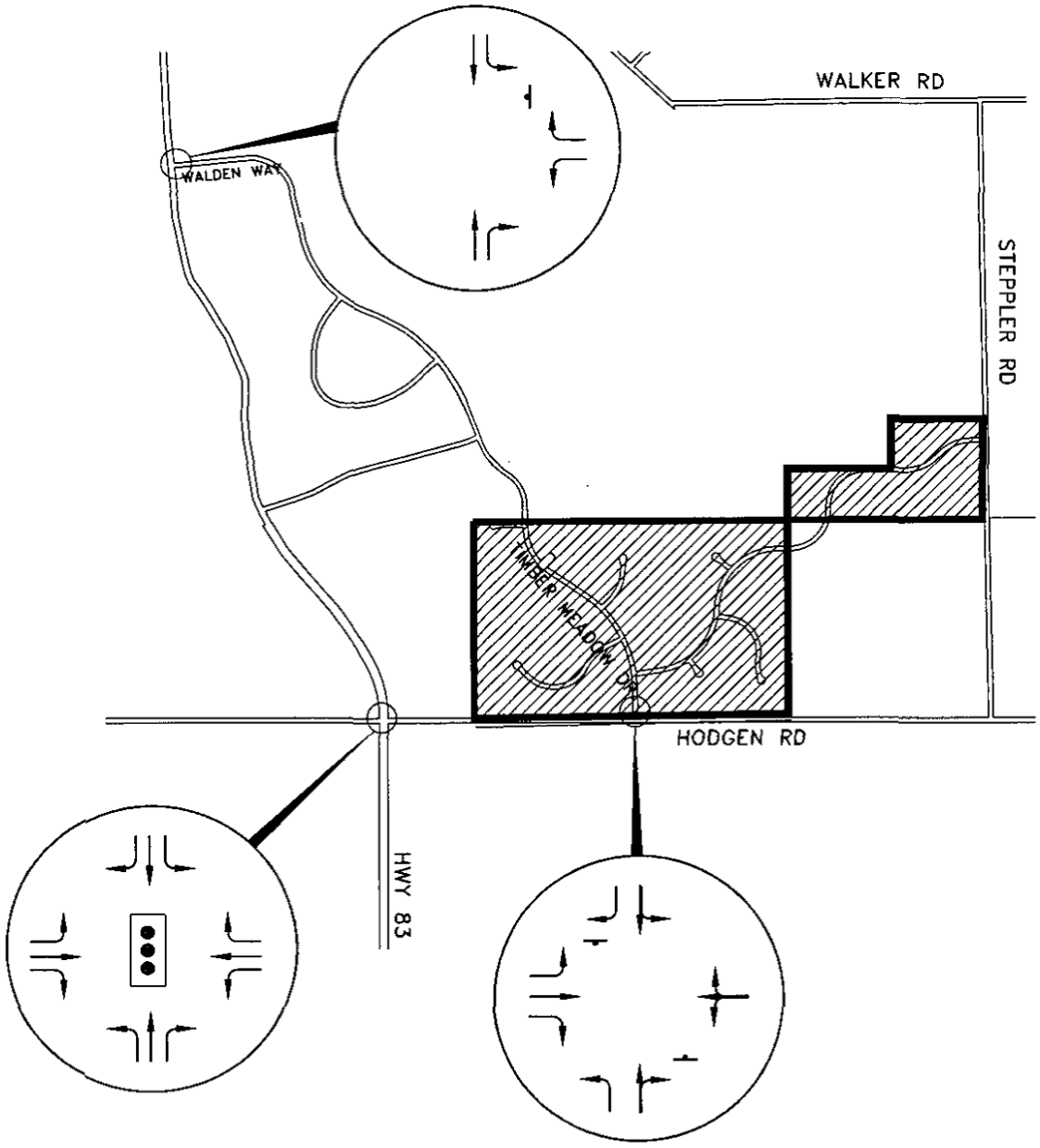
Short-Term Lane Geometry

Settlers Ranch

Figure 13

LSC # 036370

LSC TRANSPORTATION CONSULTANTS, INC.



Legend:

-Stop sign

-Traffic Signal

N

Not to Scale

TRANSPORTATION CONSULTANTS, INC.

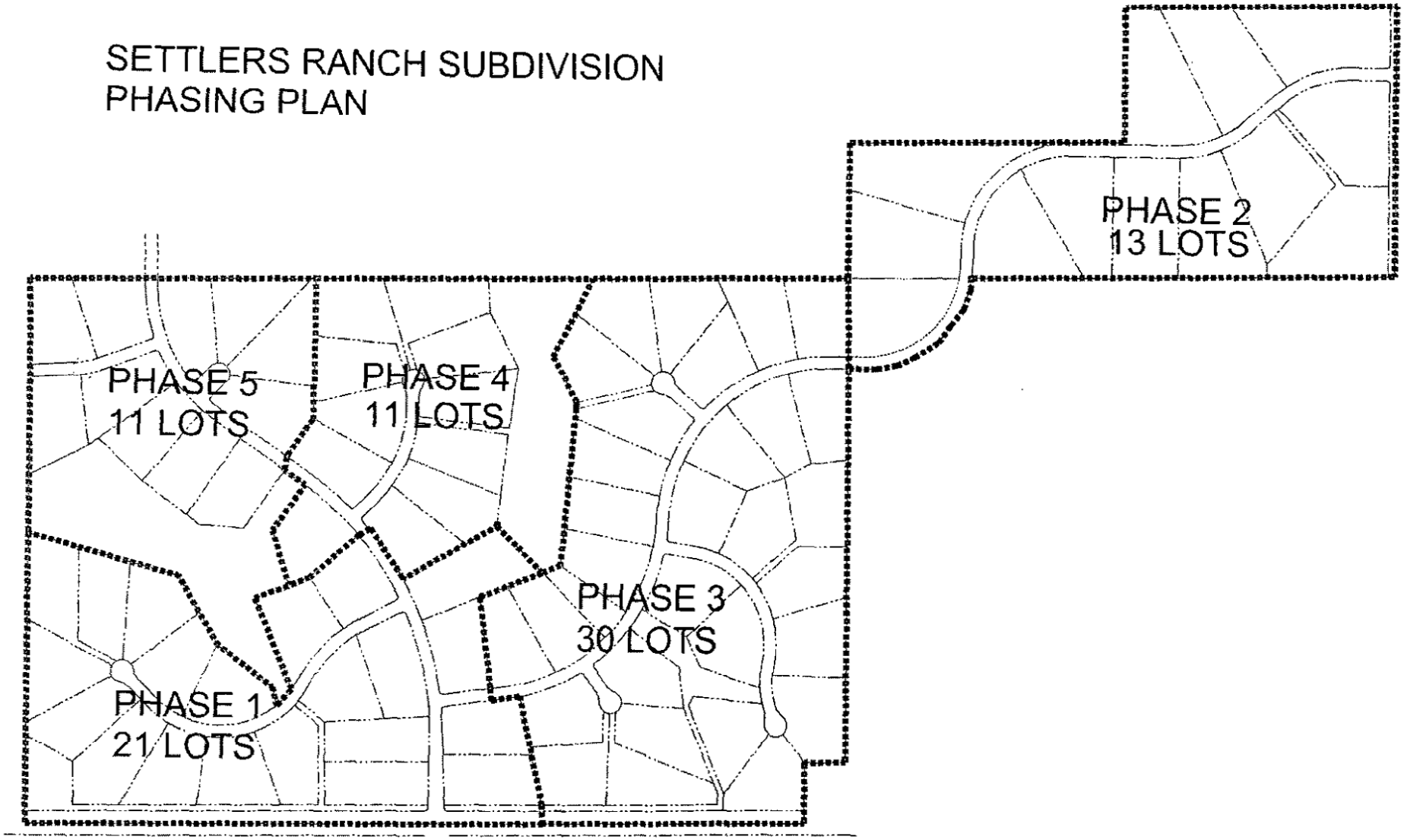
Long-Term Lane Geometry

Settlers Ranch

Figure 14

LSC # 036370

SETTLERS RANCH SUBDIVISION
PHASING PLAN



LSC TRANSPORTATION CONSULTANTS, INC.
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FAX (719) 633-5430
E-mail: lsc@lsctrans.com
Website: http://www.lsctrans.com

Settlers View Subdivision
Final Plat
PCD File No.: SF-18-041
Transportation Memorandum
(LSC #164720)
December 18, 2018

Traffic Engineer's Statement

This 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.

COLORADO LICENSED
JEFFREY C. HODSDON
31684
12-18-18
PROFESSIONAL ENGINEER

Developer's Statement

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

12/18/18
Date

LSC TRANSPORTATION CONSULTANTS, INC.
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Colorado Springs, CO 80903
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Website: http://www.lsctrans.com

December 18, 2018

Mr. Jerry Hannigan
Jerome W. Hannigan and Associates, Inc.
19360 Spring Valley Road
Monument, CO 80132

RE: Settlers View Subdivision
El Paso County, CO
PCD File No.: SF-18-041
Updated Transportation Memorandum
LSC #164720

Dear Jerry:

LSC Transportation Consultants, Inc. has prepared this transportation memorandum for the proposed Settlers View subdivision. The site is located generally northwest of the intersection of Hodgen Road and Steppler Road in El Paso County, Colorado. The site's location is shown in Figure 1. Site access would be through adjacent subdivisions as the site is not directly adjacent to Steppler Road. This analysis has been prepared in conjunction with the proposed Abert Estates subdivision, which is adjacent to Settlers View. LSC has prepared a separate traffic report for Abert Estates.

REPORT CONTENTS

The report contains the following:

- Existing roadway and traffic conditions in the vicinity of the site, including the intersection lane geometries, traffic controls, posted speed limits, functional classifications, intersection spacing and alignment, etc.
- Existing peak-hour turning movement traffic counts and/or estimates of future background traffic volumes at the intersections of:
  - Steppler Road at Silver Nell Drive
  - Steppler Road at Settler's Ranch Road (future)
- Description of the proposed land use
- Estimates of the average weekday and peak-hour vehicle-trips to be generated by the site
- Projected site-generated traffic volumes on roadways and intersections to provide access to the site
- Analysis of the resulting traffic impacts from the site including the development's relative average daily traffic volume impacts and intersection level of service analysis
- Findings and recommendations.

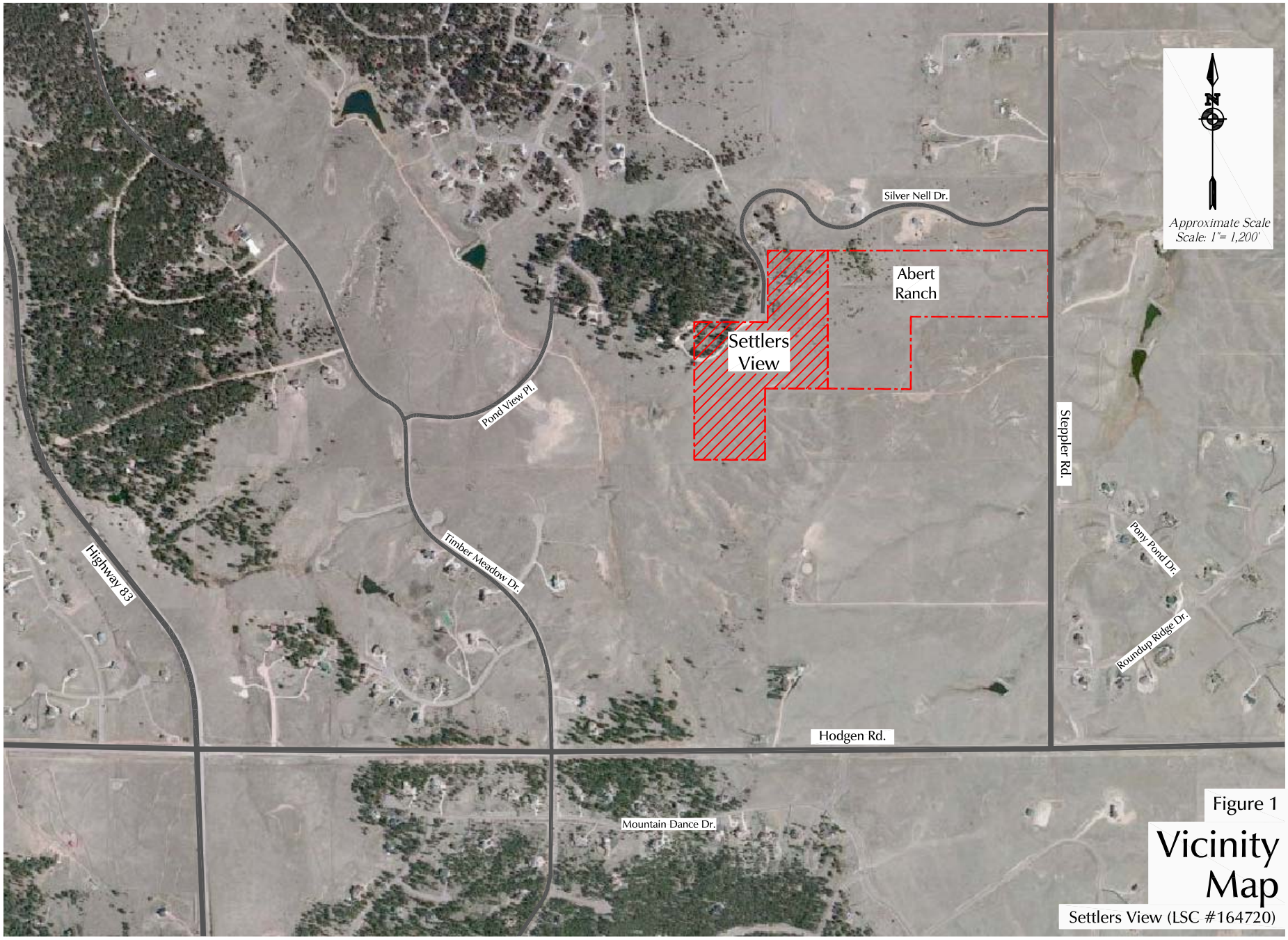
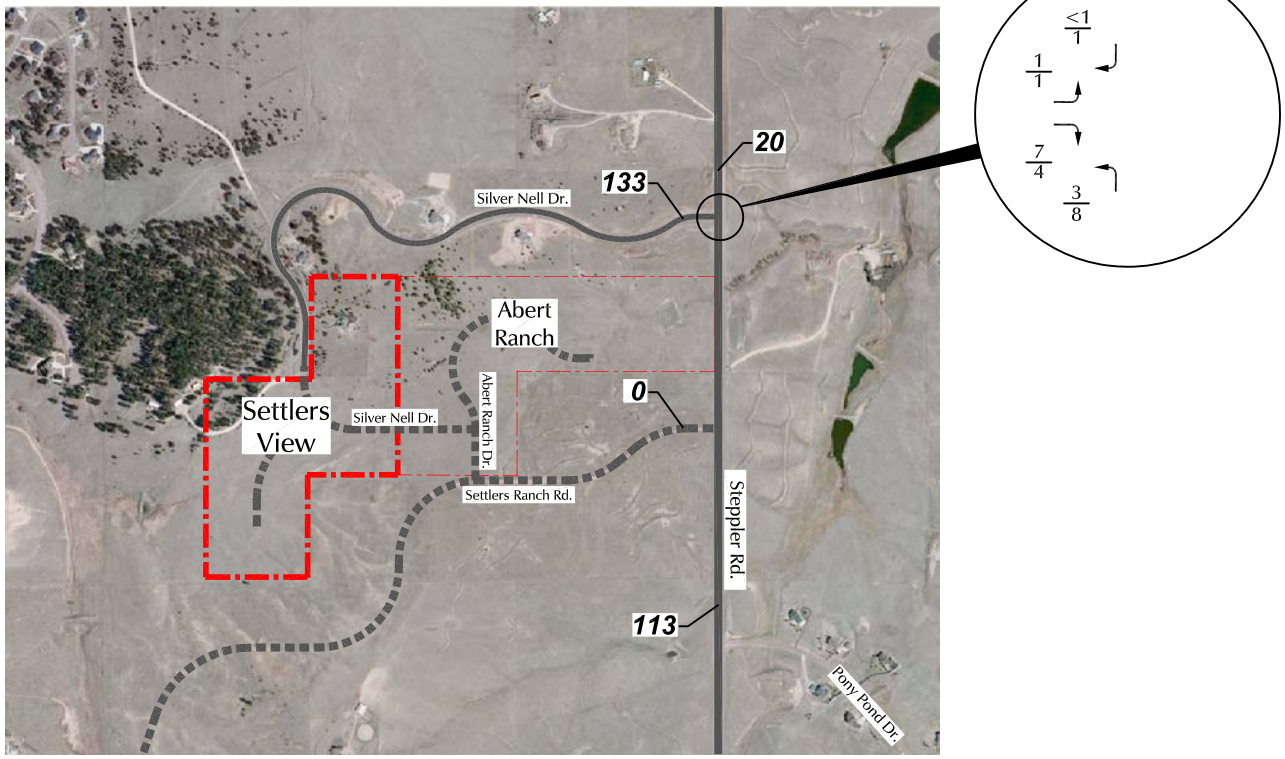


Figure 1

Vicinity Map

Settlers View (LSC #164720)



N

Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

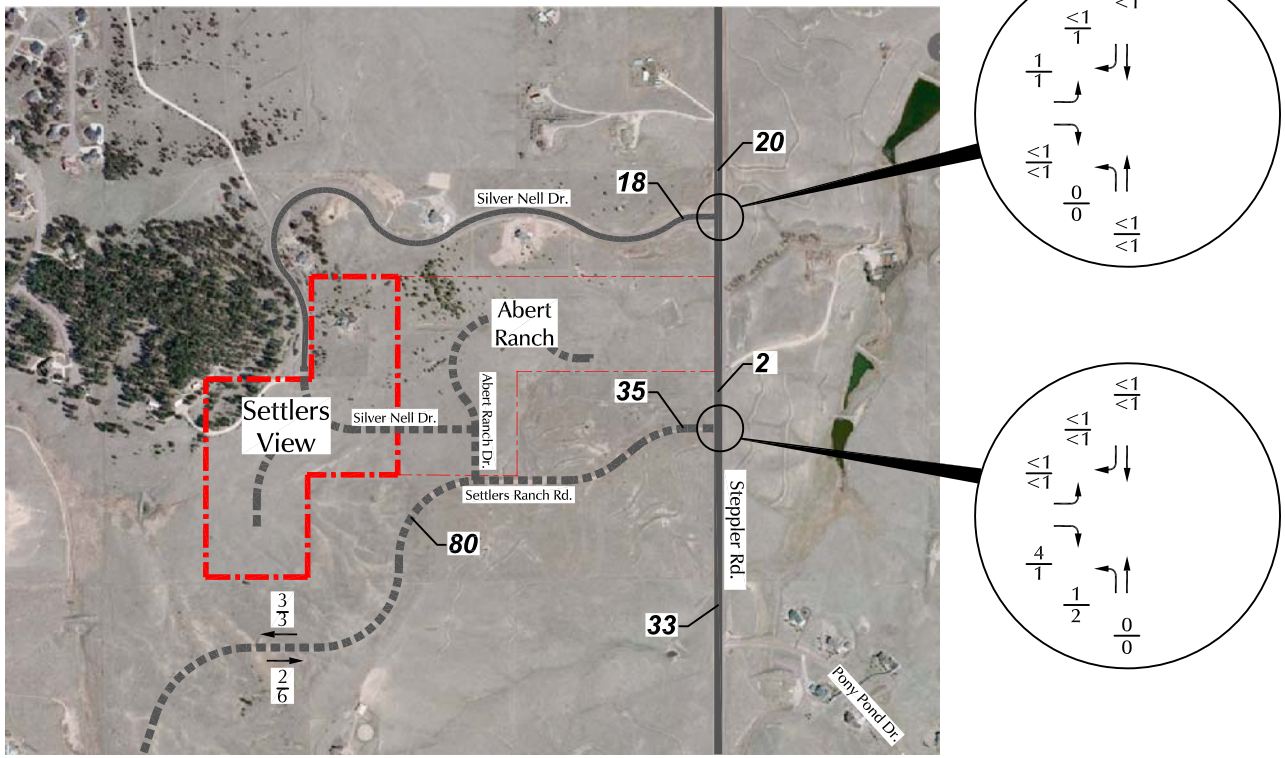
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 5

Short-Term Assignment of Site-Generated Traffic

Settlers View (LSC #164720)



N

Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak–Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak–Hour Traffic (vehicles per hour)}}$

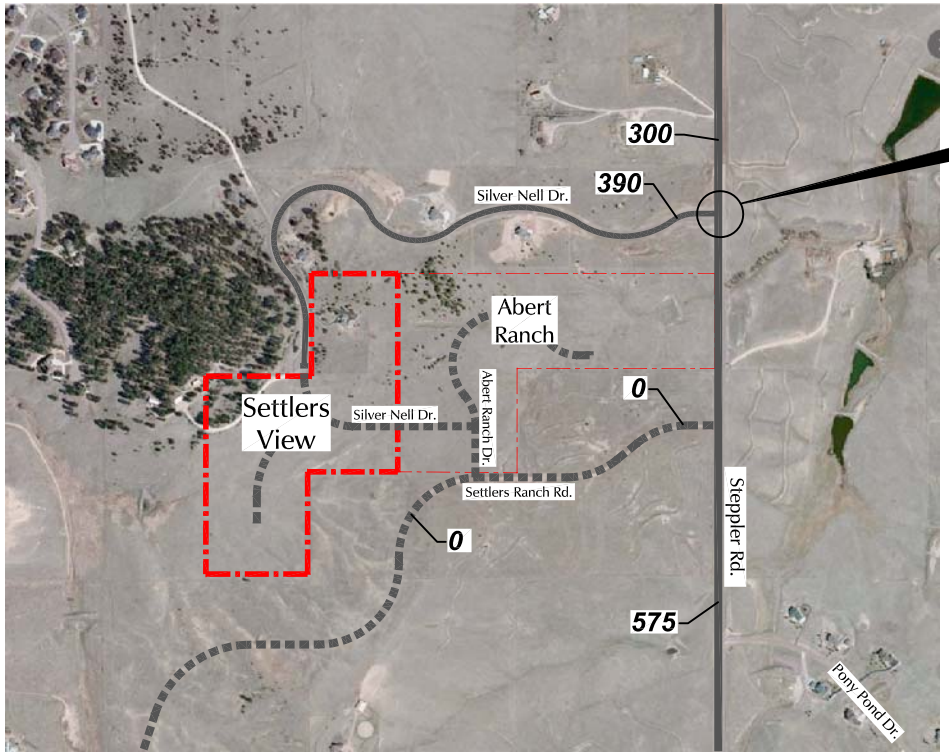
XXX = Average Weekday Traffic (vehicles per day)

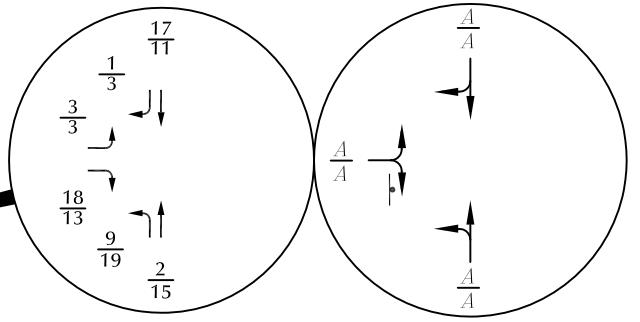
TRANSPORTATION CONSULTANTS, INC.

Figure 6

Long-Term Assignment of Site-Generated Traffic

Settlers View (LSC #164720)





Approximate Scale
Scale: 1"= 1,200'

✻ Includes buildout of the site plus Abert Ranch plus Grandview but not Settlers Ranch. Assumes Settlers Ranch Road not built adjacent to Abert Ranch east of Albert Ranch.

LEGEND:

⊢ = Stop Sign

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

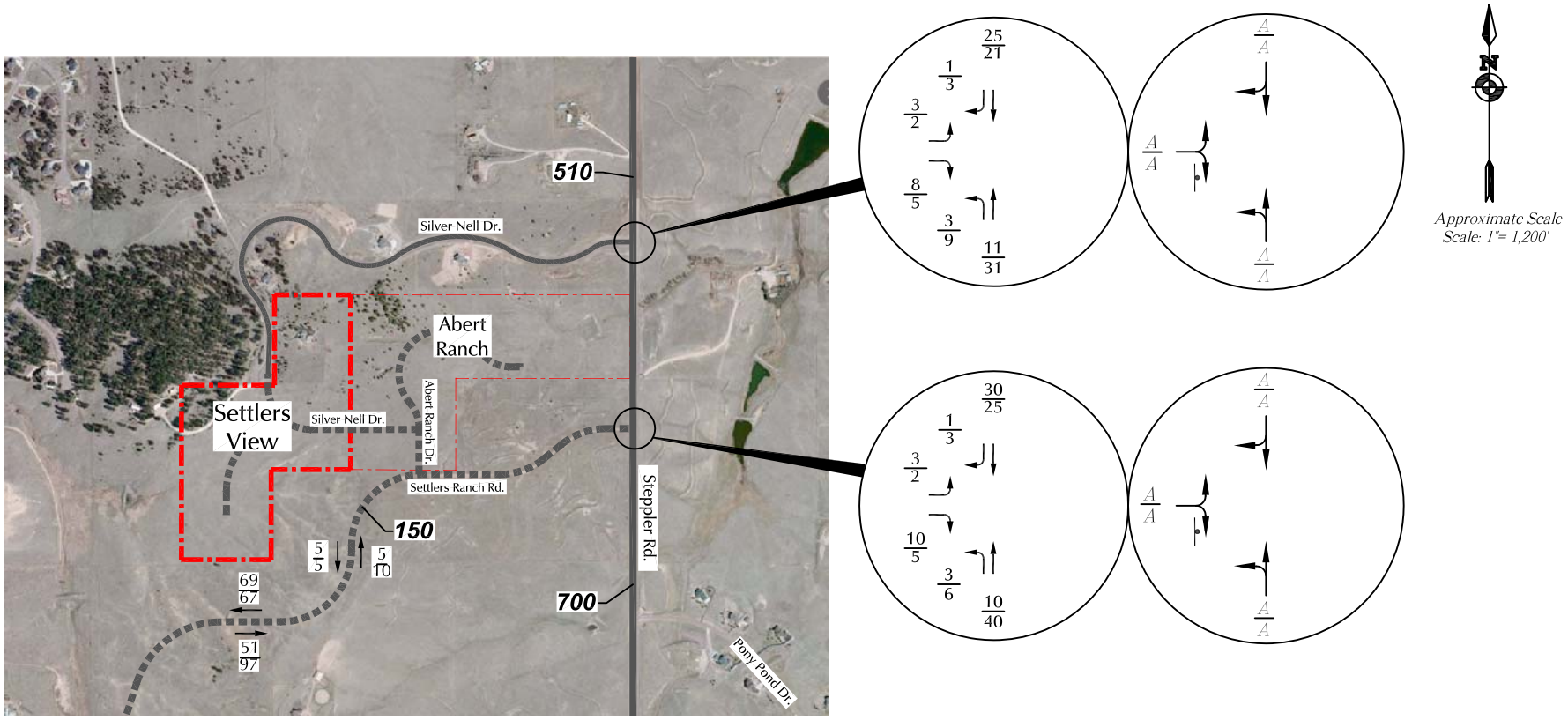
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 7

Short-Term Total Traffic*, Lane Geometry, Traffic Control & Level of Service

Settlers View (LSC #164720)



LEGEND:

⊦ = Stop Sign

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

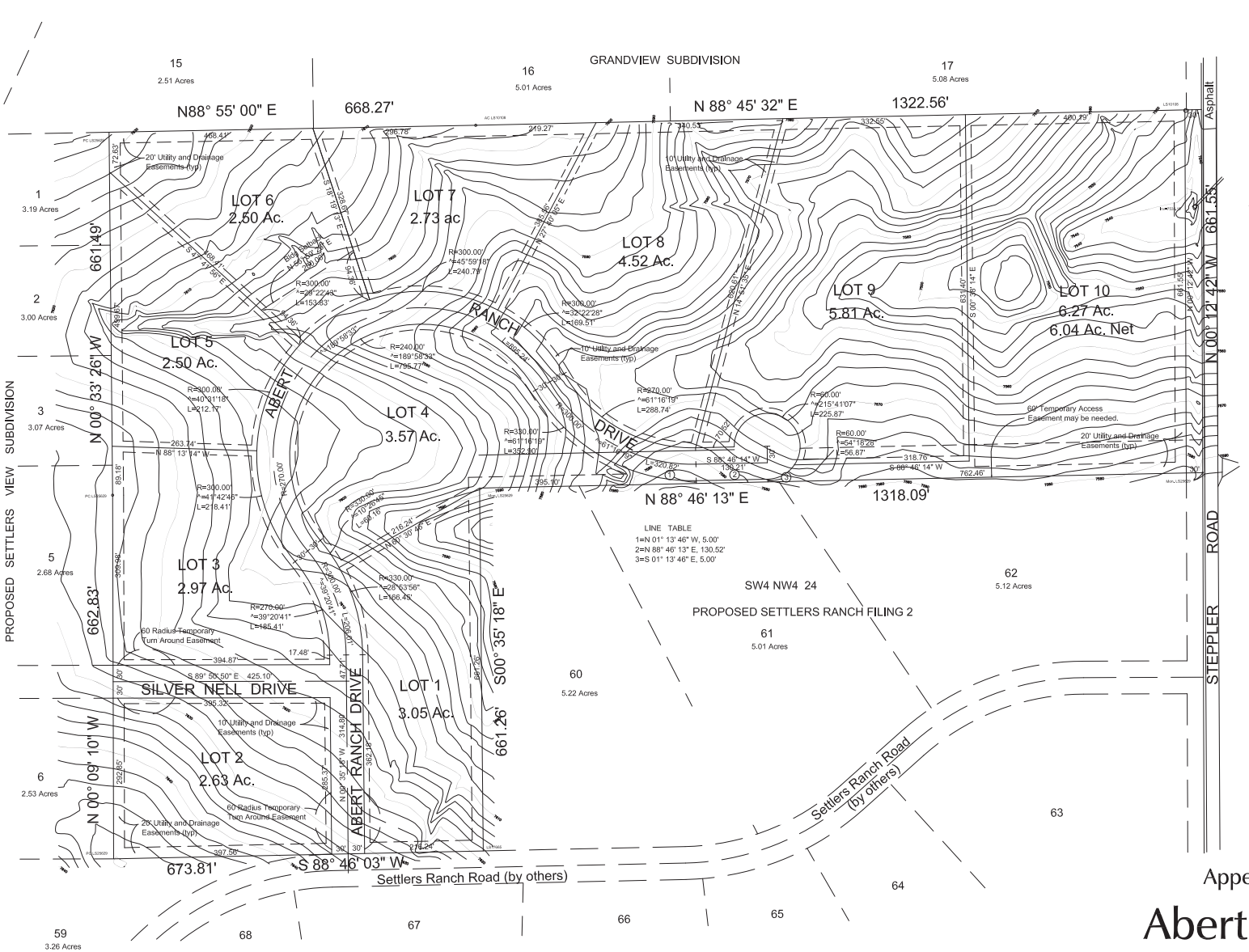
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 9

Year 2040 Total Traffic, Lane Geometry, Traffic Control & Level of Service

Settlers View (LSC #164720)



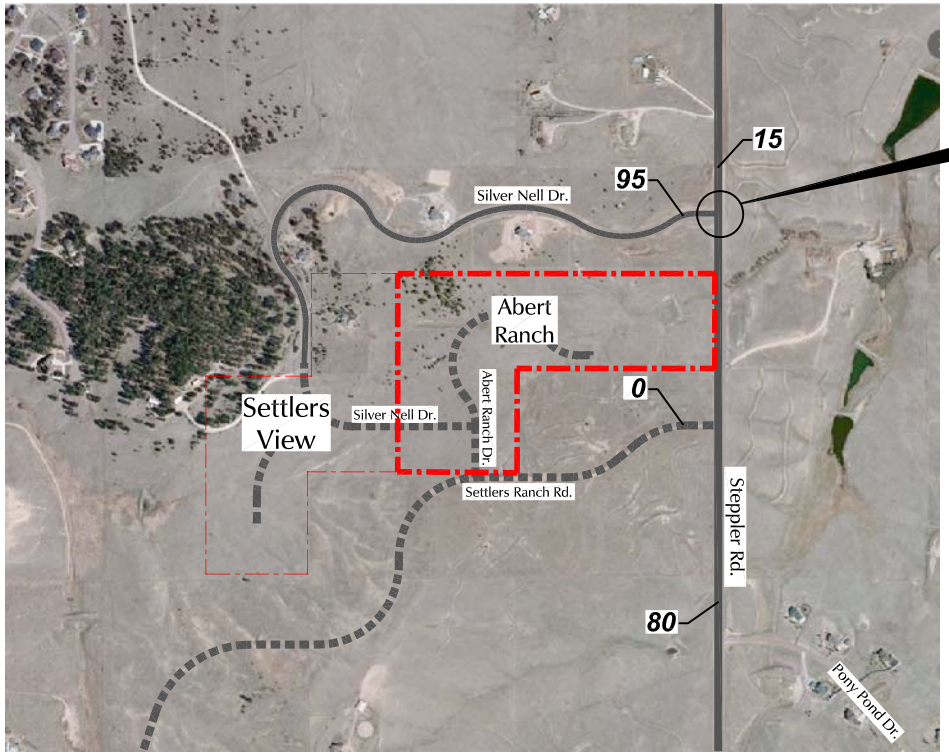
Approximate Scale
Scale: NTS

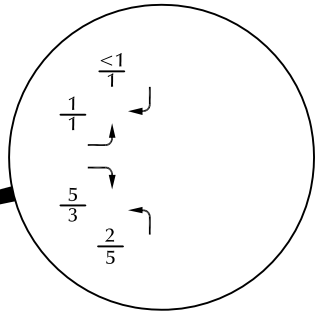
Appendix Figure 1

Abert Ranch Site Plan

Settlers View (LSC #164720)

TRANSPORTATION CONSULTANTS, INC.





Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak–Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak–Hour Traffic (vehicles per hour)}}$

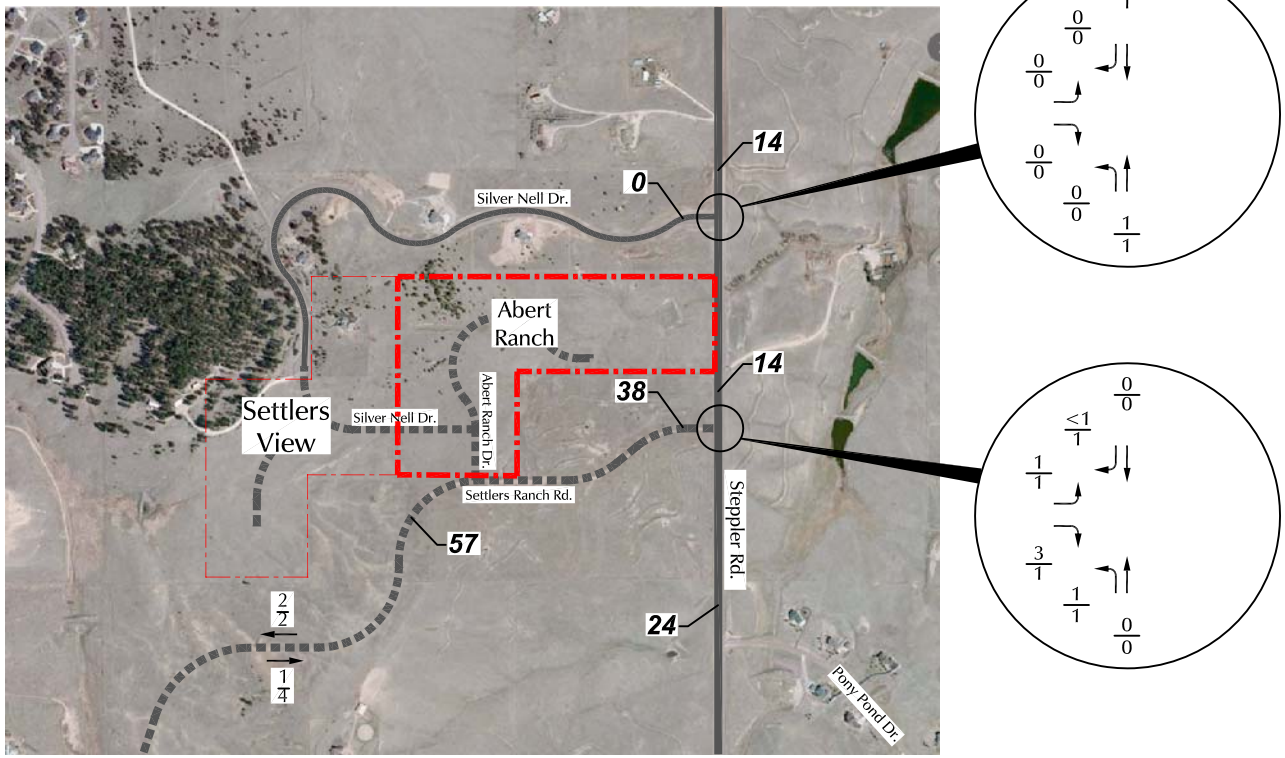
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Appendix Figure 2

Abert Ranch Short-Term Traffic

Settlers View (LSC #164720)



Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak–Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak–Hour Traffic (vehicles per hour)}}$

XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Appendix Figure 3

Long-Term Assignment of Abert Ranch Site-Generated Traffic

Settlers View (LSC #164720)

LSC TRANSPORTATION CONSULTANTS, INC.
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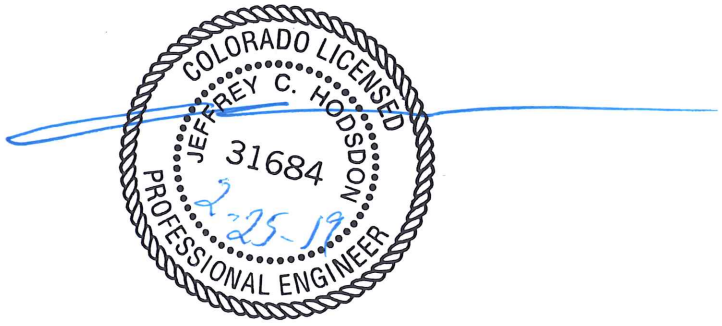
E-mail: lsc@lsctrans.com
Website: http://www.lsctrans.com

Abert Ranch Subdivision
Transportation Memorandum

PCD File No.: SP-17-007
(LSC #164890)
February 25, 2019

Traffic Engineer's Statement

This 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.



Developer's Statement

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

J. W. Hannigan — 02-25-19
Date
Jerome W. Hannigan and Associates, Inc
For and on behalf of the owner.

LSC TRANSPORTATION CONSULTANTS, INC.
545 East Pikes Peak Avenue, Suite 210
Colorado Springs, CO 80903
(719) 633-2868
FAX (719) 633-5430
E-mail: lsc@lsctrans.com
Website: http://www.lsctrans.com

February 25, 2019

Mr. Jerry Hannigan
Jerome W. Hannigan and Associates, Inc.
19360 Spring Valley Road
Monument, CO 80132

RE: Abert Ranch Subdivision
El Paso County, CO
PCD File Nos.: SP-17-007
Preliminary Plan and Final Plat
Updated Transportation Memorandum
LSC #164890

Dear Jerry:

LSC Transportation Consultants, Inc. has prepared this updated transportation memorandum for the proposed Abert Ranch subdivision. The site is located generally northwest of the intersection of Hodgen Road and Steppler Road in El Paso County, Colorado. The site's location is shown in Figure 1. Site access would be through adjacent subdivisions as the site is not directly adjacent to Steppler Road. The site plan is shown in Figure 2. Figure 2This analysis has been prepared in conjunction with the proposed Settlers View subdivision, which is adjacent to Abert Ranch. LSC has prepared a separate traffic report for Settlers View.

REPORT CONTENTS

The report contains the following:

- Existing roadway and traffic conditions in the vicinity of the site, including the intersection lane geometries, traffic controls, posted speed limits, functional classifications, intersection spacing and alignment, etc.
- Existing peak-hour turning movement traffic counts and/or estimates of future background traffic volumes at the intersections of:
  - Steppler Road at Silver Nell Drive
  - Steppler Road at Settler's Ranch Road (future)
- Description of the proposed land use.
- Estimates of the average weekday and peak-hour vehicle-trips to be generated by the site.
- Projected site-generated traffic volumes on roadways and intersections to provide access to the site.

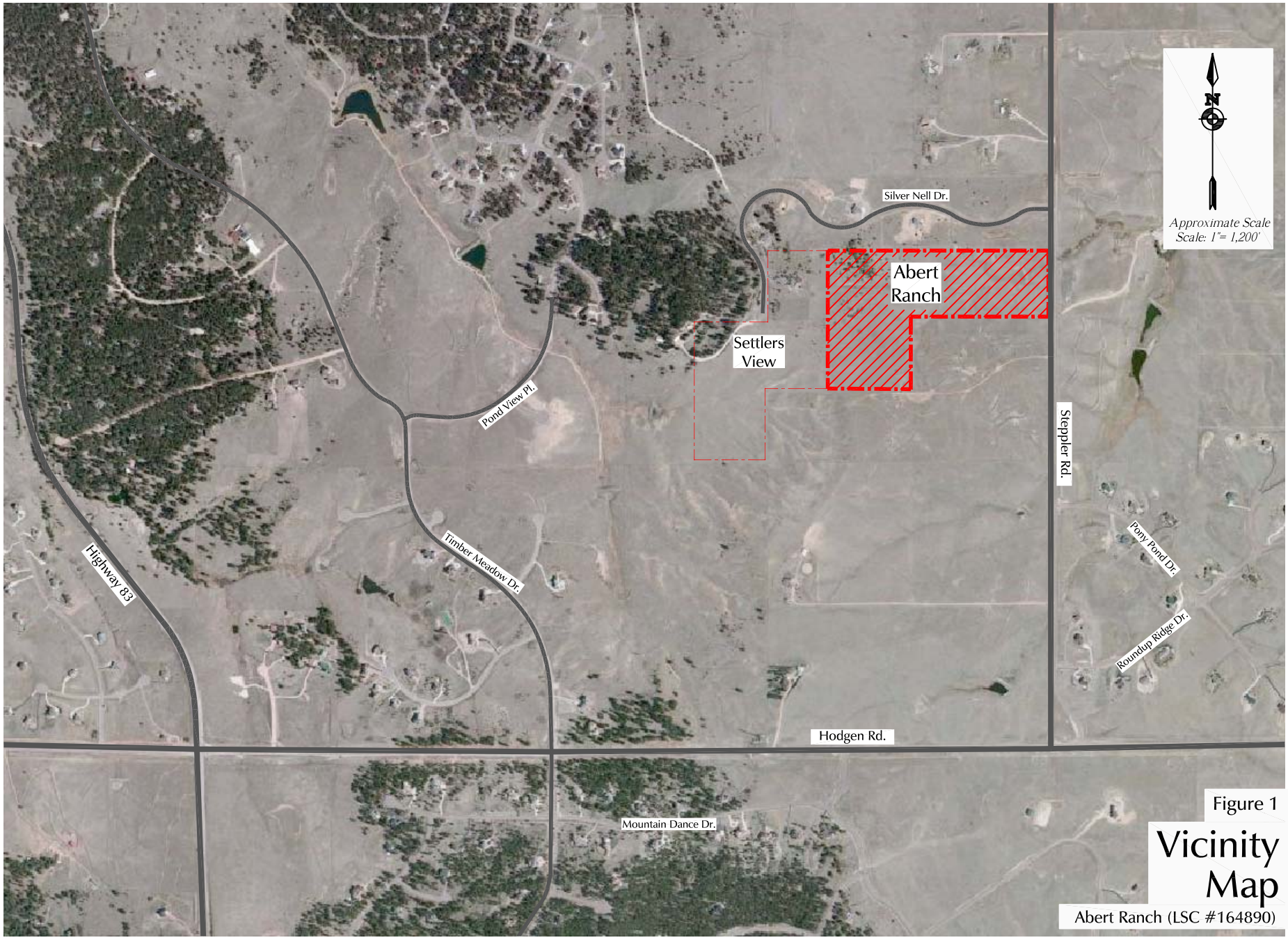
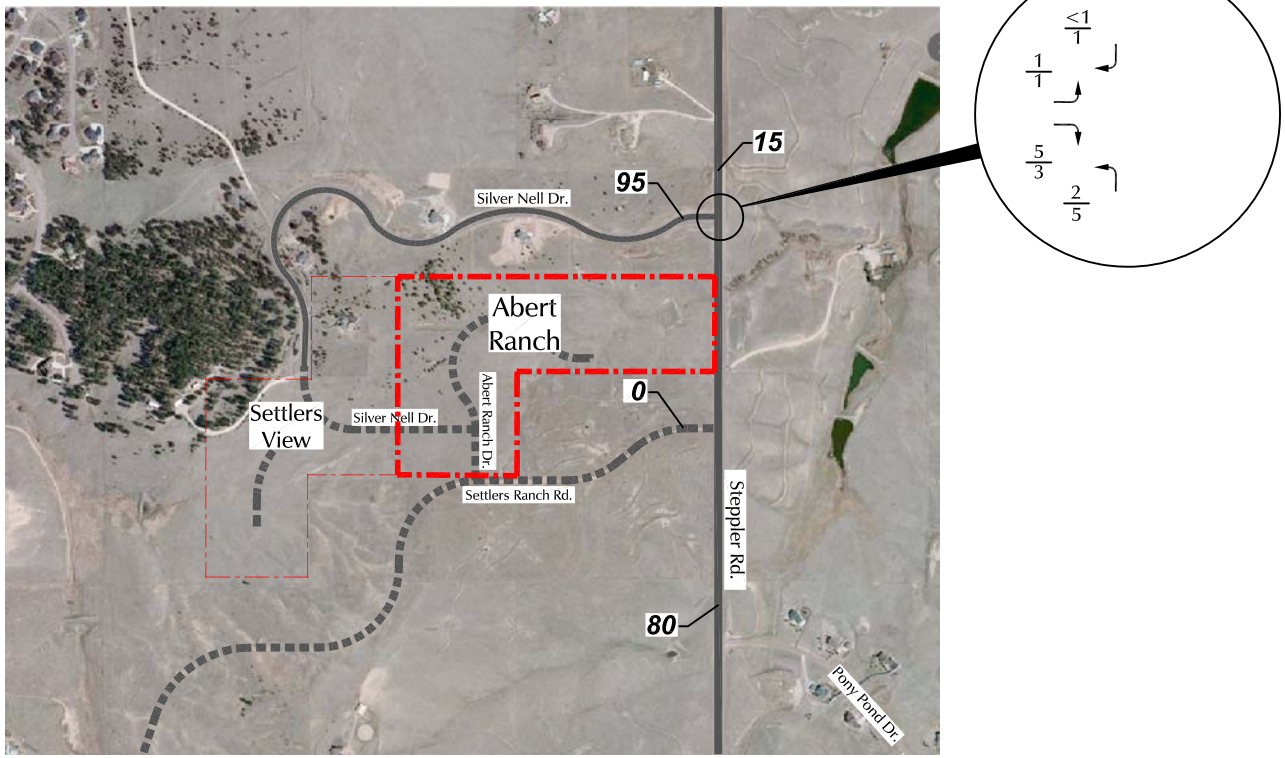


Figure 1

Vicinity Map

Abert Ranch (LSC #164890)



N

Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

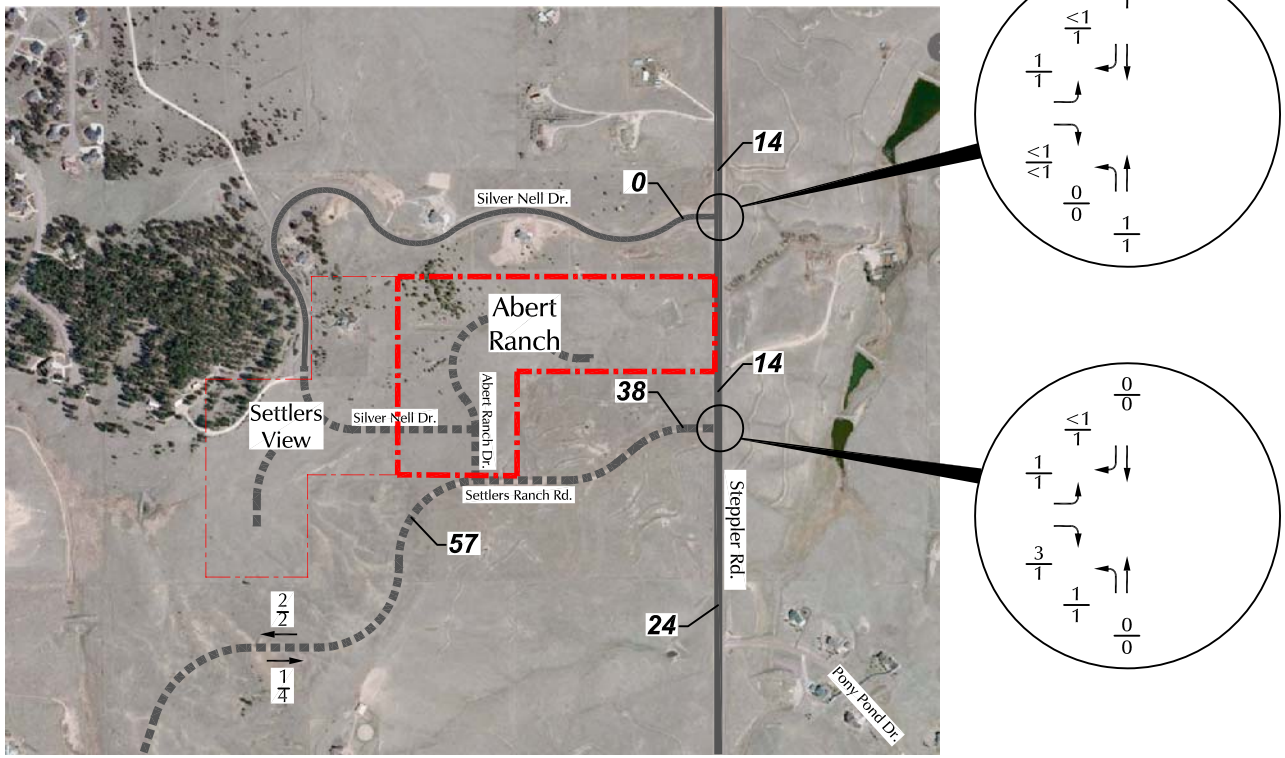
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 5

Abert Ranch Short-Term Assignment of Site-Generated Traffic

Abert Ranch (LSC #164890)



Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak–Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak–Hour Traffic (vehicles per hour)}}$

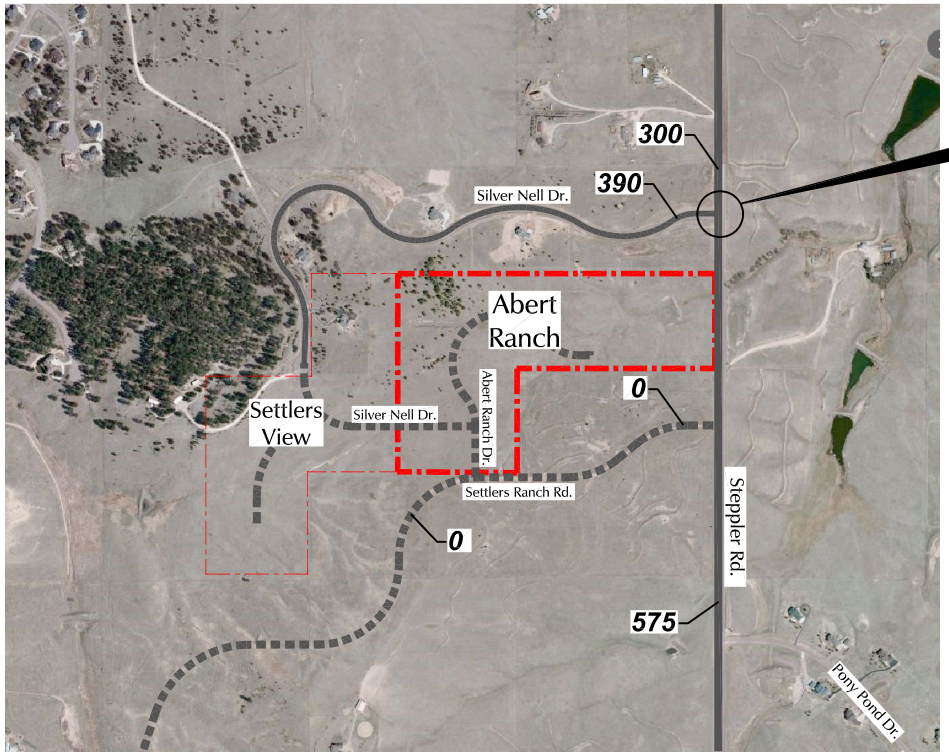
XXX = Average Weekday Traffic (vehicles per day)

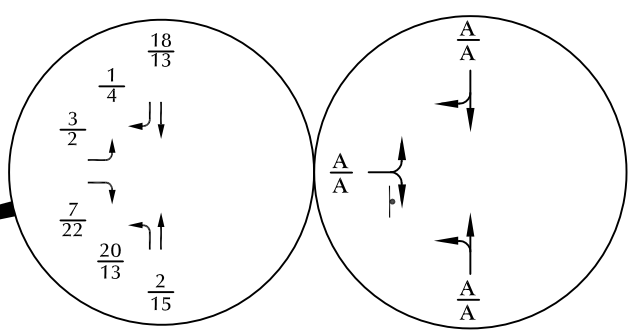
TRANSPORTATION CONSULTANTS, INC.

Figure 6

Abert Ranch Long-Term Assignment of Site-Generated Traffic

Abert Ranch (LSC #164890)





Approximate Scale
Scale: 1"= 1,200'

* Includes buildout of the site plus Settlers View plus Grandview but not Settlers Ranch. Assumes Settlers Ranch Road not built adjacent to Abert Ranch east of Albert Ranch.

LEGEND:

⊦ = Stop Sign

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

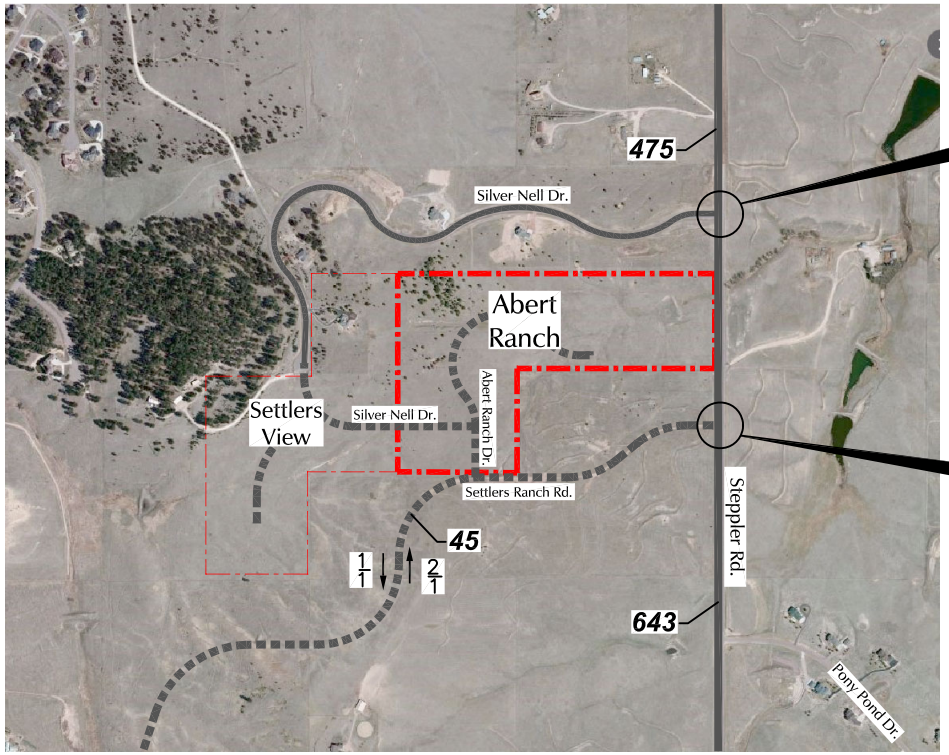
XXX = Average Weekday Traffic (vehicles per day)

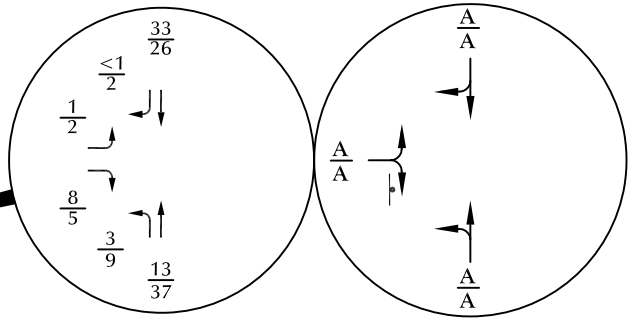
TRANSPORTATION CONSULTANTS, INC.

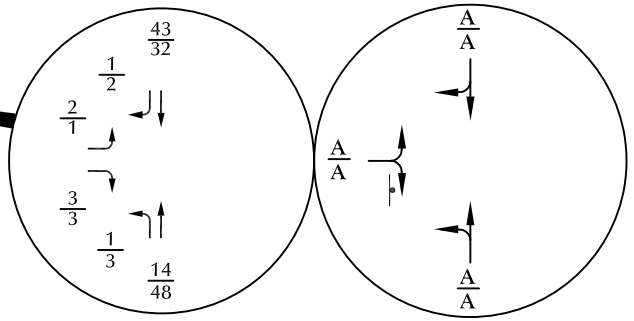
Figure 7

Short-Term Total Traffic*, Lane Geometry, Traffic Control & Level of Service

Abert Ranch (LSC #164890)







Approximate Scale
Scale: 1"= 1,200'

✻ Not including Settlers Ranch or Abert Ranch.

LEGEND:

= Stop Sign

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

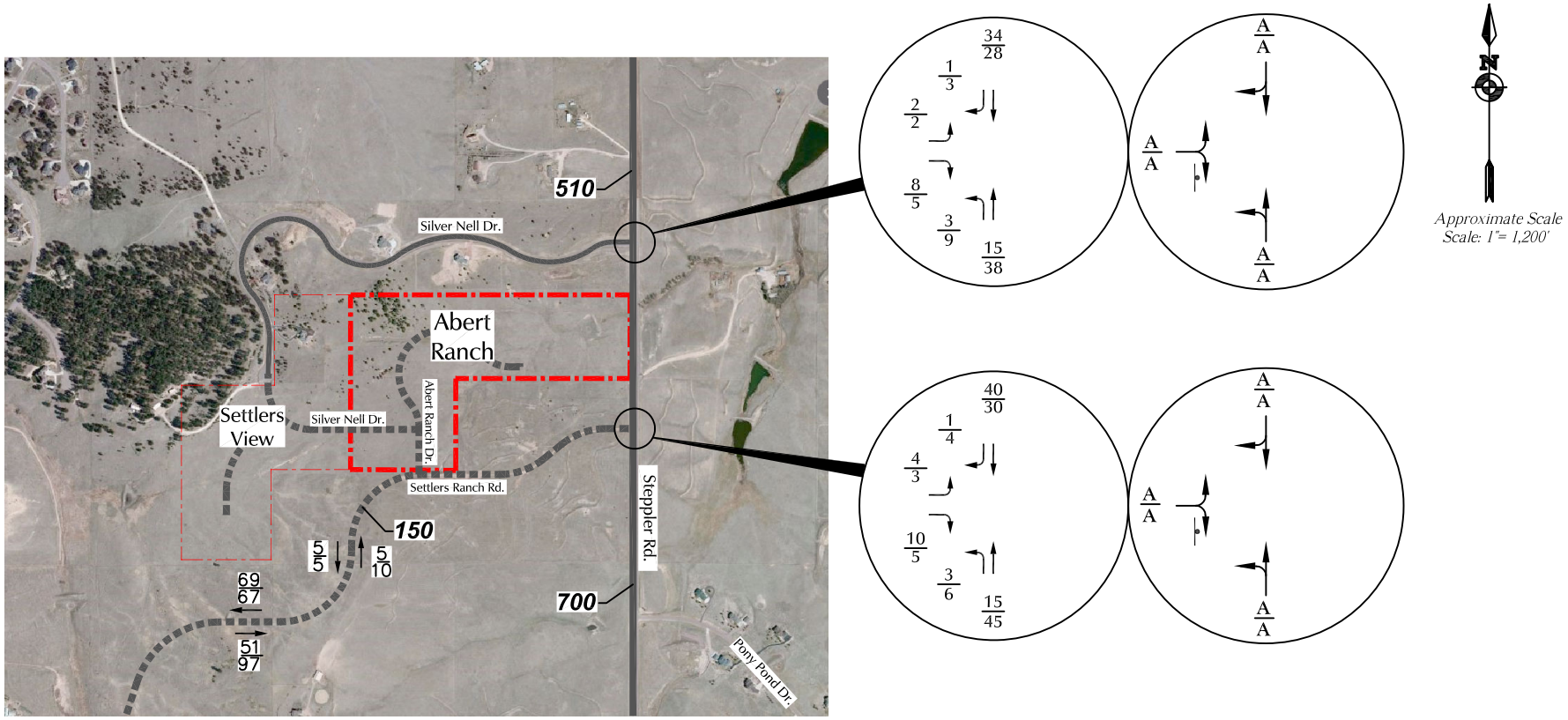
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 8

Year 2040 Background Traffic*, Lane Geometry, Traffic Control & Level of Service

Abert Ranch (LSC #164890)



LEGEND:

= Stop Sign

XX/XX = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

A/B = AM Individual Movement Peak-Hour Level of Service / PM Individual Movement Peak-Hour Level of Service

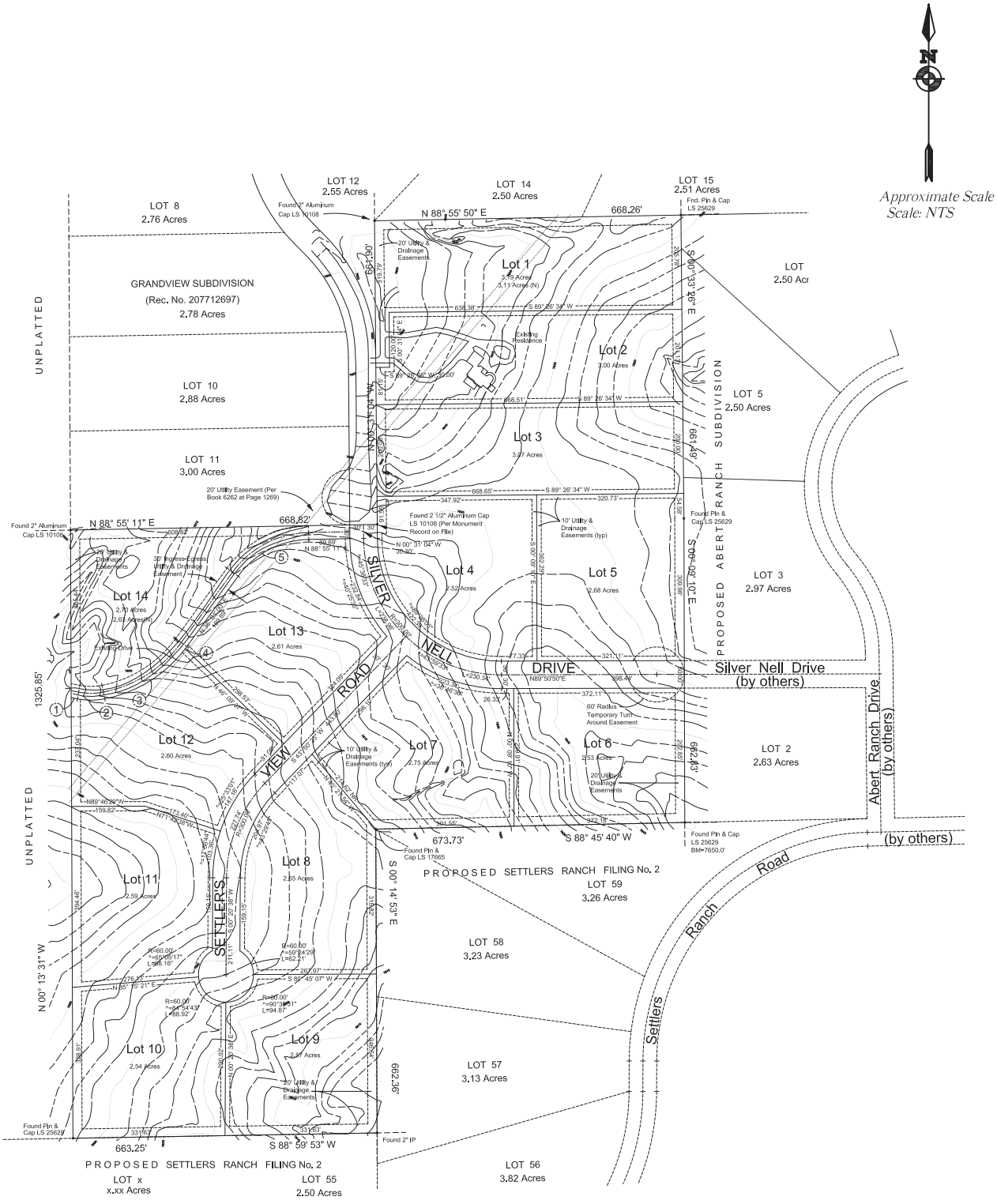
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Figure 9

Year 2040 Total Traffic, Lane Geometry, Traffic Control & Level of Service

Abert Ranch (LSC #164890)

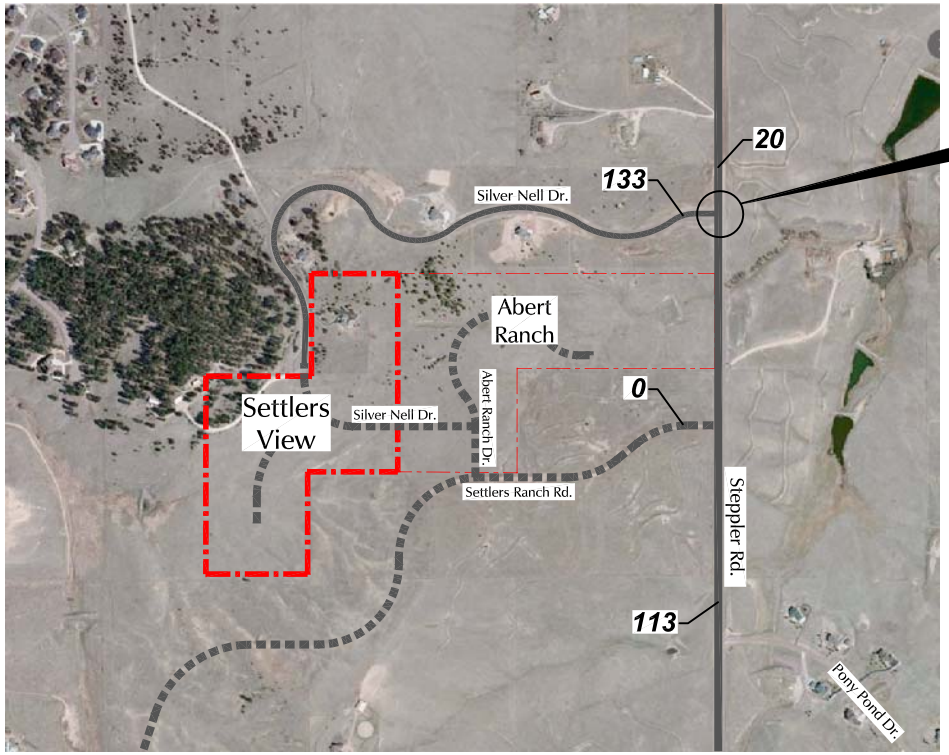


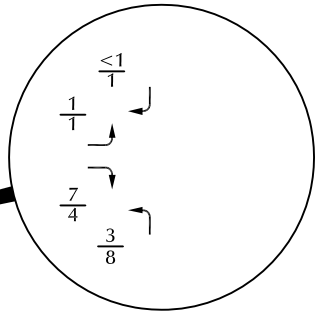
Appendix Figure 1

Settlers View Site Plan

Abert Ranch (LSC #164890)

TRANSPORTATION CONSULTANTS, INC.





Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

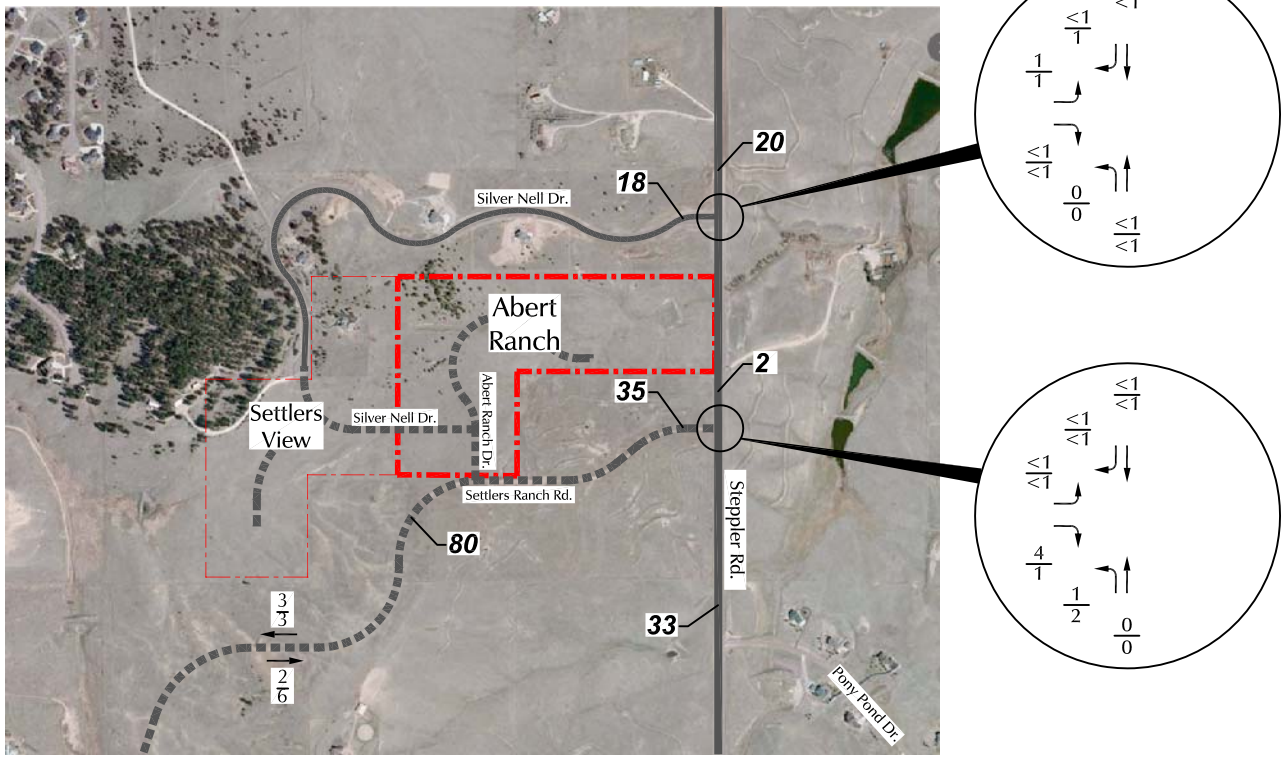
XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Appendix Figure 2

Settlers View Background Traffic

Abert Ranch (LSC #164890)



Approximate Scale
Scale: 1"= 1,200'

LEGEND:

$\frac{XX}{XX}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

XXX = Average Weekday Traffic (vehicles per day)

TRANSPORTATION CONSULTANTS, INC.

Appendix Figure 3

Abert Ranch + Settlers View Long-Term Assignment of Site-Generated Traffic

Abert Ranch (LSC #164890)

JPS ENGINEERING
19 E. Willamette Avenue
Colorado Springs, CO 80903
(719)-477-9429
www.jpsengr.com

SETTLERS RANCH FILING NO. 2C - TRAFFIC MEMORANDUM
PCD File No. SF-18-018
March 22, 2019

This Memorandum has been prepared in support of the phased final plat submittal for Settlers Ranch Filing No. 2C. Final plat approval for Filing No. 2 was initially approved by the Board of County Commissioners in April of 2009. The approved Filing No. 2 plat allows for development of a total of 43 single family lots ranging from 2.5 acres to 5.0 acres in size. The developer elected to record the Filing No. 2 plat in phases. Filings No. 2A and 2B, comprising a total of 14 lots, were previously recorded in 2013 and 2015, and the developer is now proceeding with recording of Filing No. 2C, consisting of 11 lots.

LSC Transportation Consultants, Inc. prepared the overall traffic impact study for Settlers Ranch dated August 5, 2004, which provides a detailed traffic engineering evaluation and recommendations for this subdivision. The 11 residential lots in Filing No. 2C would be expected to generate an average daily traffic (ADT) of approximately 104.7 vehicle trips on the average weekday, which is consistent with the previously approved traffic study. Recognizing that this phased final plat filing is entirely consistent with the previously approved road configuration, and there are no changes proposed in the previously approved total number of Filing No. 2 lots, there are no significant changes in traffic planning considerations.

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 accordance with the criteria established by the County for traffic reports.

COLORADO REGISTERED 29891 PROFESSIONAL ENGINEER

5/20/19

John P. Schwab, P.E. #29891 — Date

Developer's Statement:

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

3/25/19

Mark Davis, Manager, Hodgen Settlers Ranch LLC — Date
P.O. Box 1488, Monument, CO 80132

Trip Generation Worksheet

Kimley»Horn

Project	16850 Steppler Road				
Subject	Trip Generation for Single-Family Detached Housing				
Designed by	TJD	*Date*	April 10, 2023	*Job No.*	196310000
Checked by		*Date*		*Sheet No.*	*of*

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations

Land Use Code - Single-Family Detached Housing (210)

Independent Variable - Dwelling Units (X)

X = 14
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 220)

Directional Distribution: 26% ent. 74% exit.

Ln(T) = 0.91 Ln(X) + 0.12
Ln(T) = 0.91 * Ln(14) + 0.12

T = 12 Average Vehicle Trip Ends
3 entering 9 exiting

3 + 9 = 12

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 221)

Directional Distribution: 63% ent. 37% exit.

Ln(T) = 0.94 Ln(X) + 0.27
Ln(T) = 0.94 * Ln(14) + 0.27

T = 16 Average Vehicle Trip Ends
10 entering 6 exiting

10 + 6 = 16

Weekday (200 Series Page 219)

Directional Distribution: 50% entering, 50% exiting

Ln(T) = 0.92 Ln(X) + 2.68
Ln(T) = 0.92 * Ln(14) + 2.68

T = 166 Average Vehicle Trip Ends
83 entering 83 exiting

83 + 83 = 166

Intersection Capacity Analysis Outputs

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	138	1	2	248	3	4	0	0	2	0	38
Future Vol, veh/h	15	138	1	2	248	3	4	0	0	2	0	38
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	92	92	92	50	50	50	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	186	1	2	270	3	8	0	0	3	0	64

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	273	0	0	187	0	0	534	503	186	501	501	270
Stage 1	-	-	-	-	-	-	226	226	-	274	274	-
Stage 2	-	-	-	-	-	-	308	277	-	227	227	-
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	1290	-	-	1387	-	-	457	471	856	480	472	769
Stage 1	-	-	-	-	-	-	777	717	-	732	683	-
Stage 2	-	-	-	-	-	-	702	681	-	776	716	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1290	-	-	1387	-	-	413	463	856	474	464	769
Mov Cap-2 Maneuver	-	-	-	-	-	-	413	463	-	474	464	-
Stage 1	-	-	-	-	-	-	765	706	-	720	682	-
Stage 2	-	-	-	-	-	-	642	680	-	764	705	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.1	13.9	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	413	1290	-	-	1387	-	-	746
HCM Lane V/C Ratio	0.019	0.016	-	-	0.002	-	-	0.091
HCM Control Delay (s)	13.9	7.8	-	-	7.6	-	-	10.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	466	8	1	229	8	4	1	2	5	0	48
Future Vol, veh/h	76	466	8	1	229	8	4	1	2	5	0	48
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	92	92	92	58	58	58	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	536	9	1	249	9	7	2	3	6	0	62

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	258	0	0	545	0	0	997	970	536	968	970	249
Stage 1	-	-	-	-	-	-	710	710	-	251	251	-
Stage 2	-	-	-	-	-	-	287	260	-	717	719	-
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	1307	-	-	1024	-	-	223	253	545	233	253	790
Stage 1	-	-	-	-	-	-	424	437	-	753	699	-
Stage 2	-	-	-	-	-	-	720	693	-	421	433	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1307	-	-	1024	-	-	195	236	545	218	236	790
Mov Cap-2 Maneuver	-	-	-	-	-	-	195	236	-	218	236	-
Stage 1	-	-	-	-	-	-	396	408	-	703	698	-
Stage 2	-	-	-	-	-	-	663	692	-	389	404	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	20.4	11.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	246	1307	-	-	1024	-	-	633
HCM Lane V/C Ratio	0.049	0.067	-	-	0.001	-	-	0.107
HCM Control Delay (s)	20.4	8	-	-	8.5	-	-	11.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	147	1	2	265	3	4	0	0	2	0	46
Future Vol, veh/h	19	147	1	2	265	3	4	0	0	2	0	46
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	92	92	92	50	50	50	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	199	1	2	288	3	8	0	0	3	0	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	291	0	0	200	0	0	584	546	199	544	544	288
Stage 1	-	-	-	-	-	-	251	251	-	292	292	-
Stage 2	-	-	-	-	-	-	333	295	-	252	252	-
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	1271	-	-	1372	-	-	423	445	842	450	446	751
Stage 1	-	-	-	-	-	-	753	699	-	716	671	-
Stage 2	-	-	-	-	-	-	681	669	-	752	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1271	-	-	1372	-	-	373	436	842	442	437	751
Mov Cap-2 Maneuver	-	-	-	-	-	-	373	436	-	442	437	-
Stage 1	-	-	-	-	-	-	738	685	-	702	670	-
Stage 2	-	-	-	-	-	-	609	668	-	737	684	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.1	14.9	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1271	-	-	1372	-	-	730
HCM Lane V/C Ratio	0.021	0.02	-	-	0.002	-	-	0.111
HCM Control Delay (s)	14.9	7.9	-	-	7.6	-	-	10.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	498	8	1	245	8	4	1	2	5	0	54
Future Vol, veh/h	87	498	8	1	245	8	4	1	2	5	0	54
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	92	92	92	58	58	58	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	572	9	1	266	9	7	2	3	6	0	69

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	275	0	0	581	0	0	1079	1049	572	1047	1049	266
Stage 1	-	-	-	-	-	-	772	772	-	268	268	-
Stage 2	-	-	-	-	-	-	307	277	-	779	781	-
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	1288	-	-	993	-	-	196	227	520	206	227	773
Stage 1	-	-	-	-	-	-	392	409	-	738	687	-
Stage 2	-	-	-	-	-	-	703	681	-	389	405	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1288	-	-	993	-	-	168	209	520	191	209	773
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	209	-	191	209	-
Stage 1	-	-	-	-	-	-	361	377	-	680	686	-
Stage 2	-	-	-	-	-	-	639	680	-	355	373	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0	22.7	11.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	216	1288	-	-	993	-	-	614
HCM Lane V/C Ratio	0.056	0.078	-	-	0.001	-	-	0.123
HCM Control Delay (s)	22.7	8	-	-	8.6	-	-	11.7
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	147	1	2	265	3	4	0	0	3	0	54
Future Vol, veh/h	22	147	1	2	265	3	4	0	0	3	0	54
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	92	92	92	50	50	50	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	199	1	2	288	3	8	0	0	5	0	92

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	291	0	0	200	0	0	599	554	199	552	552	288
Stage 1	-	-	-	-	-	-	259	259	-	292	292	-
Stage 2	-	-	-	-	-	-	340	295	-	260	260	-
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	1271	-	-	1372	-	-	413	440	842	444	442	751
Stage 1	-	-	-	-	-	-	746	694	-	716	671	-
Stage 2	-	-	-	-	-	-	675	669	-	745	693	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1271	-	-	1372	-	-	356	429	842	436	431	751
Mov Cap-2 Maneuver	-	-	-	-	-	-	356	429	-	436	431	-
Stage 1	-	-	-	-	-	-	728	677	-	699	670	-
Stage 2	-	-	-	-	-	-	592	668	-	727	676	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	15.3	10.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	356	1271	-	-	1372	-	-	723
HCM Lane V/C Ratio	0.022	0.023	-	-	0.002	-	-	0.134
HCM Control Delay (s)	15.3	7.9	-	-	7.6	-	-	10.7
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	96	498	8	1	245	9	4	1	2	6	0	59
Future Vol, veh/h	96	498	8	1	245	9	4	1	2	6	0	59
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	92	92	92	58	58	58	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	110	572	9	1	266	10	7	2	3	8	0	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	276	0	0	581	0	0	1103	1070	572	1067	1069	266
Stage 1	-	-	-	-	-	-	792	792	-	268	268	-
Stage 2	-	-	-	-	-	-	311	278	-	799	801	-
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	1287	-	-	993	-	-	189	221	520	200	221	773
Stage 1	-	-	-	-	-	-	382	401	-	738	687	-
Stage 2	-	-	-	-	-	-	699	680	-	379	397	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1287	-	-	993	-	-	159	202	520	184	202	773
Mov Cap-2 Maneuver	-	-	-	-	-	-	159	202	-	184	202	-
Stage 1	-	-	-	-	-	-	350	367	-	675	686	-
Stage 2	-	-	-	-	-	-	630	679	-	343	363	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0	23.6	12
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	206	1287	-	-	993	-	-	597
HCM Lane V/C Ratio	0.059	0.086	-	-	0.001	-	-	0.14
HCM Control Delay (s)	23.6	8.1	-	-	8.6	-	-	12
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	224	1	2	403	4	4	0	0	3	0	54
Future Vol, veh/h	22	224	1	2	403	4	4	0	0	3	0	54
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	92	92	92	50	50	50	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	303	1	2	438	4	8	0	0	5	0	92

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	442	0	0	304	0	0	853	809	303	806	806	438
Stage 1	-	-	-	-	-	-	363	363	-	442	442	-
Stage 2	-	-	-	-	-	-	490	446	-	364	364	-
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	1118	-	-	1257	-	-	279	314	737	300	316	619
Stage 1	-	-	-	-	-	-	656	625	-	594	576	-
Stage 2	-	-	-	-	-	-	560	574	-	655	624	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1118	-	-	1257	-	-	233	305	737	293	307	619
Mov Cap-2 Maneuver	-	-	-	-	-	-	233	305	-	293	307	-
Stage 1	-	-	-	-	-	-	638	608	-	578	575	-
Stage 2	-	-	-	-	-	-	476	573	-	637	607	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	21	12.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	233	1118	-	-	1257	-	-	585
HCM Lane V/C Ratio	0.034	0.027	-	-	0.002	-	-	0.165
HCM Control Delay (s)	21	8.3	-	-	7.9	-	-	12.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	103	757	9	1	372	10	4	1	2	7	0	64
Future Vol, veh/h	103	757	9	1	372	10	4	1	2	7	0	64
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	92	92	92	58	58	58	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	870	10	1	404	11	7	2	3	9	0	82

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	415	0	0	880	0	0	1559	1523	870	1520	1522	404
Stage 1	-	-	-	-	-	-	1106	1106	-	406	406	-
Stage 2	-	-	-	-	-	-	453	417	-	1114	1116	-
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	1144	-	-	768	-	-	91	118	351	97	118	647
Stage 1	-	-	-	-	-	-	255	286	-	622	598	-
Stage 2	-	-	-	-	-	-	586	591	-	253	283	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1144	-	-	768	-	-	73	106	351	88	106	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	162	194	-	88	106	-
Stage 1	-	-	-	-	-	-	229	257	-	558	597	-
Stage 2	-	-	-	-	-	-	511	590	-	223	254	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	24.5	16.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	197	1144	-	-	768	-	-	398
HCM Lane V/C Ratio	0.061	0.103	-	-	0.001	-	-	0.229
HCM Control Delay (s)	24.5	8.5	-	-	9.7	-	-	16.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	0.9

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	224	1	2	403	4	4	0	0	3	0	62
Future Vol, veh/h	25	224	1	2	403	4	4	0	0	3	0	62
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	92	92	92	50	50	50	59	59	59
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	303	1	2	438	4	8	0	0	5	0	105

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	442	0	0	304	0	0	868	817	303	814	814	438
Stage 1	-	-	-	-	-	-	371	371	-	442	442	-
Stage 2	-	-	-	-	-	-	497	446	-	372	372	-
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	1118	-	-	1257	-	-	273	311	737	297	312	619
Stage 1	-	-	-	-	-	-	649	620	-	594	576	-
Stage 2	-	-	-	-	-	-	555	574	-	648	619	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1118	-	-	1257	-	-	221	301	737	290	302	619
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	301	-	290	302	-
Stage 1	-	-	-	-	-	-	630	601	-	576	575	-
Stage 2	-	-	-	-	-	-	460	573	-	628	600	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	21.9	12.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	221	1118	-	-	1257	-	-	588
HCM Lane V/C Ratio	0.036	0.03	-	-	0.002	-	-	0.187
HCM Control Delay (s)	21.9	8.3	-	-	7.9	-	-	12.5
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.7

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	112	757	9	1	372	11	4	1	2	7	0	69
Future Vol, veh/h	112	757	9	1	372	11	4	1	2	7	0	69
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	500	-	425	525	-	525	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	92	92	92	58	58	58	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	129	870	10	1	404	12	7	2	3	9	0	88

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	416	0	0	880	0	0	1584	1546	870	1542	1544	404
Stage 1	-	-	-	-	-	-	1128	1128	-	406	406	-
Stage 2	-	-	-	-	-	-	456	418	-	1136	1138	-
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	1143	-	-	768	-	-	88	114	351	94	115	647
Stage 1	-	-	-	-	-	-	248	279	-	622	598	-
Stage 2	-	-	-	-	-	-	584	591	-	246	276	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1143	-	-	768	-	-	69	101	351	84	102	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	155	187	-	84	102	-
Stage 1	-	-	-	-	-	-	220	247	-	552	597	-
Stage 2	-	-	-	-	-	-	503	590	-	215	245	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	25.2	16.9
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	190	1143	-	-	768	-	-	400
HCM Lane V/C Ratio	0.064	0.113	-	-	0.001	-	-	0.244
HCM Control Delay (s)	25.2	8.5	-	-	9.7	-	-	16.9
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.4	-	-	0	-	-	0.9

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	2	10	0	2	37
Future Vol, veh/h	5	2	10	0	2	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	55	55	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	18	0	3	61

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	85	18	0	0	18	0
Stage 1	18	-	-	-	-	-
Stage 2	67	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	916	1061	-	-	1599	-
Stage 1	1005	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	914	1061	-	-	1599	-
Mov Cap-2 Maneuver	914	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	954	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	952	1599	-
HCM Lane V/C Ratio	-	-	0.013	0.002	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	3	75	5	0	65
Future Vol, veh/h	5	3	75	5	0	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	72	72	54	54
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	6	104	7	0	120

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	228	108	0	0	111	0
Stage 1	108	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	760	946	-	-	1479	-
Stage 1	916	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	760	946	-	-	1479	-
Mov Cap-2 Maneuver	760	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	905	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	820	1479	-
HCM Lane V/C Ratio	-	-	0.02	-	-
HCM Control Delay (s)	-	-	9.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	2	11	3	2	40
Future Vol, veh/h	10	2	11	3	2	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	55	55	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	3	20	5	3	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	95	23	0	0	25	0
Stage 1	23	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	905	1054	-	-	1589	-
Stage 1	1000	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	903	1054	-	-	1589	-
Mov Cap-2 Maneuver	903	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	925	1589	-
HCM Lane V/C Ratio	-	-	0.022	0.002	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	3	76	15	0	66
Future Vol, veh/h	10	3	76	15	0	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	72	72	54	54
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	6	106	21	0	122

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	239	117	0	0	127	0
Stage 1	117	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	749	935	-	-	1459	-
Stage 1	908	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	749	935	-	-	1459	-
Mov Cap-2 Maneuver	749	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	785	1459	-
HCM Lane V/C Ratio	-	-	0.033	-	-
HCM Control Delay (s)	-	-	9.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	2	11	6	2	40
Future Vol, veh/h	19	2	11	6	2	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	55	55	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	3	20	11	3	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	98	26	0	0	31	0
Stage 1	26	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	901	1050	-	-	1582	-
Stage 1	997	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	899	1050	-	-	1582	-
Mov Cap-2 Maneuver	899	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	911	1582	-
HCM Lane V/C Ratio	-	-	0.04	0.002	-
HCM Control Delay (s)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	3	76	25	0	66
Future Vol, veh/h	16	3	76	25	0	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	72	72	54	54
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	6	106	35	0	122

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	246	124	0	0	141	0
Stage 1	124	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	742	927	-	-	1442	-
Stage 1	902	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	742	927	-	-	1442	-
Mov Cap-2 Maneuver	742	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	766	1442	-
HCM Lane V/C Ratio	-	-	0.05	-	-
HCM Control Delay (s)	-	-	9.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	2	11	5	2	41
Future Vol, veh/h	18	2	11	5	2	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	55	55	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	3	20	9	3	67

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	98	25	0	0	29	0
Stage 1	25	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	901	1051	-	-	1584	-
Stage 1	998	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	899	1051	-	-	1584	-
Mov Cap-2 Maneuver	899	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	948	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	912	1584	-
HCM Lane V/C Ratio	-	-	0.038	0.002	-
HCM Control Delay (s)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	3	84	24	0	73
Future Vol, veh/h	16	3	84	24	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	72	72	54	54
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	6	117	33	0	135

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	269	134	0	0	150	0
Stage 1	134	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	720	915	-	-	1431	-
Stage 1	892	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	720	915	-	-	1431	-
Mov Cap-2 Maneuver	720	-	-	-	-	-
Stage 1	892	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	745	1431	-
HCM Lane V/C Ratio	-	-	0.051	-	-
HCM Control Delay (s)	-	-	10.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	2	11	8	2	41
Future Vol, veh/h	26	2	11	8	2	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	55	55	61	61
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	3	20	15	3	67

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	101	28	0	0	35	0
Stage 1	28	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	898	1047	-	-	1576	-
Stage 1	995	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	896	1047	-	-	1576	-
Mov Cap-2 Maneuver	896	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	948	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	905	1576	-
HCM Lane V/C Ratio	-	-	0.053	0.002	-
HCM Control Delay (s)	-	-	9.2	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	3	84	33	0	73
Future Vol, veh/h	21	3	84	33	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	72	72	54	54
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	6	117	46	0	135

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	275	140	0	0	163	0
Stage 1	140	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	715	908	-	-	1416	-
Stage 1	887	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	715	908	-	-	1416	-
Mov Cap-2 Maneuver	715	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	735	1416	-
HCM Lane V/C Ratio	-	-	0.065	-	-
HCM Control Delay (s)	-	-	10.2	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	10	3	17	45	1
Future Vol, veh/h	4	10	3	17	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	4	11	3	18	49	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	74	50	50	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	930	1018	1557	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	928	1018	1557	-	-	-
Mov Cap-2 Maneuver	928	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	999	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1557	-	991	-	-
HCM Lane V/C Ratio	0.002	-	0.015	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	6	50	33	4
Future Vol, veh/h	3	5	6	50	33	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	3	5	7	54	36	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	106	38	40	0	-	0
Stage 1	38	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	892	1034	1570	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	888	1034	1570	-	-	-
Mov Cap-2 Maneuver	888	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	955	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	974	-	-
HCM Lane V/C Ratio	0.004	-	0.009	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	3	17	45	1
Future Vol, veh/h	5	10	3	17	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	5	11	3	18	49	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	74	50	50	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	930	1018	1557	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	928	1018	1557	-	-	-
Mov Cap-2 Maneuver	928	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	999	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1557	-	986	-	-
HCM Lane V/C Ratio	0.002	-	0.017	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	5	6	50	33	5
Future Vol, veh/h	4	5	6	50	33	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	4	5	7	54	36	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	107	39	41	0	-	0
Stage 1	39	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	891	1033	1568	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	887	1033	1568	-	-	-
Mov Cap-2 Maneuver	887	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	955	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1568	-	963	-	-
HCM Lane V/C Ratio	0.004	-	0.01	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	3	0	12	9	0
Future Vol, veh/h	5	3	0	12	9	0
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	5	3	0	13	10	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	20	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	13	-
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	-	-	1612	-	997	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1612	-	997	1075
Mov Cap-2 Maneuver	-	-	-	-	997	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1010	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	997	-	-	1612	-
HCM Lane V/C Ratio	0.01	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	15	10	0	13	6	0
Future Vol, veh/h	15	10	0	13	6	0
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	16	11	0	14	7	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	27	0	36	22
Stage 1	-	-	-	-	22	-
Stage 2	-	-	-	-	14	-
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	-	-	1587	-	977	1055
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1587	-	977	1055
Mov Cap-2 Maneuver	-	-	-	-	977	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	977	-	-	1587	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	3	0	20	8	1
Future Vol, veh/h	7	3	0	20	8	1
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	8	3	0	22	9	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	32	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	22	-
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	-	-	1608	-	982	1071
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1608	-	982	1071
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	991	-	-	1608	-
HCM Lane V/C Ratio	0.01	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1

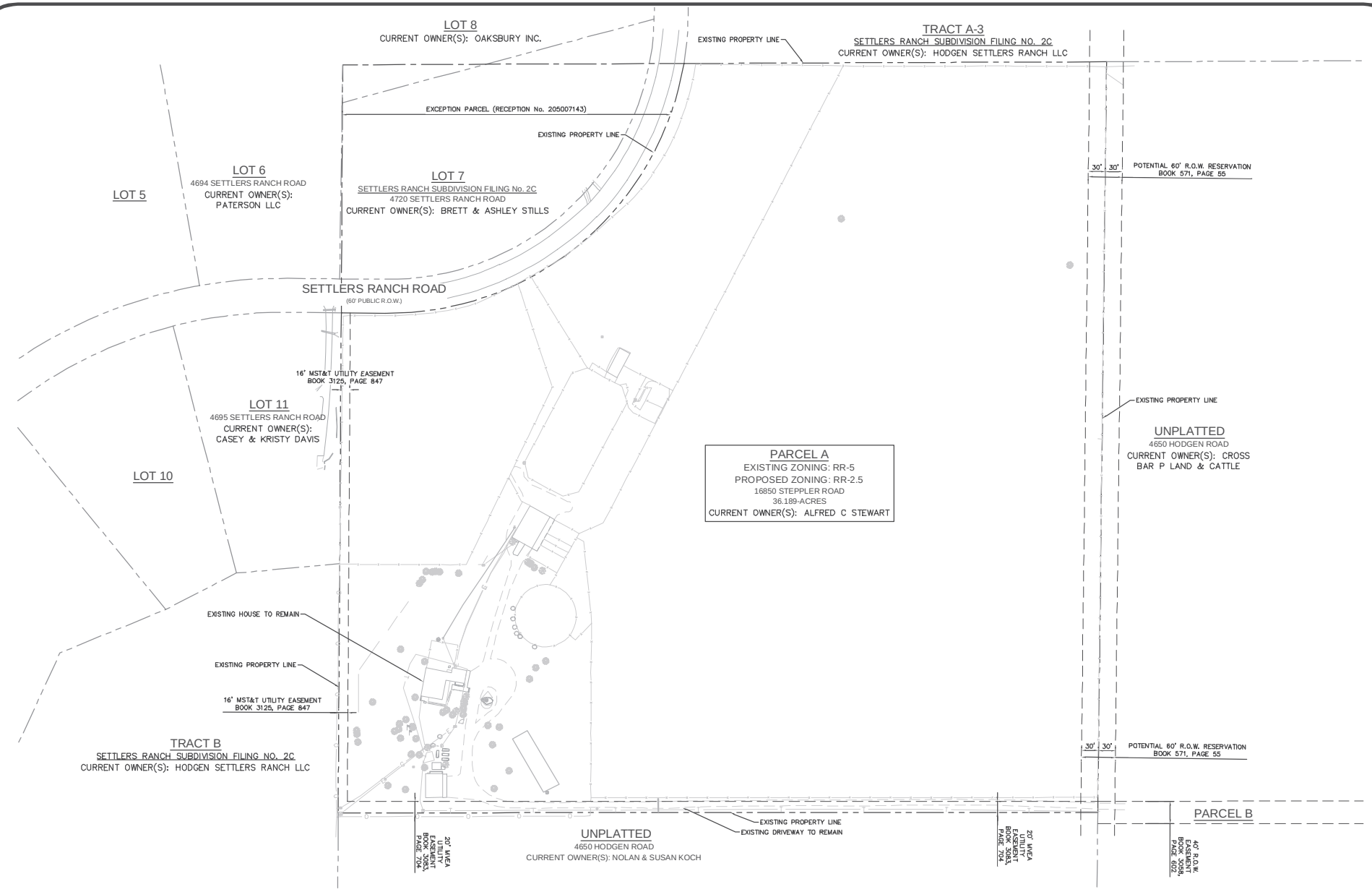
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	9	1	19	5	1
Future Vol, veh/h	24	9	1	19	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	10	1	21	5	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	54	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	23	-
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	-	-	1575	-	954	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1575	-	953	1043
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	967	-	-	1575	-
HCM Lane V/C Ratio	0.007	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Conceptual Site Plan



16850 STEPPLER ROAD
REZONE PLAN
2/16/2023

Kimley»Horn

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