



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


Per ECM Table 2-5, minimum centerline radius is 300 ft. Revise or submit a deviation request.

Abert Ranch Subdivision  
Transportation Memorandum  
(LSC #164890)

March 20, 2017

**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.

  
Jeffrey C. Hodsdon, P.E. #31684



3/20/17  
Date

**Developer's Statement**

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

\_\_\_\_\_  
Date

**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](mailto:lsc@lsctrans.com)**  
**Website: <http://www.lsctrans.com>**



March 20, 2017

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

RE: Abert Ranch Subdivision  
El Paso County, CO  
Transportation Memorandum  
LSC #164890

Dear Jerry:

LSC Transportation Consultants, Inc. has prepared this transportation memorandum for the proposed Abert Ranch subdivision. The site is located generally northwest of the intersection of Hodgen Road and Stepler 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 Stepler Road. This 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:
  - Stepler Road at Silver Nell Drive
  - Stepler 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.

## **LAND USE AND ACCESS**

### **Site Land Use and Access**

Abert Ranch is a proposed single-family residential subdivision consisting of 10 lots, each a minimum of 2.5 acres. Site access to Stepler Road would initially be through the Grandview and proposed Settlers View subdivisions and the extension of Silver Nell Drive. A second access would be available in the future via the proposed future Settlers Ranch Road once constructed by the developer of Settlers Ranch (Settlers Ranch Road will ultimately connect to Stepler Road).

### **Adjacent Subdivisions – Existing and Proposed**

#### Settlers View

Settlers View is a proposed single-family residential subdivision consisting of 14 lots, each a minimum of 2.5 acres. The location of the site is shown in Figure 1. Figure 1 also shows the proposed adjacent Abert Ranch site. The existing Grandview subdivision is located to the north of the Settlers View and Abert Ranch sites and the eastern portion of Settlers Ranch is located to the south. The Settlers View site plan/subdivision plat is shown in Appendix Figure 1.

#### Settlers Ranch

Settlers Ranch is located south and southeast of the site. Filing 1 to the southeast has been developed. The Settlers Ranch Road extension to Stepler Road will be added with future Filing 2. This future road connection will provide secondary access to both Abert Ranch and this site (via the proposed Abert Ranch subdivision roads).

#### Grandview

Grandview is located to the north of the Settlers View and Abert Ranch sites. It is partially developed, but Silver Nell Drive through Grandview has been completed and provides access to Stepler Road. Silver Nell Drive will provide the initial access to both the Settlers View and Abert Ranch subdivisions.

## **EXISTING ROADWAY AND TRAFFIC CONDITIONS**

### **Area Roadways**

Major roadways in the vicinity of the site are summarized below:

**State Highway (SH) 83** extends from Colorado Springs north to Parker and areas of southeast Denver. In the vicinity of the site, SH 83 is classified as a Regional Highway (R-A). At this location, SH 83 is a two-lane rural highway with two- to four-foot shoulders and a speed limit of 60 miles per hour (mph). The intersection with Hodgen Road is signalized.

**Hodgen Road** is a two-lane paved Rural Minor Arterial that extends west from the intersection of Roller Coaster Road/Baptist Road to Eastonville Road. The speed limit on Hodgen Road is generally 55 mph east of SH 83.

**Walker Road/SH 105** - Highway 105 west of SH 83 is a Principal Arterial, while Walker Road east of SH 83 is a Collector roadway. Both are currently two-lane roadways, but the *Major Transportation Corridors Plan (MTCP)* shows a future four-lane cross section on SH 105 west of SH 83. The intersection with SH 83 is unsignalized.

Identify the surfacing (paved?)

**Steppler Road** is a local roadway extending north from Hodgen Road to Walker Road. The posted speed limit on Steppler Road is 30 mph.

**Traffic Volumes**

Turning movements and on September Nell Drive. Count weekday peak-hour average daily traffic Figure 3.

Provide a summary for Silver Nell Drive and Albert Drive. The temporary access from Albert Drive to Steppler Road is required. This may need to be the primary access to the lots until the Silver Nell/Albert Drive connection is made. If the Silver Nell/Albert Drive connection is constructed in conjunction with Settlers View Subdivision, then the temporary access will be used as a secondary access for emergency access only. The emergency access will be removed once the Albert Drive/Settlers Ranch Road intersection is constructed.

**Level of Service**

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from “A” to “F.” LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 1 shows the level of service delay ranges for signalized and unsignalized intersections.

**Table 1: Intersection Levels of Service Delay Ranges**

Level of Service	Signalized Intersections	Unsignalized Intersections
	Control Delay (seconds per vehicle)	
A	10 sec or less	10 sec or less
B	10-20 sec	10-15 sec
C	20-35 sec	15-25 sec
D	35-55 sec	25-35 sec
E	55-80 sec	35-50 sec
F	80 sec or more	50 sec or more

The intersection of Steppler Road at Silver Nell Drive has been analyzed in Synchro to determine the current level of service using the unsignalized method of analysis procedures from the *Highway Capacity Manual, 2010 Edition*. The level of service is “A.”

## **TRIP GENERATION**

Estimates of the vehicle-trips projected to be generated by Abert Ranch have been made using the nationally published trip generation rates from *Trip Generation, 9<sup>th</sup> Edition, 2012* by the Institute of Transportation Engineers (ITE). Land use code 210 – Single-Family Detached Housing was categorized using the *Trip Generation Manual, 9<sup>th</sup> Edition, 2012* by the Institute of Transportation Engineers (ITE) and used for trip generation estimates. The proposed Abert Ranch subdivision is projected to generate about 95 total vehicle-trips on the average weekday during a 24-hour period, with about half entering the site and half exiting the site during the evening peak hour. The peak-hour trip generation is also summarized. A detailed trip generation estimate for the development, including ITE rates for the proposed land use, is presented in Table 6 (attached).

### **Trip Distribution and Assignment**

Distribution of the site-generated vehicle-trips to the study area streets and intersections is a necessary component in determining the site's traffic impacts. Figure 4 shows the directional distribution estimate for the site-generated trips. The figure shows the percentages of the site-generated vehicle-trips projected to be oriented to and from the site's major approaches. Estimates were based on the following factors: the proposed land use and access plan, the area street system, and anticipated area future development.

### **Site-Generated Traffic**

When the directional distribution percentages (from Figure 4) were applied to the trip generation estimates (from Table 6), the site-generated traffic volumes on the adjacent streets were determined. Figure 5 shows the projected site-generated traffic volumes.

## **EXISTING VS. EXISTING PLUS SITE-GENERATED TRAFFIC/LOS**

### **Traffic Volumes**

Figure 7 shows the sum of the existing weekday traffic volumes (from Figure 3) and site-generated weekday traffic volumes (from Figure 4). The existing plus site-generated trips identify the site's short-term traffic impacts assuming buildout of all three aforementioned subdivisions. Appendix Figure 2 shows the projected background traffic generated by Settlers View.

### **Levels of Service**

#### Morning Peak Hour

All approaches at the intersection of Stepler Road at Silver Nell Drive currently operate at and are projected to remain at LOS A during the morning peak hour upon site buildout. A summary of projected 2040 background plus site-generated LOS and control delays during the morning peak hour is shown in Table 2.

**Table 2: Projected Peak-Hour LOS and Control Delays by Intersection (2016 a.m.)**

Intersection	Traffic Control*	Scenario	NBL	EBL
<b>LOS</b>				
Stepler Road @ Silver Nell Dr	TWSC	Existing	A	A
		Existing + Site (short-term)	A	A
<b>Control Delay (seconds)</b>				
Stepler Road @ Silver Nell Dr	TWSC	Existing	7.3	8.5
		Existing + Site (short-term)	7.3	8.6

\* TWSC = two-way stop-sign control

### Evening Peak Hour

All approaches at the intersection of Stepler Road at Silver Nell Drive currently operate at and are projected to remain at LOS A during the evening peak hour upon site buildout. A summary of projected 2040 background plus site-generated LOS and control delays during the morning peak hour is shown in Table 3.

**Table 3: Projected Peak-Hour LOS and Control Delays by Intersection (2016 p.m.)**

Intersection	Traffic Control*	Scenario	NBL	EBL
<b>LOS</b>				
Stepler Road @ Silver Nell Dr	TWSC	Existing	A	A
		Existing + Site (short-term)	A	A
<b>Control Delay (seconds)</b>				
Stepler Road @ Silver Nell Dr	TWSC	Existing	7.3	8.4
		Existing + Site (short-term)	7.3	8.5

\* TWSC = two-way stop-sign control

## **2040 BACKGROUND VS. 2040 TOTAL TRAFFIC/LOS**

### **Traffic Volumes**

Figure 8 shows the projected 2040 background traffic volumes based on existing turning movement counts (from Figure 3), the historic growth rate, and projected future development. Projected 2040 background plus site-generated weekday traffic volumes are shown in Figure 9. Appendix Figure 3 shows the long-term site-generated traffic volumes for the Abert Ranch and Settlers View subdivisions combined.

### **Levels of Service**

#### Morning Peak Hour

All approaches at the intersections of Stepler Road/Silver Nell Drive and Stepler Road/Settlers Ranch Road are projected to operate at LOS A during the 2040 morning peak hour with and

without considering site-generated trips. A summary of projected 2040 background plus site-generated LOS and control delays during the morning peak hour is shown in Table 4.

**Table 4: Projected Peak-Hour LOS and Control Delays by Intersection (2040 a.m.)**

Intersection	Traffic Control*	Scenario	NBL	EBL
<b>LOS</b>				
Steppler Road @ Silver Nell Dr	TWSC	2040 Background	A	A
		2040 Background + Site	A	A
Steppler Road @ Settler's Ranch Rd	TWSC	2040 Background	A	A
		2040 Background + Site	A	A
<b>Control Delay (seconds)</b>				
Steppler Road @ Silver Nell Dr	TWSC	2040 Background	7.3	8.5
		2040 Background + Site	7.3	8.6
Steppler Road @ Settlers Ranch Rd	TWSC	2040 Background	7.3	8.7
		2040 Background + Site	7.3	8.7
* TWSC = two-way stop-sign control				

Evening Peak Hour

All approaches at the intersections of Steppler Road/Silver Nell Drive and Steppler Road/Settlers Ranch Road are projected to operate at LOS A during the 2040 morning peak hour with and without considering site-generated trips. A summary of projected 2040 background plus site-generated LOS and control delays during the evening peak hour is shown in Table 5.

**Table 5: Projected Peak-Hour LOS and Control Delays by Intersection (2040 p.m.)**

Intersection	Traffic Control*	Scenario	NBL	EBL
<b>LOS</b>				
Steppler Road @ Silver Nell Dr	TWSC	2040 Background	A	A
		2040 Background + Site	A	A
Steppler Road @ Settler's Ranch Rd	TWSC	2040 Background	A	A
		2040 Background + Site	A	A
<b>Control Delay (seconds)</b>				
Steppler Road @ Silver Nell Dr	TWSC	2040 Background	7.3	8.6
		2040 Background + Site	7.3	8.6
Steppler Road @ Settler's Ranch Rd	TWSC	2040 Background	7.3	8.6
		2040 Background + Site	7.3	8.7
* TWSC = two-way stop-sign control				

**CONCLUSIONS AND RECOMMENDATIONS**

**Trip Generation**

- The proposed Abert Ranch subdivision is projected to generate about 95 new vehicle-trips on the average weekday with about half entering and half exiting the site. The projected

morning **peak-hour** trip generation for the site (total “driveway” trips) is two entering and six exiting trips. The projected evening **peak-hour** trip generation for the site (total “driveway” trips) is six entering and four exiting trips.

### Level of Service Analysis

- All levels of service at the intersections analyzed are projected to be “A.” Please refer to the Level of Service sections above for detailed findings and results of the intersection level of service analysis.

### Auxiliary Turn Lanes

- Neither Silver Nell/Steppler nor Settlers Ranch Road/Steppler will exceed *Engineering Criteria Manual* thresholds requiring auxiliary left- and right-turn lanes.

### Street Classification

The streets within this proposed subdivision should be classified as Rural Local streets.

### County Road Improvement Fee Program

This project will need to participate in the County Road Improvement Fee Program.

\* \* \*

Please contact me if you have any questions regarding this report.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By 

Jeffrey C. Hodsdon, P.E., PTOE  
Principal

JCH:JAB:ro

Enclosures: Table 6  
Figure 1 - Figure 9  
Appendix Figure 1 - Appendix Figure 3  
Traffic Count Reports  
Level of Service Reports



**Table 6: Trip Generation Estimate and Comparison**

Lots	ITE Land Use Code	Land Use Description	Value	Units	Trip Generation Rates <sup>(1)</sup>					Total Trips Generated								
					Average Weekday Traffic	A.M.		P.M.		Average Weekday Traffic	A.M.		P.M.					
						In	Out	In	Out		In	Out	In	Out				
<b>Abert Ranch Only</b>																		
1-10	210	Single-Family Detached Housing	10	DU <sup>(2)</sup>	9.52	0.19	0.56	0.63	0.37	95	2	6	6	4				
<b>Settler's View Only</b>																		
1-14	210	Single-Family Detached Housing	14	DU	9.52	0.19	0.56	0.63	0.37	133	3	8	9	5				
<b>Total</b>										<b>228</b>	<b>5</b>	<b>14</b>	<b>15</b>	<b>9</b>				

(1) Source: "Trip Generation, 9th Edition, 2012" by the Institute of Transportation Engineers (ITE)

(2) DU = dwelling units

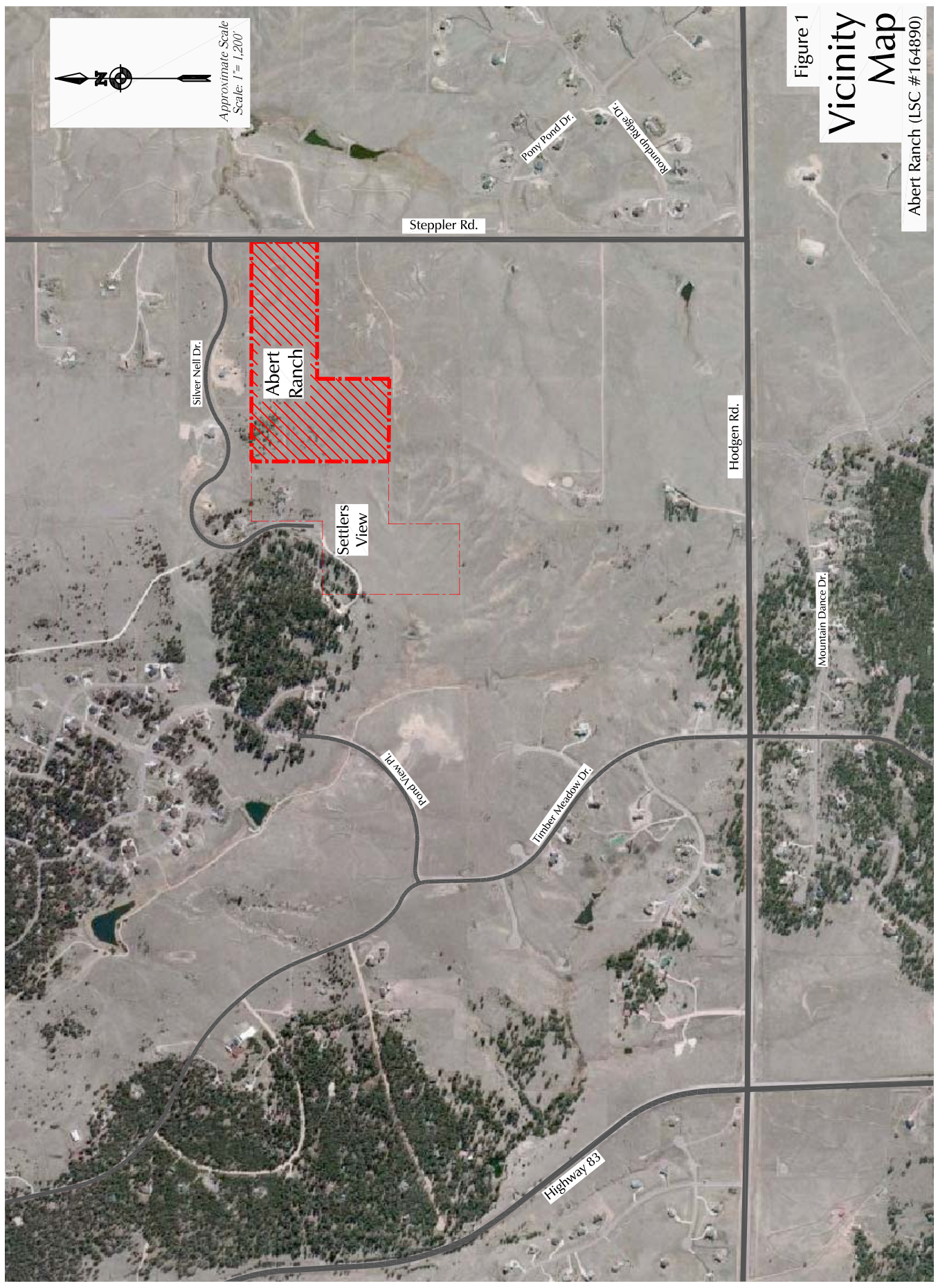
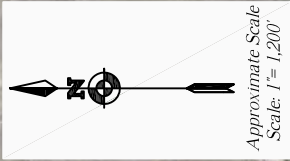
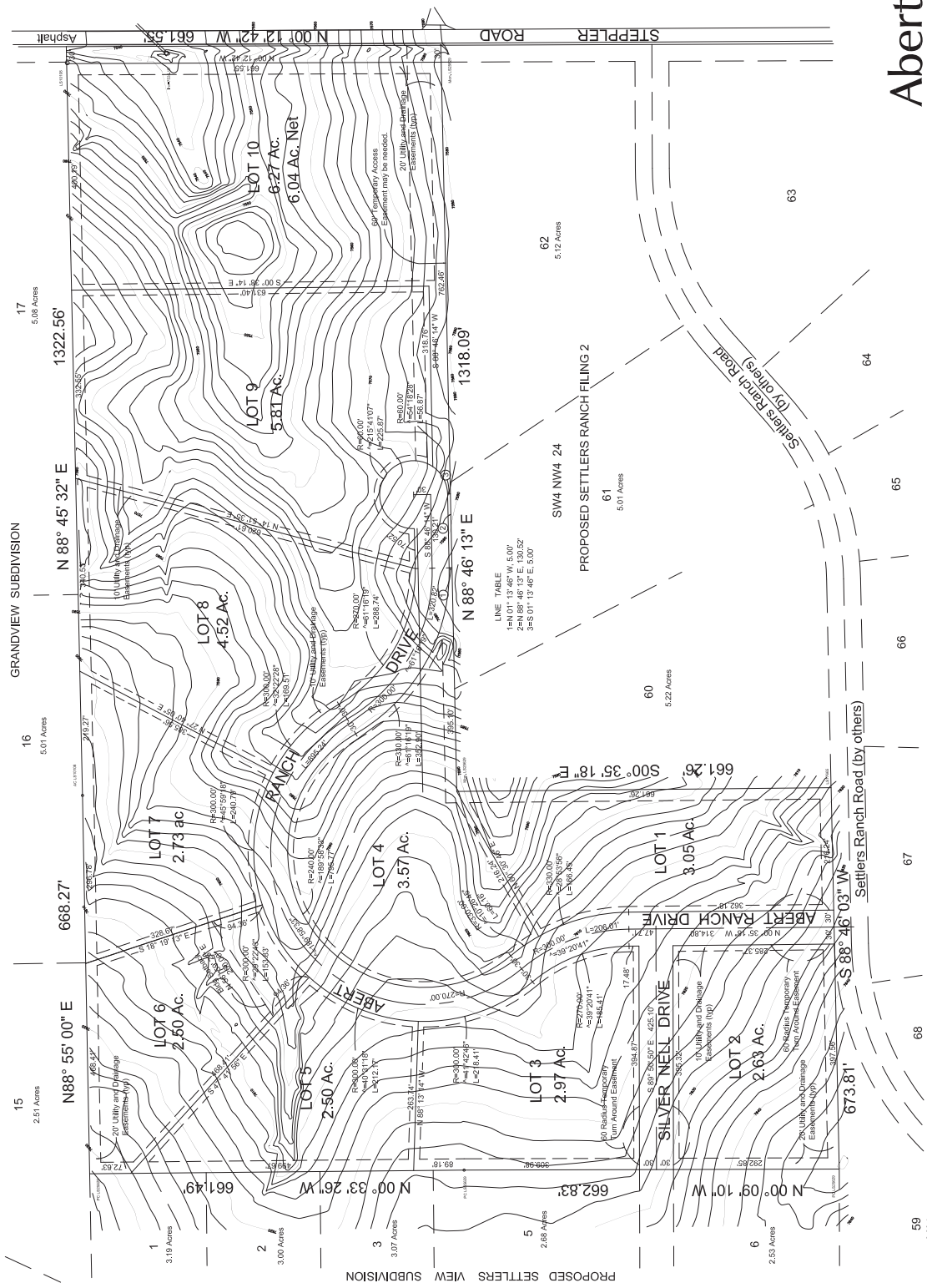


Figure 1  
**Vicinity Map**  
Abert Ranch (LSC #164890)



Approximate Scale  
Scale: NTS



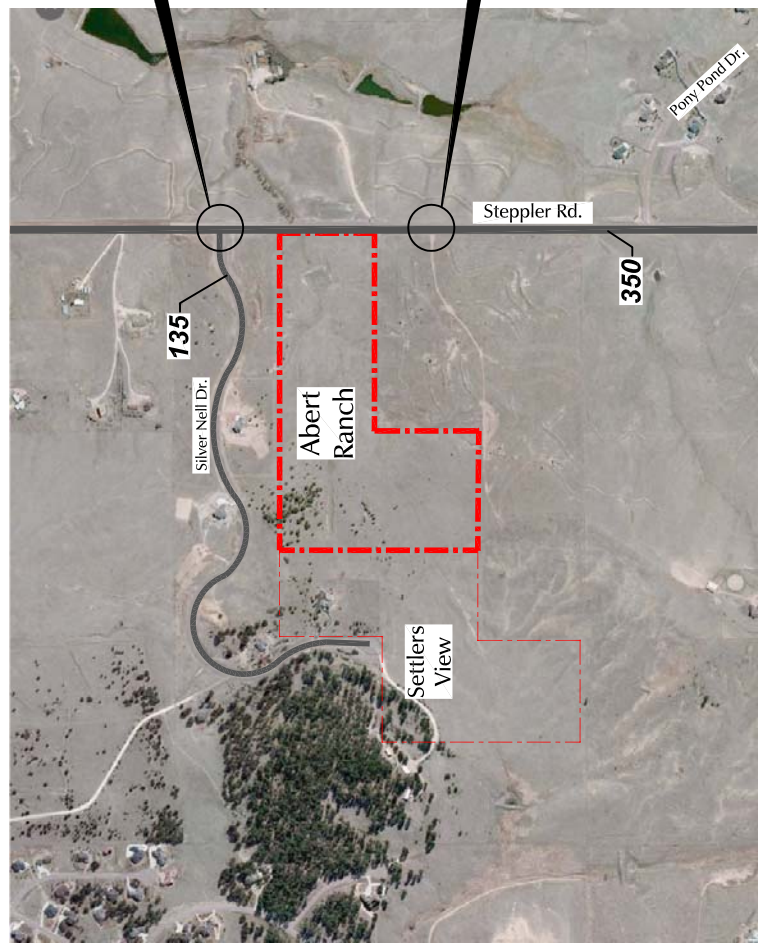
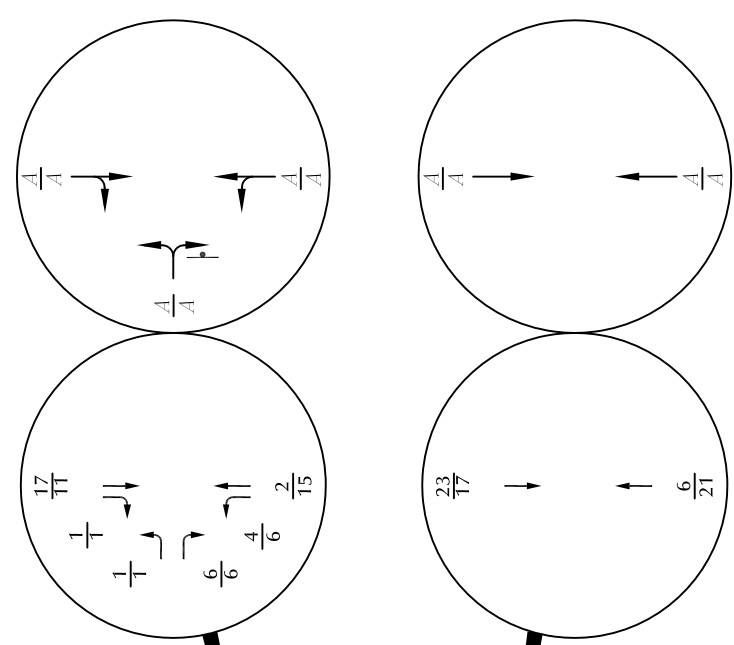
LINE TABLE

1=N 01° 13' 46" W, 5.00'
2=N 88° 46' 13" E, 130.52'
3=S 01° 13' 46" E, 5.00'

Figure 2  
**Abert Ranch**  
**Site Plan**  
 Abert Ranch (LSC #164890)



Approximate Scale  
Scale: 1" = 1,200'



LEGEND:

† = Stop Sign

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

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

XXX = Average Weekday Traffic (vehicles per day)  
 Estimates by LSC



Figure 3

# Existing Traffic, Lane Geometry, Traffic Control & Level of Service

Abert Ranch (LSC #164890)

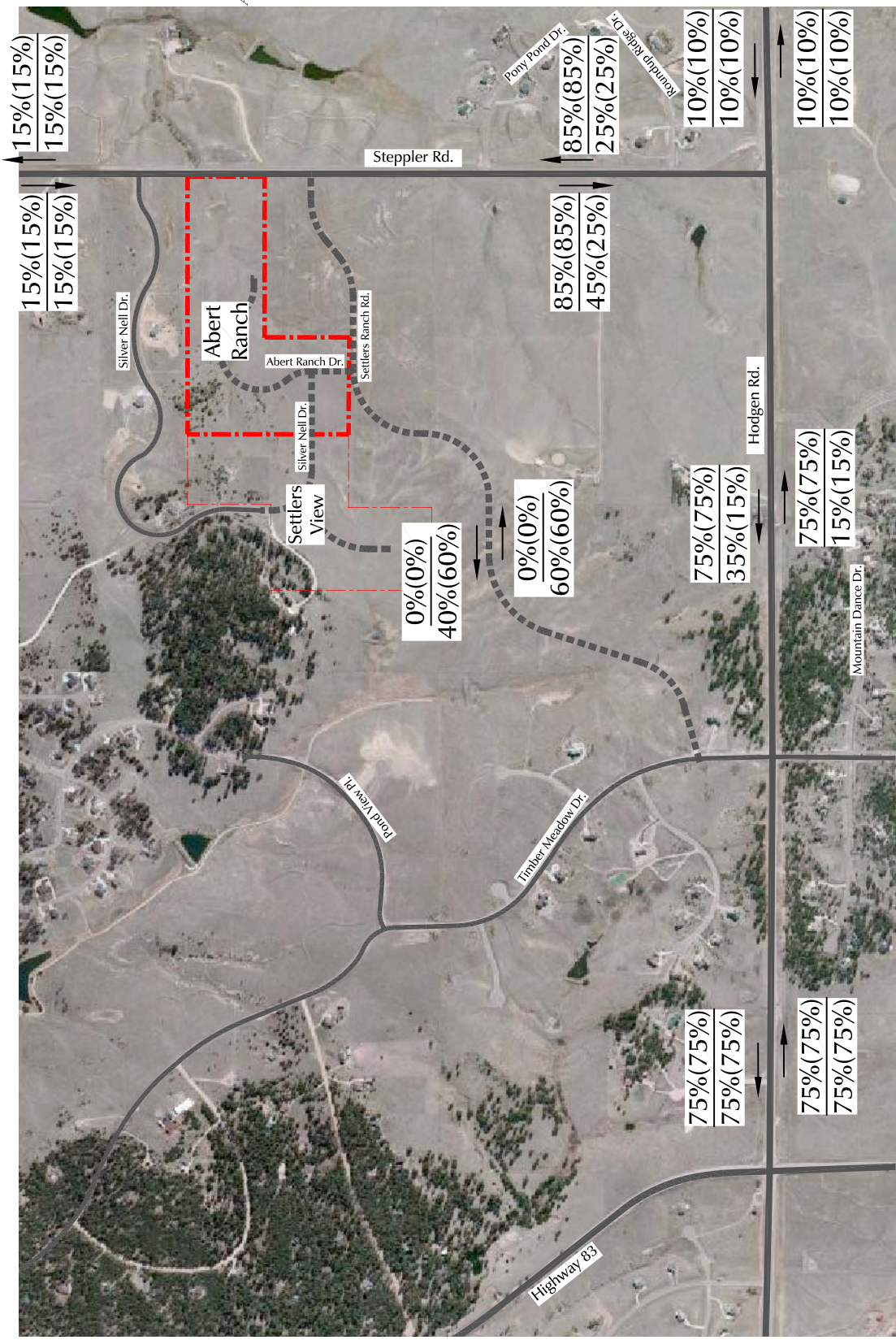


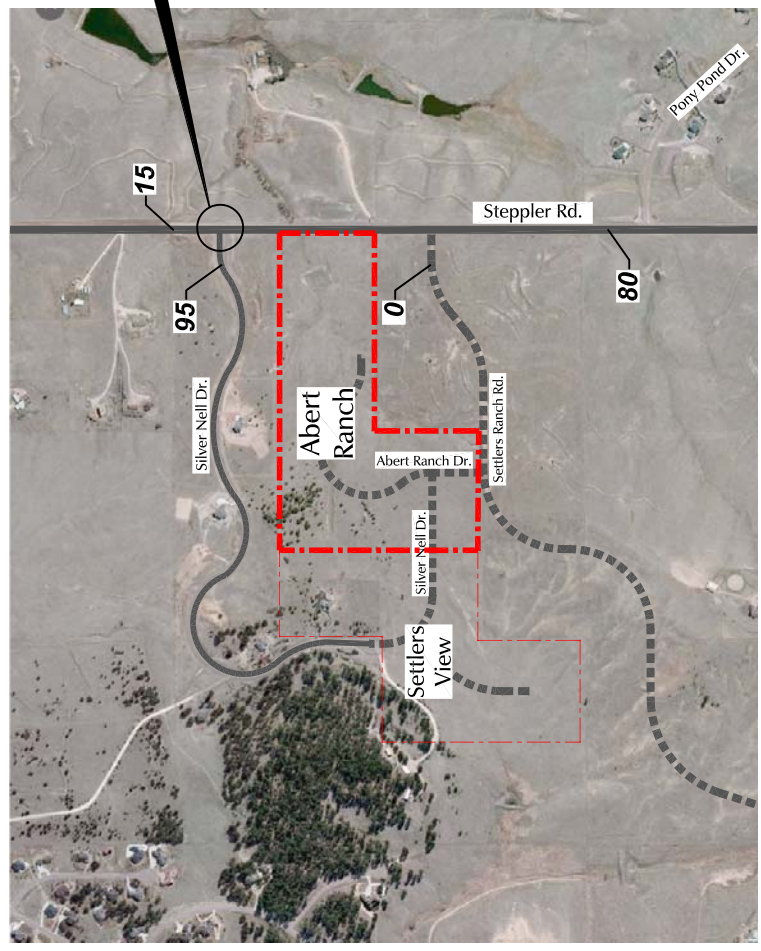
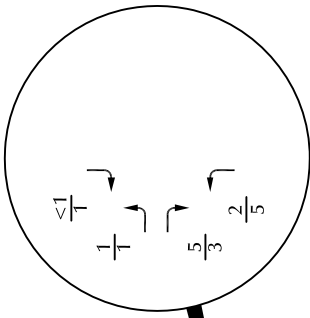
Figure 4  
**Directional Distribution  
of Site-Generated Traffic**  
Abert Ranch (LSC #164890)

LEGEND:  
 $\overleftarrow{X\%(X\%)}$  = Short-Term Percent Directional Distribution AM(PM)  
 $\overrightarrow{X\%(X\%)}$  = Long-Term Percent Directional Distribution AM(PM)





Approximate Scale  
Scale: 1" = 1,200'



LEGEND:

- XX = AM Weekday Peak-Hour Traffic (vehicles per hour)
- XX = PM Weekday Peak-Hour Traffic (vehicles per hour)
- XXX = Average Weekday Traffic (vehicles per day)



Figure 5  
**Abert Ranch Short-Term  
Assignment of Site-Generated Traffic**  
Abert Ranch (LSC #164890)



Approximate Scale  
Scale: 1" = 1,200'

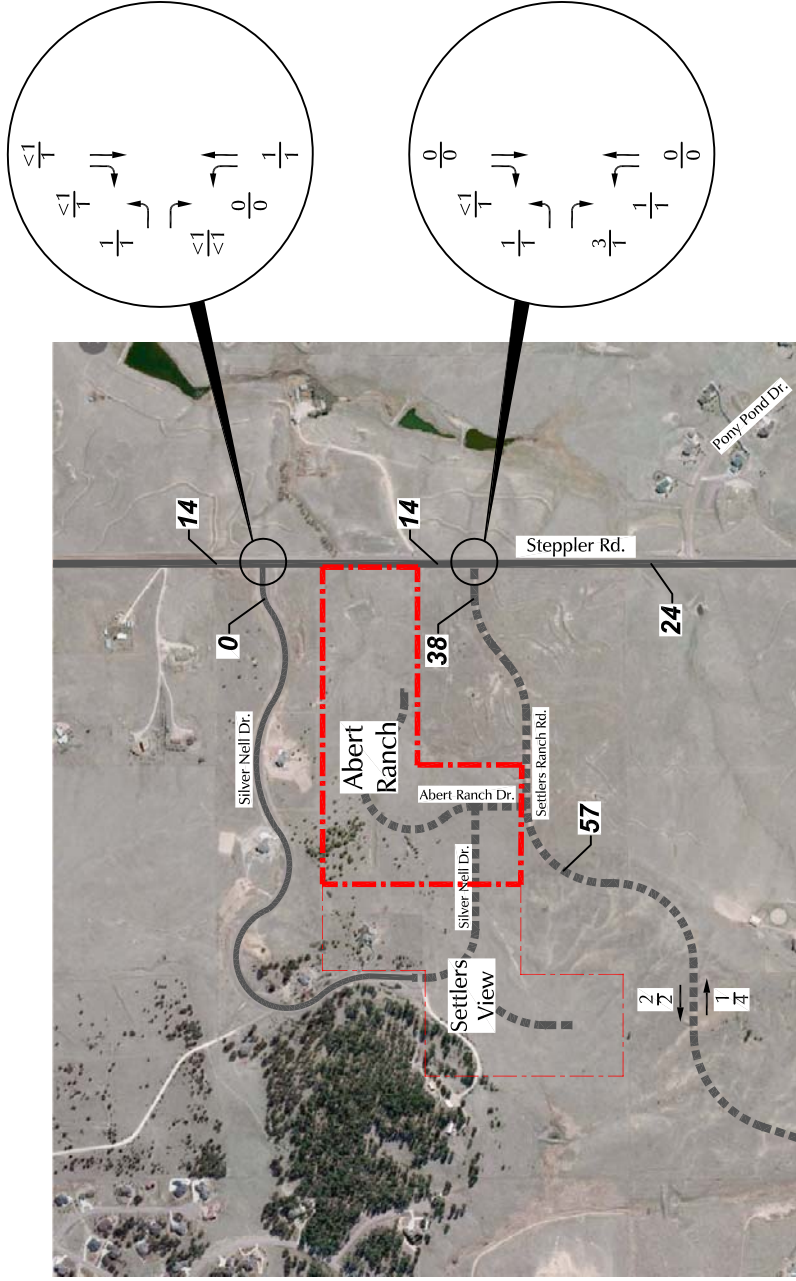


Figure 6

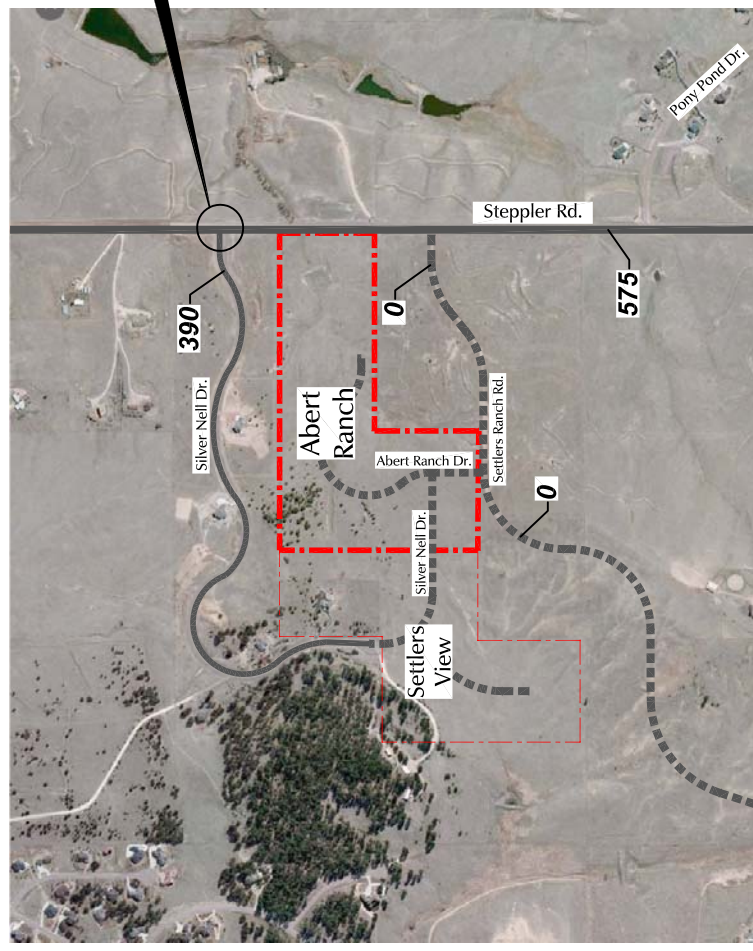
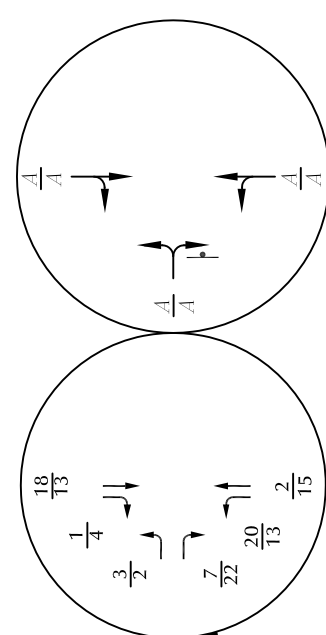
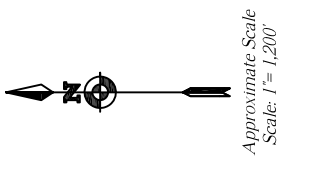
# Abert Ranch Long-Term Assignment of Site-Generated Traffic

Abert Ranch (LSC #164890)

**LEGEND:**

- XX = AM Weekday Peak-Hour Traffic (vehicles per hour)
- XX = PM Weekday Peak-Hour Traffic (vehicles per hour)
- XXX = Average Weekday Traffic (vehicles per day)





\* 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 Abert Ranch.

LEGEND:

- † = Stop Sign
- $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
PM Weekday Peak-Hour Traffic (vehicles per hour)
- $\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
PM Individual Movement Peak-Hour Level of Service
- XXX = Average Weekday Traffic (vehicles per day)

Figure 7

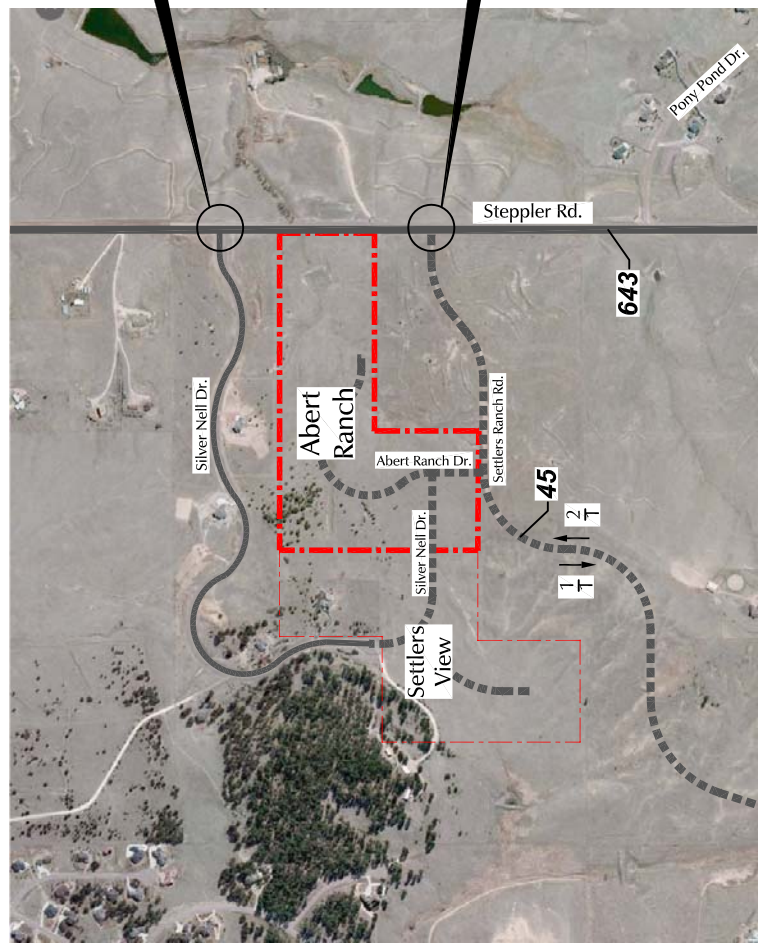
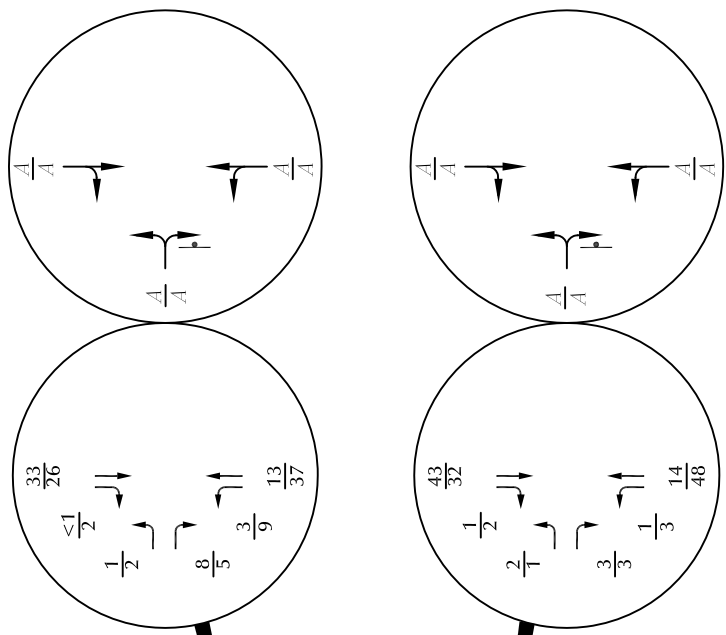
# Short-Term Total Traffic\*, Lane Geometry, Traffic Control & Level of Service

Abert Ranch (LSC #164890)





Approximate Scale  
Scale: 1" = 1,200'



\* Not including Settlers Ranch or Abert Ranch.

LEGEND:

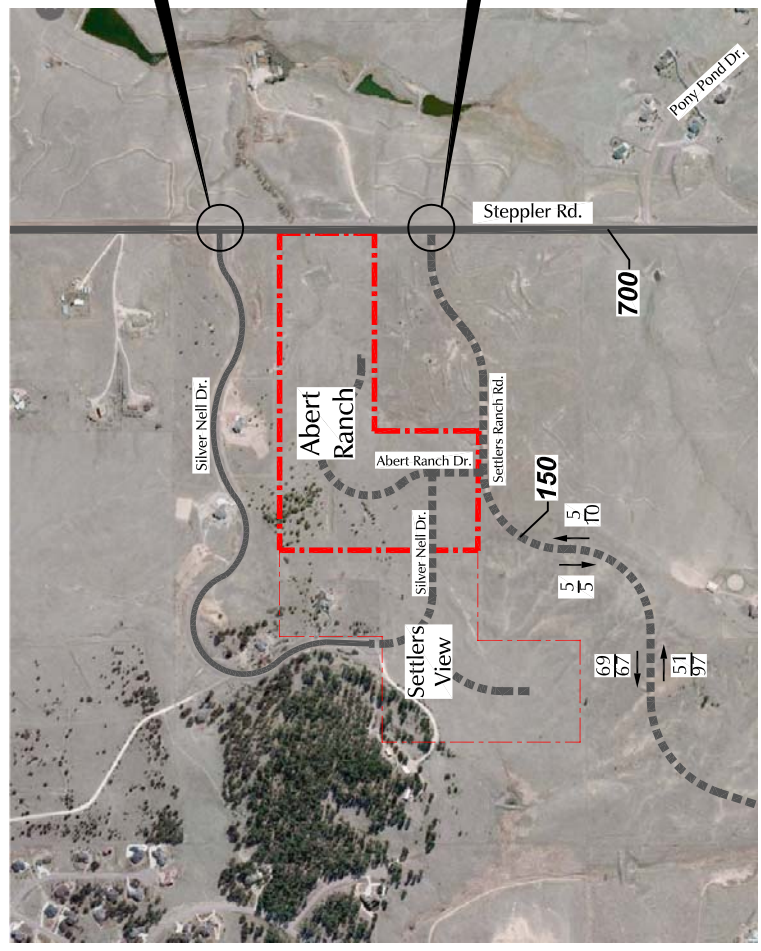
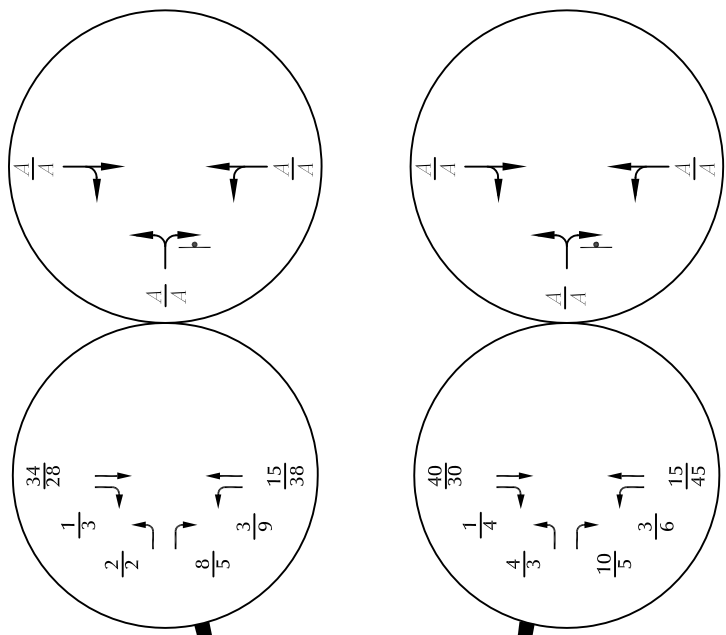
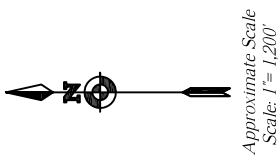
- T = Stop Sign
- $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
PM Weekday Peak-Hour Traffic (vehicles per hour)
- $\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
PM Individual Movement Peak-Hour Level of Service
- XXX = Average Weekday Traffic (vehicles per day)

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

Figure 8

Abert Ranch (LSC #164890)





LEGEND:

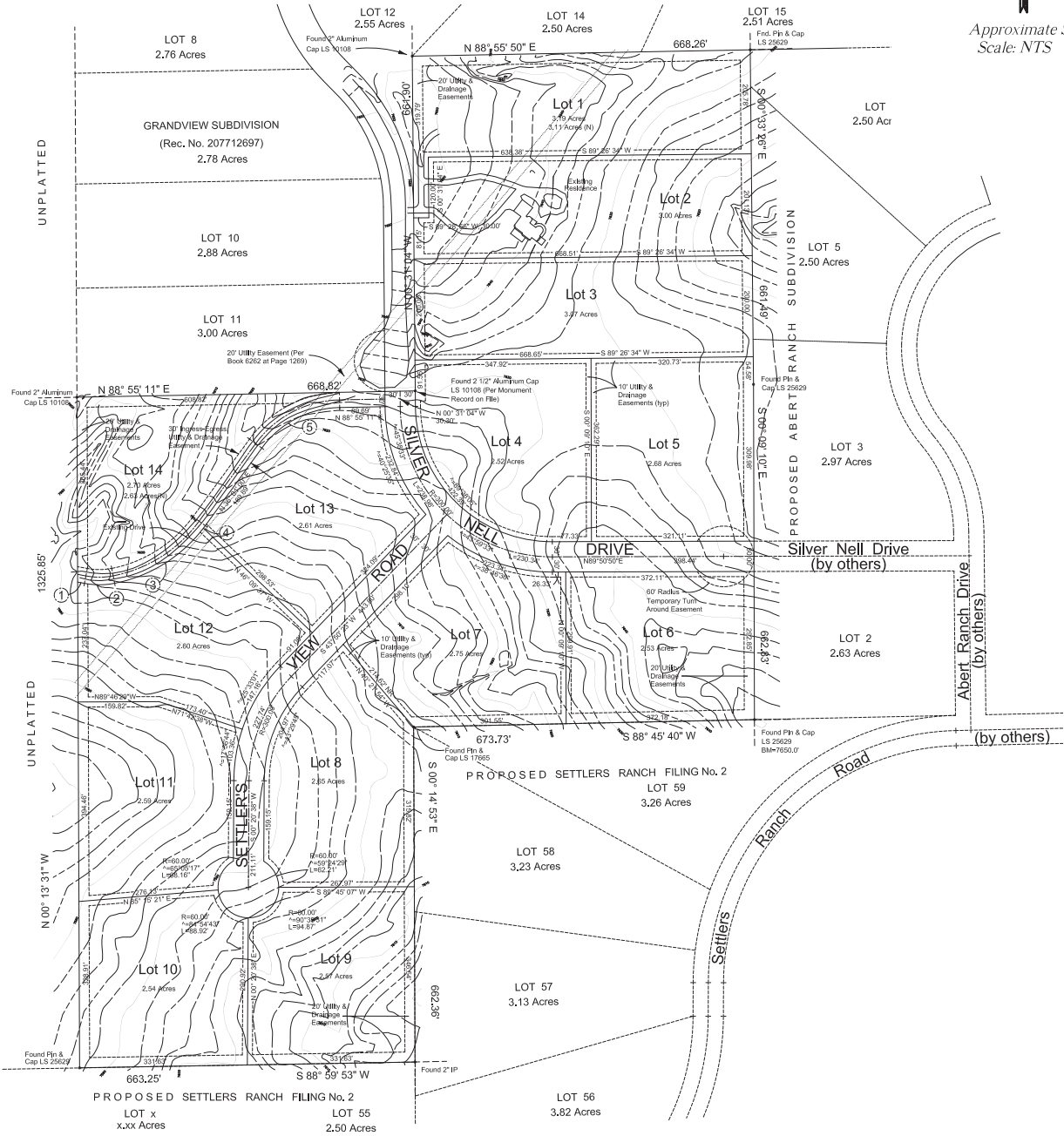
- † = Stop Sign
- $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
PM Weekday Peak-Hour Traffic (vehicles per hour)
- $\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
PM Individual Movement Peak-Hour Level of Service
- XXX = Average Weekday Traffic (vehicles per day)



Figure 9  
Year 2040 Total Traffic, Lane  
Geometry, Traffic Control & Level of Service  
Abert Ranch (LSC #164890)



Approximate Scale  
Scale: NTS

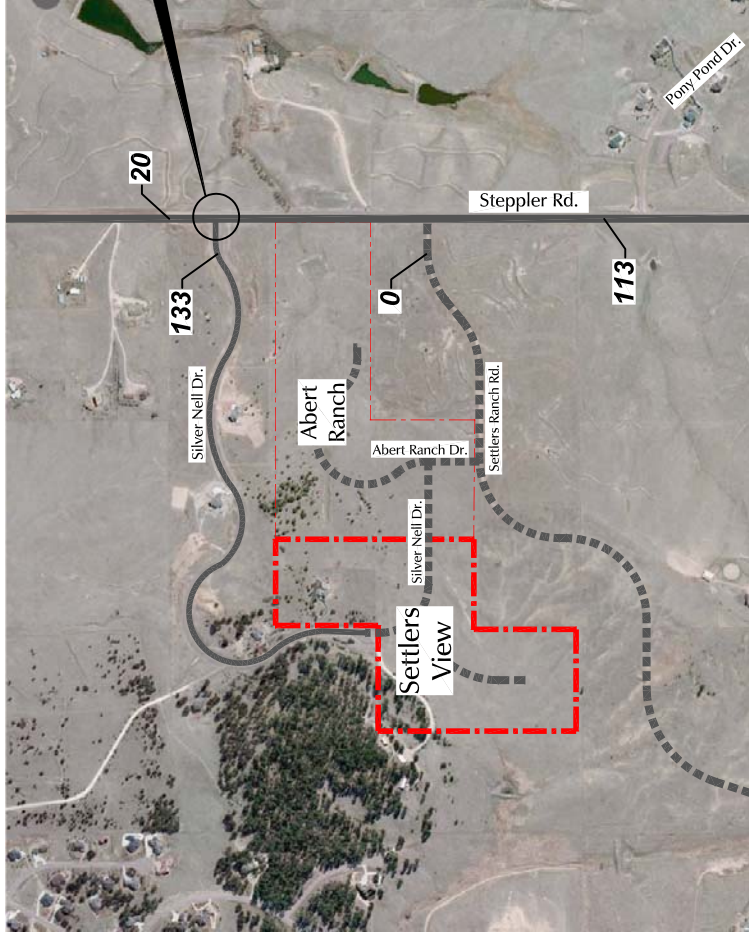
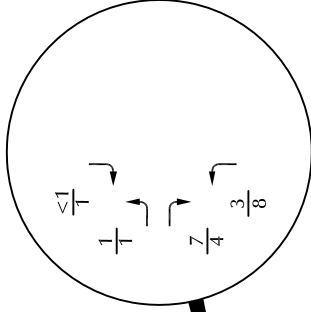


Appendix Figure 1  
**Settlers View**  
**Site Plan**  
 Abert Ranch (LSC #164890)





Approximate Scale  
Scale: 1" = 1,200'



Appendix Figure 2

# Settlers View Background Traffic

Abert Ranch (LSC #164890)

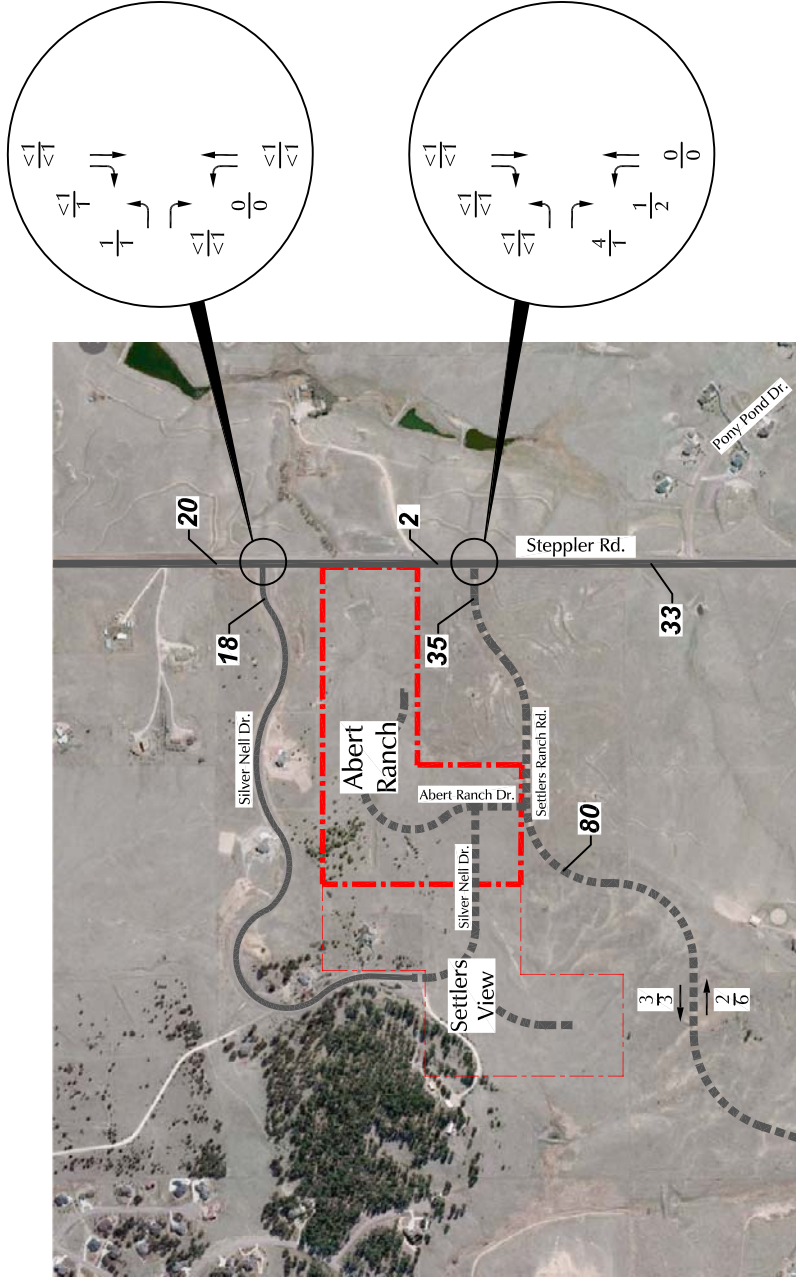
### LEGEND:

- XX = AM Weekday Peak-Hour Traffic (vehicles per hour)
- XX = PM Weekday Peak-Hour Traffic (vehicles per hour)
- XXX = Average Weekday Traffic (vehicles per day)





Approximate Scale  
Scale: 1" = 1,200'



Appendix Figure 3

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

Abert Ranch (LSC #164890)

**LEGEND:**

- XX = AM Weekday Peak-Hour Traffic (vehicles per hour)
- XX = PM Weekday Peak-Hour Traffic (vehicles per hour)
- XXX = Average Weekday Traffic (vehicles per day)



LSC Transportation Consultants, Inc.  
**545 E. Pikes Peak Ave., #210**

LSC Transportation Consultants, Inc. **Colorado Springs, CO 80903** Name : Stepler Rd - Silver Nell Dr AM  
 (719) 633-2868 Site Code : 00164720  
 Start Date : 09/01/2016  
 Page No : 1

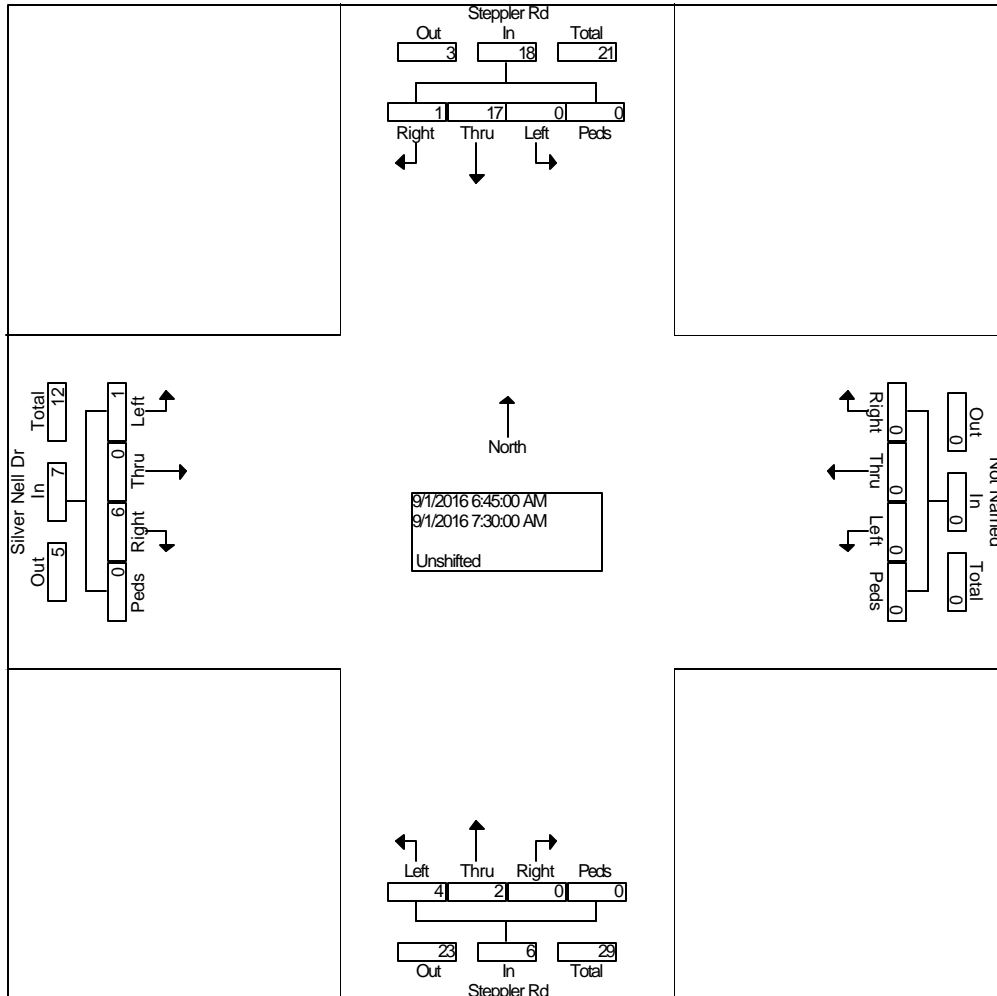
Groups Printed- Unshifted

Start Time	Stepler Rd From North				From East				Stepler Rd From South				Silver Nell Dr From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	1	0	1	0	4
06:45 AM	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4
Total	0	4	0	0	0	0	0	0	0	1	0	0	2	0	1	0	8
07:00 AM	1	4	0	0	0	0	0	0	0	1	1	0	2	0	1	0	10
07:15 AM	0	5	0	0	0	0	0	0	0	1	2	0	1	0	0	0	9
07:30 AM	0	5	0	0	0	0	0	0	0	0	1	0	2	0	0	0	8
07:45 AM	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Total	1	16	0	0	0	0	0	0	0	2	5	0	5	0	1	0	30
08:00 AM	0	0	0	0	0	0	0	0	0	3	1	0	1	0	2	0	7
08:15 AM	0	1	0	0	0	0	0	0	0	4	0	0	1	0	1	0	7
Grand Total	1	21	0	0	0	0	0	0	0	10	6	0	9	0	5	0	52
Apprch %	4.5	95.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	37.5	0.0	64.3	0.0	35.7	0.0	
Total %	1.9	40.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	11.5	0.0	17.3	0.0	9.6	0.0	

LSC Transportation Consultants, Inc.  
 545 E. Pikes Peak Ave., #210  
 Colorado Springs, CO 80903  
 (719) 633-2868

Name : Stepler Rd - Silver Nell Dr AM  
 Site Code : 00164720  
 Start Date : 09/01/2016  
 Page No : 2

Start Time	Stepler Rd From North					From East					Stepler Rd From South					Silver Nell Dr From West					Int. Total
	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	06:45 AM																				
Volume	1	17	0	0	18	0	0	0	0	0	0	2	4	0	6	6	0	1	0	7	31
Percent	5.6	94.4	0.0	0.0		0.0	0.0	0.0	0.0		0.0	33.3	66.7	0.0		85.7	0.0	14.3	0.0		
07:00 Volume	1	4	0	0	5	0	0	0	0	0	0	1	1	0	2	2	0	1	0	3	10
Peak Factor																					
High Int.	07:00 AM																				
Volume	1	4	0	0	5	0	0	0	0	0	0	1	2	0	3	2	0	1	0	3	0.775
Peak Factor	0.90										0.50					0.58					3



LSC Transportation Consultants, Inc.  
**545 E. Pikes Peak Ave., #210**

LSC Transportation Consultants, Inc. **Colorado Springs, CO 80903** Project Name : Stepler Rd - Silver Nell Dr PM  
 (719) 633-2868 Site Code : 00164720  
 Start Date : 08/30/2016  
 Page No : 1

Groups Printed- Unshifted

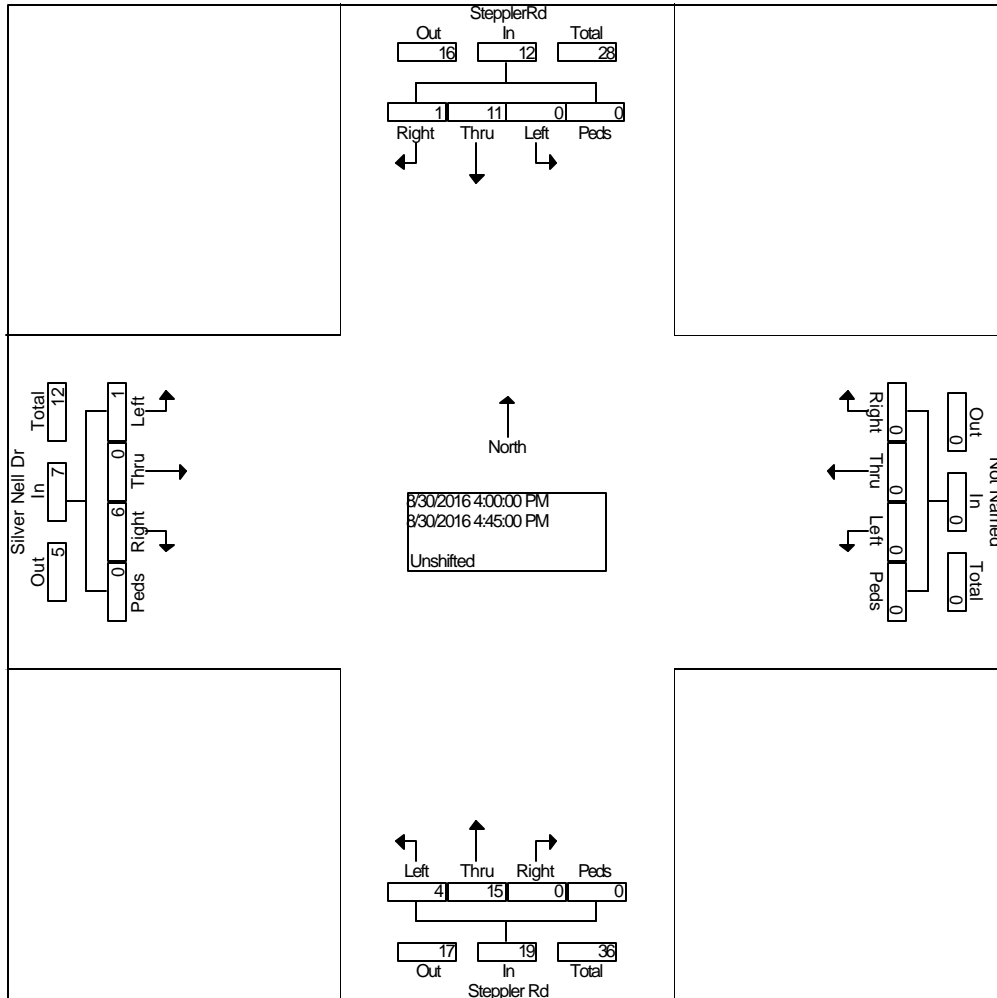
Start Time	SteplerRd From North				From East				Stepler Rd From South				Silver Nell Dr From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
04:00 PM	1	4	0	0	0	0	0	0	0	3	1	0	2	0	0	0	11
04:15 PM	0	1	0	0	0	0	0	0	0	7	1	0	1	0	0	0	10
04:30 PM	0	4	0	0	0	0	0	0	0	2	1	0	2	0	1	0	10
04:45 PM	0	2	0	0	0	0	0	0	0	3	1	0	1	0	0	0	7
Total	1	11	0	0	0	0	0	0	0	15	4	0	6	0	1	0	38
05:00 PM	0	1	0	0	0	0	0	0	0	3	1	0	1	0	1	0	7
05:15 PM	0	3	0	0	0	0	0	0	0	2	3	0	1	0	0	0	9
05:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
05:45 PM	0	2	0	0	0	0	0	0	0	3	1	0	1	0	1	0	8
Total	0	6	0	0	0	0	0	0	0	12	5	0	3	0	2	0	28
Grand Total	1	17	0	0	0	0	0	0	0	27	9	0	9	0	3	0	66
Apprch %	5.6	94.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	25.0	0.0	75.0	0.0	25.0	0.0	
Total %	1.5	25.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.9	13.6	0.0	13.6	0.0	4.5	0.0	



LSC Transportation Consultants, Inc.  
 545 E. Pikes Peak Ave., #210  
 Colorado Springs, CO 80903  
 (719) 633-2868

Project Name : Stepler Rd - Silver Nell Dr PM  
 Site Code : 00164720  
 Start Date : 08/30/2016  
 Page No : 2

Start Time	SteplerRd From North					From East					Stepler Rd From South					Silver Nell Dr From West					Int. Total
	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	1	11	0	0	12	0	0	0	0	0	0	15	4	0	19	6	0	1	0	7	38
Percent	8.3	91.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	78.9	21.1	0.0		85.7	0.0	14.3	0.0		
04:00 Volume	1	4	0	0	5	0	0	0	0	0	0	3	1	0	4	2	0	0	0	2	11
Peak Factor																					
High Int.	04:00 PM																				
Volume	1	4	0	0	5	0	0	0	0	0	0	7	1	0	8	2	0	1	0	3	0.864
Peak Factor	0.60										0.59					0.58					
	0										4					3					



**Intersection**

Int Delay, s/veh 2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	6	4	2	17	1
Future Vol, veh/h	1	6	4	2	17	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	1	7	4	2	18	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	30	19	20	0	-	0
Stage 1	19	-	-	-	-	-
Stage 2	11	-	-	-	-	-
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	984	1059	1596	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	981	1059	1596	-	-	-
Mov Cap-2 Maneuver	981	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1596	-	1047	-	-
HCM Lane V/C Ratio	0.003	-	0.007	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

**Intersection**

Int Delay, s/veh 2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	6	6	15	11	1
Future Vol, veh/h	1	6	6	15	11	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	1	7	7	16	12	1




Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	41	12	13	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	29	-	-	-	-	-
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	970	1069	1606	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	966	1069	1606	-	-	-
Mov Cap-2 Maneuver	966	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	990	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	1053	-	-
HCM Lane V/C Ratio	0.004	-	0.007	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

**Intersection**

Int Delay, s/veh 4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	7	20	2	18	1
Future Vol, veh/h	3	7	20	2	18	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	3	8	22	2	20	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	66	20	21	0	-	0
Stage 1	20	-	-	-	-	-
Stage 2	46	-	-	-	-	-
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	939	1058	1595	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	926	1058	1595	-	-	-
Mov Cap-2 Maneuver	926	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	6.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1595	-	1015	-	-
HCM Lane V/C Ratio	0.014	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

**Intersection**

Int Delay, s/veh 4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	22	13	15	13	4
Future Vol, veh/h	2	22	13	15	13	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	2	24	14	16	14	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	61	16	18	0	-	0
Stage 1	16	-	-	-	-	-
Stage 2	45	-	-	-	-	-
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	945	1063	1599	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	936	1063	1599	-	-	-
Mov Cap-2 Maneuver	936	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	968	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	3.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1599	-	1051	-	-
HCM Lane V/C Ratio	0.009	-	0.025	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	8	3	13	33	0
Future Vol, veh/h	1	8	3	13	33	0
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	1	9	3	14	36	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	57	36	36	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	21	-	-	-	-	-
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	950	1037	1575	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1037	1575	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1575	-	1026	-	-
HCM Lane V/C Ratio	0.002	-	0.01	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

**Intersection**

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	1	14	43	1
Future Vol, veh/h	2	3	1	14	43	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	2	3	1	15	47	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	64	47	48	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	17	-	-	-	-	-
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	942	1022	1559	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1022	1559	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	988	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
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 1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	9	37	26	2
Future Vol, veh/h	2	5	9	37	26	2
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	2	5	10	40	28	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	89	29	30	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	60	-	-	-	-	-
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	912	1046	1583	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	907	1046	1583	-	-	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1583	-	1002	-	-
HCM Lane V/C Ratio	0.006	-	0.008	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



**Intersection**

Int Delay, s/veh 0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	3	3	48	32	2
Future Vol, veh/h	1	3	3	48	32	2
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	1	3	3	52	35	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	95	36	37	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	59	-	-	-	-	-
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	1037	1574	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	903	1037	1574	-	-	-
Mov Cap-2 Maneuver	903	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	962	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1574	-	1000	-	-
HCM Lane V/C Ratio	0.002	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

**Intersection**

Int Delay, s/veh 1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	8	3	15	34	1
Future Vol, veh/h	2	8	3	15	34	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	2	9	3	16	37	1

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	60	37	38	0
Stage 1	37	-	-	-
Stage 2	23	-	-	-
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	947	1035	1572	-
Stage 1	985	-	-	-
Stage 2	1000	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	945	1035	1572	-
Mov Cap-2 Maneuver	945	-	-	-
Stage 1	985	-	-	-
Stage 2	998	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1572	-	1016	-	-
HCM Lane V/C Ratio	0.002	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

**Intersection**

Int Delay, s/veh 2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	10	3	15	40	1
Future Vol, veh/h	4	10	3	15	40	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	16	43	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	67	44	45	0	-	0
Stage 1	44	-	-	-	-	-
Stage 2	23	-	-	-	-	-
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	938	1026	1563	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	936	1026	1563	-	-	-
Mov Cap-2 Maneuver	936	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1563	-	999	-	-
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 1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	9	38	28	3
Future Vol, veh/h	2	5	9	38	28	3
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	2	5	10	41	30	3

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	93	32	34	0
Stage 1	32	-	-	-
Stage 2	61	-	-	-
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	907	1042	1578	-
Stage 1	991	-	-	-
Stage 2	962	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	902	1042	1578	-
Mov Cap-2 Maneuver	902	-	-	-
Stage 1	991	-	-	-
Stage 2	956	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	998	-	-
HCM Lane V/C Ratio	0.006	-	0.008	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

**Intersection**

Int Delay, s/veh 1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	6	45	30	4
Future Vol, veh/h	3	5	6	45	30	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	49	33	4

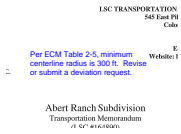
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	97	35	37	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	902	1038	1574	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	897	1038	1574	-	-	-
Mov Cap-2 Maneuver	897	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	956	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1574	-	980	-	-
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	-	-

# Markup Summary

dsdlaforce (4)



**Subject:** Text Box

**Page Label:** 1

**Lock:** Unlocked

**Status:**

**Checkmark:** Unchecked

**Author:** dsdlaforce

**Date:** 8/28/2017 1:43:11 PM

**Color:** ■

Per ECM Table 2-5, minimum centerline radius is 300 ft. Revise or submit a deviation request.



**Subject:** Text Box

**Page Label:** 1

**Lock:** Unlocked

**Status:**

**Checkmark:** Unchecked

**Author:** dsdlaforce

**Date:** 8/28/2017 1:45:13 PM

**Color:** ■

Add: PCD File No.: P-17-005 & SP-17-007



**Subject:** Callout

**Page Label:** 4

**Lock:** Unlocked

**Status:**

**Checkmark:** Unchecked

**Author:** dsdlaforce

**Date:** 8/28/2017 2:15:25 PM

**Color:** ■

Provide a summary for Silver Nell Drive and Albert Drive. The temporary access from Albert Drive to Stepler Road is required. This may need to be the primary access to the lots until the Silver Nell/Albert Drive connection is made. If the Silver Nell/Albert Drive connection is constructed in conjunction with Settlers View Subdivision, then the temporary access will be used as a secondary access for emergency access only. The emergency access will be removed once the Albert Drive/Settlers Ranch Road intersection is constructed.



**Subject:** Cloud+

**Page Label:** 4

**Lock:** Unlocked

**Status:**

**Checkmark:** Unchecked

**Author:** dsdlaforce

**Date:** 8/28/2017 1:45:42 PM

**Color:** ■

Identify the surfacing (paved?)