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Ellicott Sand and Gravel
Traffic Impact Analysis
PCD File No. AL2014
(LSC #194980)
October 12, 2021

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.

Christine Wilson

10/14/2021
Date

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October 12, 2021

Christine Wilson
Ellicott Sand & Gravel
c/o Mr. Bruce Humphries
<via email>

RE: Ellicott Sand and Gravel
El Paso County, CO
Traffic Impact Analysis
LSC #194980
PCD File No. AL2014

Dear Ms. Wilson,

LSC Transportation Consultants, Inc. has prepared this traffic impact study for the proposed Schubert Ranch/Ellicott Sand & Gravel extraction operation in El Paso County, Colorado. The site is located west of Baggett Road and north (and south) of Sanborn Road. One access is proposed to Sanborn Road about one quarter-mile west of Baggett Road (access GPS location: 38°47'43.5875" N, 104°21'17.6006" W).

The proposed haul route would have trucks utilize State Highway (SH) 94 to/from the west, Baggett Road between SH 94 and Sanborn Road, and the segment of Sanborn Road east of the access. Initially and in the short term, an average of about 30 truck trips per day is anticipated to be generated during the peak summer season. This level may increase in the future and this report provides an estimate of the potential future (higher) trip generation.

This report has been prepared for submittal to the El Paso County Planning and Community Development department and CDOT.

REPORT CONTENTS

The report contains the following:

- Existing street and traffic conditions adjacent to and in the vicinity of the site, including the intersection lane geometries, traffic controls, posted speed limits, functional classifications, intersection spacing and alignment, sight distances, etc.

- Existing peak-hour turning-movement traffic counts at the intersections of SH 94/Baggett Road and Baggett Road/Sanborn Road; the results of 2021 daily traffic counts.
- Estimates of projected 20-year daily background traffic volumes on the study-area roadways using EPC and CDOT data/available projections.
- Estimates of the proposed mineral extraction operation's peak-hour and daily trip generation for the short and intermediate & long term, including trips by vehicle type.
- Estimated directional distribution of mine-generated trips on roadways to be used for hauling. An employee distribution is also provided.
- Estimated assignment of peak-hour and daily site-generated traffic volumes on the study-area roadways providing access to/from the site, including the following intersections:
    - State Highway 94/Baggett Road
    - Baggett Road/Sanborn Road
    - Sanborn Road/proposed site access
- Resulting traffic impacts of the proposed sand and gravel operation on the roadways along the haul route, relative to the El Paso County's *Engineering Criteria Manual* (*ECM*) "design ADTs."
- Intersection levels of service analysis at key intersections along the proposed haul route:
    - State Highway 94/Baggett Road
    - Baggett Road/Sanborn Road
    - Sanborn Road/proposed site access
- Auxiliary right-/left-turn lane analysis at the following intersections based on the projected volumes and criteria in the *ECM* and the *State Highway Access Code*:
    - State Highway 94/Baggett Road
    - Baggett Road/Sanborn Road
    - Sanborn Road/proposed site access
- Findings and recommendations

SAND & GRAVEL PIT SITE LOCATION & ACCESS

As shown in Figure 1 and Figure 2 , the proposed Schubert Ranch/Ellicott Sand & Gravel extraction operation in El Paso County, Colorado is located west of Baggett Road and north (and south) of Sanborn Road. The 783-acre site is within the larger parcel identified by El Paso County parcel ID No. 2400000276 and the 40-acre smaller parcel (parcel ID no. 2400000275).

The proposed access would be located one-quarter mile west of the intersection of Baggett Road/Sanborn Road (access GPS location: 38°47'43.5875" N, 104°21'17.6006" W). This access is for Stage I of the operation. The applicant will request different access points in the future as the active mining areas change in the future (subsequent "Stages"). Access for future stages are shown in the **attached access exhibit** from the letter of intent. The applicant would be required to obtain a new driveway permit from El Paso County for any future access. Future access for future stages may require a transportation memorandum.

COMPARISON TO THE PUEBLO COUNTY MINE (CURRENTLY OPERATING)

LSC has utilized a comparable land use (an existing, operating similar mining land use) with data and known operating characteristics for trip-generation estimating purposes. This similar land use is the Pueblo County mine.

The estimated annual production for the Schubert Sand Mine and the typical production at the Pueblo County mine (250,000 tons per year) are similar. Both the proposed mine and the Pueblo County mine extract sand.

The total mining areas are not similar, nor are the mining methods, since the deposits are not similar. Approximately 35 acres of the 1,440 acres available for mining have been affected during the Pueblo County mine's 37 years of operation. None of the proposed Schubert Sand Mine approved permit area's 733.7 acres has been disturbed at this time.

Under a 112 Regular Operation Construction Material Permit, an operator is not limited to an annual production. The only limit is the amount of surface disturbance allowed, based on the amount of reclamation bond posted and the affected area approved for mining.

As an additional point, construction-materials production is seasonal, based on weather, and demand for the product mined. Typically, the construction season is variable by year and geographical location. For example, the Pueblo area has a slightly longer construction season than the Colorado Springs area. Therefore, the Colorado Springs demand for construction materials may result in a lower production.

PROPOSED DAILY OPERATIONS

Initial/Short Term (2022/2023)

Hours of operation for the mine will be from 7:00 a.m. – 7:00 p.m. **or sunrise-to-sunset**, depending on time of year. Empty haul vehicles would begin arriving around 7:00 a.m. each weekday and depart shortly after being loaded. Drivers would transport raw materials to the west via SH 94. Initially and in the short-term future, the pit would be operated in a manner similar to the mine in Pueblo County. The applicant has provided truck trip-generation data recorded for July and August 2020. The complete data set is attached for reference in Appendix A.

Based on the Pueblo County pit data, an average of 15 empty trucks would arrive at the site for loading each day and up to 15 loaded trucks will leave the mine each day.

Table 1 below summarizes the initial and short-term average entering truck trips by hour of the day, based on the Pueblo County pit data. The initial and short-term truck-trip counts at the

proposed Ellicott site are anticipated to be comparable to the Pueblo County mine site, although shifted to begin at 7:00 a.m. for this El Paso County pit.

Table 1: Initial/Short-Term Entering Trucks by Hour of the Day

Hourly Period		Short Term Trucks to Enter the Site
Start Time	End Time	Entering Trucks (Average)
7:00	8:00	2
8:00	9:00	2
9:00	10:00	2
10:00	11:00	1
11:00	12:00	2
12:00	13:00	1
13:00	14:00	2
14:00	15:00	1
15:00	16:00	1
16:00	17:00	1
17:00	18:00	0
18:00	19:00	0
Total Daily Entering Trucks		**15**

No trucks (empty or loaded) would be parked on-site overnight. Thus, haul vehicles would originate from offsite location(s) each morning and return to offsite location(s) each afternoon.

Per the applicant, six employees (including two loaders, two operators, one crusher, and another staff member) would remain on-site throughout the day. These employees would drive to the proposed mine each morning using their personal vehicles and leave during the late afternoon using their personal vehicles. Employee personal vehicles are anticipated to arrive slightly before heavy vehicles would arrive to begin preparing for the day's workload.

Potential Intermediate & Long Term – About 4 to 5 Years After Startup

Projected Timeline

Typically, it takes several months to years for a mining operation to reach full production. It is estimated that it will take this site six months to start mining and up to two years to reach the target annual production estimates. Acquiring the necessary air permits often takes up to six months as well. Therefore, a total of 1.3 "mini phases" will be mined during the first 12-month period.

Phase 1 (Phase 1 mining area, not trip levels) is projected to last 10-15 years, according to page 9, Exhibit D of the approved mining plan. Within a phase will be mini phases of 1.15 acres, each of which are expected to provide 96,220 tons of material during a 4-5-month time period. Development of the remaining future phases will only occur as mining in the previous phase is completed. For instance, mining in Phase 2 will not begin until essentially all material is removed from Phase 1. The proposed operational phase should not cause an increase in trucks, as the applicant's goal is to ensure a smooth continuation of the mining operation across phases.

Projected Truck-Trip Generation

Potentially, the trip generation may increase in the future to an average of 47 empty trucks arriving at the site for loading each day, with 47 loaded trucks departing the mine each day. The estimated timing to potentially reach this level of trip generation is about four to five years after startup.

Table 2 shows the potential intermediate & long-term average number of trucks arriving by hour of the day.

Table 2: Entering Trucks by Hour of the Day
Potential Intermediate & Long-Term Future – About 4 to 5 Years After Startup

Hourly Period		Trucks that Potentially may enter the site
Start Time	End Time	Entering Trucks (Average)
7:00	**8:00**	5
8:00	9:00	5
9:00	10:00	5
10:00	11:00	4
11:00	12:00	5
12:00	13:00	5
13:00	14:00	4
14:00	15:00	5
15:00	16:00	4
16:00	17:00	3
17:00	18:00	1
18:00	19:00	1
Total Daily Entering Trucks		**47**

APPLICANT-PROPOSED HAUL ROUTE

The haul route described below (and shown in Figure 3) is proposed by the applicant. Approximately half of the haul trips (loaded and empty) would be controlled by Ellicott, while the other half would be operated by outside hauling companies. The applicant will direct the trucking company and outside hauling companies to use this specific route when departing the site, which may be used for truck loads up to 88,000 pounds gross vehicle weight (GVW):

1. From the mine entrance, turn left and continue eastbound on Sanborn Road for 0.25 miles.
2. Turn left onto Baggett Road and continue northbound for 3.0 miles.
3. Turn left onto State Highway 94 and travel west. Note: there may be rare instances where the trucks turn east, to deliver to jobs east of the mine site.

Truck drivers would be required to travel **to** the site using this route in the reverse direction.

SIGHT DISTANCE

Access sight distance is acceptable at the proposed entrance on Sanborn Road, meeting all sight distance requirements in the *ECM*. No horizontal or vertical sight distance issues exist at key intersections along the proposed haul route, including:

- Sanborn Road/proposed site access
- State Highway 94/Baggett Road
- Baggett Road/Sanborn Road

Based on a 45-mile-per-hour (mph) posted speed limit, sight distances for both approaches on Sanborn Road from the proposed site access location exceed the required 680-foot requirement for multi-unit trucks, per *ECM* Table 2-35

ROADWAYS AND TRAFFIC CONDITIONS

Area Roadways

Major roadways in the site vicinity are shown in Figure 1 and identified below, followed by a brief description of each. Roadway functional classifications are shown in Figure 4, while detailed existing roadway conditions are shown in Figure 5.

State Highway (SH) 94 is a two-lane, paved rural highway with a posted speed limit of 65 mph in the vicinity of Baggett Road. The highway extends east from US Highway (Hwy) 24 near Peterson Air Force Base about 85 miles to Highway 287 in Cheyenne County. CDOT classifies SH 94 as an NR-A highway west of Ellicott Highway and R-A east of Ellicott Highway. CDOT has identified the governing document with respect to access management for SH 94 in the vicinity of the site as the *State Highway 94 Access Management Plan* (2012). The El Paso County 2040 *Major*

Transportation Corridors Plan (*MTCP*) identifies SH 94 as a two-lane Principal Arterial in the Ellicott area. The *MTCP* 2060 *Corridor Preservation Plan* identifies SH 94 as a future four-lane Principal Arterial. However, future right-of-way needs will be identified by CDOT.

Ellicott Highway is classified as a two-lane Minor Arterial on the 2040 El Paso County *MTCP*. The posted speed limit on Ellicott Highway south of SH 94 is 45 mph. Auxiliary left-turn lanes currently exist on the eastbound and westbound approaches at the two-way stop-controlled (TWSC) intersection of Ellicott Highway/SH 94.

Baggett Road is classified as a two-lane Rural Local roadway on the 2040 El Paso County *MTCP*. No auxiliary lanes currently exist at the TWSC intersection of Baggett Road/SH 94. Currently, Baggett Road is a 24-foot-wide gravel roadway with 4-foot shoulders and 60 feet of right-of-way (ROW). The posted speed limit on Baggett Road is 45 mph.

Sanborn Road is classified as a two-lane Collector on the 2040 El Paso County *MTCP*. No auxiliary lanes currently exist at the TWSC intersections of Baggett Road/Sanborn Road and Sanborn Road/Ellicott Highway. Currently, Sanborn Road is a 32-foot-wide gravel roadway with 4-foot shoulders and 90 feet of ROW. The posted speed limit on Sanborn Road is 45 mph.

Handle Road is classified as a two-lane Rural Local street on the 2040 El Paso County *MTCP*. No auxiliary lanes currently exist at the TWSC intersection of Handle Road/Baggett Road. Currently, Handle Road is a 24-foot-wide gravel roadway with 4-foot shoulders and a 60-foot ROW. The posted speed limit on Handle Road is 45 mph.

Ellicott Road is classified as a two-lane Rural Local roadway on the 2040 El Paso County *MTCP*. No auxiliary lanes currently exist at the TWSC intersections of Handle Road/Ellicott Road and Sanborn Road/Ellicott Road. Currently, Ellicott Road is paved north of Handle Road and has a gravel roadway surface to the south. A 24-foot-wide roadway with 4-foot shoulders and a 60-foot ROW, Ellicott Road has a posted speed limit of 45 mph.

Existing Traffic Volumes

Vehicular turning-movement counts were conducted at the following intersections:

- State Highway 94/Baggett Road
    - Wednesday, November 13, 2019 from 6:30 to 8:30 a.m.
    - Wednesday, December 11, 2019 from 4:00 to 6:00 p.m.
- Baggett Road/Sanborn Road
    - Wednesday, December 11, 2019 from 6:30 to 8:30 a.m.
    - Wednesday, December 18, 2019 from 4:00 to 6:00 p.m.

Existing morning and evening weekday peak-hour traffic volumes at these intersections are shown in Figure 6. Raw count reports are attached.

Figure 6 also shows the results of 2021 daily machine counts conducted along the proposed haul route at two locations on Baggett Road and one location on Sanborn Road just west of Baggett Road. The figure also includes prior volume data for these segments (carried over from the previous version of this report, for reference) as well as estimates of average weekday traffic by LSC for other segments for the key roadway segments.

TRIP GENERATION

Short Term

Typically, site-generated vehicle trips for proposed land uses are estimated using the nationally-published trip-generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). ITE Land use 140-Manufacturing has been selected to estimate the trip generation for this mining operation. Rates based on "acres" have been selected for the trip-generation estimate. The anticipated area of active mining and processing has been used – estimated at about 1.25 acres. The resulting trip-generation estimate is shown in Table 3.

To verify the trip-generation estimate, the resulting calculated estimate was compared to the actual trip generation from the Pueblo County mine. Minor adjustments to the ITE rates for manufacturing were made, based on these actual mining data. Appendix A contains the raw data from the Pueblo site and calculation tables converting truck-scale data to trip-generation estimates.

The projected area of mining disturbance is less than 1.25 acres. Each of the five phases will consist of mini phases of approximately 1.15 acres (500 feet long by 100 feet wide). Assuming an annual production of 250,000 tons per year starting in year 2, the 1.15 acres of disturbance per mini phase will result in approximately 4.6 months of production. Therefore, a total of 3.0 acres are estimated to be affected by mining during the second full 12 months of production (2.6 mini phases). This assumes no decrease in production during limited-construction winter months.

The applicant has indicated that this pit will operate similarly to the one in Pueblo County, with comparable trip generation – at least in the short term. There will be a difference in operating hours, with this El Paso County pit beginning operations at 7:00 a.m.

- Thirty (30) haul truck trips per day are expected in the short term on the average weekday (half entering and exiting every 24 hours).
- Approximately 44 total vehicle trips (haul trips and employee trips combined) are expected in the short term on the average weekday (half entering and exiting every 24 hours).
- During the morning peak hour, 3 total vehicles are projected to enter the mine site, while 2 total vehicles are projected to exit.
- Approximately 2 vehicles would enter, and 3 total vehicles would exit the mine site during the afternoon peak hour.

Table 3: Estimated Site Vehicle-Trip Generation

ITE		Value	Units	Trip Generation Rates [1]					Driveway Trips Generated				
				Average	A.M.		P.M.		Average	A.M.		P.M.	
Code	Description			Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
Existing (Pueblo Site)													
								Pueblo Site -- Current Total Trips	**42**	**3**	**2**	**1**	**4**
								Existing Average Truck Trips -- Count Data	30	2	2	0	0
								Existing Estimated Other Trips -- Estimated by LSC	12	1	0	1	4
Short-Term (Ellicott Site)													
Trip Generation Estimate (Short Term - Initial Operation) -ITE Rates													
140	Manufacturing	1.250	Acres	34.91	4.00	0.73	1.82	2.55	44	5	1	2	3
Trip Generation Estimate (Short Term - Initial Operation) - w/ Minor Adjustments to ITE Rates													
140	**Manufacturing**	**1.250**	**Acres**	34.91	**2.40**	**1.60**	**1.60**	**2.40**	**44**	**3**	**2**	**2**	**3**
								Short-Term -- Trucks	30	2	2	1	1
								Short-Term -- Passenger Vehicles	14	1	0	1	2
Potential Future -- Intermediate & Long-Term (Ellicott Site)													
Trip Generation Estimate (Intermediate & Long Term - Optimistic Full Operation) - ITE Rates													
140	Manufacturing	3.150	Acres	34.91	4.00	0.73	1.82	2.55	110	13	2	6	8
Trip Generation Estimate (Intermediate & Long Term - Optimistic Full Operation) - w/ Minor Adjustments to ITE Rates													
140	**Manufacturing**	**3.150**	**Acres**	34.91	**2.22**	**1.90**	**0.95**	**2.22**	**110**	**7**	**6**	**3**	**7**
								Long-Term -- Trucks	94	5	5	2	2
								Intermediate & Long-Term -- Passenger Vehicles	16	2	0	1	5

[1] Source: Trip Generation, 10th Edition, 2017, by the Institute of Transportation Engineers (ITE)

Rev. 3/7/2021

Potential Future/Intermediate & Long-Term Trip Generation

Per information provided by the applicant, the following is an estimate of potential future increased trip generation:

- Up to 47 empty trucks would arrive at the site for loading each day and up to 47 loaded trucks will leave the mine each day. Thus, in the intermediate & long-term future, the proposed mining operation could potentially generate up to 94 haul **truck-trips** on the average weekday.
- Additionally, about 16 passenger vehicle trips (employees, visitors, etc.) could potentially be generated in the future.
- This potential future trip generation is also shown in Table 3.

Trip Distribution and Assignment

An estimate of directional distribution of site-generated vehicle-trips to the study-area roads is a necessary component in determining the site's traffic impacts. Figure 7 shows the estimated distribution/proportion of mine-generated trips on the area roadway network. Haul-vehicle distribution and passenger-vehicle distribution splits are shown separately.

Estimates were based on the following factors: the proposed haul route and employee trip routing provided by the applicant, the area roadway system that will provide access to the site, and the site's geographic location. The truck distribution reflects the applicant's requirement for haul-vehicle drivers to utilize the proposed designated haul route. Also, the distribution reflects the applicant's intent to require employees to arrive from and depart to the west via Sanborn Road (rather than Baggett Road).

Site-Generated Traffic

Short Term

The short-term mine-generated traffic volumes at the following intersections have been calculated by applying the distribution percentages (from Figure 7) to the short-term trip-generation estimates (from Figure 8).

- State Highway 94/Baggett Road
- Baggett Road/Sanborn Road
- Sanborn Road/proposed site access

Figure 8 shows the short-term projected mine-generated daily traffic volumes at these intersections for the weekday morning and evening peak hours. The figure also shows the projected mine-generated average daily volumes during the peak summer months.

Intermediate & Long Term

Figure 9 shows the potential intermediate & long-term projected mine-generated peak-hour and average daily traffic volumes. These are based on the same distribution from Figure 7 and the intermediate & long-term trip-generation estimates from Table 3.

Existing-Plus-Site-Generated Traffic Volumes

Figure 10 shows the sum of the existing traffic volumes (from Figure 6) and short-term site-generated peak-hour and daily traffic volumes (shown in Figure 8). These volumes represent the projected short-term total traffic. Also shown (at the intersection of SH 94/Baggett Road) are applicable projected short-term total "passenger-car-equivalent" turning-movement traffic volumes.

Long-Term Background Traffic Volumes

Figure 11 shows the projected 2040 background traffic volumes. Background traffic on SH 94 has been based on CDOT growth factors and estimates by LSC. Traffic volumes to be generated by the proposed mining operation are **not** included in this figure. Long-term background growth estimates on Sanborn Road and Baggett Road were made using projections from the *MTCP* and estimates by LSC, respectively, as noted in the legend in Figure 11.

2040 Background Plus-Site-Generated Traffic Volumes

Figure 12 shows the sum of the 2040 Background traffic volumes (from Figure 11) and intermediate & long-term site-generated peak-hour and daily traffic volumes (shown in Figure 9). These volumes represent the potential long-term total traffic.

LEVEL OF SERVICE ANALYSIS

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 4 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 4: Intersection Levels of Service Delay Ranges

	Signalized Intersections	Unsignalized Intersections
Level of Service	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle)[(1)]
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more

(1) For unsignalized intersections if V/C ratio is greater than 1.0 the level of service is LOS F regardless of the projected average control

The following intersections have been analyzed to determine the projected short- and long-term (following the opening of mining operations) LOS for the key intersection turning movements:

- State Highway 94/Baggett Road
- Baggett Road/Sanborn Road
- Sanborn Road/proposed site access

Summaries of existing, existing-plus-site, 2040 Background, and 2040 Total traffic scenario levels of service during the weekday morning and evening peak hours are shown in the following figures:

- Figure 6: Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 10: Existing + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 11: 2040 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 12: 2040 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

Please refer to the Synchro reports (attached) for additional details.

State Highway 94/Baggett Road

Short-Term

All individual turning movements and minor street single-lane approaches currently operate at and are projected to remain at LOS B or better upon site buildout if the intersection were to remain two-way stop-sign-controlled in the short term.

Long-Term

All individual turning movements and minor street single-lane approaches currently operate at and are projected to remain at LOS C or better upon site buildout, if the intersection were to remain two-way stop-sign-controlled in the long term.

Baggett Road/Sanborn Road

All single-lane approaches at the intersection of Baggett Road/Sanborn Road are projected to operate at LOS A through the 2040 horizon.

Sanborn Road/Site Access

All single-lane approaches at the proposed site access on Sanborn Road are projected to operate at LOS A through the 2040 horizon. For purposes of this level of service analysis, stop-sign control on the southbound approach is assumed.

AUXILIARY TURN-LANE NEEDS EVALUATION

CDOT Intersection

State Highway 94/Baggett Road

According to criteria in the *State Highway Access Code*, exclusive auxiliary turn lanes shall be provided for any access on an R-A highway with a projected peak-hour ingress exceeding the following turning volume thresholds:

- Left-turn lane – 10 vehicles per hour (vph) or greater
- Right-turn lane – 25 vph or greater

Passenger-Car-Equivalent Peak-Hour Turning Movements

Passenger-car-equivalent (PCE) turning movements at the State Highway intersection have been calculated per Section 2.3.4.e of the Colorado State Highway Access Code by applying a factor of 3 to the projected site-generated volumes **for trucks only**. These PCE volumes have been calculated as required by CDOT for traffic volumes at the intersection controlled by CDOT (specifically, for vehicles turning from State Highway 94 onto Baggett Road). The PCE factor of 3 was **not** applied to trips associated with workers accessing the site using their personal vehicles.

Short-Term

Approximately 10 vehicles per hour (the passenger car equivalent volume is 12) are projected to make an eastbound right-turning movement during the morning peak hour, which does **not** exceed the 25 vph right-turn lane threshold in the *State Highway Access Code*. Based on the combination of operations for the proposed sand/gravel pit and existing traffic volumes along the haul route, **no auxiliary turn lanes (left or right) would be required, based on the *Access Code* turning-volume threshold during the short term**.

Long-Term

Background traffic volumes in the study area are anticipated to grow over time due to additional background development.

The long-term peak-hour background projections are 5 (a.m.) and 15 (p.m.) eastbound right-turning vehicles. The totals with site-generated turning volumes are projected at 10 and 17 vehicles per hour during the morning and afternoon peak hours, respectively (the passenger-car-equivalent volumes are 20 and 21, respectively). An eastbound right-turn lane would **not** be required, based on these projections and the *Access Code* turning-volume threshold for right-turn lanes.

Due to background **(non-mine operations traffic**), approximately 15 vehicles per hour are projected to make an eastbound left turn during the afternoon peak hour, which exceeds the 10-vph threshold for a left-turn deceleration lane in the *State Highway Access Code*. **NOTE: This information is provided for reference only (as required by El Paso County), as the proposed gravel pit would not add traffic to this turning movement**. The figure shows a left-turn arrow – representing a potential matching short westbound left-turn bay – not triggered by volume (and not triggered by traffic generated by this project) – but shown for purposes of maintaining lane alignment. This potential short turn bay would likely be constructed as part of redirect tapers for the eastbound left-turn lane **(not by this applicant).**

El Paso County Intersections

Sanborn Road Intersections/Access Point

According to criteria in the *Engineering Criteria Manual*, exclusive auxiliary turn lanes shall be provided at intersections/access point on a Collector roadway with a projected peak-hour ingress exceeding the following turning-volume thresholds:

- Left-turn lane – 25 vehicles per hour (vph)
- Right-turn lane – 50 vph or greater

Baggett Road/Sanborn Road

No modifications are required to the existing single-lane approaches at the intersection of Baggett Road/Sanborn Road. Auxiliary right- or left-turn lanes would **not** be required on any approach on Sanborn Road or Baggett Road, based on projected site-generated traffic volumes and criteria in the *ECM*.

Site Access Point on Sanborn Road

No auxiliary right- or left-turn lanes would be required at the proposed site access point on Sanborn Road, based on projected site-generated traffic volumes and criteria in the *ECM*.

AVERAGE DAILY TRAFFIC IMPACTS RELATIVE TO ROADWAY DESIGN ADT BY CLASSIFICATION

El Paso County Roadway Segments

Note: The County *ECM* does not specify a requirement to adjust for passenger-car equivalents when calculating ADTs for use in evaluating against the design ADT by classification.

The projected buildout average daily traffic (ADT) impacts have been compared to the roadway design ADTs shown in Tables 2-4 and 2-5 of the *ECM*. Figure 4 shows existing roadway classifications along the haul route and has been provided as a general reference. The actual

current roadway capacities for specific roadway segments may differ from these *ECM*-identified "Design ADT" values for County-standard roadways by classification.

Baggett Road

Existing and Short Term

Baggett Road is a Local, gravel roadway. The *ECM* design ADT for this type of roadway is 200 ADT. Figure 6 and Figure 10 show the existing and existing plus site and ADT volumes, respectively, on the section just south of SH 94 and on the section north of Sanborn Road. With the addition of projected haul-route site-generated trips to the roadway, the section just north of Sanborn Road and the section just south of SH 94 are likely to remain under the 200 ADT threshold in the short term.

Long Term

The 2040 *MTCP* shows residential household growth in the general area north of Sanborn Road. Figure 12 shows LSC's estimates of 2040 volumes on Baggett Road. Future volumes may vary significantly depending on location of the growth, development access points, and area roadway conditions. The section just north of Sanborn Road, at 245 vehicles per day, is projected to exceed the 200 ADT threshold in the long term. The section just south of SH 94 is projected to be approximately 275 vpd **without** the proposed mine operation, with increases in background traffic (due to area development and growth). The projected total would be 370 ADT in the long term.

Sanborn Road

This project's traffic added to the existing volume is **not** projected to bring the roadway segment between the site access and Baggett Road to a volume over 200 ADT.

Based on *MTCP* projected 2040 background traffic volumes, current cross section, and functional classification, the *MTCP* 2040 "Gravel Road Analysis" shows Sanborn Road as "Deficient." *MTCP* project P9 Roadway paving project is shown due to this background volume and resulting deficiency. Map 7 of the *MTCP* also indicates that the condition of the existing gravel roadway on Sanborn is "adequate."

Based on *MTCP* projected 2040 volume, the proposed mine traffic would represent a relatively minor percentage of the projected future total traffic.

Additionally, Sanborn Road is indicated in the list of *MTCP* improvements as a roadway likely to be eligible for credit/reimbursement should paving be required. The applicant would be required to contact the County's Road Advisory Committee regarding possible reimbursement, in the event that Sanborn Road would be required to be paved.

DESIGN VEHICLE ACCOMMODATION AT HAUL ROUTE INTERSECTIONS AND ALONG ROADWAYS

Intersections

The largest anticipated haul vehicles should be considered the "design vehicle" for purposes of evaluating the geometry of existing intersections along the anticipated haul route. Intersections along the haul route (SH 94/Baggett Road and Baggett Road/Sanborn Road, as well as the site access intersection) will likely require some intersection corner-radius and potentially other geometric improvements to meet criteria 2.3.7.G of the El Paso County *Engineering Criteria Manual*.

State Highway 94/Baggett Road

- The southwest corner radius will likely need to be improved to accommodate right-turning multi-unit-truck haul vehicles. This would likely entail grading and paving of a compound radius and potentially pavement markings.
- The turning path of the northbound left turn should be analyzed to determine intersection geometric improvements which may be needed to accommodate this turning movement.
- If there is the potential for haul trucks to turn to the east on SH 94, the southeast corner radius should also accommodate northbound-to-eastbound right turns by multi-unit trucks.

Baggett Road/Sanborn Road

- **Short Term:** Based on the existing traffic volumes along Sanborn Road, the existing intersection may be able to accommodate a turning vehicle without modification (assuming the truck could utilize the entire intersection footprint to complete the turn). Minor modifications to the northwest corner radius may be needed if truck-turning analysis shows insufficient geometry.
- **Long Term:** As volumes increase as projected along Sanborn in the *MTCP*, the following may be necessary in the future:
    - The northwest corner radius may need to be improved to accommodate southbound right-turning multi-unit-truck haul vehicles. This would likely entail grading and installing a compound radius.
    - The turning path of the eastbound-to-northbound left turn should be analyzed to determine intersection geometric improvements may be needed to accommodate this turning movement by haul vehicles.

Sanborn Road/proposed site access

- The northeast corner radius may need to be designed to accommodate right-turning multi-unit-truck haul vehicles. The northwest corner radius may need to be designed for truck-turning movements, even though the current haul route shows trucks turning to the east.
- The turning path of the southbound left turn should be accommodated as part of the access design. The eastbound left-turning movement should also be designed to accommodate multi-unit trucks, even though the current haul route shows trucks entering from the east.

Note: Intersection AutoTurn analysis, findings, and recommendations for design-vehicle accommodation will be provided with the site development plan application.

FINDINGS AND CONCLUSIONS

Land Use (Applicant-Provided Programming Information)

The applicant has provided LSC with operations information including the anticipated number of haul trucks per day, hours and days of operation, and employee counts. This trip-generation estimate has been verified with this information.

Trip Generation Estimate

- The proposed mining operation would generate an average of 30 haul-truck trips on the average weekday (one-half entering and one-half exiting in a 24-hour period).
- Per information provided by the applicant, an average of 15 empty trucks would arrive at the site for loading each day and 15 loaded trucks will leave the mine each day.
- Additionally, about 14 passenger-vehicle trips (employees, visitors, etc.) are projected. Most employees will arrive prior to the morning peak hour and the trips estimate assumes more dispersed exiting employee trips in the afternoon/early evening - depending on demand daily variability.
- This report also includes estimates of potential **intermediate & long-term** trip generation – potentially an average of 110 total trips (truck trips plus employee-/passenger-vehicle trips).

Proposed Haul Route

Please refer to Figure 3 for a map detailing the proposed haul route between the mine and destinations west of the site (which is the direction of the major, potential market).

Level of Service Analysis

All individual turning movements/approaches at the following intersection currently operate at and are projected to remain at LOS B or better through the 2040 horizon, with or without the addition of site-generated traffic:

- State Highway 94/Baggett Road
- Baggett Road/Sanborn Road
- Sanborn Road/proposed site access

Auxiliary Turn Lanes

Based on the analysis in this report, no auxiliary turn lanes would be required. Please refer to the "Auxiliary Turn-Lane Needs Evaluation" section above for a detailed auxiliary turn-lane needs assessment.

Average Daily Traffic Impacts Relative to Roadway Design ADT (by Classification)

The following summarizes our findings. Please refer to the above section for additional details.

Baggett Road

Baggett Road is a Local, gravel roadway. The *ECM* design ADT for this type of roadway is 200 ADT. Figure 6 and Figure 10 show the existing and existing-plus-site and ADT volumes, respectively, on the section just south of SH 94 and on the section north of Sanborn Road. Based on projected existing-plus-short-term mine-generated traffic volumes (shown in Figure 10), the section just north of Sanborn Road and the section just south of SH 94 would remain under the 200 ADT threshold in the short term.

LSC projects 2040 total volumes of about 245 to 370 ADT on Baggett Road, depending on the segment (as shown in Figure 12). Due to the relatively low volumes, future volumes may vary significantly from these estimates. These would exceed 200 ADT and future mitigation may be needed.

Sanborn Road

This project's traffic added to the existing volume is **not** projected to bring the roadway segment between the site access and Baggett Road to a volume over 200 ADT.

The *MTCP* shows Sanborn Road as "deficient" by 2040, based on *MTCP* 2040 traffic projections. The proposed haul route includes the section of Sanborn Road between Baggett Road and the site access.

As mentioned above, additional site traffic would constitute up to about six percent of the projected 2040 traffic volumes along the section of Sanborn Road between Baggett Road and the site access. The applicant will be paying fees into the Countywide fee program.

Haul Vehicle (Design Vehicle) Accommodation

Please refer to the section "Design Vehicle Accommodation at Haul Route Intersections and Along Roadways" for potential intersection corner radius improvements that may be necessary to accommodate multi-unit haul trucks.

El Paso County Roadway Improvement Fee Program

This development will be subject to participation in the El Paso County Roadway Improvement Fee Program. TIS comments indicated the following:

> *The County would recommend that the fee by calculated based on the ITE land use (140) of Manufacturing with the units of measure being per acre. Since the proposed mining land use is not directly in the ITE manual a determination from the County administrator would be required. Per the Road impact fee implementation document the timing and payment obligation is triggered by the final land use approval required (i.e., at the site development plan application). Staff recommends that the final calculation be provided at that stage as we will know exactly what will be proposed with the first phase of development and a determination can be made at that time by the County Administrator. Alternatively, a request may be made to the County Administrator as to whether an independent study per the road implementation document would be allowed to be submitted.*

Note: The El Paso County Roadway Improvement Fee calculation will be provided at a later date with the site development plan application.

LIST OF DEVIATIONS REQUESTED

The following deviation request form has been prepared:

- Access is not permitted on a Rural Major Collector, per *ECM* Table 2-5. The applicant is requesting site access on Sanborn Road, a Rural Major Collector.

* * * * *

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

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By: Jeffrey C. Hodsdon, P.E.
Principal

JCH:JAB:jas

Enclosures: Figure 1-Figure 12
Traffic Count Reports
LOS Synchro Reports
Appendix A (Pueblo County Pit Trip Generation Data)
Access Exhibit by Stage

Figures

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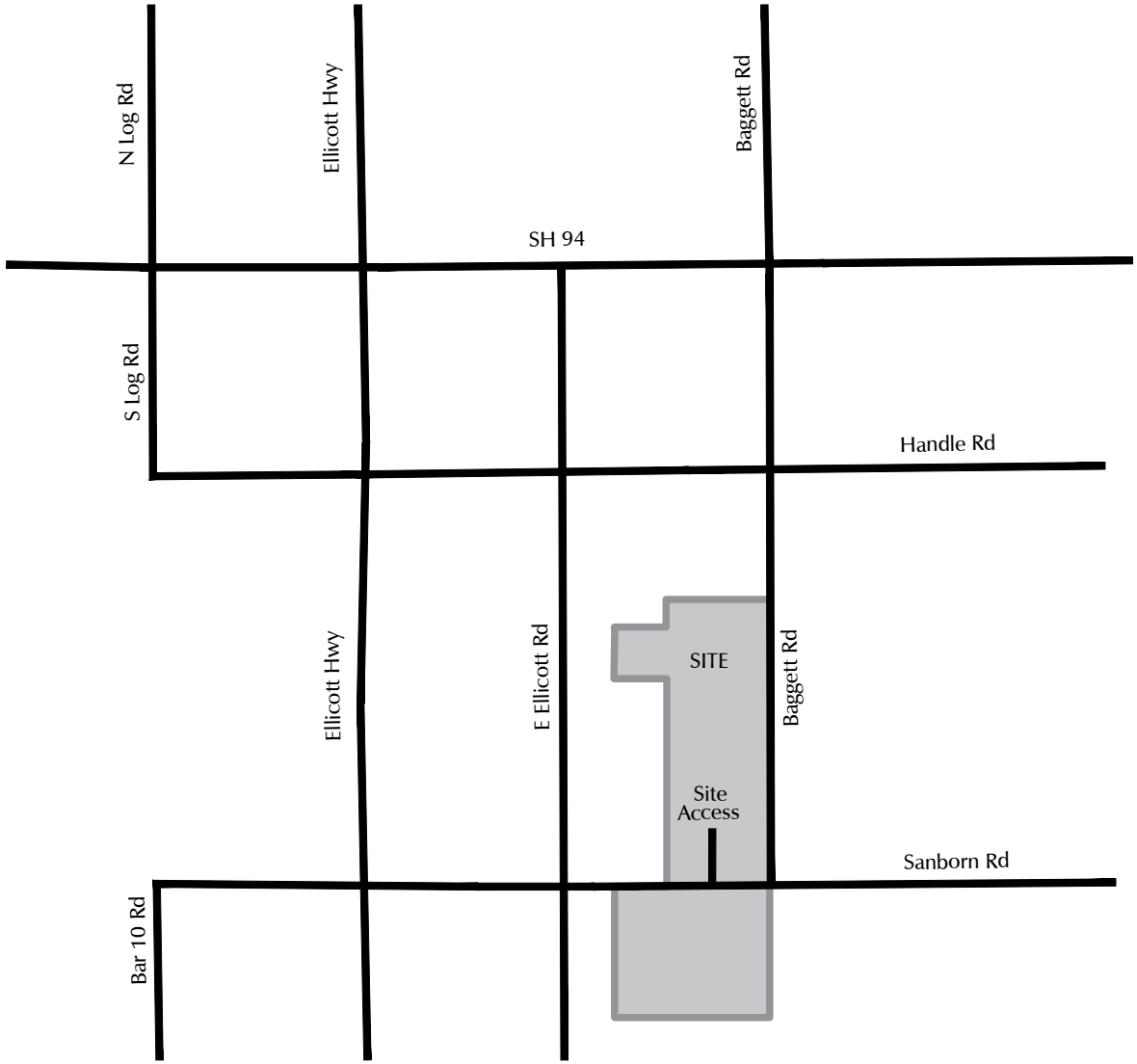


N

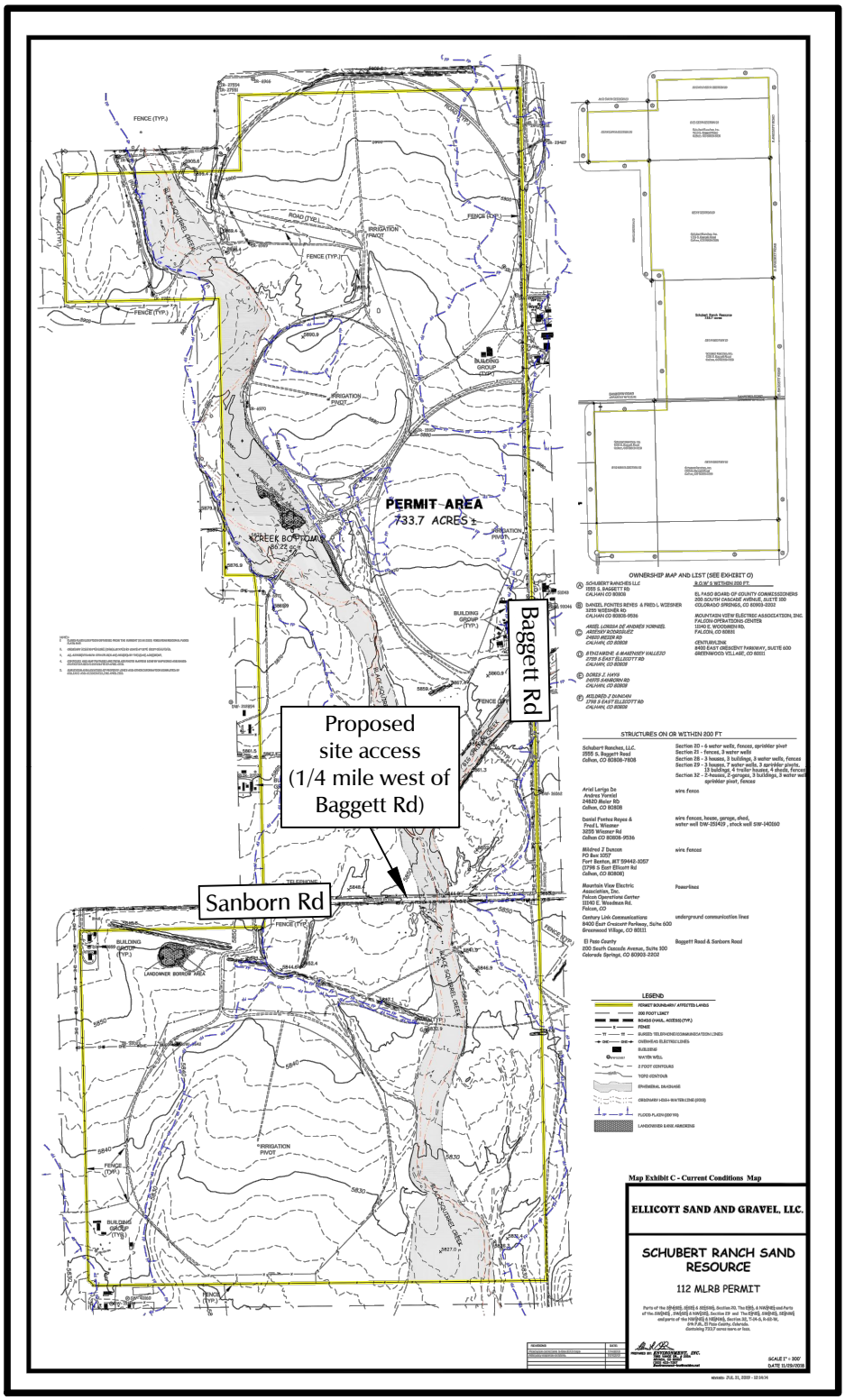
Not to scale

TRANSPORTATION CONSULTANTS, INC.

Figure 1

Vicinity Map

Ellicott Sand + Gravel (LSC# 194980)



Not to Scale

Figure 2

Site Plan

Ellicott Sand + Gravel (LSC# 194980)

TRANSPORTATION CONSULTANTS, INC.

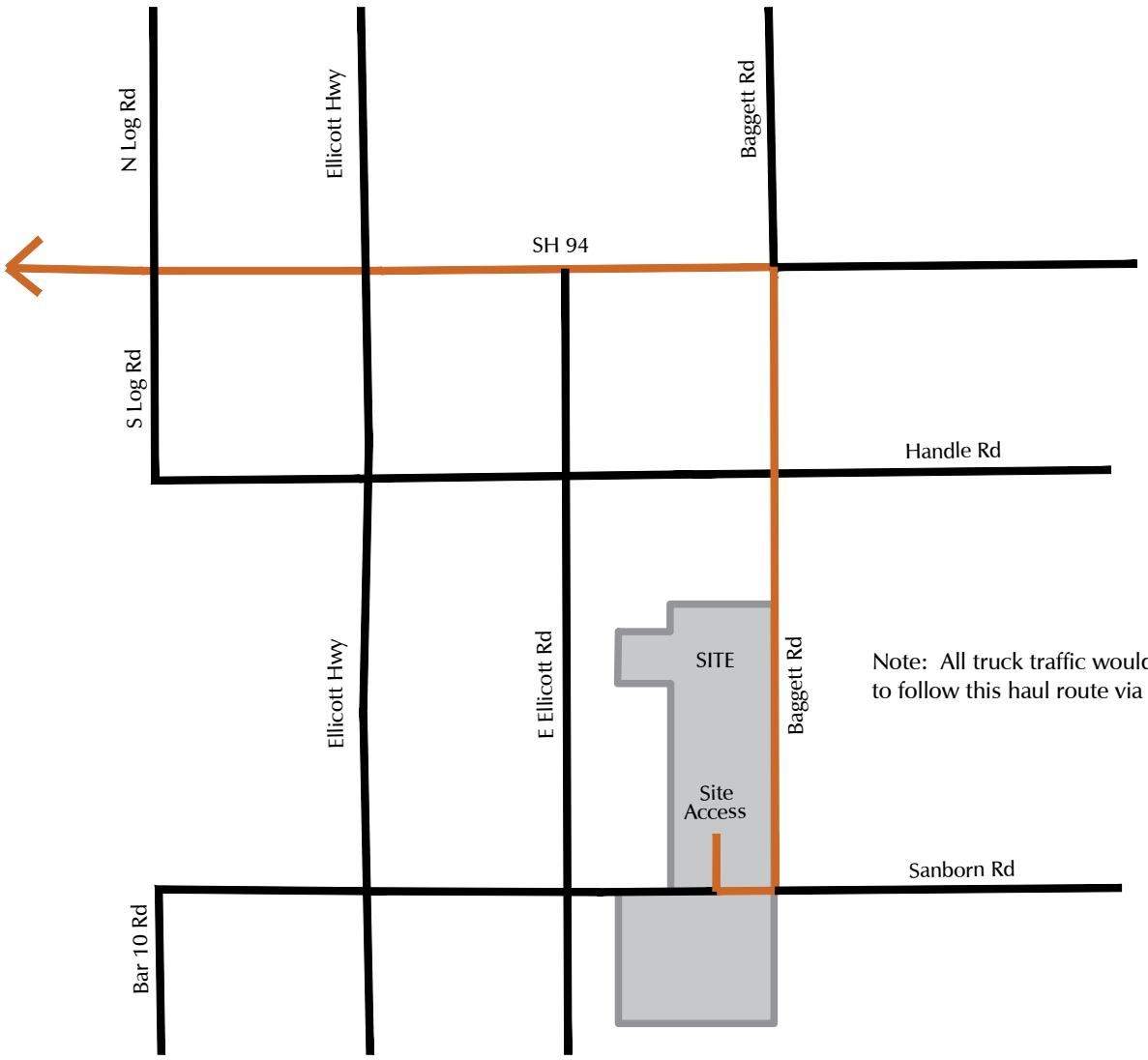


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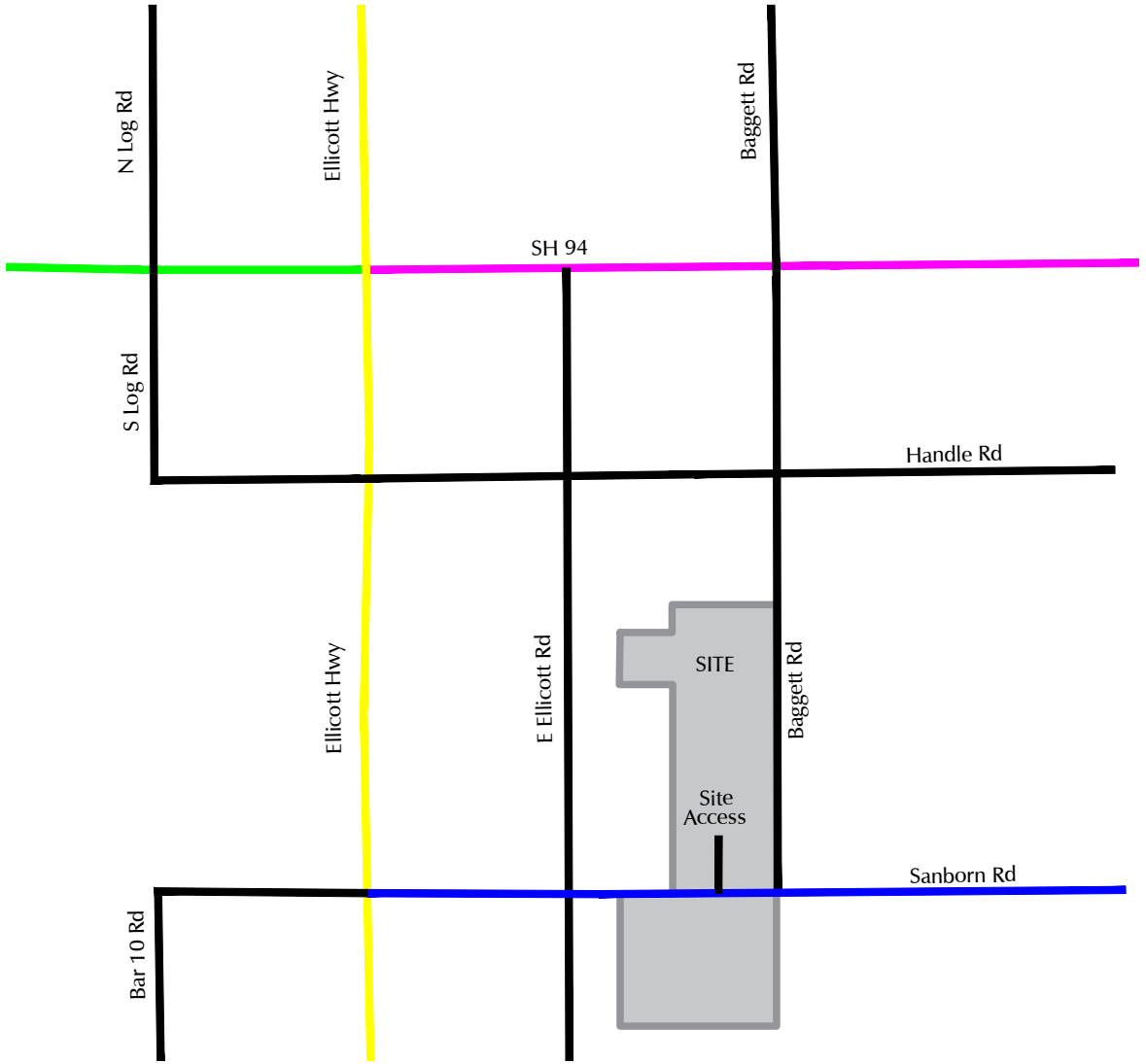
Figure 3

Proposed Primary Haul Route

Ellicott Sand + Gravel (LSC# 194980)



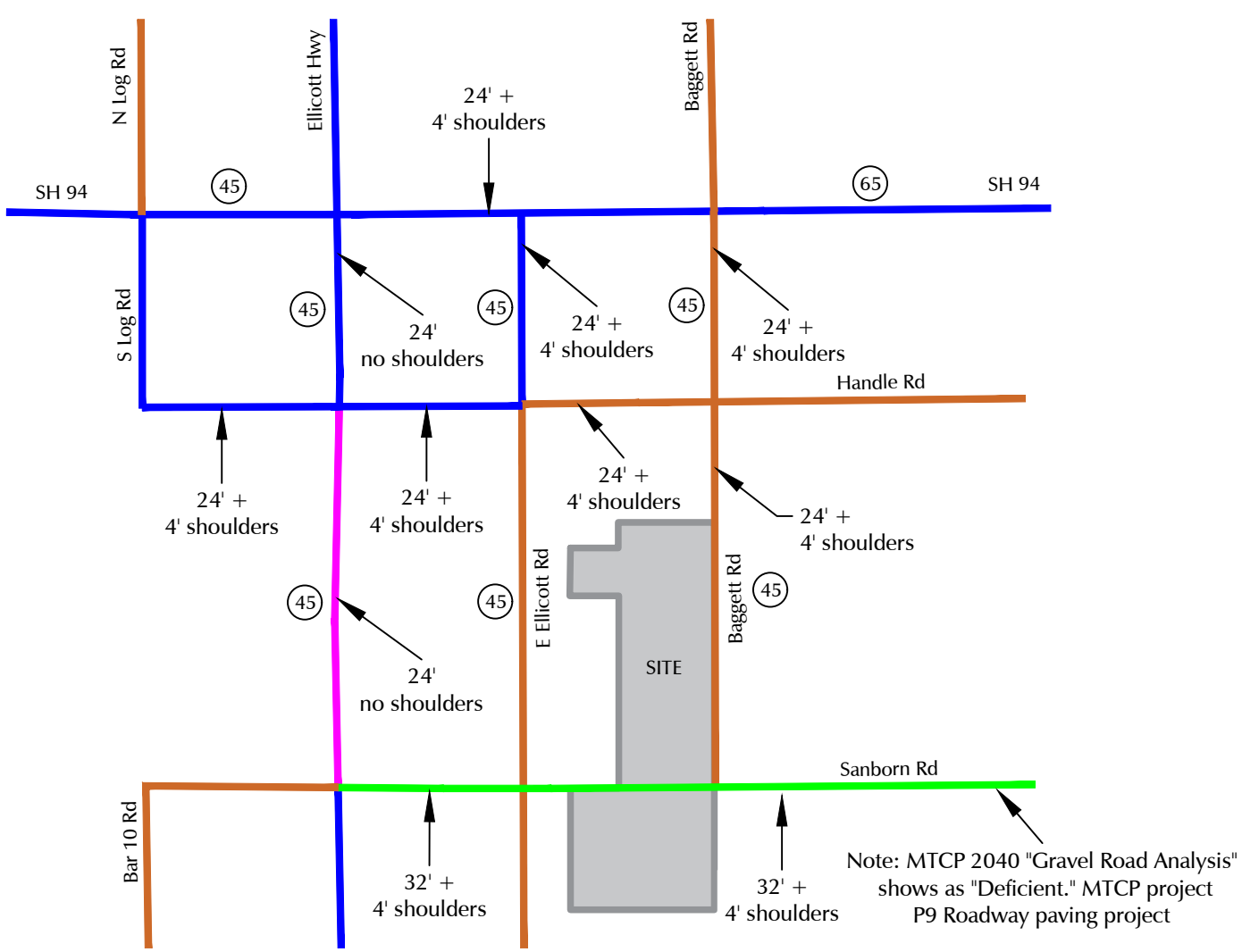
Not to scale

TRANSPORTATION CONSULTANTS, INC.

Figure 4

Roadway Classifications

Ellicott Sand + Gravel (LSC# 194980)



Not to scale

Source: Field measurements by LSC

(XX) Speed limit (mph)

Paved roadway surface

Gravel roadway surface

Existing "adequate" unimproved road (MTCP)

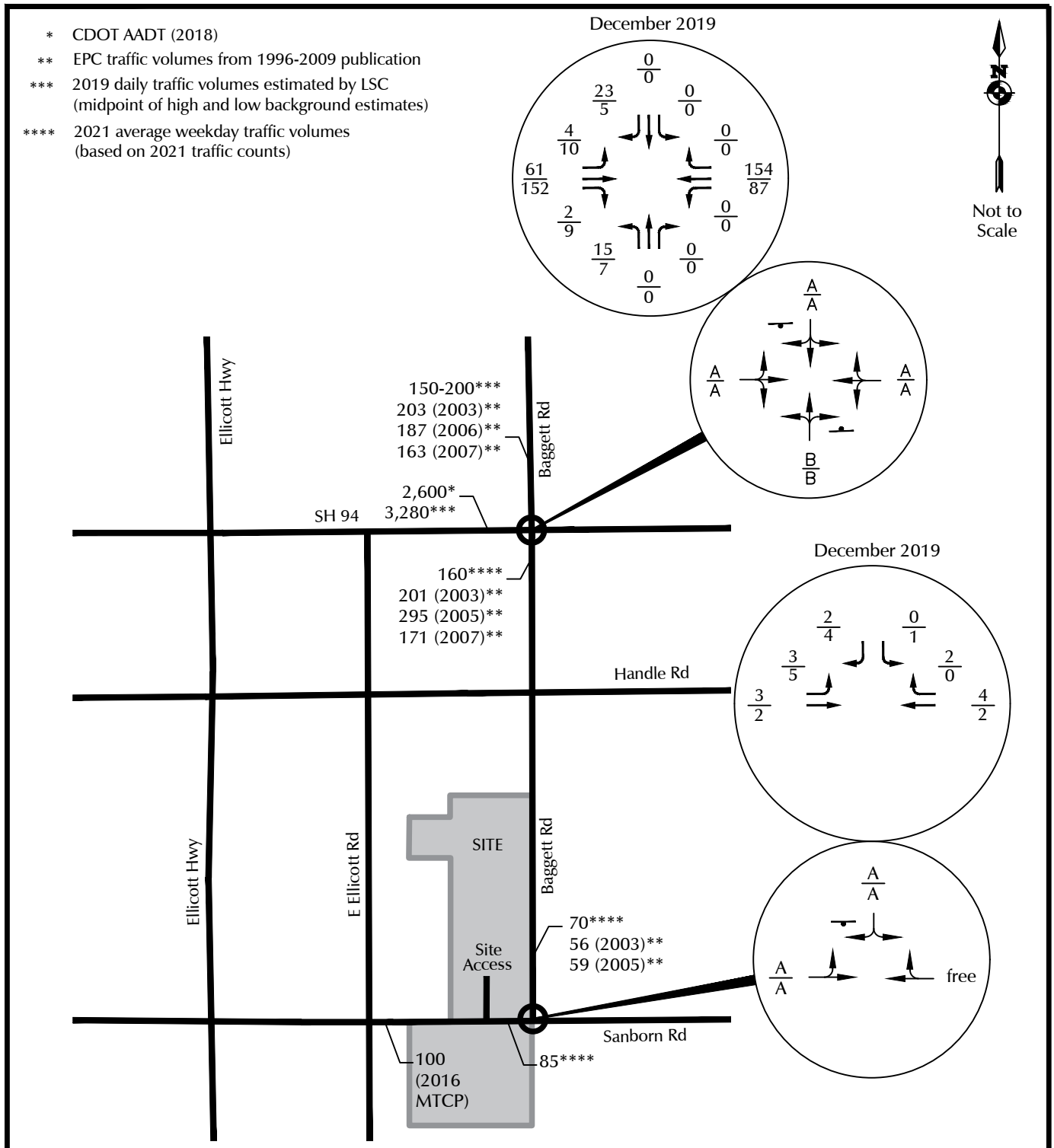
Existing "adequate" gravel road (MTCP)

LSC TRANSPORTATION CONSULTANTS, INC.

Figure 5

Existing (and Future MTCP Projected) Roadway Conditions

Ellicott Sand + Gravel (LSC# 194980)



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

X,XXX = Average Daily Traffic (vehicles per day)

$\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS / PM Individual Movement Peak-Hour LOS

$\frac{X}{X}$ = AM Entire Intersection Peak-Hour LOS / PM Entire Intersection Peak-Hour LOS

⊦ = Stop Sign

TRANSPORTATION CONSULTANTS, INC.

Figure 6

Existing Traffic Volumes, Lane Geometry, Traffic Control, and LOS

Ellicott Sand + Gravel (LSC# 194980)

Not to scale

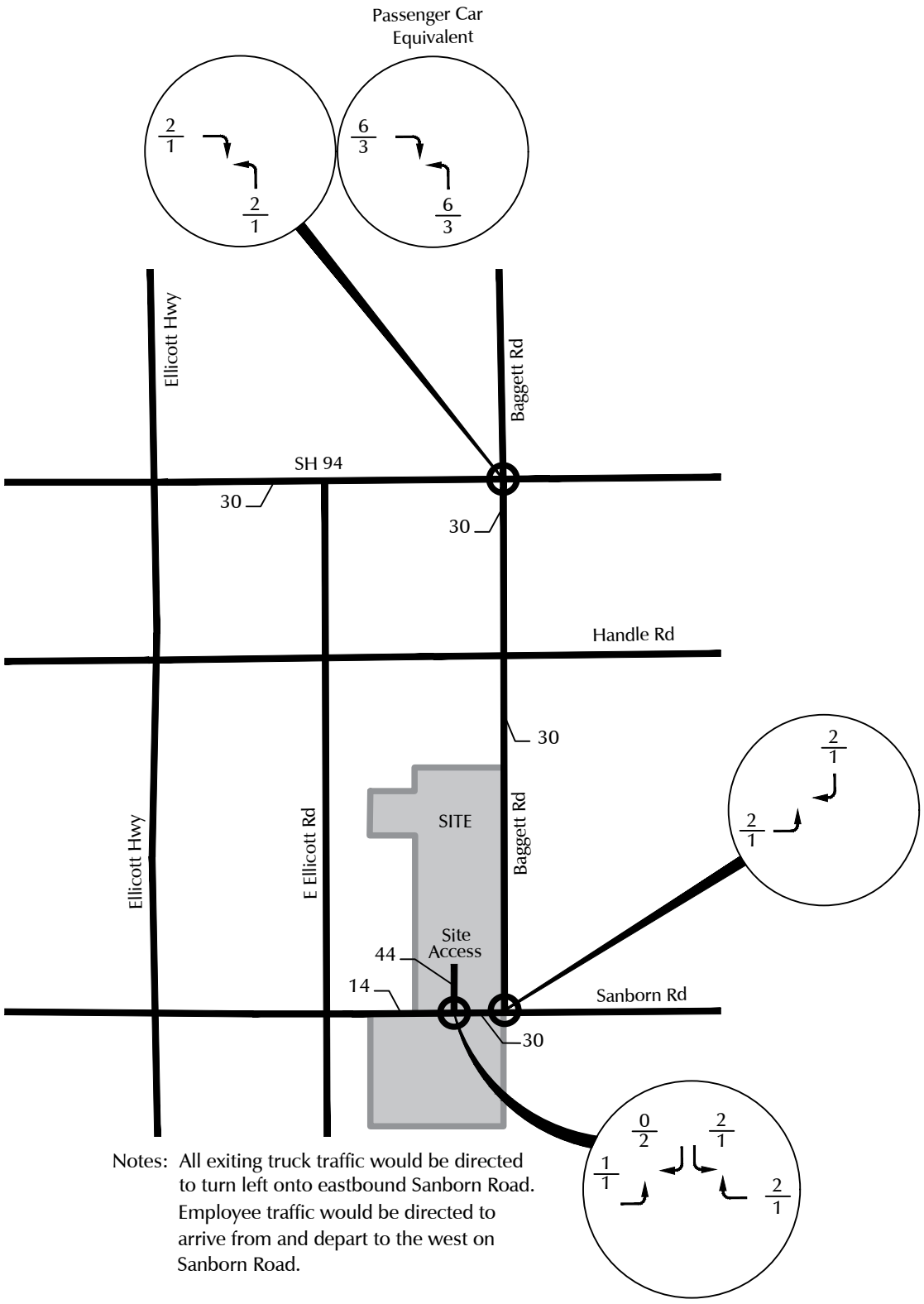
XX% = Peak-Hour Directional Distribution (Trucks)

XX% = Peak-Hour Directional Distribution (Passenger Vehicles)

Figure 7

Estimated Directional Distribution

Ellicott Sand + Gravel (LSC# 194980)



Notes: All exiting truck traffic would be directed to turn left onto eastbound Sanborn Road. Employee traffic would be directed to arrive from and depart to the west on Sanborn Road.

Figure 8

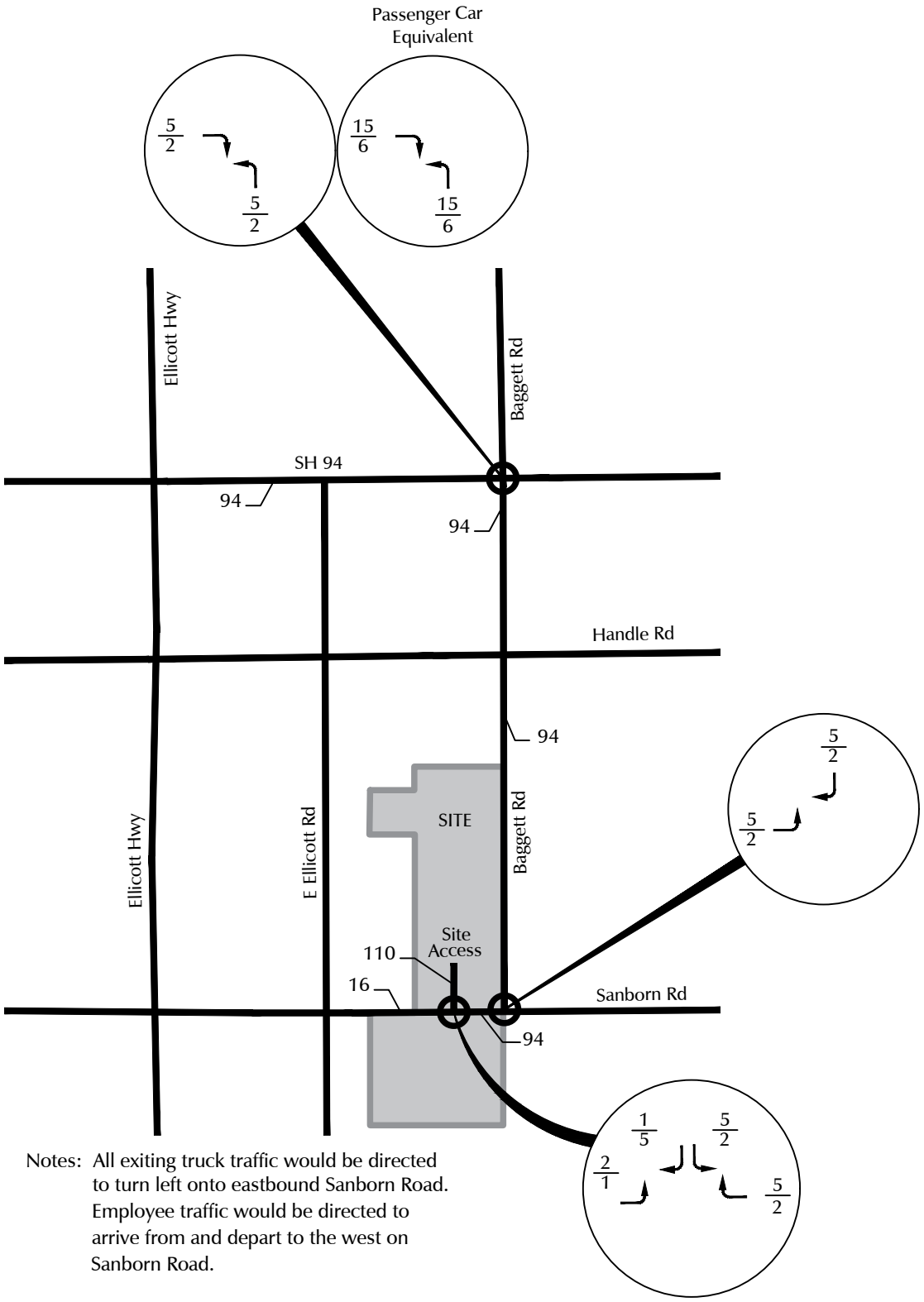
Short-Term Site-Generated Traffic Volumes

Ellicott Sand + Gravel (LSC# 194980)

TRANSPORTATION CONSULTANTS, INC.

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

X,XXX = Average Daily Traffic (vehicles per day)



Notes: All exiting truck traffic would be directed to turn left onto eastbound Sanborn Road. Employee traffic would be directed to arrive from and depart to the west on Sanborn Road.

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

X,XXX = Average Daily Traffic (vehicles per day)

*These represent Average Site-Generated volumes with potential increases over short-term volumes depending on pit operations, demand, etc.

Figure 9

Potential Intermediate/ Long-Term Site-Generated Traffic Volumes*

Ellicott Sand + Gravel (LSC# 194980)

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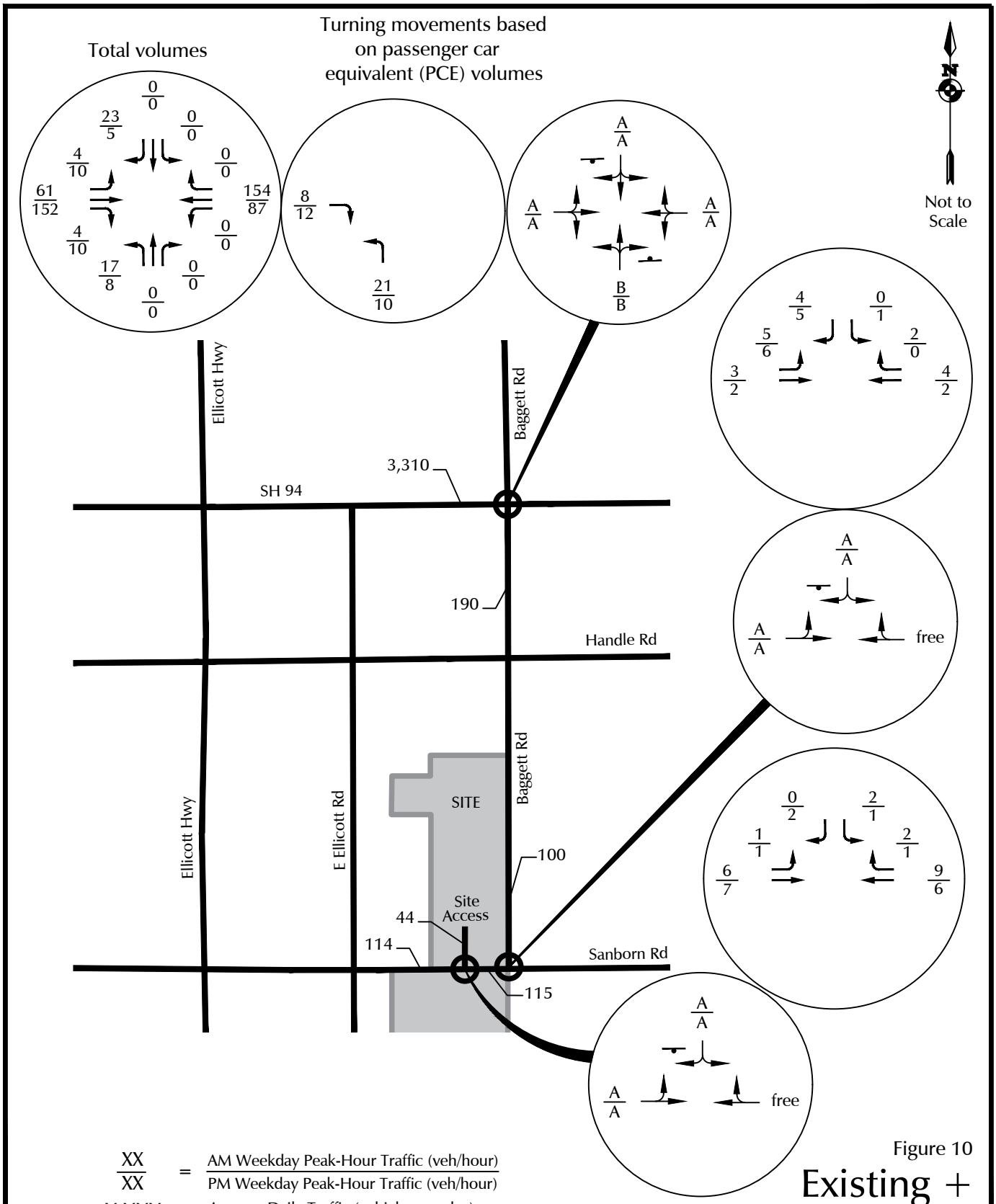

XX / XX = AM Weekday Peak-Hour Traffic (veh/hour) / PM Weekday Peak-Hour Traffic (veh/hour)

X,XXX = Average Daily Traffic (vehicles per day)

X / X = AM Individual Movement Peak-Hour LOS / PM Individual Movement Peak-Hour LOS

X / X = AM Entire Intersection Peak-Hour LOS / PM Entire Intersection Peak-Hour LOS

= Stop Sign

Figure 10

Existing + Short-Term Site-Generated Traffic, Lane Geometry, Traffic Control, and LOS

Ellicott Sand + Gravel (LSC# 194980)

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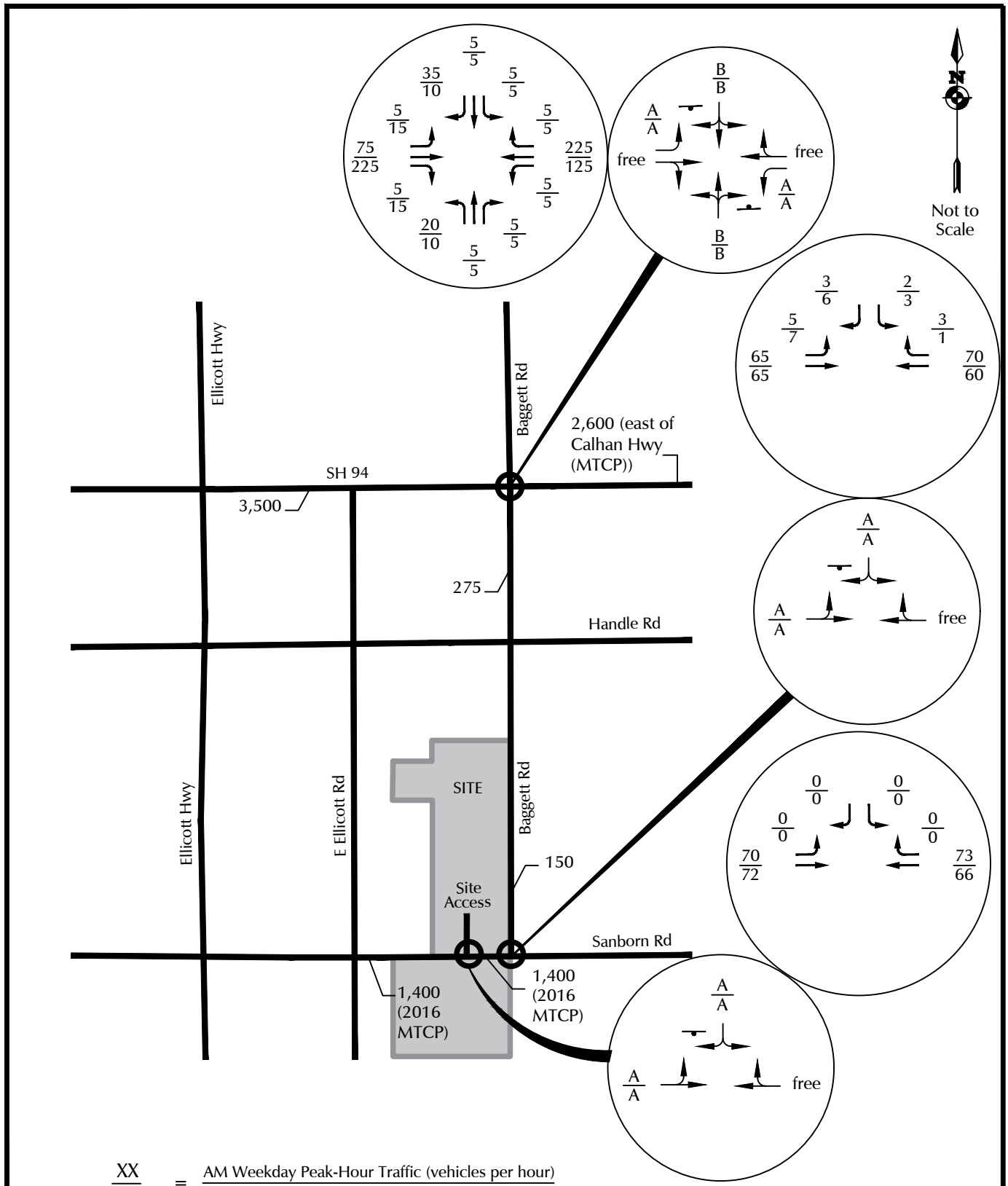

XX / XX = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

X,XXX = Average Daily Traffic (vehicles per day)

X / X = AM Individual Movement Peak-Hour LOS / PM Individual Movement Peak-Hour LOS

X / X = AM Entire Intersection Peak-Hour LOS / PM Entire Intersection Peak-Hour LOS

= Stop Sign

Figure 11

2040 Background Traffic, Lane Geometry, Traffic Control, and LOS

Ellicott Sand + Gravel (LSC# 194980)

TRANSPORTATION CONSULTANTS, INC.

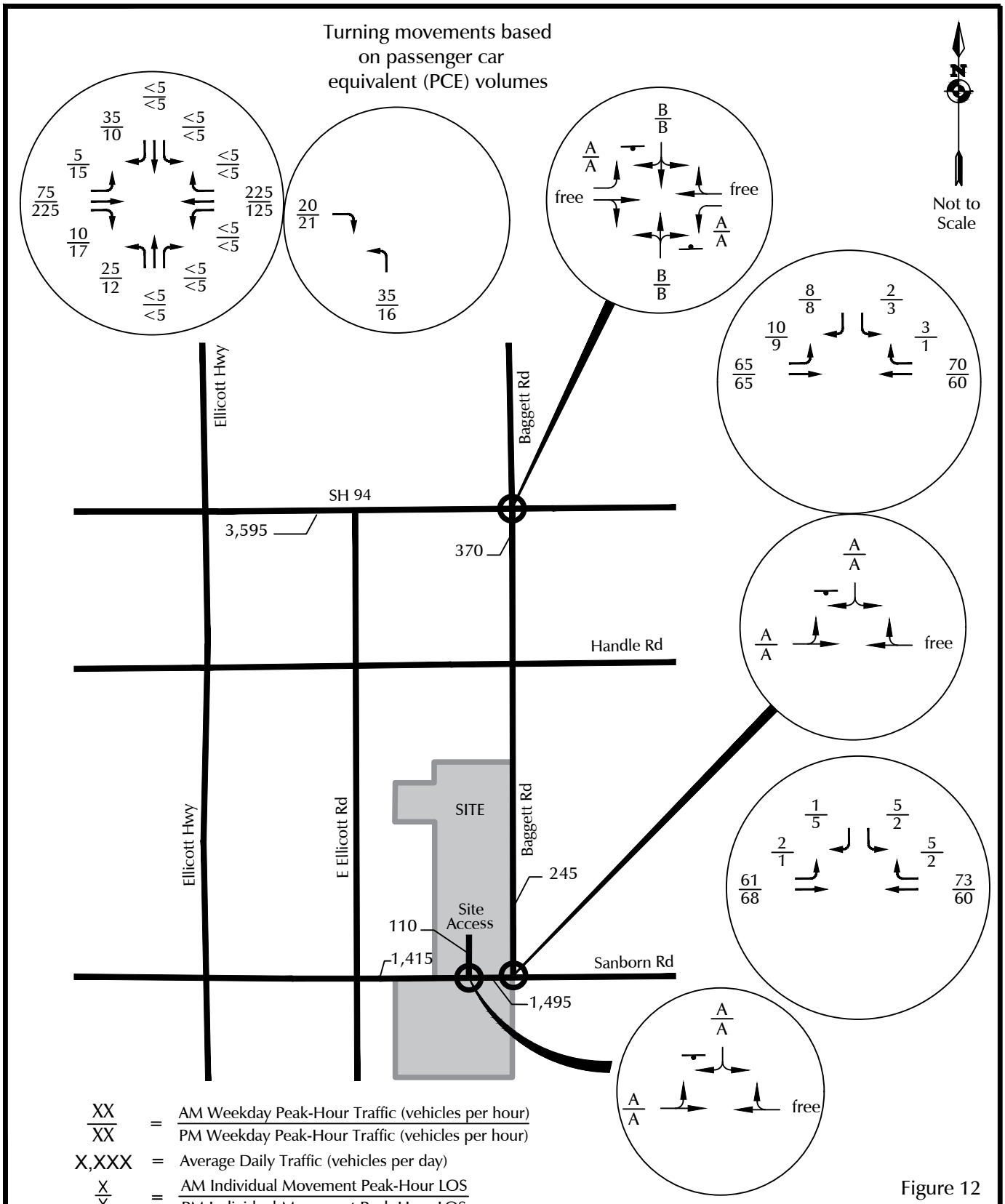

Figure 12

2040 Background + Site Traffic*, Lane Geometry, Traffic Control, and LOS

Ellicott Sand + Gravel (LSC# 194980)

Traffic Counts

TRANSPORTATION
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LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Baggett Rd - Hwy 94 AM
Site Code : 00194980
Start Date : 11/13/2019
Page No : 1

Groups Printed- Unshifted

	Baggett Rd Southbound					Hwy 94 Westbound					Baggett Rd Northbound					Hwy 94 Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
06:30 AM	0	0	2	0	2	0	19	0	0	19	2	0	0	0	2	0	8	1	0	9	32
06:45 AM	0	0	0	0	0	0	21	0	0	21	2	0	0	0	2	1	9	0	0	10	33
Total	0	0	2	0	2	0	40	0	0	40	4	0	0	0	4	1	17	1	0	19	65
07:00 AM	0	0	3	0	3	0	50	0	0	50	8	0	0	0	8	0	13	1	0	14	75
07:15 AM	0	0	9	0	9	0	39	0	0	39	3	0	0	0	3	0	14	1	0	15	66
07:30 AM	0	0	8	0	8	0	31	0	0	31	0	0	0	0	0	0	17	2	0	19	58
07:45 AM	0	0	3	0	3	0	34	0	0	34	4	0	0	0	4	2	17	0	0	19	60
Total	0	0	23	0	23	0	154	0	0	154	15	0	0	0	15	2	61	4	0	67	259
08:00 AM	0	0	0	0	0	0	20	0	0	20	2	0	0	0	2	2	13	1	0	16	38
*** BREAK ***																					
Grand Total	0	0	25	0	25	0	214	0	0	214	21	0	0	0	21	5	91	6	0	102	362
Apprch %	0	0	100	0		0	100	0	0		100	0	0	0		4.9	89.2	5.9	0		
Total %	0	0	6.9	0	6.9	0	59.1	0	0	59.1	5.8	0	0	0	5.8	1.4	25.1	1.7	0	28.2	

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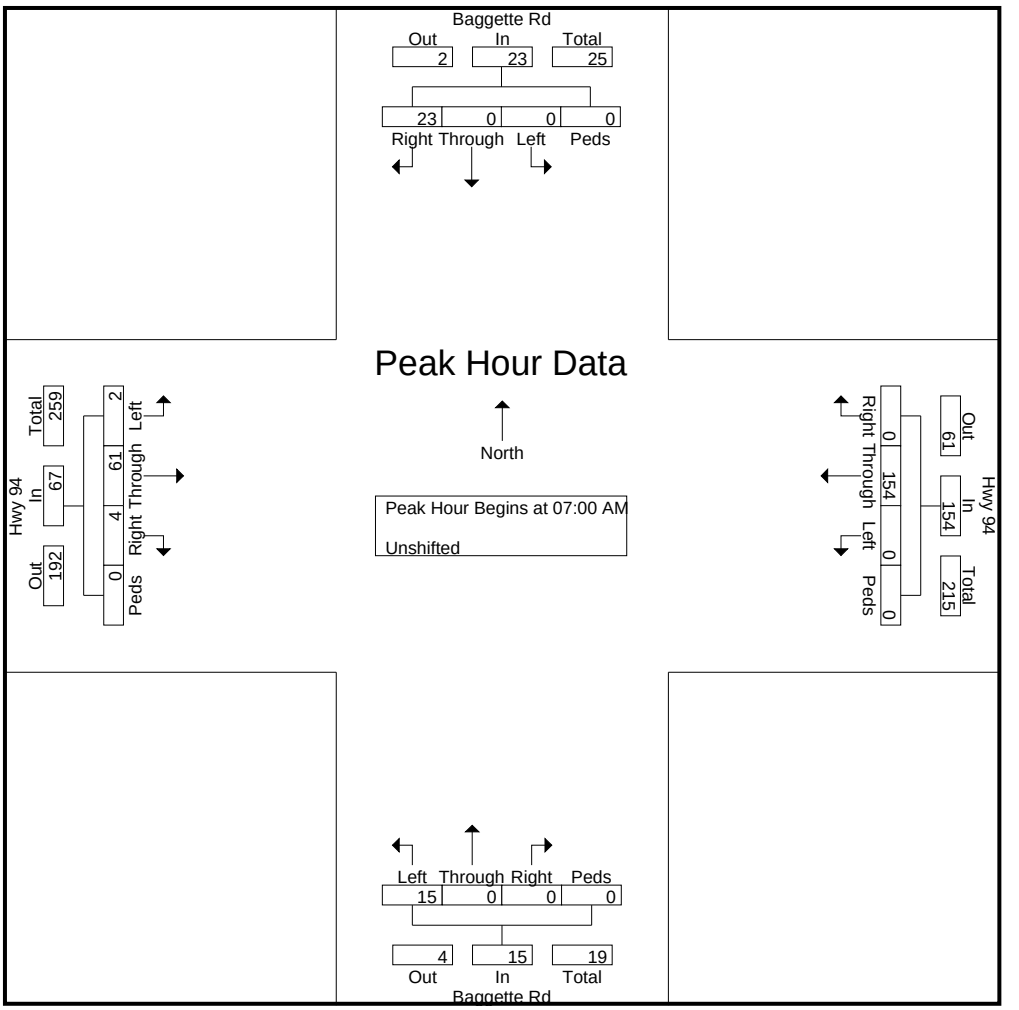
Site Code : 00194980
Start Date : 11/13/2019
Page No : 2

	Baggett Rd Southbound					Hwy 94 Westbound					Baggett Rd Northbound					Hwy 94 Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	3	0	3	0	**50**	0	0	**50**	**8**	0	0	0	**8**	0	13	1	0	14	**75**
07:15 AM	0	0	**9**	0	**9**	0	39	0	0	39	3	0	0	0	3	0	14	1	0	15	66
07:30 AM	0	0	8	0	8	0	31	0	0	31	0	0	0	0	0	0	**17**	**2**	0	**19**	58
07:45 AM	0	0	3	0	3	0	34	0	0	34	4	0	0	0	4	**2**	17	0	0	19	60
Total Volume	0	0	23	0	23	0	154	0	0	154	15	0	0	0	15	2	61	4	0	67	259
% App. Total	0	0	100	0		0	100	0	0		100	0	0	0		3	91	6	0		
PHF	.000	.000	.639	.000	.639	.000	.770	.000	.000	.770	.469	.000	.000	.000	.469	.250	.897	.500	.000	.882	.863



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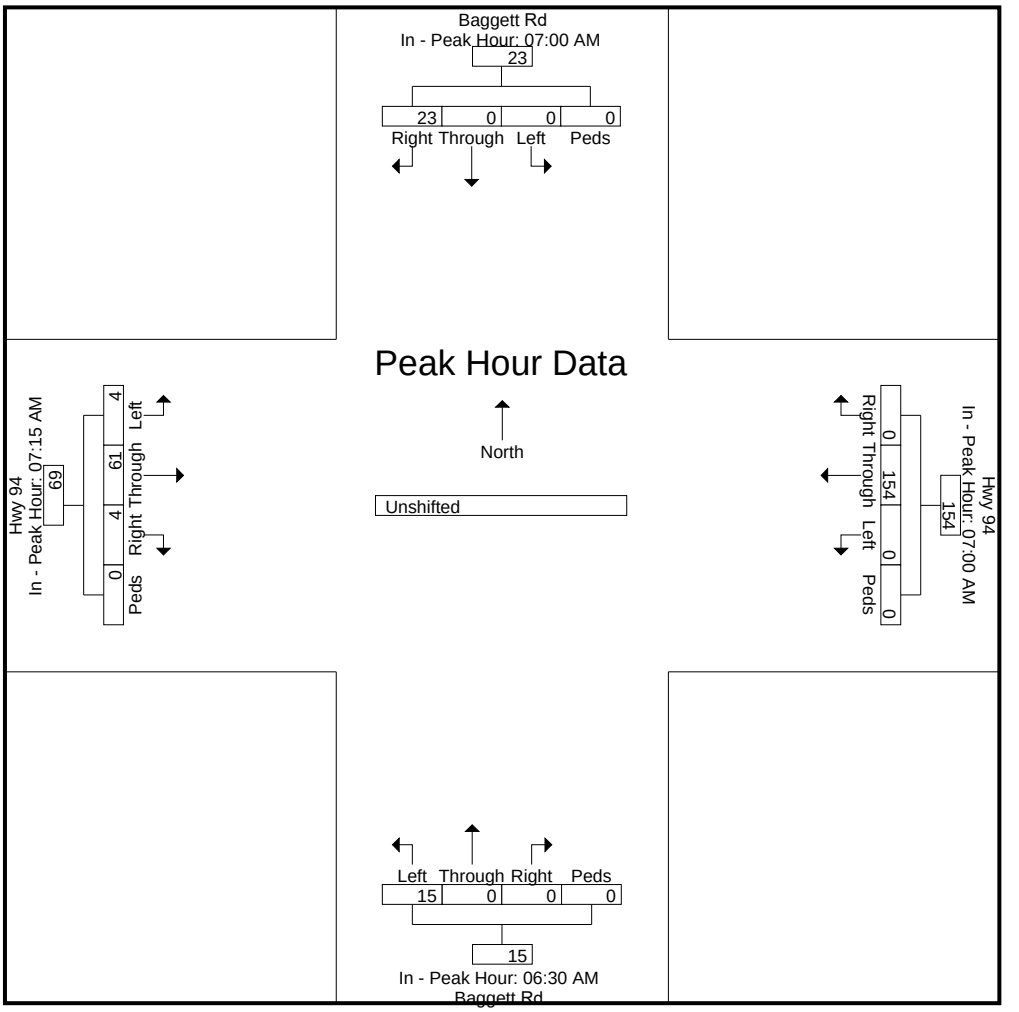
	Baggett Rd Southbound					Hwy 94 Westbound					Baggett Rd Northbound					Hwy 94 Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00 AM					07:00 AM					06:30 AM					07:15 AM					
+0 mins.	0	0	3	0	3	0	**50**	0	0	**50**	2	0	0	0	2	0	14	1	0	15	
+15 mins.	0	0	**9**	0	**9**	0	39	0	0	39	2	0	0	0	2	0	**17**	**2**	0	**19**	
+30 mins.	0	0	8	0	8	0	31	0	0	31	**8**	0	0	0	**8**	**2**	17	0	0	19	
+45 mins.	0	0	3	0	3	0	34	0	0	34	3	0	0	0	3	2	13	1	0	16	
Total Volume	0	0	23	0	23	0	154	0	0	154	15	0	0	0	15	4	61	4	0	69	
% App. Total	0	0	100	0		0	100	0	0		100	0	0	0		5.8	88.4	5.8	0		
PHF	.000	.000	.639	.000	.639	.000	.770	.000	.000	.770	.469	.000	.000	.000	.469	.500	.897	.500	.000	.908	



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File Name : Baggett Rd - Hwy 94 PM
Site Code : 00194980
Start Date : 12/11/2019
Page No : 1

Groups Printed- Unshifted

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Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
04:00 PM	0	1	1	0	2	0	20	0	0	20	0	0	0	0	0	3	25	1	0	29	51
04:15 PM	0	0	2	0	2	0	28	0	0	28	3	0	0	0	3	0	31	5	0	36	69
04:30 PM	0	0	1	0	1	0	22	0	0	22	0	0	0	0	0	7	35	2	0	44	67
04:45 PM	0	0	1	0	1	0	15	0	0	15	3	0	0	0	3	2	37	1	0	40	59
Total	0	1	5	0	6	0	85	0	0	85	6	0	0	0	6	12	128	9	0	149	246
05:00 PM	0	0	1	0	1	0	22	0	0	22	1	0	0	0	1	1	49	1	0	51	75
05:15 PM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	5	41	6	0	52	62
05:30 PM	0	0	1	0	1	0	19	0	0	19	0	0	0	0	0	6	39	5	0	50	70
05:45 PM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	3	37	0	0	40	57
Total	0	0	2	0	2	0	68	0	0	68	1	0	0	0	1	15	166	12	0	193	264
Grand Total	0	1	7	0	8	0	153	0	0	153	7	0	0	0	7	27	294	21	0	342	510
Apprch %	0	12.5	87.5	0		0	100	0	0		100	0	0	0		7.9	86	6.1	0		
Total %	0	0.2	1.4	0	1.6	0	30	0	0	30	1.4	0	0	0	1.4	5.3	57.6	4.1	0	67.1	

LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
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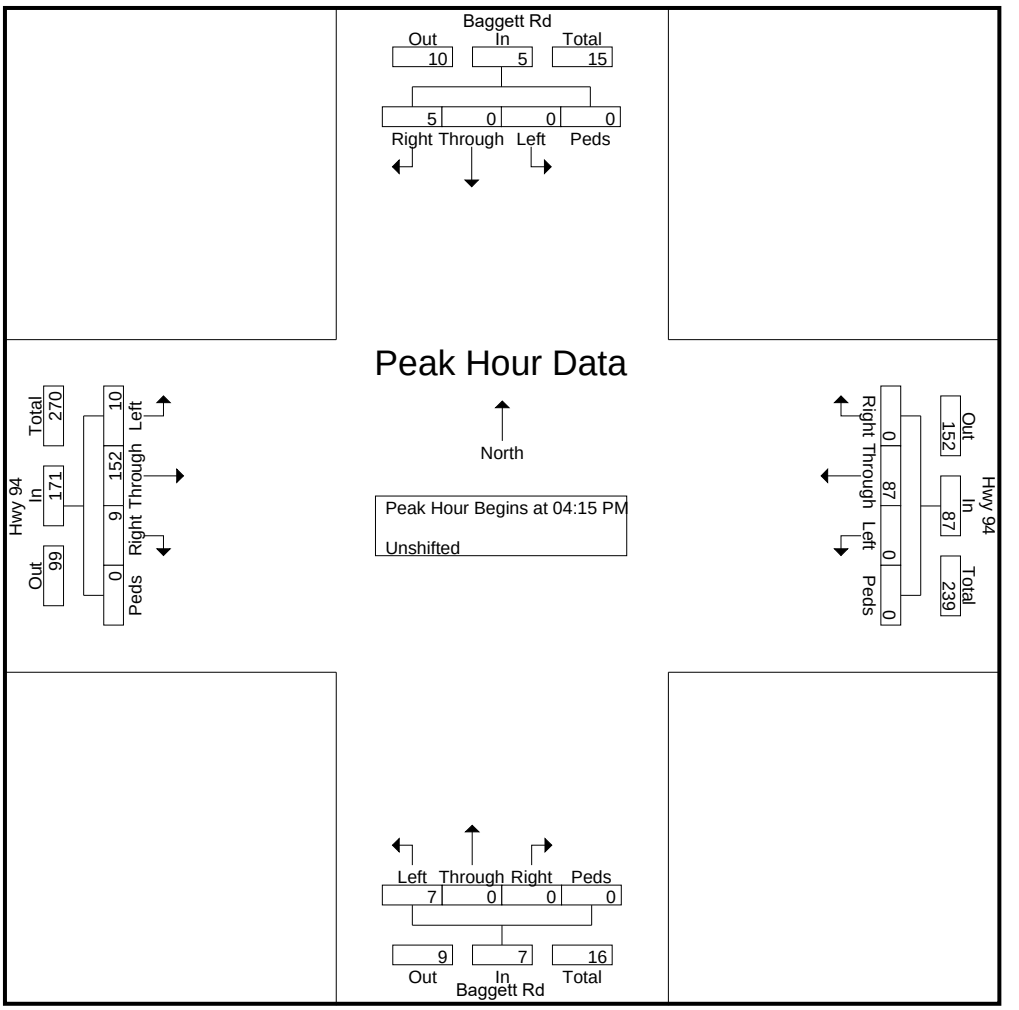
719-633-2868

File Name : Baggett Rd - Hwy 94 PM
Site Code : 00194980
Start Date : 12/11/2019
Page No : 2

	Baggett Rd Southbound					Hwy 94 Westbound					Baggett Rd Northbound					Hwy 94 Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**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 04:15 PM																					
04:15 PM	0	0	**2**	0	**2**	0	**28**	0	0	**28**	**3**	0	0	0	**3**	0	31	**5**	0	36	69
04:30 PM	0	0	1	0	1	0	22	0	0	22	0	0	0	0	0	**7**	35	2	0	44	67
04:45 PM	0	0	1	0	1	0	15	0	0	15	3	0	0	0	3	2	37	1	0	40	59
05:00 PM	0	0	1	0	1	0	22	0	0	22	1	0	0	0	1	1	**49**	1	0	**51**	**75**
Total Volume	0	0	5	0	5	0	87	0	0	87	7	0	0	0	7	10	152	9	0	171	270
% App. Total	0	0	100	0		0	100	0	0		100	0	0	0		5.8	88.9	5.3	0		
PHF	.000	.000	.625	.000	.625	.000	.777	.000	.000	.777	.583	.000	.000	.000	.583	.357	.776	.450	.000	.838	.900

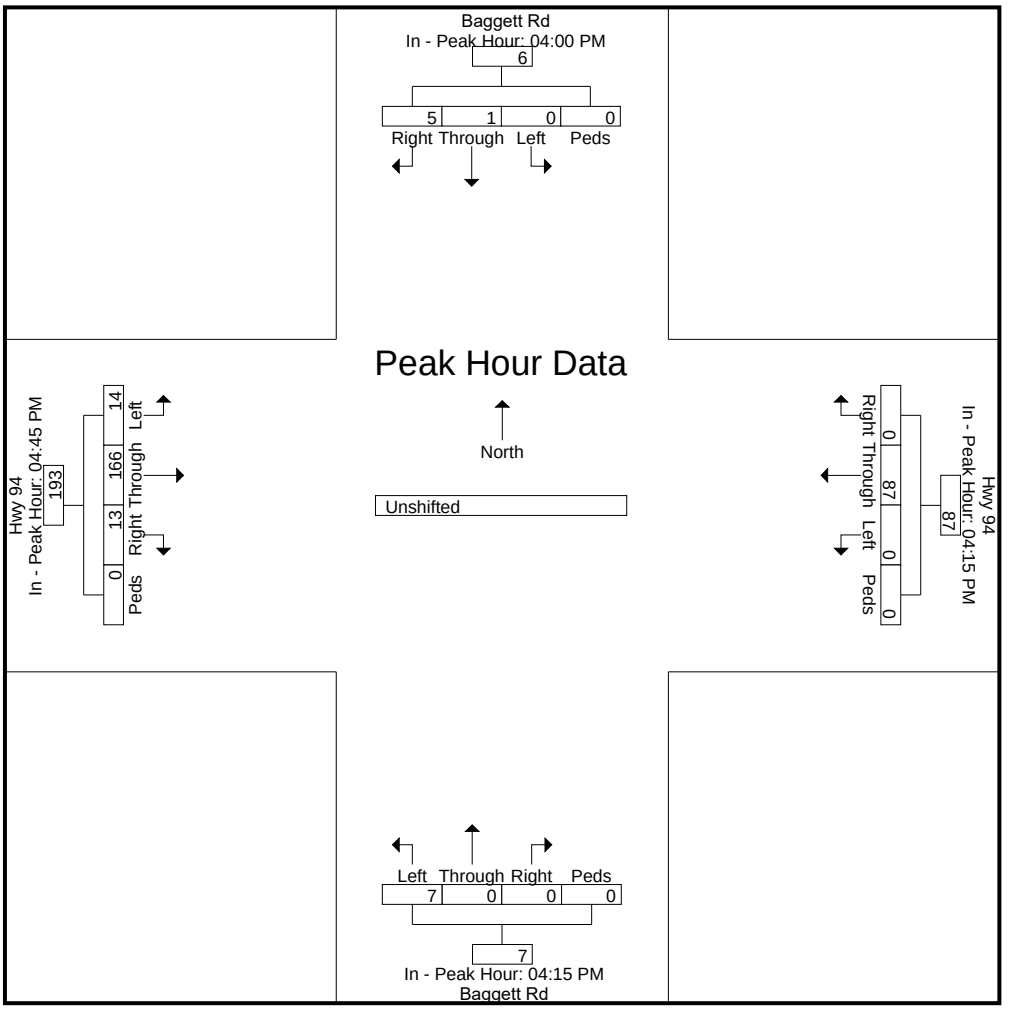


LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Baggett Rd - Hwy 94 PM
Site Code : 00194980
Start Date : 12/11/2019
Page No : 3

	Baggett Rd Southbound					Hwy 94 Westbound					Baggett Rd Northbound					Hwy 94 Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:00 PM					04:15 PM					04:15 PM					04:45 PM					
+0 mins.	0	**1**	1	0	**2**	0	**28**	0	0	**28**	**3**	0	0	0	**3**	2	37	1	0	40	
+15 mins.	0	0	**2**	0	2	0	22	0	0	22	0	0	0	0	0	1	**49**	1	0	51	
+30 mins.	0	0	1	0	1	0	15	0	0	15	3	0	0	0	3	5	41	**6**	0	**52**	
+45 mins.	0	0	1	0	1	0	22	0	0	22	1	0	0	0	1	**6**	39	5	0	50	
Total Volume	0	1	5	0	6	0	87	0	0	87	7	0	0	0	7	14	166	13	0	193	
% App. Total	0	16.7	83.3	0		0	100	0	0		100	0	0	0		7.3	86	6.7	0		
PHF	.000	.250	.625	.000	.750	.000	.777	.000	.000	.777	.583	.000	.000	.000	.583	.583	.847	.542	.000	.928	



LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Baggett Rd - Sanborn Rd AM
Site Code : 00194980
Start Date : 12/11/2019

Groups Printed- Unshifted

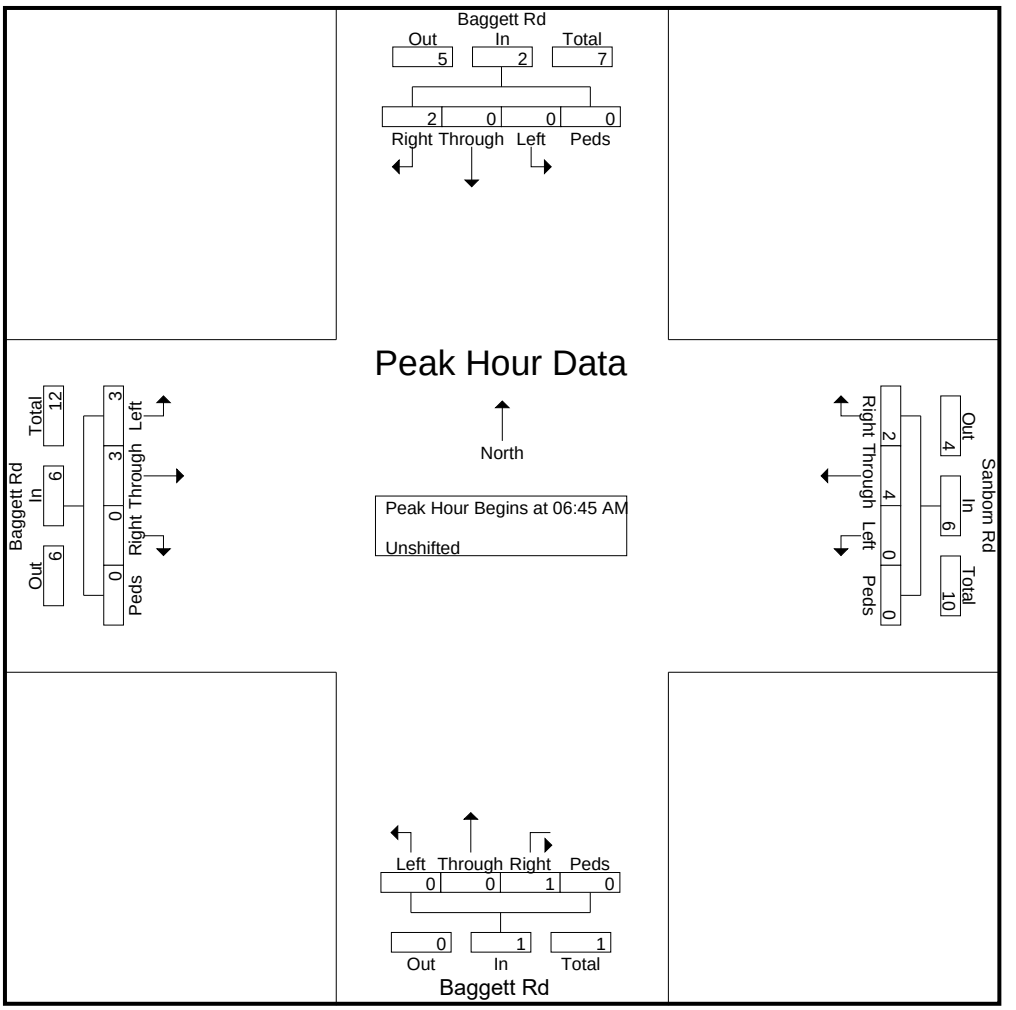
	Baggett Rd Southbound					Sanborn Rd Westbound					Baggett Rd Northbound					Sanborn Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
06:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
06:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	2	0	0	0	2	6
Total	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	3	0	0	0	3	8
07:00 AM	0	0	2	0	2	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
07:30 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	3
*** BREAK ***																					
Total	0	0	2	0	2	0	1	2	0	3	0	0	0	0	0	1	3	0	0	4	9
*** BREAK ***																					
Grand Total	0	0	2	0	2	0	5	2	0	7	0	0	1	0	1	4	3	0	0	7	17
Apprch %	0	0	100	0		0	71.4	28.6	0		0	0	100	0		57.1	42.9	0	0		
Total %	0	0	11.8	0	11.8	0	29.4	11.8	0	41.2	0	0	5.9	0	5.9	23.5	17.6	0	0	41.2	

LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Baggett Rd - Sanborn Rd AM
Site Code : 00194980
Start Date : 12/11/2019
Page No : 2

	Baggett Rd Southbound					Sanborn Rd Westbound					Baggett Rd Northbound					Sanborn Rd Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Int. Total**
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:45 AM																					
06:45 AM	0	0	0	0	0	0	**3**	0	0	**3**	0	0	**1**	0	**1**	**2**	0	0	0	**2**	**6**
07:00 AM	0	0	**2**	0	**2**	0	0	**1**	0	1	0	0	0	0	0	0	**1**	0	0	1	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
07:30 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	3
Total Volume	0	0	2	0	2	0	4	2	0	6	0	0	1	0	1	3	3	0	0	6	15
% App. Total	0	0	100	0		0	66.7	33.3	0		0	0	100	0		50	50	0	0		
PHF	.000	.000	.250	.000	.250	.000	.333	.500	.000	.500	.000	.000	.250	.000	.250	.375	.750	.000	.000	.750	.625

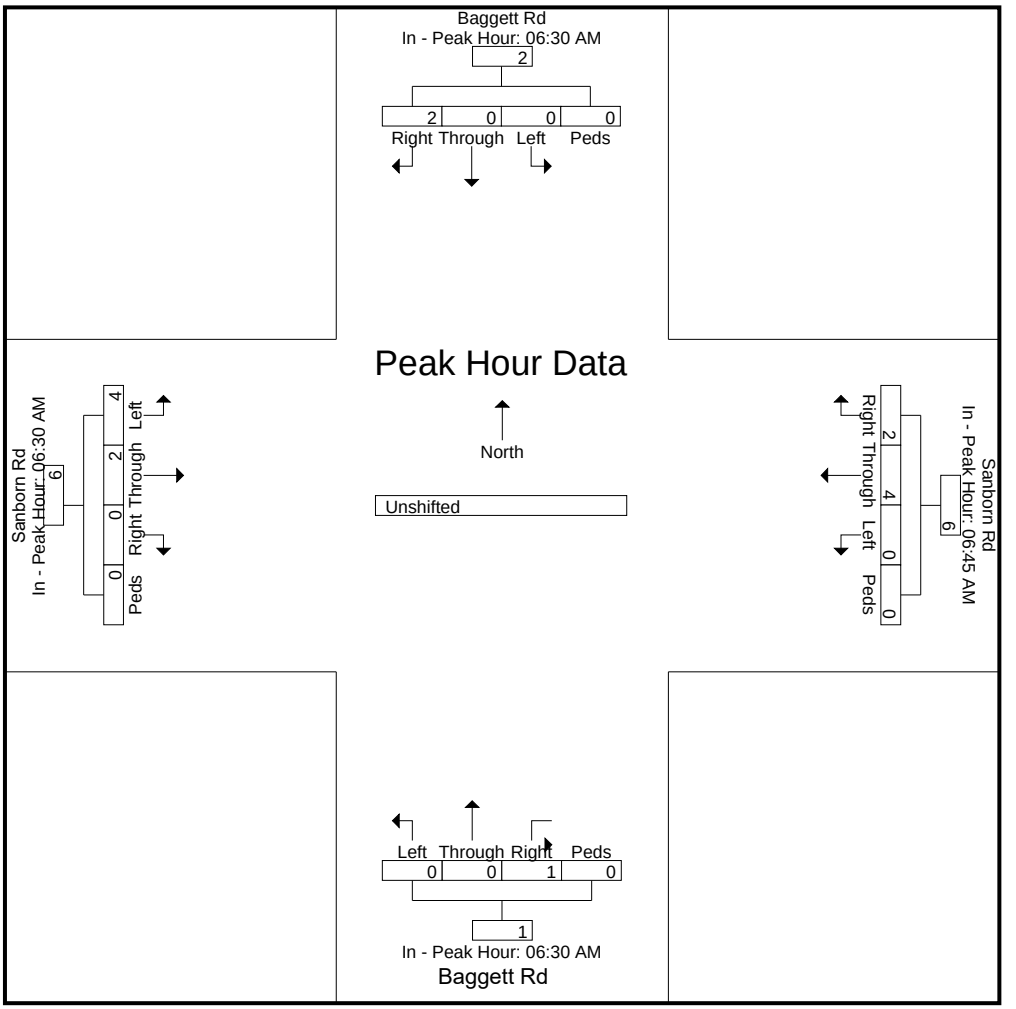


LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Baggett Rd - Sanborn Rd AM
Site Code : 00194980
Start Date : 12/11/2019
Page No : 3

	Baggett Rd Southbound					Sanborn Rd Westbound					Baggett Rd Northbound					Sanborn Rd Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	06:30 AM					06:45 AM					06:30 AM					06:30 AM					
+0 mins.	0	0	0	0	0	0	**3**	0	0	**3**	0	0	0	0	0	1	0	0	0	1	
+15 mins.	0	0	0	0	0	0	0	**1**	0	1	0	0	**1**	0	**1**	**2**	0	0	0	**2**	
+30 mins.	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	1	
+45 mins.	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	1	0	0	2	
Total Volume	0	0	2	0	2	0	4	2	0	6	0	0	1	0	1	4	2	0	0	6	
% App. Total	0	0	100	0		0	66.7	33.3	0		0	0	100	0		66.7	33.3	0	0		
PHF	.000	.000	.250	.000	.250	.000	.333	.500	.000	.500	.000	.000	.250	.000	.250	.500	.500	.000	.000	.750	



LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Baggett Rd - Sanborn Rd PM
Site Code : 00194980
Start Date : 12/18/2019
Page No : 1

Groups Printed- Unshifted

	Baggett Rd Southbound					Sanborn Rd Westbound					Baggett Rd Northbound					Sanborn Rd Eastbound					
Start Time	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Left**	**Through**	**Right**	**Peds**	**App. Total**	**Int. Total**
04:00 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	3
04:30 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	5
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	4
Total	1	0	4	0	5	0	2	0	0	2	0	0	0	0	0	5	2	0	0	7	14
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
05:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
05:45 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	4
Total	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	3	3	0	0	6	10
Grand Total	1	0	7	0	8	0	3	0	0	3	0	0	0	0	0	8	5	0	0	13	24
Apprch %	12.5	0	87.5	0		0	100	0	0		0	0	0	0		61.5	38.5	0	0		
Total %	4.2	0	29.2	0	33.3	0	12.5	0	0	12.5	0	0	0	0	0	33.3	20.8	0	0	54.2	

LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
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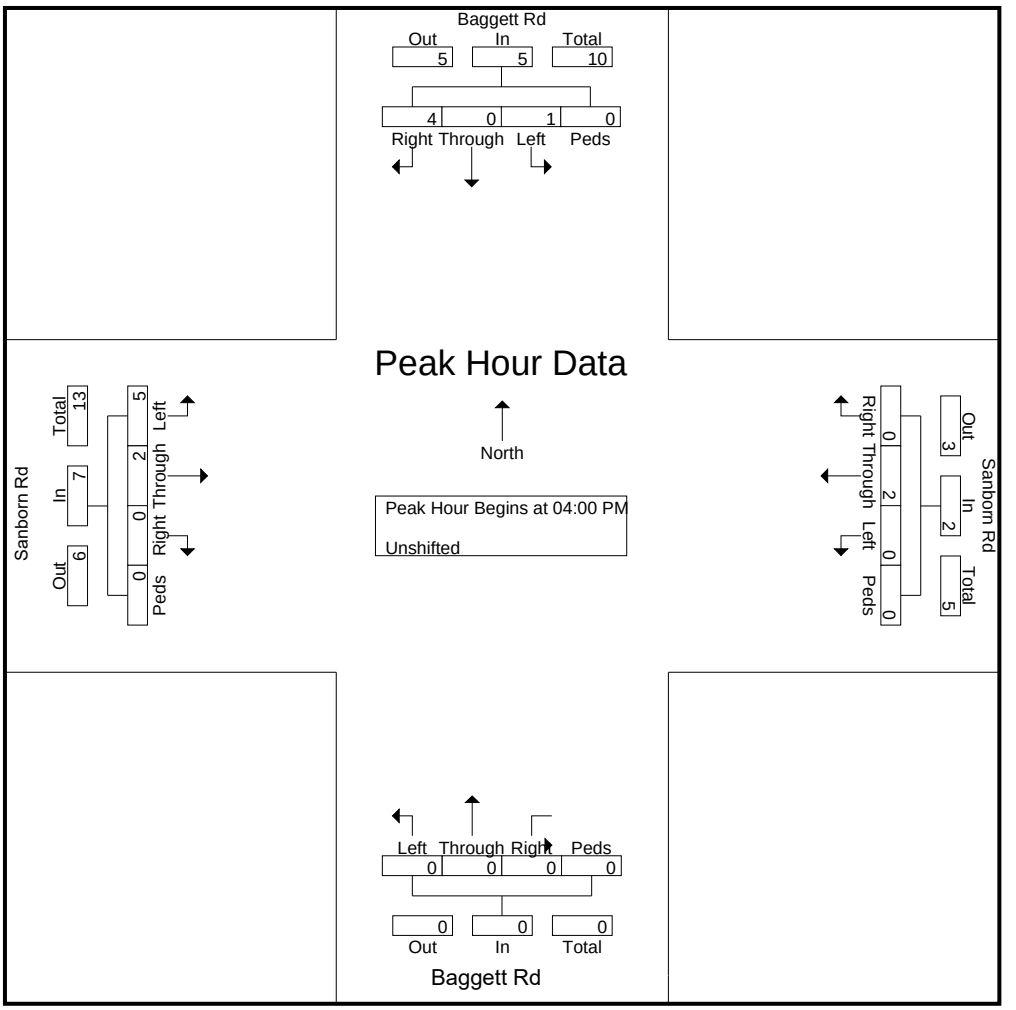
719-633-2868

File Name : Baggett Rd - Sanborn Rd PM
Site Code : 00194980
Start Date : 12/18/2019
Page No : 2

	Baggett Rd Southbound					Sanborn Rd Westbound					Baggett Rd Northbound					Sanborn Rd Eastbound					
Start Time	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**Right**	**Peds**	App. Total	**Left**	Through	**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 04:00 PM																					
04:00 PM	**1**	0	1	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	**2**	0	0	0	2	3
04:30 PM	0	0	**2**	0	2	0	**1**	0	0	**1**	0	0	0	0	0	1	**1**	0	0	2	**5**
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	1	0	0	**3**	4
Total Volume	1	0	4	0	5	0	2	0	0	2	0	0	0	0	0	5	2	0	0	7	14
% App. Total	20	0	80	0		0	100	0	0		0	0	0	0		71.4	28.6	0	0		
PHF	.250	.000	.500	.000	.625	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.625	.500	.000	.000	.583	.700

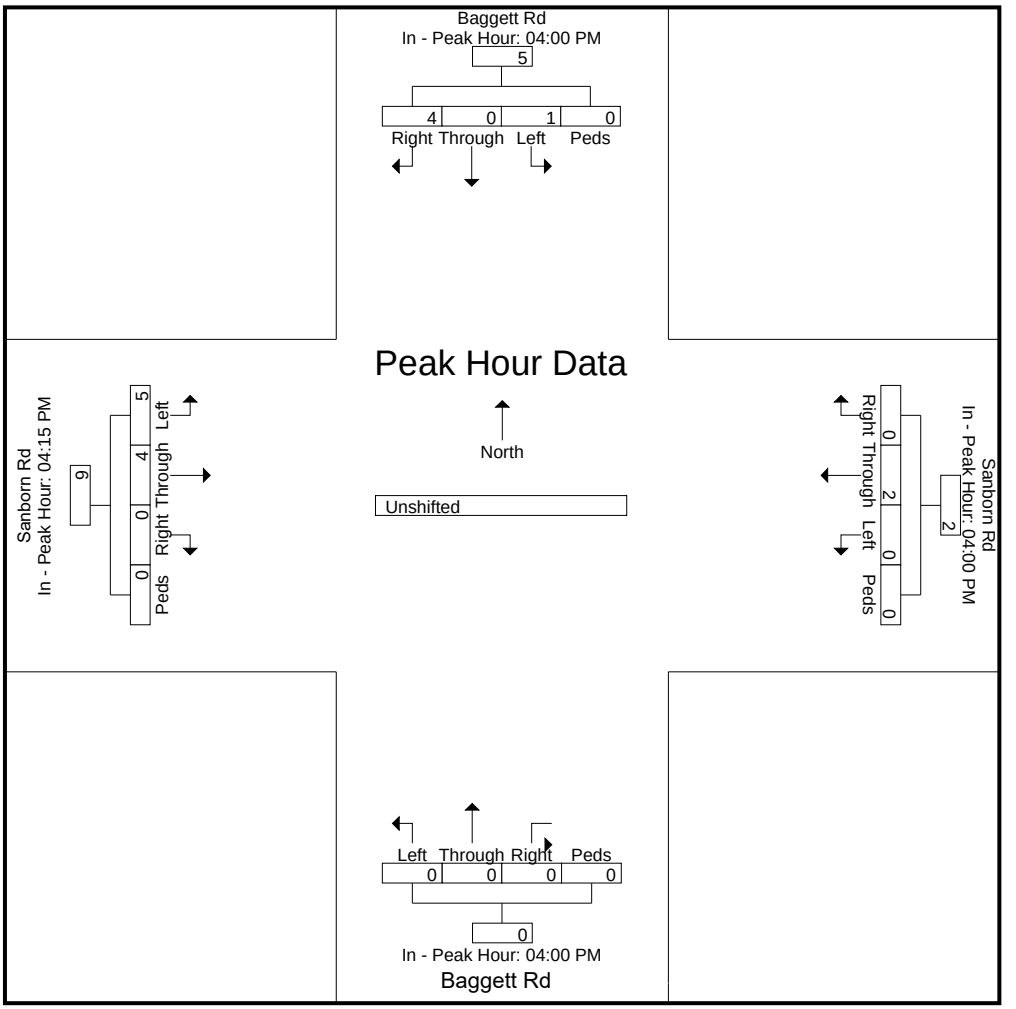


LSC Transportation Consultants, Inc.

2504 E Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Baggett Rd - Sanborn Rd PM
Site Code : 00194980
Start Date : 12/18/2019
Page No : 3

	Baggett Rd Southbound					Sanborn Rd Westbound					Baggett Rd Northbound					Sanborn Rd Eastbound					
Start Time	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:00 PM					04:00 PM					04:00 PM					04:15 PM					
+0 mins.	**1**	0	1	0	**2**	0	0	0	0	0	0	0	0	0	0	**2**	0	0	0	2	
+15 mins.	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	
+30 mins.	0	0	**2**	0	2	0	**1**	0	0	**1**	0	0	0	0	0	2	1	0	0	**3**	
+45 mins.	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	**2**	0	0	2	
Total Volume	1	0	4	0	5	0	2	0	0	2	0	0	0	0	0	5	4	0	0	9	
% App. Total	20	0	80	0		0	100	0	0		0	0	0	0		55.6	44.4	0	0		
PHF	.250	.000	.500	.000	.625	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.625	.500	.000	.000	.750	



Traffic Counts (Tube Counts)

TRANSPORTATION
CONSULTANTS, INC.

COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: BAGGETT ROAD N-O SANBORN ROAD
City: ELICCOTT
County: EL PASO
Direction: NORTH/SOUTH

Site Code: 212920
Station ID: 212920

Start	02-Feb-21	NORTHBOUND		SOUTHBOUND		Combined		03-Feb	NORTHBOUND		SOUTHBOUND		Combined	
Time	Tue	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Wed	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		0	2	0	1	0	3		0	0	0	***1***	0	1
12:15		0	0	0	0	0	0		0	0	0	***1***	0	***1***
12:30		0	0	0	0	0	0		0	0	0	***0***	0	***0***
12:45		0	1	0	1	0	2		0	0	0	***1***	0	***1***
01:00		0	3	0	0	0	3		0	***2***	0	1	0	***3***
01:15		0	0	0	0	0	0		0	***0***	0	0	0	0
01:30		0	2	0	0	0	2		0	***0***	0	1	0	1
01:45		0	0	0	2	0	2		0	***1***	0	0	0	1
02:00		0	2	0	0	0	2		0	0	0	0	0	0
02:15		0	0	0	0	0	0		0	*	0	*	0	*
02:30		0	1	0	1	0	2		0	*	0	*	0	*
02:45		0	1	0	0	0	1		0	*	0	*	0	*
03:00		0	0	0	1	0	1		0	*	0	*	0	*
03:15		0	0	0	***1***	0	1		0	*	0	*	0	*
03:30		0	1	0	***0***	0	1		0	*	0	*	0	*
03:45		0	***1***	0	***1***	0	2		0	*	0	*	0	*
04:00		0	***2***	0	***3***	0	***5***		0	*	0	*	0	*
04:15		0	***1***	0	0	0	***1***		0	*	0	*	0	*
04:30		0	***4***	0	0	0	***4***		0	*	0	*	0	*
04:45		0	1	0	2	0	***3***		0	*	0	*	0	*
05:00		0	1	0	1	0	2		0	*	0	*	0	*
05:15		0	2	0	1	0	3		0	*	0	*	0	*
05:30		0	1	0	0	0	1		0	*	0	*	0	*
05:45		0	1	0	0	0	1		1	*	***1***	*	2	*
06:00		1	0	1	0	2	0		0	*	***0***	*	0	*
06:15		0	0	0	0	0	0		***0***	*	***0***	*	***0***	*
06:30		0	0	0	0	0	0		***0***	*	***1***	*	***1***	*
06:45		0	0	1	0	1	0		***2***	*	0	*	***2***	*
07:00		2	0	2	0	***4***	0		***1***	*	1	*	***2***	*
07:15		0	1	***2***	1	***2***	2		0	*	0	*	0	*
07:30		0	1	***0***	1	***0***	2		0	*	0	*	0	*
07:45		***0***	0	***2***	0	***2***	0		1	*	0	*	1	*
08:00		***0***	0	***3***	0	3	0		0	*	1	*	1	*
08:15		***2***	0	0	0	2	0		1	*	0	*	1	*
08:30		***1***	0	0	0	1	0		0	*	1	*	1	*
08:45		0	0	0	0	0	0		0	*	0	*	0	*
09:00		0	0	0	0	0	0		0	*	0	*	0	*
09:15		0	0	0	0	0	0		1	*	0	*	1	*
09:30		1	0	0	0	1	0		0	*	1	*	1	*
09:45		1	0	1	0	2	0		1	*	0	*	1	*
10:00		1	0	0	0	1	0		0	*	0	*	0	*
10:15		0	1	0	0	0	1		1	*	1	*	2	*
10:30		0	0	0	0	0	0		0	*	0	*	0	*
10:45		0	0	0	0	0	0		0	*	0	*	0	*
11:00		1	0	0	0	1	0		0	*	1	*	1	*
11:15		0	0	1	0	1	0		0	*	0	*	0	*
11:30		0	0	0	0	0	0		0	*	0	*	0	*
11:45		0	0	0	0	0	0		0	*	0	*	0	*
Total		10	30	13	17	23	47		9	3	8	5	17	8
Day Total			40		30		70			12		13		25
% Total		14.3%	42.9%	18.6%	24.3%				36.0%	12.0%	32.0%	20.0%		
Peak	-	07:45	03:45	07:15	03:15	07:00	04:00	-	06:15	01:00	05:45	12:00	06:15	00:15
Vol.	-	3	8	7	5	8	13	-	3	3	2	3	5	5
P.H.F.		0.375	0.500	0.583	0.417	0.500	0.650		0.375	0.375	0.500	0.750	0.625	0.417

ADT	ADT 48	AADT 48

COUNTER MEASURES INC.

1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: BAGGETT ROAD S-O SR 94
City: ELICCOTT
County: EL PASO
Direction: NORTH/SOUTH

Site Code: 212910
Station ID: 212910

Start Time	02-Feb-21 Tue	NORTHBOUND A.M.	NORTHBOUND P.M.	SOUTHBOUND A.M.	SOUTHBOUND P.M.	Combined A.M.	Combined P.M.	03-Feb Wed	NORTHBOUND A.M.	NORTHBOUND P.M.	SOUTHBOUND A.M.	SOUTHBOUND P.M.	Combined A.M.	Combined P.M.
12:00		0	2	0	2	0	4		0	0	0	1	0	1
12:15		0	1	0	0	0	1		0	0	0	1	0	1
12:30		0	1	1	1	1	2		0	0	0	3	0	3
12:45		0	0	0	1	0	1		0	2	0	1	0	3
01:00		0	3	0	2	0	5		0	0	0	2	0	2
01:15		0	1	0	1	0	2		0	0	0	0	0	0
01:30		0	0	0	1	0	1		0	0	0	0	0	0
01:45		0	2	0	2	0	4		0	0	0	1	0	1
02:00		0	1	0	0	0	1		0	0	0	0	0	0
02:15		0	3	0	0	0	3		0	*	0	*	0	*
02:30		0	1	0	2	0	3		0	*	0	*	0	*
02:45		0	2	0	1	0	3		0	*	0	*	0	*
03:00		0	2	0	3	0	5		0	*	0	*	0	*
03:15		0	0	0	1	0	1		0	*	0	*	0	*
03:30		0	1	0	2	0	3		0	*	0	*	0	*
03:45		1	2	0	2	1	4		1	*	0	*	1	*
04:00		2	1	0	2	2	3		0	*	0	*	0	*
04:15		0	1	0	2	0	3		0	*	0	*	0	*
04:30		2	3	0	1	2	4		1	*	0	*	1	*
04:45		1	0	0	5	1	5		0	*	0	*	0	*
05:00		1	0	0	3	1	3		1	*	0	*	1	*
05:15		1	1	0	1	1	2		1	*	0	*	1	*
05:30		4	1	0	2	4	3		3	*	0	*	3	*
05:45		1	0	0	2	1	2		2	*	0	*	2	*
06:00		2	0	0	2	2	2		3	*	0	*	3	*
06:15		4	0	0	2	4	2		1	*	0	*	1	*
06:30		3	0	1	2	4	2		5	*	2	*	7	*
06:45		7	0	1	1	8	1		4	*	0	*	4	*
07:00		1	0	1	1	2	1		2	*	0	*	2	*
07:15		2	1	0	1	2	2		0	*	0	*	0	*
07:30		0	1	0	0	0	1		2	*	0	*	2	*
07:45		0	0	0	1	0	1		2	*	0	*	2	*
08:00		1	0	0	2	1	2		1	*	0	*	1	*
08:15		3	0	0	1	3	1		2	*	0	*	2	*
08:30		0	0	0	1	0	1		3	*	0	*	3	*
08:45		0	0	0	0	0	0		0	*	2	*	2	*
09:00		1	0	0	0	1	0		1	*	0	*	1	*
09:15		1	0	1	1	2	1		2	*	0	*	2	*
09:30		0	0	2	0	2	0		0	*	4	*	4	*
09:45		4	1	0	1	4	2		0	*	2	*	2	*
10:00		0	0	1	1	1	1		3	*	1	*	4	*
10:15		2	0	1	0	3	0		0	*	2	*	2	*
10:30		1	1	2	0	3	1		4	*	0	*	4	*
10:45		0	0	1	0	1	0		0	*	2	*	2	*
11:00		0	0	1	0	1	0		0	*	1	*	1	*
11:15		2	0	0	0	2	0		0	*	2	*	2	*
11:30		1	0	1	0	2	0		4	*	0	*	4	*
11:45		2	0	0	1	2	1		0	*	1	*	1	*
Total		50	33	14	57	64	90		48	2	19	9	67	11
Day Total		83		71		154			50		28		78	
% Total		32.5%	21.4%	9.1%	37.0%				61.5%	2.6%	24.4%	11.5%		
Peak	-	06:00	02:15	10:00	04:15	06:00	04:00	-	06:00	12:00	09:30	00:15	06:00	00:15
Vol.	-	16	8	5	11	18	15	-	13	2	9	7	15	9
P.H.F.		0.571	0.667	0.625	0.550	0.563	0.750		0.650	0.250	0.563	0.583	0.536	0.750

ADT	ADT 162	AADT 162

COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: SANBORN ROAD W-O BAGGETT ROAD
City: ELLICOTT
County: EL PASO
Direction: EAST/WEST

Site Code: 212908
Station ID: 212908

Start Time	02-Feb-21 Tue	EASTBOUND A.M.	EASTBOUND P.M.	WESTBOUND A.M.	WESTBOUND P.M.	Combined A.M.	Combined P.M.	03-Feb Wed	EASTBOUND A.M.	EASTBOUND P.M.	WESTBOUND A.M.	WESTBOUND P.M.	Combined A.M.	Combined P.M.
12:00		0	3	0	0	0	3		0	0	0	1	0	1
12:15		0	1	0	0	0	1		0	2	0	1	0	3
12:30		0	0	0	0	0	0		0	1	0	1	0	2
12:45		0	1	0	1	0	2		0	1	0	3	0	4
01:00		0	0	0	1	0	1		0	1	0	3	0	4
01:15		0	0	0	0	0	0		0	0	0	0	0	0
01:30		0	0	0	0	0	0		0	0	0	0	0	0
01:45		0	0	0	0	0	0		0	0	0	1	0	1
02:00		0	2	0	2	0	4		0	0	0	0	0	0
02:15		0	1	0	0	0	1		0	*	0	*	0	*
02:30		0	0	0	0	0	0		0	*	0	*	0	*
02:45		0	1	0	0	0	1		0	*	0	*	0	*
03:00		0	1	0	0	0	1		0	*	0	*	0	*
03:15		0	0	0	0	0	0		0	*	0	*	0	*
03:30		0	4	0	1	0	5		0	*	0	*	0	*
03:45		0	2	0	1	0	3		0	*	0	*	0	*
04:00		0	2	0	2	0	4		0	*	1	*	1	*
04:15		0	1	1	0	1	1		0	*	0	*	0	*
04:30		0	5	0	0	0	5		0	*	1	*	1	*
04:45		0	1	1	1	1	2		0	*	0	*	0	*
05:00		0	1	1	1	1	2		0	*	1	*	1	*
05:15		0	1	0	0	0	1		0	*	1	*	1	*
05:30		0	2	0	0	0	2		0	*	0	*	0	*
05:45		0	1	0	1	0	2		1	*	0	*	1	*
06:00		1	1	2	0	3	1		0	*	1	*	1	*
06:15		0	0	1	1	1	1		0	*	0	*	0	*
06:30		1	1	0	0	1	1		0	*	0	*	0	*
06:45		1	1	0	0	1	1		1	*	0	*	1	*
07:00		0	0	1	0	1	0		1	*	1	*	2	*
07:15		0	0	2	0	2	0		1	*	1	*	2	*
07:30		0	1	0	1	0	2		0	*	2	*	2	*
07:45		0	1	2	0	2	1		0	*	2	*	2	*
08:00		1	0	1	0	2	0		0	*	1	*	1	*
08:15		1	0	1	0	2	0		0	*	1	*	1	*
08:30		0	0	1	0	1	0		0	*	2	*	2	*
08:45		0	0	0	0	0	0		1	*	1	*	2	*
09:00		0	0	1	0	1	0		0	*	3	*	3	*
09:15		0	0	1	0	1	0		1	*	0	*	1	*
09:30		1	0	0	0	1	0		0	*	1	*	1	*
09:45		1	0	0	0	1	0		1	*	1	*	2	*
10:00		0	0	1	0	1	0		0	*	0	*	0	*
10:15		0	1	0	0	0	1		1	*	0	*	1	*
10:30		1	0	0	0	1	0		0	*	1	*	1	*
10:45		1	0	1	0	2	0		0	*	0	*	0	*
11:00		1	0	0	0	1	0		0	*	1	*	1	*
11:15		1	0	2	0	3	0		0	*	1	*	1	*
11:30		0	0	0	0	0	0		1	*	0	*	1	*
11:45		0	0	1	0	1	0		1	*	0	*	1	*
Total		11	36	21	13	32	49		10	5	24	10	34	15
Day Total		47		34		81			15		34		49	
% Total		13.6%	44.4%	25.9%	16.0%				20.4%	10.2%	49.0%	20.4%		
Peak	-	10:30	03:45	07:00	03:15	07:45	03:30	-	06:30	00:15	08:15	00:15	07:00	00:15
Vol.	-	4	10	5	4	7	13	-	3	5	7	8	8	13
P.H.F.		1.000	0.500	0.625	0.500	0.875	0.650		0.750	0.625	0.583	0.667	1.000	0.813

ADT	ADT 75	AADT 75

Levels of Service

TRANSPORTATION
CONSULTANTS, INC.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	61	2	0	154	0	15	0	0	0	0	23
Future Vol, veh/h	4	61	2	0	154	0	15	0	0	0	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	87	87	87	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	73	2	0	177	0	19	0	0	0	0	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	177	0	0	75	0	0	276	261	74	261	262	177
Stage 1	-	-	-	-	-	-	84	84	-	177	177	-
Stage 2	-	-	-	-	-	-	192	177	-	84	85	-
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	1399	-	-	1524	-	-	676	644	988	692	643	866
Stage 1	-	-	-	-	-	-	924	825	-	825	753	-
Stage 2	-	-	-	-	-	-	810	753	-	924	824	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1399	-	-	1524	-	-	651	641	988	690	640	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	651	641	-	690	640	-
Stage 1	-	-	-	-	-	-	920	822	-	822	753	-
Stage 2	-	-	-	-	-	-	782	753	-	920	821	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	10.7	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	651	1399	-	-	1524	-	-	866
HCM Lane V/C Ratio	0.03	0.003	-	-	-	-	-	0.034
HCM Control Delay (s)	10.7	7.6	0	-	0	-	-	9.3
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	3	4	2	0	2
Future Vol, veh/h	3	3	4	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	5	3	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	8	0	-	0	19	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	12	-
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	-	-	-	998	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1612	-	-	-	996	1075
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	1075
HCM Lane V/C Ratio	0.002	-	-	-	0.002
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	152	9	0	87	0	7	0	0	0	0	5
Future Vol, veh/h	10	152	9	0	87	0	7	0	0	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	83	83	83	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	175	10	0	105	0	9	0	0	0	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	185	0	0	310	307	180	307	312	105
Stage 1	-	-	-	-	-	-	202	202	-	105	105	-
Stage 2	-	-	-	-	-	-	108	105	-	202	207	-
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	1486	-	-	1390	-	-	642	607	863	645	603	949
Stage 1	-	-	-	-	-	-	800	734	-	901	808	-
Stage 2	-	-	-	-	-	-	897	808	-	800	731	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1390	-	-	634	602	863	641	598	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	634	602	-	641	598	-
Stage 1	-	-	-	-	-	-	794	728	-	894	808	-
Stage 2	-	-	-	-	-	-	891	808	-	794	725	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	10.8	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	634	1486	-	-	1390	-	-	949
HCM Lane V/C Ratio	0.014	0.008	-	-	-	-	-	0.007
HCM Control Delay (s)	10.8	7.4	0	-	0	-	-	8.8
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	2	2	0	1	4
Future Vol, veh/h	5	2	2	0	1	4
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	3	3	0	1	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	3	0	-	0	18	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	15	-
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	1619	-	-	-	1000	1081
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1008	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1619	-	-	-	996	1081
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1008	-

Approach	EB	WB	SB
HCM Control Delay, s	5.2	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1619	-	-	-	1063
HCM Lane V/C Ratio	0.004	-	-	-	0.006
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	61	4	0	154	0	17	0	0	0	0	23
Future Vol, veh/h	4	61	4	0	154	0	17	0	0	0	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	87	87	87	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	73	5	0	177	0	22	0	0	0	0	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	177	0	0	78	0	0	278	263	76	263	265	177
Stage 1	-	-	-	-	-	-	86	86	-	177	177	-
Stage 2	-	-	-	-	-	-	192	177	-	86	88	-
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	1399	-	-	1520	-	-	674	642	985	690	640	866
Stage 1	-	-	-	-	-	-	922	824	-	825	753	-
Stage 2	-	-	-	-	-	-	810	753	-	922	822	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1399	-	-	1520	-	-	649	639	985	688	637	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	649	639	-	688	637	-
Stage 1	-	-	-	-	-	-	918	821	-	822	753	-
Stage 2	-	-	-	-	-	-	782	753	-	918	819	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	10.7	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	649	1399	-	-	1520	-	-	866
HCM Lane V/C Ratio	0.034	0.003	-	-	-	-	-	0.034
HCM Control Delay (s)	10.7	7.6	0	-	0	-	-	9.3
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	3	4	2	0	4
Future Vol, veh/h	5	3	4	2	0	4
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	4	5	3	0	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	8	0	-	0	23	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	16	-
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	-	-	-	993	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1612	-	-	-	989	1075
Mov Cap-2 Maneuver	-	-	-	-	989	-
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	1075
HCM Lane V/C Ratio	0.004	-	-	-	0.005
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	6	9	2	2	0
Future Vol, veh/h	1	6	9	2	2	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	75	75	50	50	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	8	18	4	2	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	22	0	-	0	30	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	10	-
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	1593	-	-	-	984	1058
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	983	1058
Mov Cap-2 Maneuver	-	-	-	-	983	-
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	1013	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1593	-	-	-	983
HCM Lane V/C Ratio	0.001	-	-	-	0.002
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	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	152	10	0	87	0	8	0	0	0	0	5
Future Vol, veh/h	10	152	10	0	87	0	8	0	0	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	83	83	83	78	78	78	78	78	78
Heavy Vehicles, %	6	6	6	6	6	6	2	2	2	2	2	2
Mvmt Flow	11	175	11	0	105	0	10	0	0	0	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	186	0	0	311	308	181	308	313	105
Stage 1	-	-	-	-	-	-	203	203	-	105	105	-
Stage 2	-	-	-	-	-	-	108	105	-	203	208	-
Critical Hdwy	4.16	-	-	4.16	-	-	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	2.254	-	-	2.254	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1462	-	-	1365	-	-	642	606	862	644	602	949
Stage 1	-	-	-	-	-	-	799	733	-	901	808	-
Stage 2	-	-	-	-	-	-	897	808	-	799	730	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1462	-	-	1365	-	-	634	601	862	640	597	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	634	601	-	640	597	-
Stage 1	-	-	-	-	-	-	793	727	-	894	808	-
Stage 2	-	-	-	-	-	-	891	808	-	793	724	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	10.8	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	634	1462	-	-	1365	-	-	949
HCM Lane V/C Ratio	0.016	0.008	-	-	-	-	-	0.007
HCM Control Delay (s)	10.8	7.5	0	-	0	-	-	8.8
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	2	2	0	1	5
Future Vol, veh/h	6	2	2	0	1	5
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	3	3	0	1	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	3	0	-	0	22	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	19	-
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	1619	-	-	-	995	1081
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1619	-	-	-	990	1081
Mov Cap-2 Maneuver	-	-	-	-	990	-
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	1004	-

Approach	EB	WB	SB
HCM Control Delay, s	5.4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1619	-	-	-	1065
HCM Lane V/C Ratio	0.005	-	-	-	0.007
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	7	6	1	1	2
Future Vol, veh/h	1	7	6	1	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	9	8	1	1	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	9	0	-	0	20	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	11	-
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	1611	-	-	-	997	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1611	-	-	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1012	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1046
HCM Lane V/C Ratio	0.001	-	-	-	0.004
HCM Control Delay (s)	7.2	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	75	5	5	225	5	20	5	5	5	5	35
Future Vol, veh/h	5	75	5	5	225	5	20	5	5	5	5	35
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	-	-	500	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	87	87	87	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	90	6	6	259	6	26	6	6	6	6	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	265	0	0	96	0	0	405	382	93	385	382	262
Stage 1	-	-	-	-	-	-	105	105	-	274	274	-
Stage 2	-	-	-	-	-	-	300	277	-	111	108	-
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	1299	-	-	1498	-	-	556	551	964	573	551	777
Stage 1	-	-	-	-	-	-	901	808	-	732	683	-
Stage 2	-	-	-	-	-	-	709	681	-	894	806	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1299	-	-	1498	-	-	516	546	964	560	546	777
Mov Cap-2 Maneuver	-	-	-	-	-	-	516	546	-	560	546	-
Stage 1	-	-	-	-	-	-	896	804	-	728	680	-
Stage 2	-	-	-	-	-	-	659	678	-	877	802	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	11.8	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	565	1299	-	-	1498	-	-	713
HCM Lane V/C Ratio	0.068	0.005	-	-	0.004	-	-	0.081
HCM Control Delay (s)	11.8	7.8	-	-	7.4	-	-	10.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	65	70	3	2	3
Future Vol, veh/h	5	65	70	3	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	78	84	4	3	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	176	86
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	90	-
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	1508	-	-	-	814	973
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	934	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1508	-	-	-	811	973
Mov Cap-2 Maneuver	-	-	-	-	811	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	934	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1508	-	-	-	901
HCM Lane V/C Ratio	0.004	-	-	-	0.007
HCM Control Delay (s)	7.4	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	225	15	5	125	5	10	5	5	5	5	10
Future Vol, veh/h	15	225	15	5	125	5	10	5	5	5	5	10
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	-	-	500	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	87	87	87	78	78	78	78	78	78
Heavy Vehicles, %	6	6	6	6	6	6	2	2	2	2	2	2
Mvmt Flow	16	245	16	6	144	6	13	6	6	6	6	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	150	0	0	261	0	0	454	447	253	450	452	147
Stage 1	-	-	-	-	-	-	285	285	-	159	159	-
Stage 2	-	-	-	-	-	-	169	162	-	291	293	-
Critical Hdwy	4.16	-	-	4.16	-	-	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	2.254	-	-	2.254	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1407	-	-	1280	-	-	516	506	786	519	503	900
Stage 1	-	-	-	-	-	-	722	676	-	843	766	-
Stage 2	-	-	-	-	-	-	833	764	-	717	670	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1407	-	-	1280	-	-	497	498	786	503	495	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	497	498	-	503	495	-
Stage 1	-	-	-	-	-	-	714	669	-	834	762	-
Stage 2	-	-	-	-	-	-	810	760	-	696	663	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	11.9	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	548	1407	-	-	1280	-	-	642
HCM Lane V/C Ratio	0.047	0.012	-	-	0.004	-	-	0.04
HCM Control Delay (s)	11.9	7.6	-	-	7.8	-	-	10.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	65	60	1	3	6
Future Vol, veh/h	7	65	60	1	3	6
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	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	78	72	1	4	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	73	0	-	0	167	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	94	-
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	1527	-	-	-	823	989
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	930	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1527	-	-	-	819	989
Mov Cap-2 Maneuver	-	-	-	-	819	-
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	930	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1527	-	-	-	925
HCM Lane V/C Ratio	0.006	-	-	-	0.012
HCM Control Delay (s)	7.4	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	75	10	5	225	5	26	5	5	5	5	35
Future Vol, veh/h	5	75	10	5	225	5	26	5	5	5	5	35
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	-	-	500	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	87	87	87	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	90	12	6	259	6	33	6	6	6	6	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	265	0	0	102	0	0	408	385	96	388	388	262
Stage 1	-	-	-	-	-	-	108	108	-	274	274	-
Stage 2	-	-	-	-	-	-	300	277	-	114	114	-
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	1299	-	-	1490	-	-	554	549	960	571	547	777
Stage 1	-	-	-	-	-	-	897	806	-	732	683	-
Stage 2	-	-	-	-	-	-	709	681	-	891	801	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1299	-	-	1490	-	-	514	544	960	558	542	777
Mov Cap-2 Maneuver	-	-	-	-	-	-	514	544	-	558	542	-
Stage 1	-	-	-	-	-	-	893	802	-	728	680	-
Stage 2	-	-	-	-	-	-	659	678	-	874	797	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.2	12.1	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	554	1299	-	-	1490	-	-	712
HCM Lane V/C Ratio	0.083	0.005	-	-	0.004	-	-	0.081
HCM Control Delay (s)	12.1	7.8	-	-	7.4	-	-	10.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	65	70	1	2	8
Future Vol, veh/h	10	65	70	1	2	8
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	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	78	84	1	3	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	85	0	-	0	187	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	102	-
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	1512	-	-	-	802	974
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	922	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	796	974
Mov Cap-2 Maneuver	-	-	-	-	796	-
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	922	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	-	932
HCM Lane V/C Ratio	0.008	-	-	-	0.014
HCM Control Delay (s)	7.4	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	61	73	5	5	1
Future Vol, veh/h	2	61	73	5	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	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	73	88	6	6	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	94	0	-	0	168	91
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	77	-
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	1500	-	-	-	822	967
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	946	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1500	-	-	-	821	967
Mov Cap-2 Maneuver	-	-	-	-	821	-
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	946	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1500	-	-	-	842
HCM Lane V/C Ratio	0.002	-	-	-	0.009
HCM Control Delay (s)	7.4	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	225	18	5	125	5	13	5	5	5	5	10
Future Vol, veh/h	15	225	18	5	125	5	13	5	5	5	5	10
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	-	-	500	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	83	83	83	78	78	78	78	78	78
Heavy Vehicles, %	6	6	6	6	6	6	2	2	2	2	2	2
Mvmt Flow	16	245	20	6	151	6	17	6	6	6	6	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	157	0	0	265	0	0	463	456	255	459	463	154
Stage 1	-	-	-	-	-	-	287	287	-	166	166	-
Stage 2	-	-	-	-	-	-	176	169	-	293	297	-
Critical Hdwy	4.16	-	-	4.16	-	-	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	2.254	-	-	2.254	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1399	-	-	1276	-	-	509	501	784	512	496	892
Stage 1	-	-	-	-	-	-	720	674	-	836	761	-
Stage 2	-	-	-	-	-	-	826	759	-	715	668	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1399	-	-	1276	-	-	491	493	784	497	488	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	491	493	-	497	488	-
Stage 1	-	-	-	-	-	-	712	667	-	827	757	-
Stage 2	-	-	-	-	-	-	803	755	-	694	661	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	12.1	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	535	1399	-	-	1276	-	-	635
HCM Lane V/C Ratio	0.055	0.012	-	-	0.005	-	-	0.04
HCM Control Delay (s)	12.1	7.6	-	-	7.8	-	-	10.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	65	60	1	3	8
Future Vol, veh/h	9	65	60	1	3	8
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	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	78	72	1	4	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	73	0	-	0	173	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	100	-
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	1527	-	-	-	817	989
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	924	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1527	-	-	-	810	989
Mov Cap-2 Maneuver	-	-	-	-	810	-
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	924	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1527	-	-	-	933
HCM Lane V/C Ratio	0.007	-	-	-	0.015
HCM Control Delay (s)	7.4	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	68	60	2	2	5
Future Vol, veh/h	1	68	60	2	2	5
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	83	83	83	83	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	82	72	2	3	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	74	0	-	0	157	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	84	-
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	1526	-	-	-	834	989
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	939	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1526	-	-	-	833	989
Mov Cap-2 Maneuver	-	-	-	-	833	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	939	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1526	-	-	-	939
HCM Lane V/C Ratio	0.001	-	-	-	0.01
HCM Control Delay (s)	7.4	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Appendix A

Pueblo County Pit Trip Generation Data

TRANSPORTATION
CONSULTANTS, INC.

Hourly Period		Pueblo Pit Data - Average Number of Entering Trucks		
Start Time	End Time	Average	July	August
5:00	6:00	1.3	1.6	0.9
6:00	7:00	2.1	2.1	2.2
7:00	8:00	2.0	1.9	2.1
8:00	9:00	1.1	0.6	1.6
9:00	10:00	1.9	1.4	2.3
10:00	11:00	0.8	0.6	1.1
11:00	12:00	2.0	1.1	2.8
12:00	13:00	1.1	0.9	1.2
13:00	14:00	2.1	1.7	2.4
14:00	15:00	0.8	0.6	1.0

Hourly Period		Pueblo Pit Data - Average Number of Trucks Entering and Exiting		
Start Time	End Time	Average	July	August
5:00	6:00	2.6	3.3	1.9
6:00	7:00	4.3	4.1	4.4
7:00	8:00	3.9	3.8	4.1
8:00	9:00	2.2	1.2	3.2
9:00	10:00	3.7	2.7	4.7
10:00	11:00	1.7	1.2	2.1
11:00	12:00	3.9	2.2	5.6
12:00	13:00	2.1	1.8	2.4
13:00	14:00	4.2	3.4	4.9
14:00	15:00	1.7	1.3	2.0

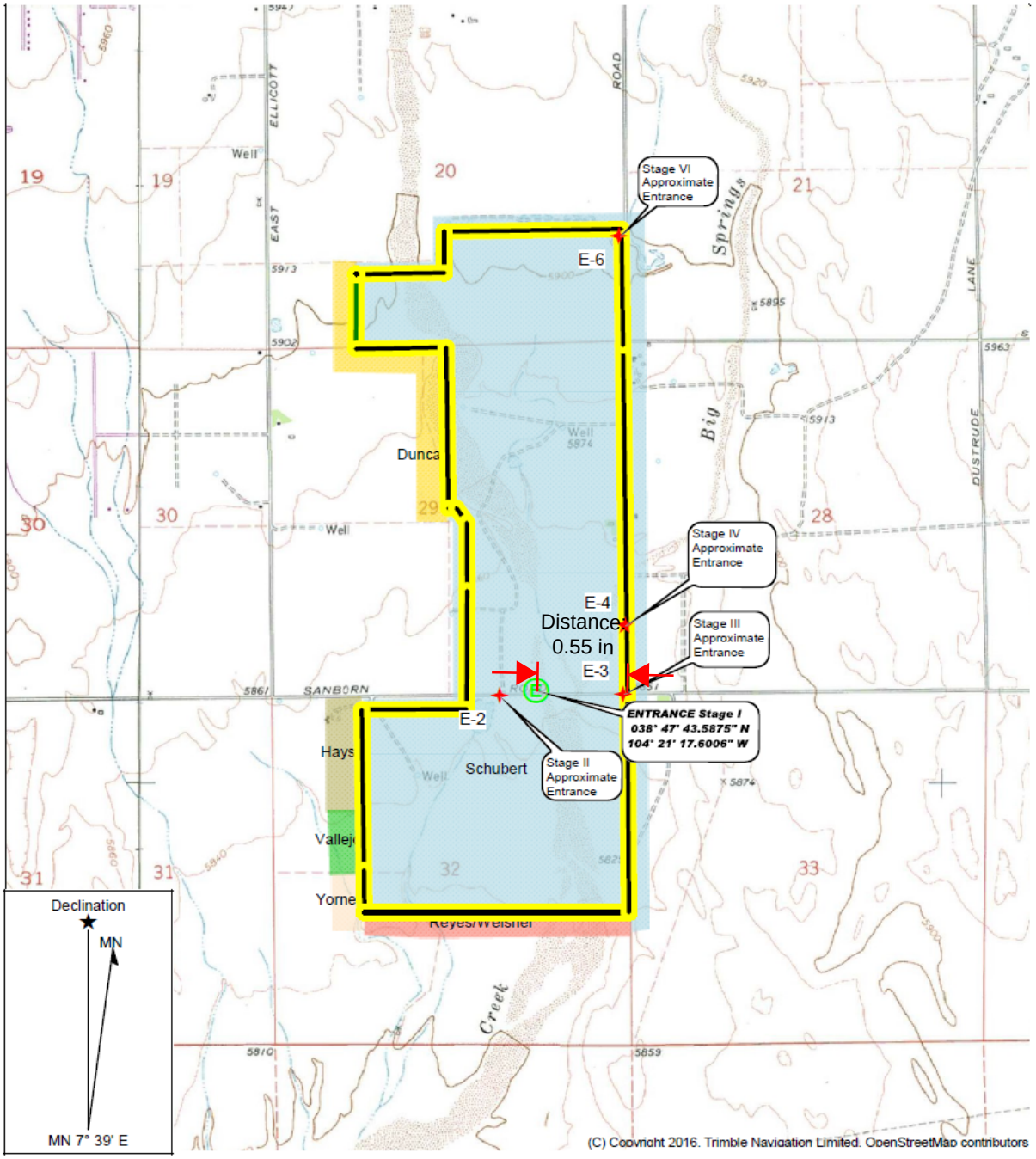
Hourly Period		Pueblo Pit Data - Average Number of Entering Trucks
Start Time	End Time	
5:00	6:00	1
6:00	7:00	2
7:00	8:00	2
8:00	9:00	1
9:00	10:00	2
10:00	11:00	1
11:00	12:00	2
12:00	13:00	1
13:00	14:00	2
14:00	15:00	1
Daily Average July & Aug.		**15**
*Pueblo Actual Recorded Data		
Note: These are just data tables. This table is not the same as Table 1 in the report		

Access Exhibit by Stage

TRANSPORTATION
CONSULTANTS, INC.

RPM, Inc.

- Vicinity Map:



Quad. Name: BIG SPRINGS RANCH
Date: 03/03/20
Scale: 1 inch = 2,000 ft.

Part of the S1/2N1/2SE1/4, S1/2SE1/4,and SE1/4SW1/4 of Section 20, and The E1/2E1/2 and NW1/4NE1/4 and parts of the SW1/4NE1/4, SW1/4SE1/4, and NW1/4SE1/4 of Section 29 and The E1/2NE1/4, SW1/NE1/4, & SE1/4NW1/4, and parts of the NW1/4NE1/4 & NE1/4NW1/4, Section 32, Township 14 South, Range 62 West, 6th P.M. El Paso County, Colorado
Containing 733.7 acres more or less.

ELLICOTT SAND AND GRAVEL LLC
SCHUBERT RANCH SAND RESOURCE
MAP EXHIBIT B - VICINITY MAP