



LSC TRANSPORTATION CONSULTANTS, INC.
2504 East Pikes Peak Avenue, Suite 304
Colorado Springs, CO 80909
(719) 633-2868
FAX (719) 633-5430
E-mail: lsc@lscctrans.com
Website: <http://www.isctrans.com>

New Breed Ranch
Filing No. 3
Transportation Memorandum
PCD File No.: SF247
(LSC #S224230)
September 25, 2024

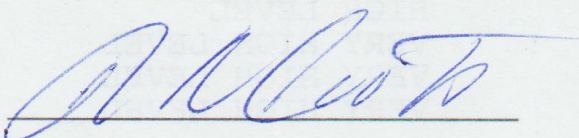
Traffic Engineer's Statement

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.



22 Dec 24
Date

New Breed Ranch

Transportation Memorandum

Prepared for:
Jim Scott
New Breed Ranch, Inc.
12750 Oak Cliff Way
Colorado Springs CO, 80908-3734

SEPTEMBER 25, 2024

LSC Transportation Consultants, Inc.
Prepared by: Jeffrey C. Hodsdon, P.E.

LSC #S234230

PCD File No.: SF247



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2504 E. Pikes Peak Ave., Suite 304
Colorado Springs, CO 80909
(719) 633-2868
FAX (719) 633-5430
E-mail: lsc@lsctrans.com
Website: <http://www.lsctrans.com>

September 25, 2024

Jim Scott
New Breed Ranch, Inc.
12750 Oak Cliff Way
Colorado Springs CO, 80908-3734

RE: New Breed Ranch Filing No. 3
El Paso County, CO
Transportation Memorandum
PCD File No.: SF247
LSC #S224230

Dear Mr. Scott,

LSC Transportation Consultants, Inc. has prepared this Transportation Memorandum for the proposed New Breed Ranch Filing No. 3 subdivision in El Paso County, Colorado. The site is located generally northeast of the intersection of State Highway 83 and Shoup Road. Figure 1 shows the site location relative to the adjacent and nearby roadways. Access to the site is proposed to Meadow Run Circle via New Breed Drive and the existing Shoup Road/New Breed Drive intersection.

This report has been prepared for submittal to El Paso County.

REPORT CONTENTS

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on major thoroughfares adjacent to the site, including surface conditions, functional classification, widths, pavement markings, traffic-control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;
- Weekday peak-hour turning-movement traffic counts Shoup Road/New Breed;
- Estimated average daily traffic (ADT) volumes on the study-area roadway segments;
- Projections of 20-year background traffic volumes on the study-area roadways adjacent to the site;
- The proposed site land use and access plan;

- Estimates of average weekday and weekday peak-hour trip generation for the proposed development and the estimated directional distribution of site-generated vehicle trips on roadways and intersections adjacent to and in the vicinity of the site;
- Projected site-generated and resulting total peak-hour intersection traffic volumes at the study-area intersections;
- Projected total daily and peak-hour traffic volumes at the study-area intersections;
- Intersection level of service (LOS) analysis at the study-area intersections;
- Evaluation of short- and long-term projected intersection volumes to determine potential requirements for any new auxiliary right-/left-turn lanes at the proposed site-access points, based on the criteria in El Paso County's *Engineering Criteria Manual (ECM)*. Also included are potential long-term lane requirements; and
- Findings and recommendations for submittal to El Paso County.

LIST OF OTHER TRAFFIC REPORTS USED IN THE PREPARATION OF THIS REPORT

The following previously-completed traffic report was referenced in preparation of this study:

- *New Breed Ranch Traffic Impact Study* – by LSC, dated November 5, 1999

LAND USE AND ACCESS

Proposed Land Use

Seven (7) single-family residential dwelling units are proposed for New Breed Ranch Filing No. 3 subdivision. The site plan is shown in Figure 2.

Filing No. 3 is the next phase of development within the greater New Breed Ranch development, which is planned to consist of 90 single-family dwelling units at buildout. To date, 21 residential lots have been developed with single-family, detached dwelling units within New Breed Ranch.

Proposed Site-Access Locations

Figure 2 also shows the proposed access plan for the site. Access to/from the site is proposed with a new public street connection to Meadow Run Circle about 345 feet east of New Breed Drive. The Meadow Run Circle/New Breed Drive intersection is about 600 feet north of Shoup Road. The New Breed Drive/Shoup Road intersection is currently a full-movement, stop-sign-controlled intersection.

SIGHT DISTANCE

Intersection sight distance will need to be maintained at the proposed site-access intersection with Meadow Run Circle, by keeping the lines of sight for both access points clear of any sight-distance obstructions. This includes landscaping, signage, fencing, and other site improvements. associated with the development.

With the 30-mph posted speed limit/design speed on Meadow Run Circle, the *ECM*-prescribed intersection sight distance, as shown in *ECM* Table 2-21, is 335 feet to the east and west along Meadow Run Circle.

ROAD AND TRAFFIC CONDITIONS AND MTCP CLASSIFICATION

Figure 1 shows the roads adjacent to and in the vicinity of the site. Adjacent roads serving the site are identified below followed by a brief description of each:

Shoup Road is a two-lane paved rural Minor Arterial that extends east-to-west route through the Black Forest area. The posted speed limit in the vicinity of the Shoup Road/New Breed Drive intersection is 45 miles per hour (mph). An eastbound left-turn deceleration lane exists on Shoup Road approaching New Breed Drive as it was previously constructed.

New Breed Drive is a Rural Local roadway extending north-to-south for 600 feet between Shoup Road Meadow Run Circle. The posted speed limit along this paved road is 30 mph. The southbound approach at Shoup Road is stop-sign controlled and the northbound approach at Meadow Run Circle is yield-sign controlled.

Meadow Run Circle is a Rural Local roadway extending generally east-to-west for 0.6 miles between Oak Cliff Way (to the west) and its terminus to the east. The speed limit along this paved road is assumed 30 mph, as this is the speed limit for this roadway classification. The overall New Breed Ranch Preliminary Plan shows Meadow Run Circle ultimately extended from each end to form a loop road serving the entire New Breed Ranch development.

Existing Traffic Volumes

Vehicular turning-movement counts were conducted at the intersection of Shoup Road/New Breed Drive. Raw count data are attached, for reference.

PEDESTRIAN AND BICYCLE FACILITIES

New Breed Drive and Meadow Run Circle do not currently have sidewalks or separate, striped, on-street bicycle lanes. This is consistent with the Rural Local criteria. Sidewalks would **not** be required along any study-area roadways following site buildout. The proposed subdivision road will also be a Rural Local roadway and, per *ECM* criteria, would not require sidewalks or separate bicycle lanes.

TRIP GENERATION

Estimates of the vehicle trips projected to be generated by the proposed New Breed Ranch Filing No. 3 residential subdivision have been made using the nationally published trip-generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE).

Corresponding trip-generation rates from ITE Land Use Category “210 – Single-Family (Detached) Housing” have been used to develop the trip-generation estimates for the proposed 7-dwelling-unit residential site.

Table 1 below presents a summary of the estimated external site trip generation. A detailed trip-generation estimate for the site, including ITE rates for the proposed land uses, is presented in Table 3 (attached).

The proposed subdivision is projected to generate about 71 total vehicle trips on the average weekday during a 24-hour period, with approximately half entering and half exiting the site. During the morning peak hour, approximately 1 entering vehicle and 4 exiting vehicles are estimated to be generated. Approximately 4 entering and 3 exiting vehicles are estimated to be generated by the site during the afternoon peak hour.

Table 1: Estimated Site Vehicle-Trip Generation

| Analysis Period | Weekday | | |
|---------------------|---------|-----|-------|
| | In | Out | Total |
| Morning Peak Hour | 1 | 4 | 5 |
| Afternoon Peak Hour | 4 | 3 | 7 |
| Daily/24-hour | 36 | 36 | 71 |

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

The directional-distribution estimate of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site’s traffic impacts. Figure 4 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site’s major approaches. Estimates have been based on the following factors: the original traffic impact study, the traffic count data, the proposed land use, the area roadway system serving the site, and the site’s geographic location relative to the overall greater El Paso County/Colorado Springs area.

Site-Generated Traffic

Site-generated traffic volumes have been estimated at the following intersections:

- Shoup Road/New Breed Drive
- New Breed Drive/Meadow Run Circle

These site-generated volumes have been calculated by applying directional-distribution percentages estimated by LSC (from Figure 4) to the trip-generation estimates (from Table 3). Figure 5 shows the projected short-term site-generated traffic volumes for the weekday morning and afternoon peak hours.

Existing + Site-Generated Traffic Volumes

Figure 6 shows the sum of the existing background traffic volumes (from Figure 3) and site-generated peak-hour traffic volumes (shown in Figure 5). These volumes represent the projected short-term total traffic following site buildout.

2043 Background Traffic Volumes

Long-term background traffic volumes are estimates by LSC, based on projected 2043 volumes adjacent to the site, shown in Map 9 of the *Major Transportation Corridors Plan (MTCP)*. Additionally, estimated traffic at buildout for the overall 90-dwelling-unit New Breed Ranch residential development has been included in 2043 background traffic volumes. Please refer to Figure 7 for estimated long-term background volumes and assumed laneage at the study-area intersections.

2043 Total Traffic Volumes

Figure 8 shows the sum of 2043 background traffic volumes (from Figure 7) plus site-generated traffic volumes (from Figure 5).

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

Table 2: Intersection Levels of Service Delay Ranges

| Level of Service | Signalized Intersections | Unsignalized Intersections |
|------------------|---|--|
| | 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 delay per vehicle.

LOS values have been included in each figure for each turning movement/approach during the weekday morning and afternoon peak hours for the proposed site-access intersections and off-site intersections in the study area:

- Figure 3: 2022 Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 6: 2022 Existing + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 7: 2042 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 8: 2042 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

LOS calculations for long-term scenarios were based upon the recommended lane geometries and traffic controls outlined in the figures above.

Shoup Road/New Breed Drive

All movements at this intersection currently operate at and are projected to remain at LOS C or better during both peak hours through the long-term horizon year with the addition of site-generated traffic. No modifications would be required to this intersection.

Meadow Run Circle/New Breed Drive

All movements at this intersection currently operate at and are projected to remain at LOS A during both peak hours through the long-term horizon year with the addition of site-generated traffic. No modifications would be required to this intersection.

ROADWAY IMPROVEMENTS

Auxiliary Turn Lanes

A design speed of 50 mph has been assumed for Shoup Road.

Eastbound Left-Turn Deceleration Lane

According to the El Paso County *Engineering Criteria Manual (ECM)*, exclusive left-turn lanes shall be provided for any access on a Minor Arterial with a projected peak-hour ingress turning volume of 25 vehicles per hour (vph) or greater. The existing eastbound left-turn lane on Shoup Road approaching New Breed Drive is about 810 feet, consisting of a striped 275-foot lane, plus a 285-foot taper (including taper stripe and gap to the start of the turn lane white stripe). The portion of the striping gap closest to the start of the striped lane has sufficient width for the *ECM* standard deceleration plus storage requirement for this left-turn deceleration lane.

Please refer to the attached striping exhibits for details.

As demonstrated in the exhibits, the roadway appears to have been widened for this turn lane such that *ECM*-standard lane and taper dimensions would be met – this has been verified through field

measurements and the striping exhibits. However, the lane was striped in the field with a shortened transition-taper stripe and longer transition-taper “gap” than normal. LSC has prepared striping exhibits to verify this.

The current striping is not problematic as the existing striping is functional as is and does not require restriping for this development. These modifications could be made in the future when the roadway is repaved with a mill and overlay, if surface treatment is done such that Shoup needs restriping/markings or if the existing markings on Shoup Road are refreshed with routine county maintenance.

As such, no modifications would be required to this existing left-turn deceleration lane.

Westbound Right-Turn Deceleration Lane

According to *ECM*, exclusive right-turn lanes shall be provided for any access on a Minor Arterial with a projected peak-hour ingress turning volume of 50 vehicles per hour (vph) or greater. The projected right-turn volume at Shoup/New Breed is **not** expected to exceed the 50-vph minimum right-turn volume thresholds prescribing a turn lane outlined in the *ECM* upon site buildout. As such, a westbound right-turn deceleration lane would **not** be required on Shoup Road approaching New Breed Drive.

Westbound-Right-Turn Acceleration Lane

According to the *ECM*, right-turn acceleration lanes are generally not required on Minor Arterial roadways.

ROADWAY CLASSIFICATIONS

The proposed subdivision roadway is proposed as a Rural Local Road.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

Transportation Impact Fees

Per ECM Appendix B: State what the current applicable Transportation Impact Fees are and what option the developer will be selecting for payment.

This project will be required to participate in the El Paso County Road Improvement Fee Program. The applicant will select the “Opt-out” option (no PID) and would pay the “Full Fee” amount at building permit. The current (2019) fee amount associated with this option is \$3,850 per dwelling unit (subject to change). Based on 7 lots, the total building permit fee for this plat would be \$26,950.

Reimbursable Improvements

The following roadway improvement projects have been identified as being needed by the year 2040 per Map 13 and Table 4 of El Paso County's 2016 *MTCP*:

- U13 – Shoup Road from SH 83 to Black Forest Road (\$15,019,000)
- Existing conditions – 2-lane Rural Unimproved County Road
- Future conditions – 2-lane Rural Minor Arterial

See the attached *MTCP* maps for reference.

MULTI-MODAL TRANSPORTATION AND TDM OPPORTUNITIES

The following roadway improvement projects have been identified as being needed by the year 2040 per Map 15 and Table 5 of El Paso County's 2016 *MTCP*:

- M14 – Shoup Road from SH 83 to Vollmer Road
 - Bicycle improvements (6.24miles)

No public schools are located within a two-mile radius of the site.

DEVIATIONS

No deviations to *ECM* design criteria are proposed with this subdivision.

FINDINGS AND CONCLUSIONS

- The site is projected to generate about 71 new driveway vehicle-trips on the average weekday.
- During the weekday morning peak hour of adjacent street traffic, 1 vehicle would enter the site while 4 vehicles would exit.
- During the weekday afternoon peak hour of adjacent street traffic, 4 vehicles would enter the site while 3 vehicles would exit.
- All individual approaches and turn lanes at both study-area intersections would operate at LOS C or better during both short-term and long-term peak hours, with or without the addition of site-generated traffic.
- The existing eastbound left-turn deceleration lane would be adequate for this subdivision, based on projected buildout traffic volumes. No additional auxiliary turn lanes would be required. Please refer to the "Auxiliary Turn-Lane Analysis" section for evaluation details.
- The subdivision road is proposed as a Rural Local.
- No deviations are proposed with this submittal.

* * * * *

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: Table **3**
Figures 1-8
Traffic Count Reports
Synchro LOS Reports
Striping Exhibits 1-4

Table 3

The table area is currently blank.



Table 3: Detailed Trip Generation Estimate

| ITE | | Value | Units ¹ | Trip Generation Rates ² | | | | Total External Trips Generated | | | | | |
|------|----------------------------------|-------|--------------------|------------------------------------|------|------|------|--------------------------------|-----------------|------|-----|------|---|
| Code | Description | | | Average Weekday | A.M. | | P.M. | | Average Weekday | A.M. | | P.M. | |
| | | | | In | Out | In | Out | In | Out | In | Out | | |
| 210 | Single-Family (Detached) Housing | 7 | DU | 10.18 | 0.20 | 0.56 | 0.63 | 0.37 | 71 | 1 | 4 | 4 | 3 |

¹ DU = dwelling units, KSF = 1,000 square feet

² Source: *Trip Generation, 11th Edition (2021)* by the Institute of Transportation Engineers (ITE)

Figures 1-8



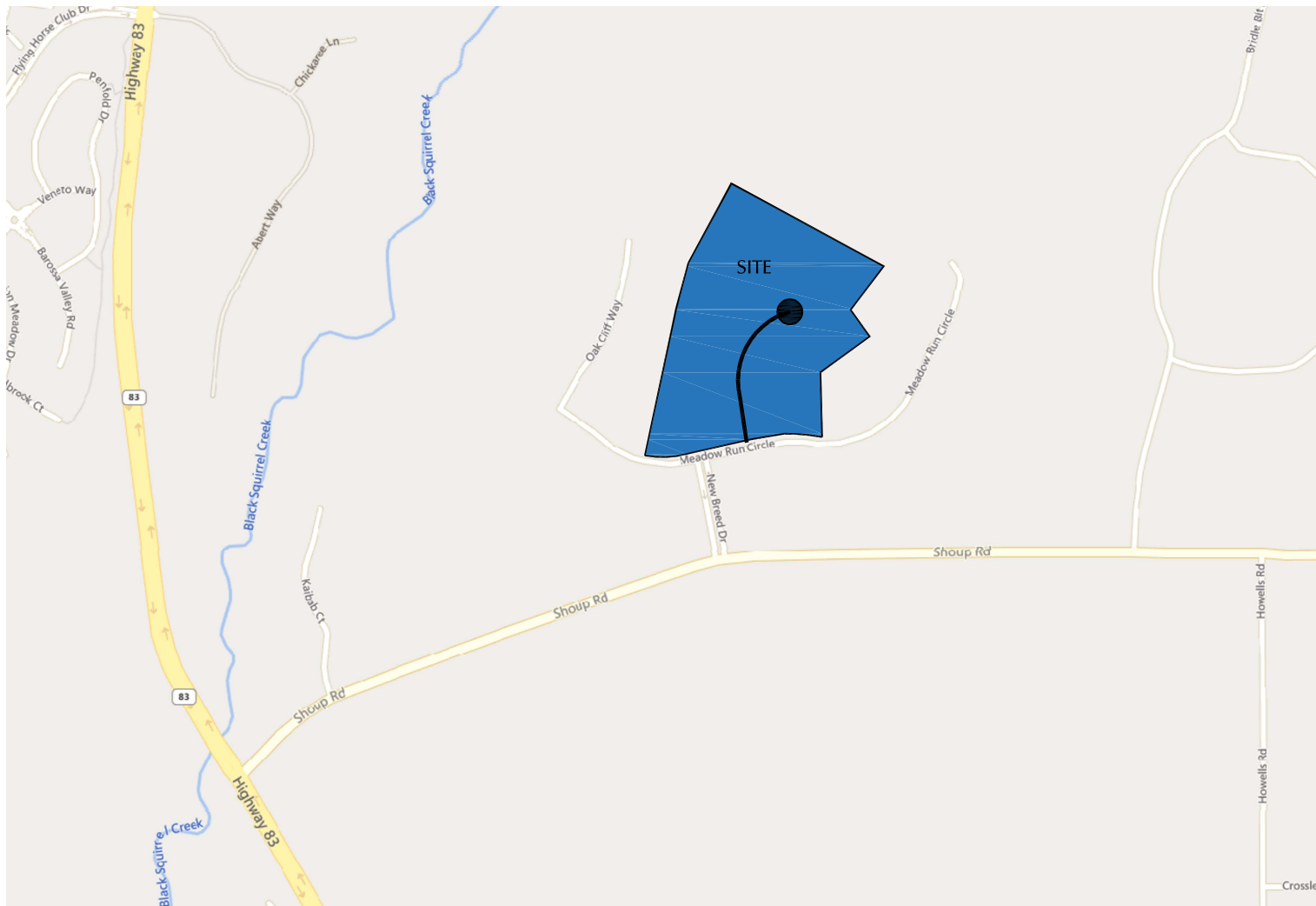
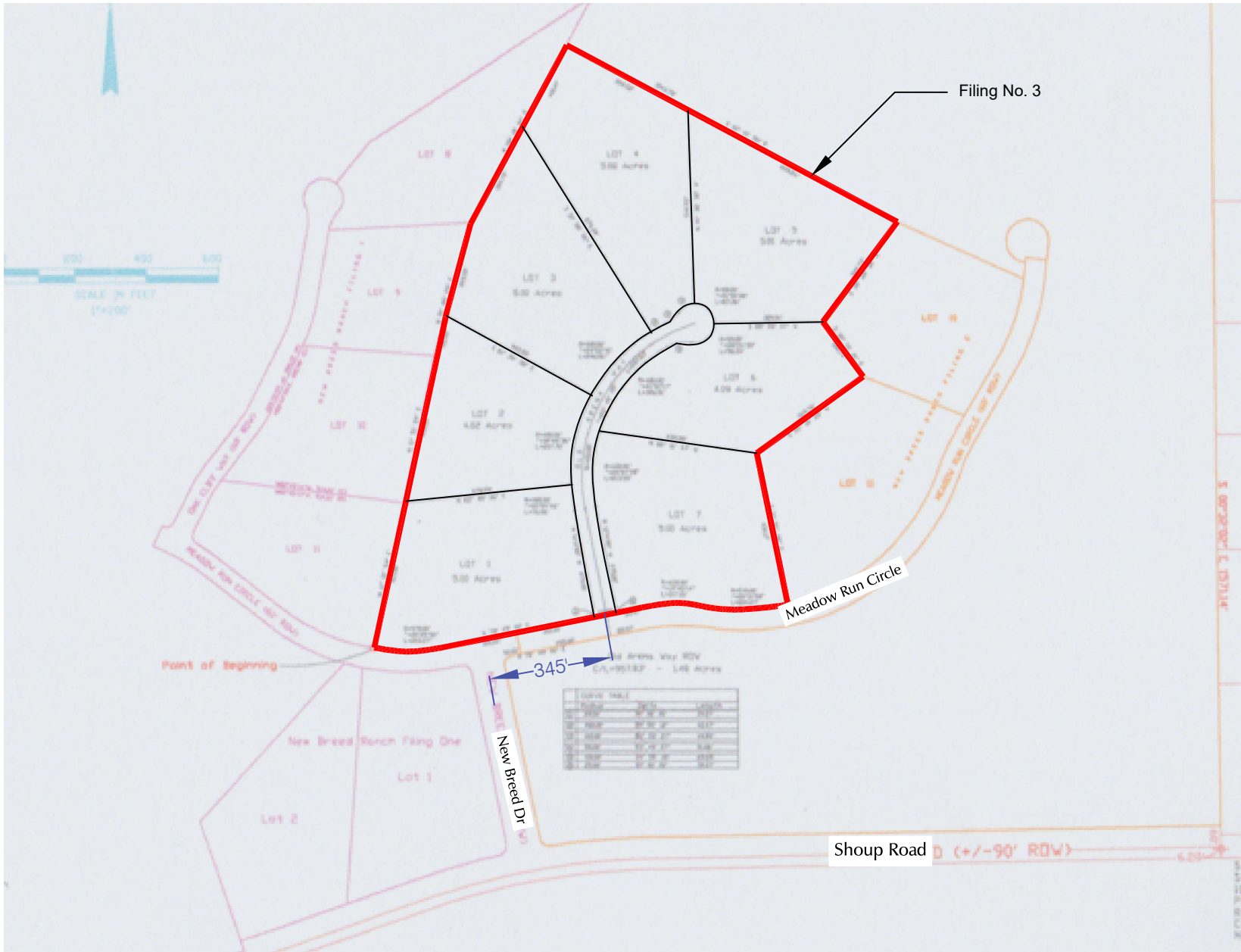


Figure 1
Vicinity Map
 New Breed Ranch (LSC# S224230)

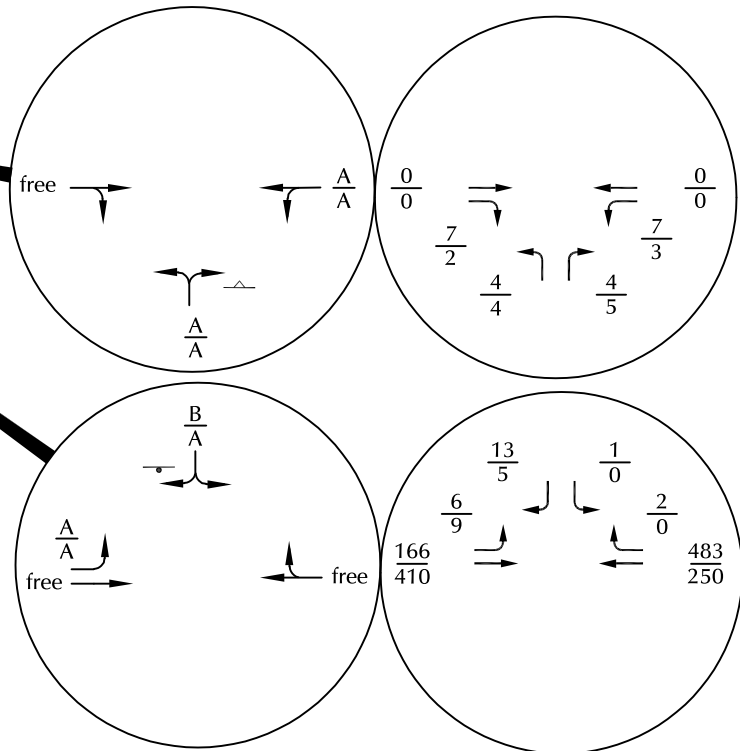
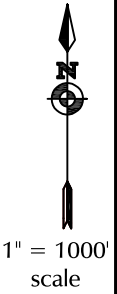
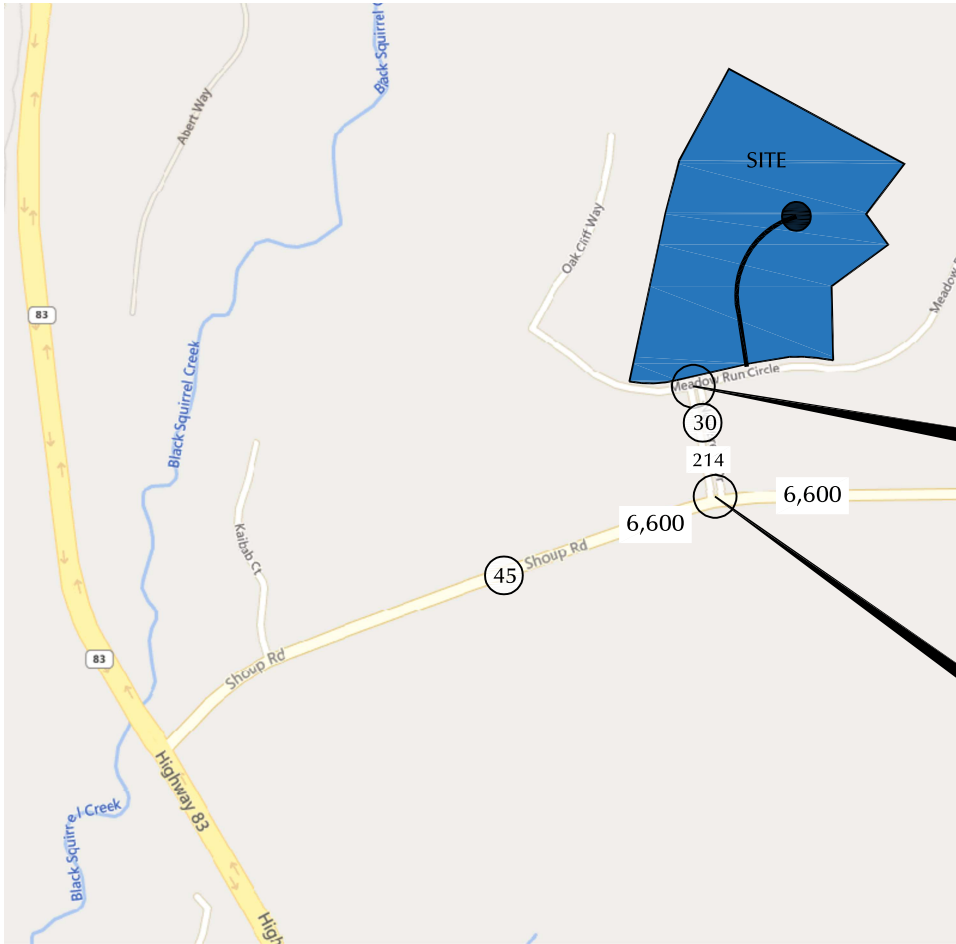


1" = 400' scale

Figure 2
Site Plan

New Breed Ranch (LSC# S224230)



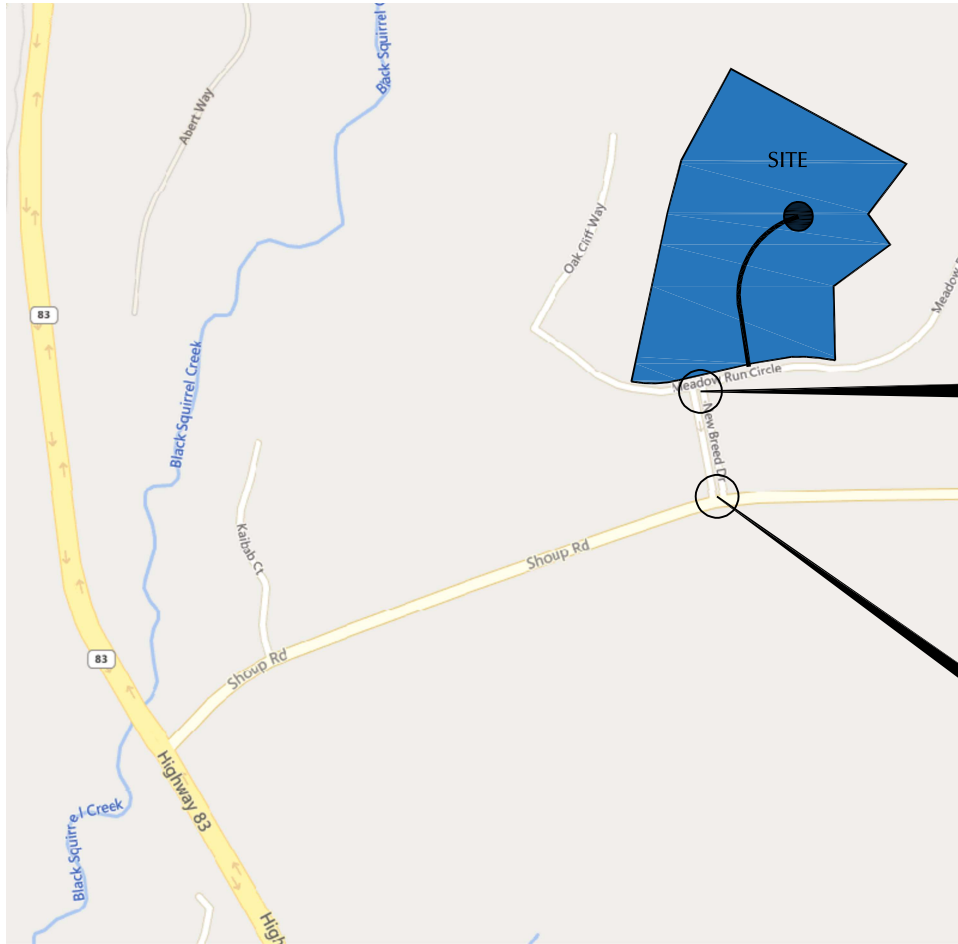


- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
- $\frac{X}{X}$ = PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour) Counts by LSC (April 2023)
- $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day) ADT based on factored peak hours
- (#) = Posted Speed Limit
- Yield Sign = = Yield Sign
- Stop Sign = = Stop Sign

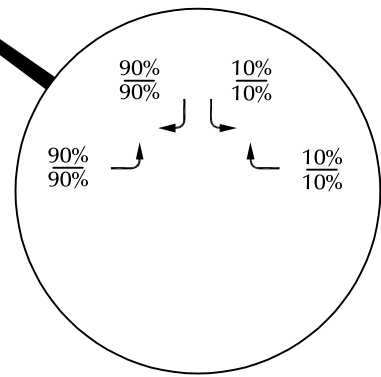
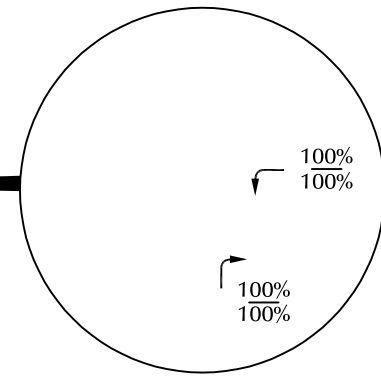
Figure 3
**Existing Traffic, Lane
 Geometry, Traffic
 Control, and LOS**

New Breed Ranch (LSC# S224230)



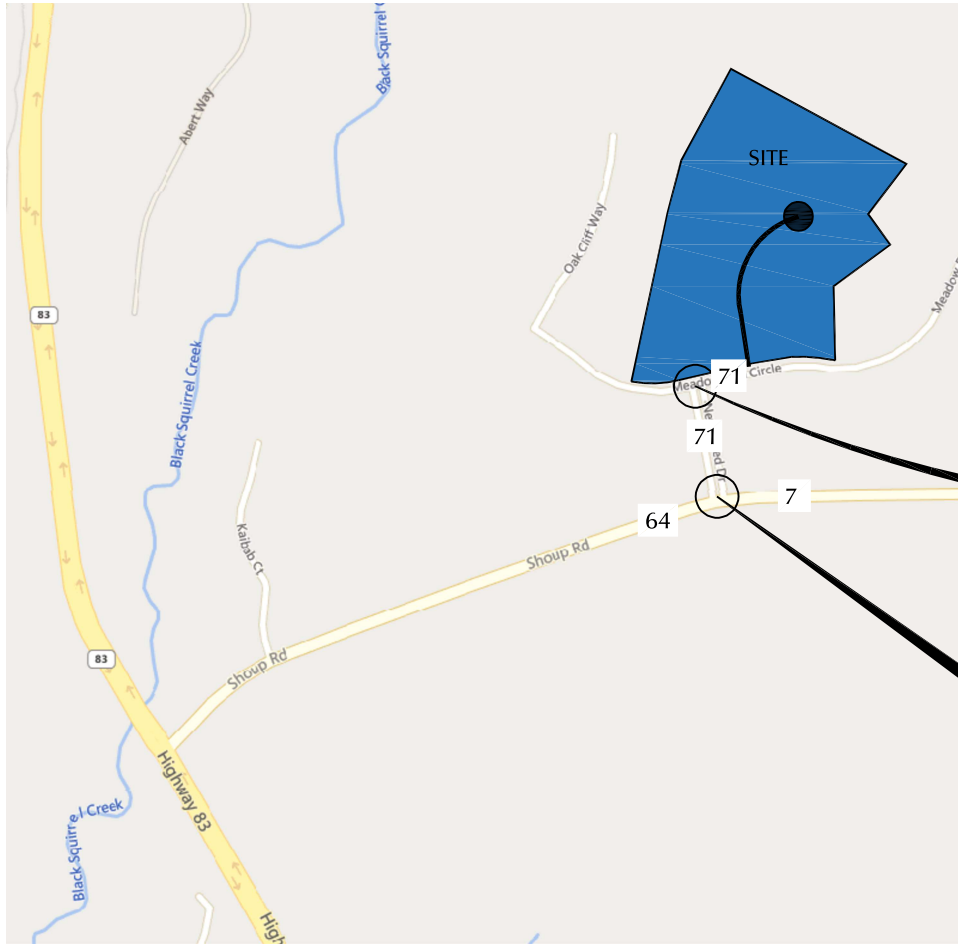


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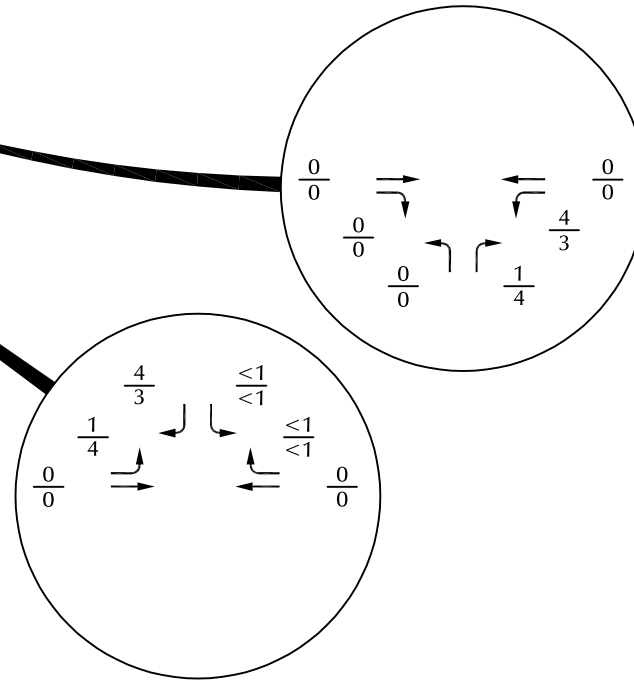


$\frac{XX}{XX}$ = % of AM Weekday Peak-Hour Traffic
 $\frac{XX}{XX}$ = % of PM Weekday Peak-Hour Traffic
 X,XXX = Average Daily Traffic (Vehicles/Day)

Figure 4
Directional Distribution
 New Breed Ranch (LSC# S224230)

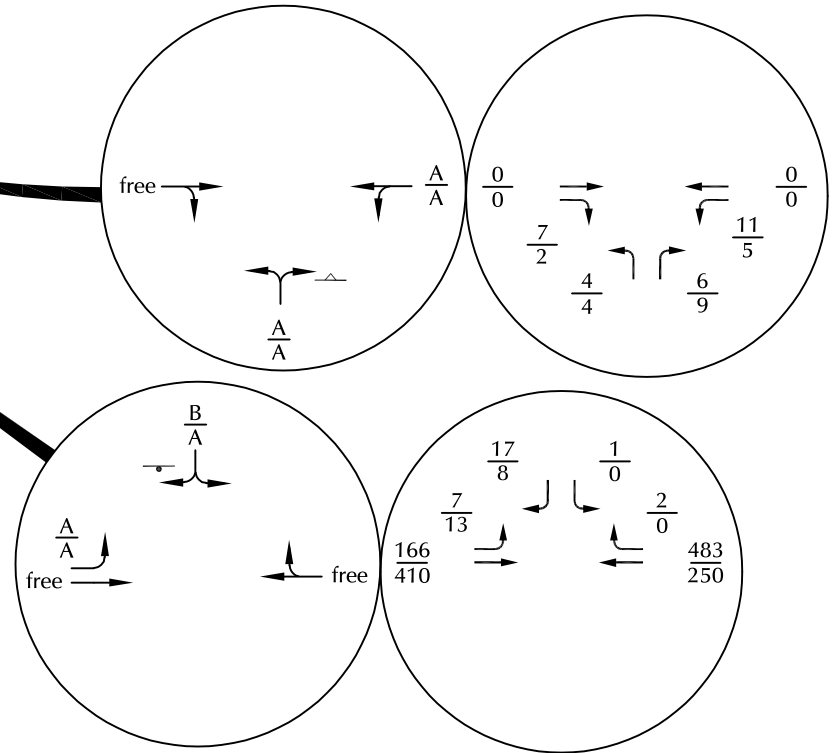
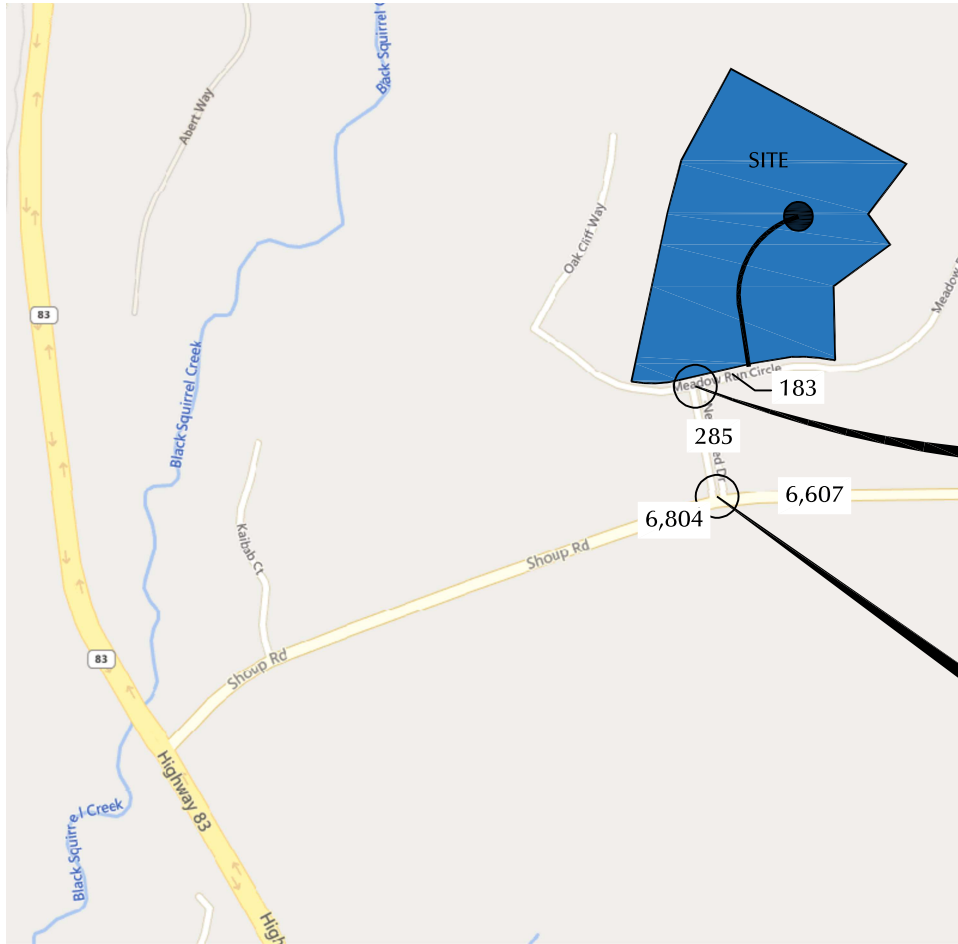


1" = 1000' scale



$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
 X,XXX = Average Daily Traffic (Vehicles/Day)

Figure 5
Site-Generated Traffic
 New Breed Ranch (LSC# S224230)



1" = 1000' scale

- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
- $\frac{X}{X}$ = PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
- $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day)
- $\} =$ Yield Sign
- $\} =$ Stop Sign



Figure 6
**Existing + Site-Generated
 Traffic, Lane Geometry,
 Traffic Control, and LOS**

New Breed Ranch (LSC# S224230)

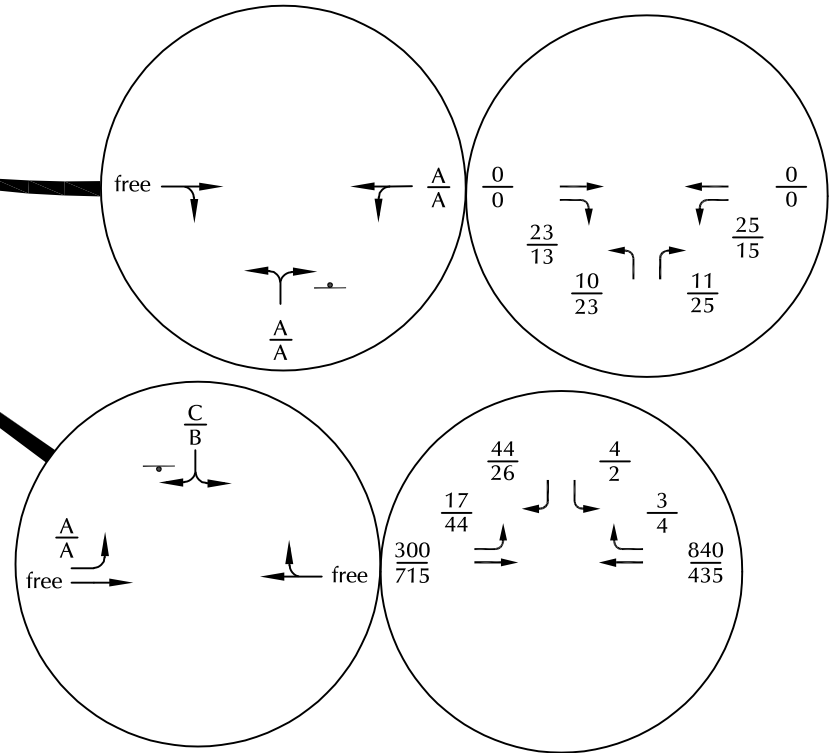
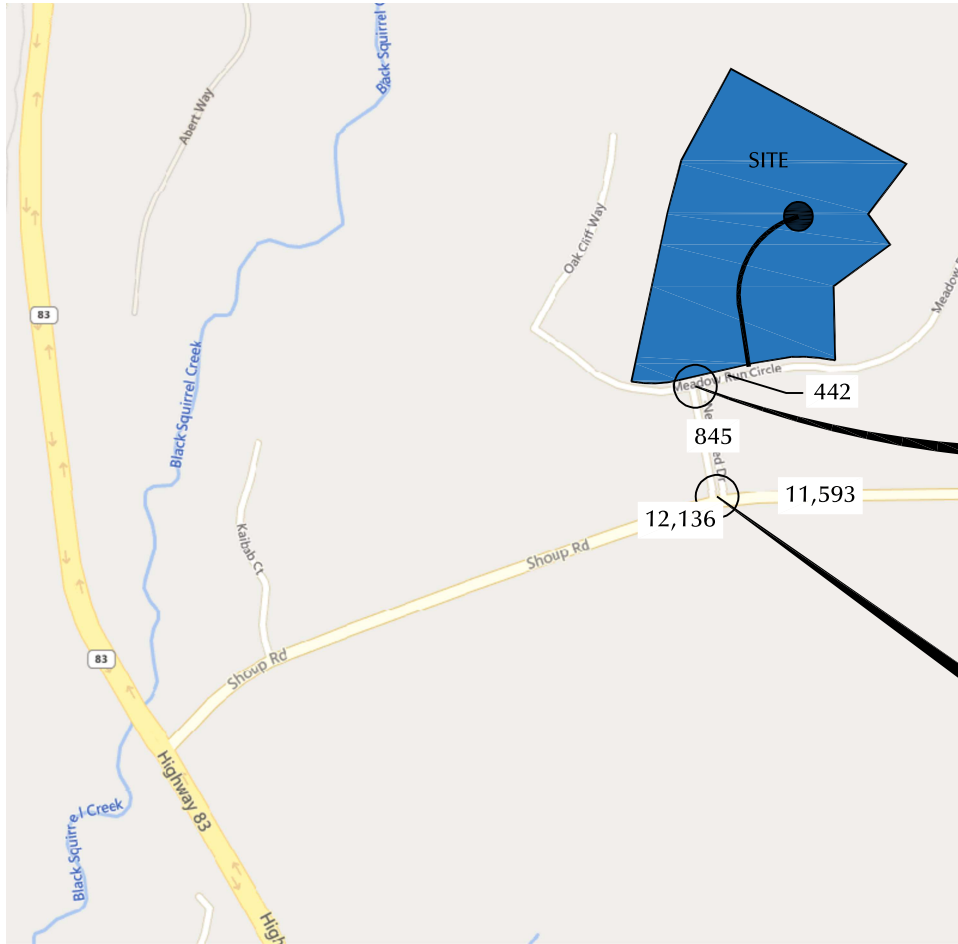


Figure 7
 2043 Background, Lane
 Geometry, Traffic
 Control, and LOS

New Breed Ranch (LSC# S224230)



- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
- $\frac{X}{X}$ = PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
- $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day)

⊥ = Stop Sign

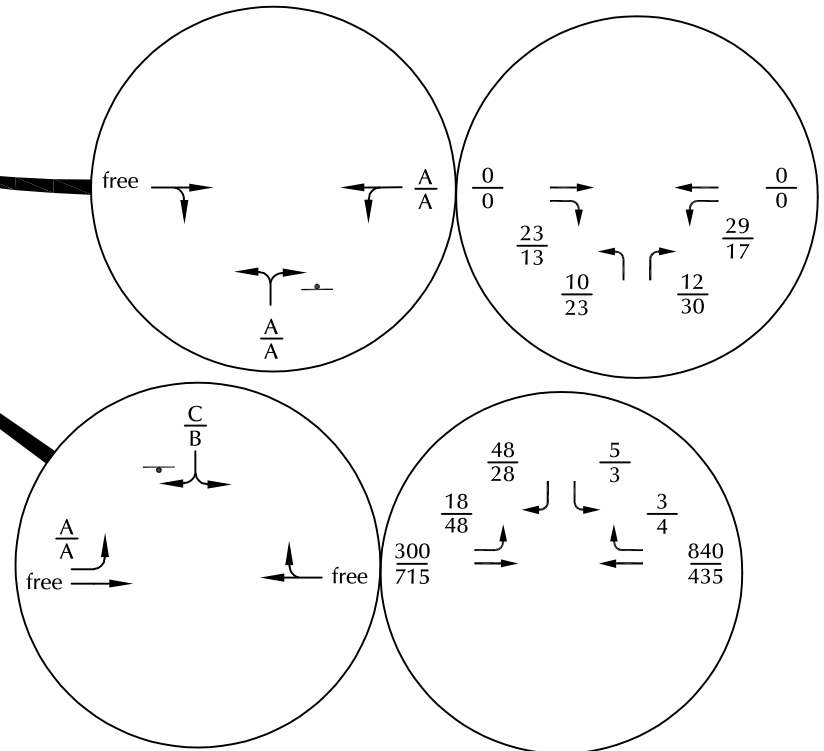
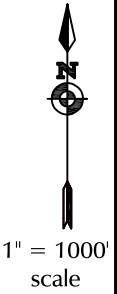
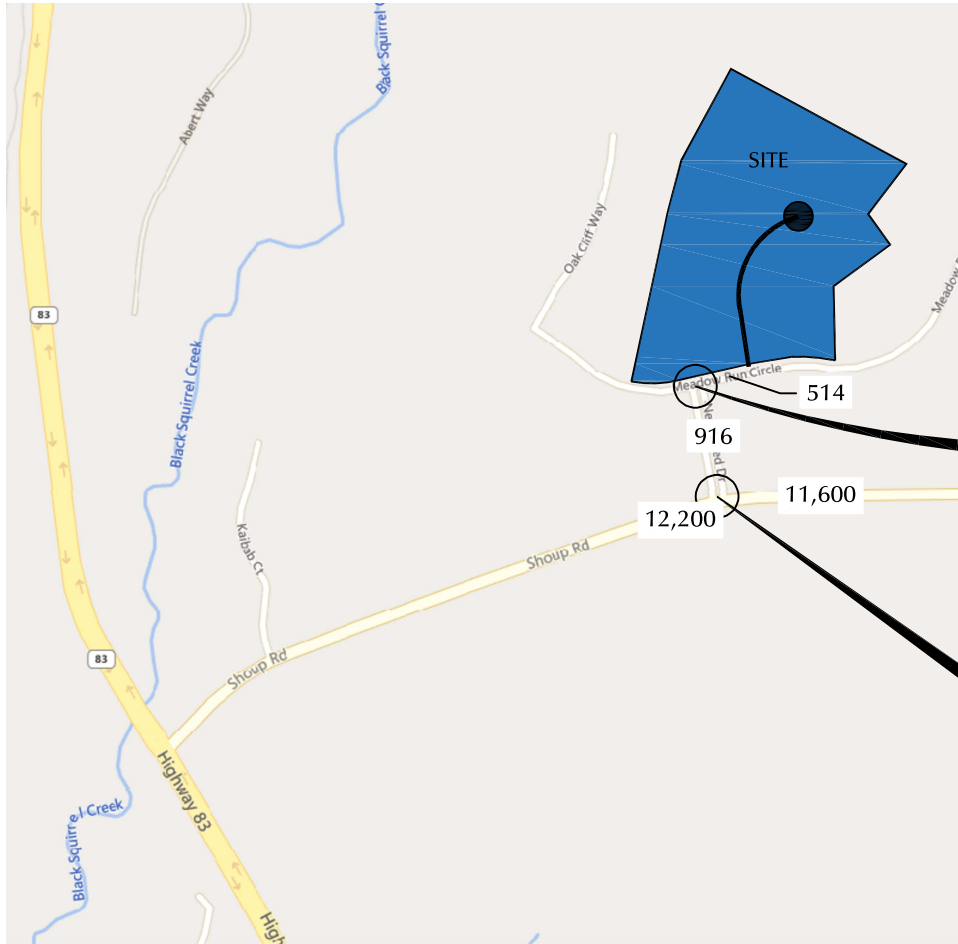


Figure 8
**2043 Background +
 Site-Generated Traffic, Lane
 Geometry, Traffic Control, and LOS**

New Breed Ranch (LSC# S224230)



- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
- $\frac{X}{X}$ = PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
- $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day)
- \uparrow = Stop Sign

Traffic Counts



LSC Transportation Consultants, Inc.

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

File Name : New Breed Dr - Shoup Rd AM
 Site Code : S214230
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Unshifted

| Start Time | New Breed Dr Southbound | | | | | Shoup Rd Westbound | | | | | Northbound | | | | | Shoup Rd Eastbound | | | | | Int. Total |
|--------------------|-------------------------|----------|------------|----------|------------|--------------------|-------------|----------|----------|-------------|------------|----------|----------|----------|------------|--------------------|-------------|------------|----------|-------------|-------------|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | |
| 06:30 | 2 | 0 | 0 | 0 | 2 | 0 | 73 | 0 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 12 | 87 |
| 06:45 | 1 | 0 | 0 | 0 | 1 | 0 | 65 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 17 | 83 |
| Total | 3 | 0 | 0 | 0 | 3 | 0 | 138 | 0 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 1 | 0 | 29 | 170 |
| 07:00 | 2 | 0 | 0 | 0 | 2 | 1 | 99 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 16 | 118 |
| 07:15 | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 0 | 142 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 2 | 0 | 22 | 164 |
| 07:30 | 3 | 0 | 0 | 0 | 3 | 1 | 133 | 0 | 0 | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 42 | 179 |
| 07:45 | 9 | 0 | 1 | 0 | 10 | 1 | 127 | 0 | 0 | 128 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 3 | 0 | 48 | 186 |
| Total | 14 | 0 | 1 | 0 | 15 | 3 | 501 | 0 | 0 | 504 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 5 | 0 | 128 | 647 |
| 08:00 | 1 | 0 | 0 | 0 | 1 | 0 | 81 | 0 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 1 | 0 | 60 | 142 |
| 08:15 | 1 | 0 | 1 | 0 | 2 | 1 | 74 | 0 | 0 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 1 | 0 | 69 | 146 |
| Grand Total | 19 | 0 | 2 | 0 | 21 | 4 | 794 | 0 | 0 | 798 | 0 | 0 | 0 | 0 | 0 | 0 | 278 | 8 | 0 | 286 | 1105 |
| Apprch % | 90.5 | 0 | 9.5 | 0 | | 0.5 | 99.5 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 97.2 | 2.8 | 0 | | |
| Total % | 1.7 | 0 | 0.2 | 0 | 1.9 | 0.4 | 71.9 | 0 | 0 | 72.2 | 0 | 0 | 0 | 0 | 0 | 0 | 25.2 | 0.7 | 0 | 25.9 | |

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 Colorado Springs, CO 80909
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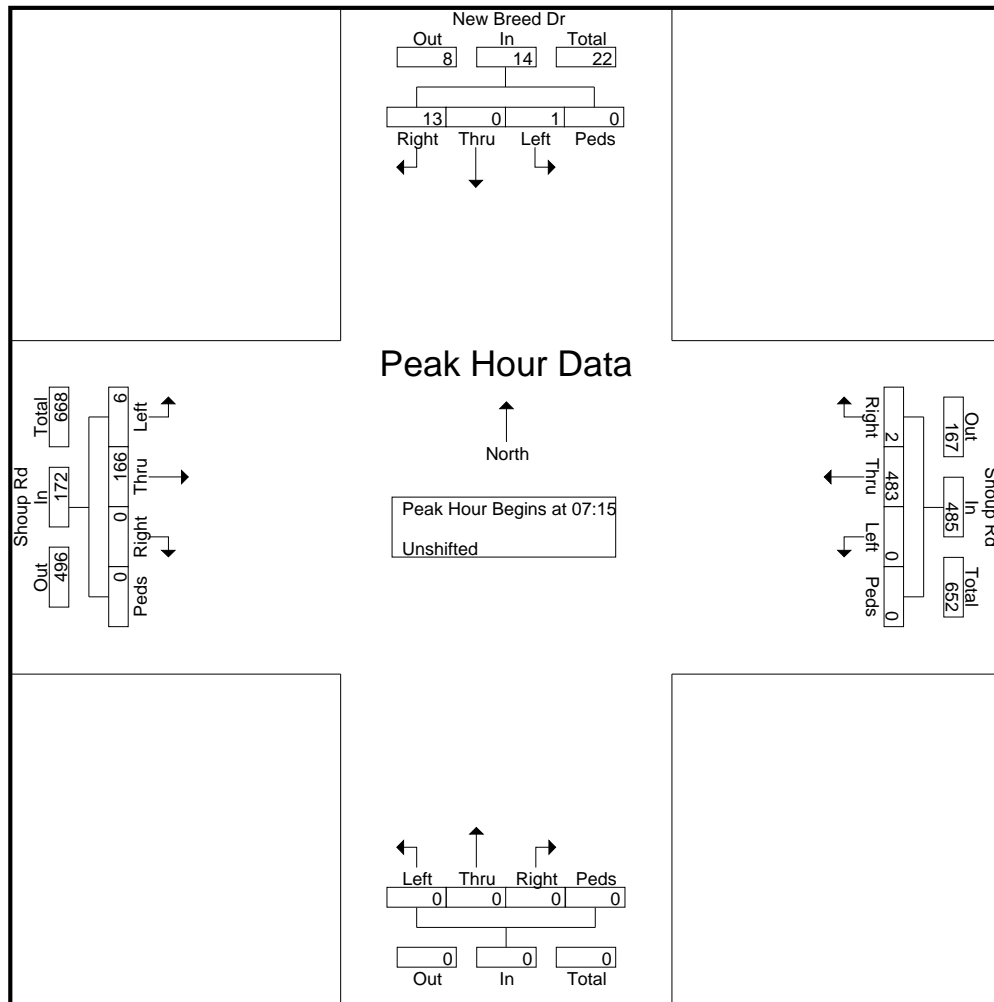
File Name : New Breed Dr - Shoup Rd AM

Site Code : S214230

Start Date : 4/26/2022

Page No : 2

| Start Time | New Breed Dr Southbound | | | | | Shoup Rd Westbound | | | | | Northbound | | | | | Shoup Rd Eastbound | | | | | Int. Total |
|--|-------------------------|------|------|------|------------|--------------------|------|------|------|------------|------------|------|------|------|------------|--------------------|------|------|------|------------|------------|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | |
| Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 7:15:00 AM | | | | | | | | | | | | | | | | | | | | | |
| 7:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 0 | 142 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 2 | 0 | 22 | 164 |
| 7:30:00 AM | 3 | 0 | 0 | 0 | 3 | 1 | 133 | 0 | 0 | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 42 | 179 |
| 7:45:00 AM | 9 | 0 | 1 | 0 | 10 | 1 | 127 | 0 | 0 | 128 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 3 | 0 | 48 | 186 |
| 8:00:00 AM | 1 | 0 | 0 | 0 | 1 | 0 | 81 | 0 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 1 | 0 | 60 | 142 |
| Total Volume | 13 | 0 | 1 | 0 | 14 | 2 | 483 | 0 | 0 | 485 | 0 | 0 | 0 | 0 | 0 | 0 | 166 | 6 | 0 | 172 | 671 |
| % App. Total | 92.9 | 0 | 7.1 | 0 | | 0.4 | 99.6 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 96.5 | 3.5 | 0 | | |
| PHF | .361 | .000 | .250 | .000 | .350 | .500 | .850 | .000 | .000 | .854 | .000 | .000 | .000 | .000 | .000 | .000 | .703 | .500 | .000 | .717 | .902 |



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File Name : New Breed Dr - Shoup Rd AM

Site Code : S214230

Start Date : 4/26/2022

Page No : 3

| Start Time | New Breed Dr Southbound | | | | | Shoup Rd Westbound | | | | | Northbound | | | | | Shoup Rd Eastbound | | | | | Int. Total |
|------------|-------------------------|------|------|------|------------|--------------------|------|------|------|------------|------------|------|------|------|------------|--------------------|------|------|------|------------|------------|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | |

Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

| | 7:30:00 AM | | | | | 7:00:00 AM | | | | | 6:30:00 AM | | | | | 7:30:00 AM | | | | |
|--------------|------------|------|------|------|------|------------|------|------|------|------|------------|------|------|------|------|------------|------|------|------|------|
| +0 mins. | 3 | 0 | 0 | 0 | 3 | 1 | 99 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 42 |
| +5 mins. | 9 | 0 | 1 | 0 | 10 | 0 | 142 | 0 | 0 | 142 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 3 | 0 | 48 |
| +10 mins. | 1 | 0 | 0 | 0 | 1 | 1 | 133 | 0 | 0 | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 1 | 0 | 60 |
| +15 mins. | 1 | 0 | 1 | 0 | 2 | 1 | 127 | 0 | 0 | 128 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 1 | 0 | 69 |
| Total Volume | 14 | 0 | 2 | 0 | 16 | 3 | 501 | 0 | 0 | 504 | 0 | 0 | 0 | 0 | 0 | 0 | 214 | 5 | 0 | 219 |
| % App. Total | 87.5 | 0 | 12.5 | 0 | | 0.6 | 99.4 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 97.7 | 2.3 | 0 | |
| PHF | .389 | .000 | .500 | .000 | .400 | .750 | .882 | .000 | .000 | .887 | .000 | .000 | .000 | .000 | .000 | .000 | .787 | .417 | .000 | .793 |

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File Name : New Breed Dr - Shoup Rd PM
 Site Code : S224230
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Unshifted

| Start Time | New Breed Dr Southbound | | | | | Shoup Rd Westbound | | | | | Northbound | | | | | Shoup Rd Eastbound | | | | | Int. Total |
|--------------------|-------------------------|----------|-------------|----------|------------|--------------------|-------------|----------|----------|-------------|------------|----------|----------|----------|------------|--------------------|-------------|------------|----------|-------------|-------------|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | |
| 16:00 | 1 | 0 | 1 | 0 | 2 | 0 | 60 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 1 | 0 | 90 | 152 |
| 16:15 | 2 | 0 | 0 | 0 | 2 | 0 | 56 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 106 | 2 | 0 | 108 | 166 |
| 16:30 | 1 | 0 | 1 | 0 | 2 | 1 | 50 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | 0 | 80 | 133 |
| 16:45 | 1 | 0 | 0 | 0 | 1 | 0 | 67 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 2 | 0 | 129 | 197 |
| Total | 5 | 0 | 2 | 0 | 7 | 1 | 233 | 0 | 0 | 234 | 0 | 0 | 0 | 0 | 0 | 0 | 402 | 5 | 0 | 407 | 648 |
| 17:00 | 3 | 0 | 0 | 0 | 3 | 0 | 56 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 2 | 0 | 100 | 159 |
| 17:15 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 2 | 0 | 96 | 163 |
| 17:30 | 1 | 0 | 0 | 0 | 1 | 0 | 60 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 3 | 0 | 94 | 155 |
| 17:45 | 2 | 0 | 0 | 0 | 2 | 0 | 48 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 3 | 0 | 80 | 130 |
| Total | 6 | 0 | 0 | 0 | 6 | 0 | 231 | 0 | 0 | 231 | 0 | 0 | 0 | 0 | 0 | 0 | 360 | 10 | 0 | 370 | 607 |
| Grand Total | 11 | 0 | 2 | 0 | 13 | 1 | 464 | 0 | 0 | 465 | 0 | 0 | 0 | 0 | 0 | 0 | 762 | 15 | 0 | 777 | 1255 |
| Apprch % | 84.6 | 0 | 15.4 | 0 | | 0.2 | 99.8 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 98.1 | 1.9 | 0 | | |
| Total % | 0.9 | 0 | 0.2 | 0 | 1 | 0.1 | 37 | 0 | 0 | 37.1 | 0 | 0 | 0 | 0 | 0 | 0 | 60.7 | 1.2 | 0 | 61.9 | |

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 Colorado Springs, CO 80909
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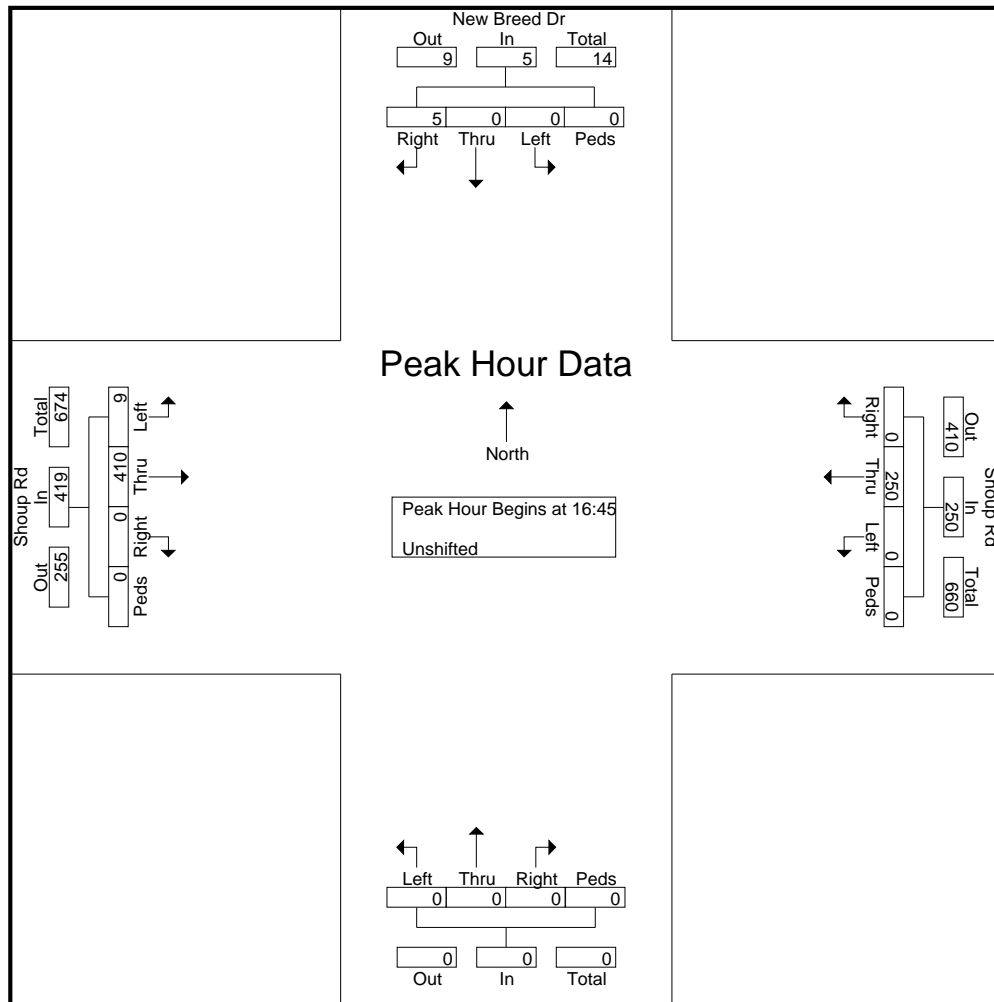
File Name : New Breed Dr - Shoup Rd PM

Site Code : S224230

Start Date : 4/26/2022

Page No : 2

| Start Time | New Breed Dr Southbound | | | | | Shoup Rd Westbound | | | | | Northbound | | | | | Shoup Rd Eastbound | | | | | Int. Total |
|--|-------------------------|------|------|------|------------|--------------------|------|------|------|------------|------------|------|------|------|------------|--------------------|------|------|------|------------|------------|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | |
| Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 4:45:00 PM | | | | | | | | | | | | | | | | | | | | | |
| 4:45:00 PM | 1 | 0 | 0 | 0 | 1 | 0 | 67 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 2 | 0 | 129 | 197 |
| 5:00:00 PM | 3 | 0 | 0 | 0 | 3 | 0 | 56 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 2 | 0 | 100 | 159 |
| 5:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 2 | 0 | 96 | 163 |
| 5:30:00 PM | 1 | 0 | 0 | 0 | 1 | 0 | 60 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 3 | 0 | 94 | 155 |
| Total Volume | 5 | 0 | 0 | 0 | 5 | 0 | 250 | 0 | 0 | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 410 | 9 | 0 | 419 | 674 |
| % App. Total | 100 | 0 | 0 | 0 | | 0 | 100 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 97.9 | 2.1 | 0 | | |
| PHF | .417 | .000 | .000 | .000 | .417 | .000 | .933 | .000 | .000 | .933 | .000 | .000 | .000 | .000 | .000 | .000 | .807 | .750 | .000 | .812 | .855 |



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 Colorado Springs, CO 80909
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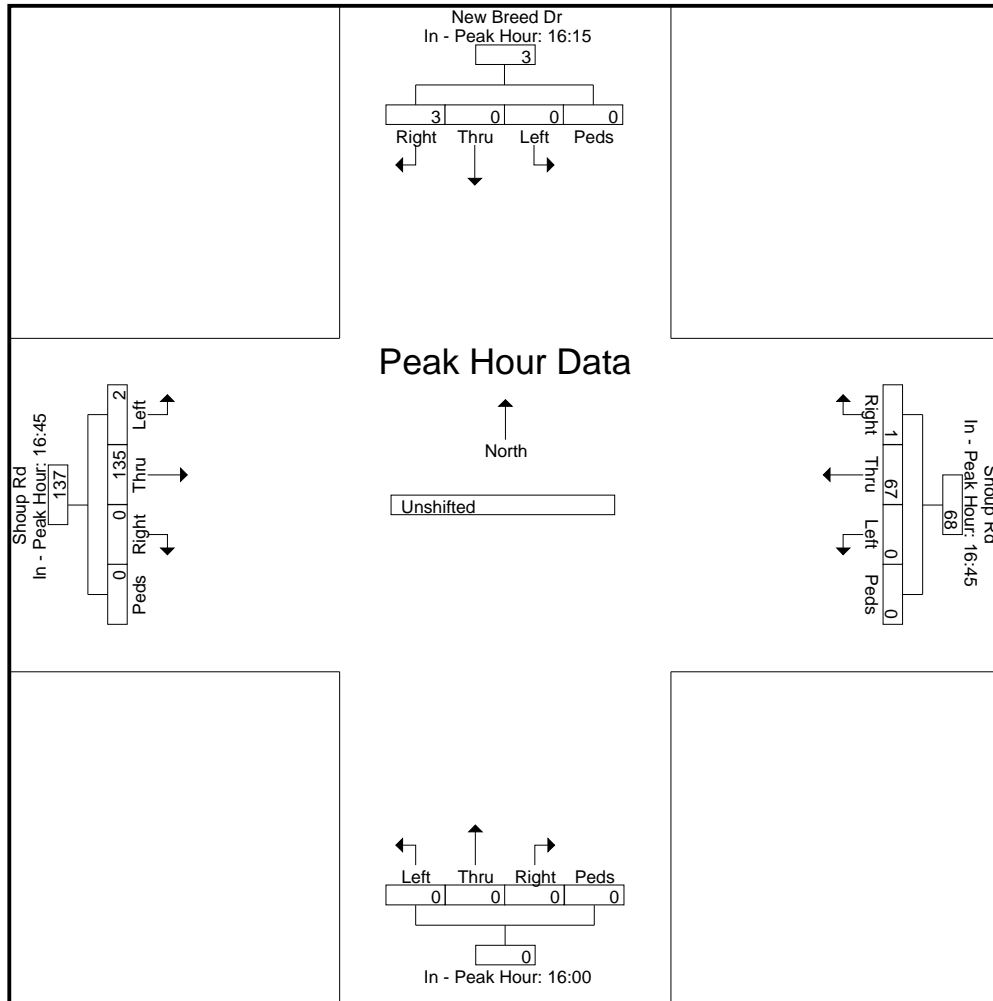
File Name : New Breed Dr - Shoup Rd PM

Site Code : S224230

Start Date : 4/26/2022

Page No : 3

| Start Time | New Breed Dr Southbound | | | | | Shoup Rd Westbound | | | | | Northbound | | | | | Shoup Rd Eastbound | | | | | Int. Total |
|--|-------------------------|------|------|------|------------|--------------------|------|------|------|------------|------------|------|------|------|------------|--------------------|------|------|------|------------|------------|
| | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | Peds | App. Total | |
| Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | | | | |
| Peak Hour for Each Approach Begins at: | | | | | | | | | | | | | | | | | | | | | |
| | 4:15:00 PM | | | | | 4:45:00 PM | | | | | 4:00:00 PM | | | | | 4:45:00 PM | | | | | |
| +0 mins. | 2 | 0 | 0 | 0 | 2 | 0 | 67 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 2 | 0 | 129 | |
| +5 mins. | 1 | 0 | 1 | 0 | 2 | 0 | 56 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 2 | 0 | 100 | |
| +10 mins. | 1 | 0 | 0 | 0 | 1 | 0 | 67 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 2 | 0 | 96 | |
| +15 mins. | 3 | 0 | 0 | 0 | 3 | 0 | 60 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 3 | 0 | 94 | |
| Total Volume | 7 | 0 | 1 | 0 | 8 | 0 | 250 | 0 | 0 | 250 | 0 | 0 | 0 | 0 | 0 | 0 | 410 | 9 | 0 | 419 | |
| % App. Total | 87.5 | 0 | 12.5 | 0 | | 0 | 100 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 97.9 | 2.1 | 0 | | |
| PHF | .583 | .000 | .250 | .000 | .667 | .000 | .933 | .000 | .000 | .933 | .000 | .000 | .000 | .000 | .000 | .000 | .807 | .750 | .000 | .812 | |



Levels of Service



| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 166 | 483 | 2 | 1 | 13 |
| Future Vol, veh/h | 6 | 166 | 483 | 2 | 1 | 13 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 87 | 87 | 92 | 92 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 191 | 525 | 2 | 1 | 17 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 527 | 0 | - | 0 | 731 |
| Stage 1 | - | - | - | - | 526 |
| Stage 2 | - | - | - | - | 205 |
| Critical Hdwy | 4.12 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1040 | - | - | - | 389 |
| Stage 1 | - | - | - | - | 593 |
| Stage 2 | - | - | - | - | 829 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1040 | - | - | - | 386 |
| Mov Cap-2 Maneuver | - | - | - | - | 386 |
| Stage 1 | - | - | - | - | 589 |
| Stage 2 | - | - | - | - | 829 |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.3 | 0 | 11.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1040 | - | - | - | 536 |
| HCM Lane V/C Ratio | 0.007 | - | - | - | 0.033 |
| HCM Control Delay (s) | 8.5 | - | - | - | 11.9 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

HCM 6th TWSC
2: New Breed Dr & Meadow Run Cir

Existing
AM

Intersection

Int Delay, s/veh 5.4

Movement EBT EBR WBL WBT NBL NBR

| | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 7 | 7 | 0 | 4 | 4 |
| Future Vol, veh/h | 0 | 7 | 7 | 0 | 4 | 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 | 0 | 9 | 9 | 0 | 5 | 5 |

Major/Minor Major1 Major2 Minor1

| | | | | | | |
|----------------------|---|---|-------|---|-------|-------|
| Conflicting Flow All | 0 | 0 | 9 | 0 | 23 | 5 |
| Stage 1 | - | - | - | - | 5 | - |
| Stage 2 | - | - | - | - | 18 | - |
| 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 | - | 993 | 1078 |
| Stage 1 | - | - | - | - | 1018 | - |
| Stage 2 | - | - | - | - | 1005 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1611 | - | 987 | 1078 |
| Mov Cap-2 Maneuver | - | - | - | - | 987 | - |
| Stage 1 | - | - | - | - | 1018 | - |
| Stage 2 | - | - | - | - | 999 | - |

Approach EB WB NB

| | | | |
|----------------------|---|-----|-----|
| HCM Control Delay, s | 0 | 7.2 | 8.5 |
| HCM LOS | | | A |

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

| | | | | | |
|-----------------------|------|---|---|-------|---|
| Capacity (veh/h) | 1030 | - | - | 1611 | - |
| HCM Lane V/C Ratio | 0.01 | - | - | 0.006 | - |
| HCM Control Delay (s) | 8.5 | - | - | 7.2 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 410 | 250 | 0 | 0 | 5 |
| Future Vol, veh/h | 9 | 410 | 250 | 0 | 0 | 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 | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 10 | 446 | 272 | 0 | 0 | 6 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 272 | 0 | - | 0 | 738 272 |
| Stage 1 | - | - | - | - | 272 - |
| Stage 2 | - | - | - | - | 466 - |
| 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 | 1291 | - | - | - | 385 767 |
| Stage 1 | - | - | - | - | 774 - |
| Stage 2 | - | - | - | - | 632 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1291 | - | - | - | 382 767 |
| Mov Cap-2 Maneuver | - | - | - | - | 382 - |
| Stage 1 | - | - | - | - | 768 - |
| Stage 2 | - | - | - | - | 632 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.2 | 0 | 9.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1291 | - | - | - | 767 |
| HCM Lane V/C Ratio | 0.008 | - | - | - | 0.008 |
| HCM Control Delay (s) | 7.8 | - | - | - | 9.7 |
| HCM Lane LOS | A | - | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

HCM 6th TWSC
2: New Breed Dr & Meadow Run Cir

Existing
PM

Intersection

Int Delay, s/veh 7

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 2 | 3 | 0 | 4 | 5 |
| Future Vol, veh/h | 0 | 2 | 3 | 0 | 4 | 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 | 0 | 3 | 4 | 0 | 5 | 6 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 3 | 0 | 10 |
| Stage 1 | - | - | - | - | 2 |
| Stage 2 | - | - | - | - | 8 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1619 | - | 1010 |
| Stage 1 | - | - | - | - | 1021 |
| Stage 2 | - | - | - | - | 1015 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1619 | - | 1008 |
| Mov Cap-2 Maneuver | - | - | - | - | 1008 |
| Stage 1 | - | - | - | - | 1021 |
| Stage 2 | - | - | - | - | 1013 |

| Approach | EB | WB | NB |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0 | 7.2 | 8.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1048 | - | - | 1619 | - |
| HCM Lane V/C Ratio | 0.011 | - | - | 0.002 | - |
| HCM Control Delay (s) | 8.5 | - | - | 7.2 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 7 | 166 | 483 | 2 | 1 | 17 |
| Future Vol, veh/h | 7 | 166 | 483 | 2 | 1 | 17 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 87 | 87 | 92 | 92 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 191 | 525 | 2 | 1 | 22 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 527 | 0 | - | 0 | 733 526 |
| Stage 1 | - | - | - | - | 526 - |
| Stage 2 | - | - | - | - | 207 - |
| 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 | 1040 | - | - | - | 388 552 |
| Stage 1 | - | - | - | - | 593 - |
| Stage 2 | - | - | - | - | 828 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1040 | - | - | - | 385 552 |
| Mov Cap-2 Maneuver | - | - | - | - | 385 - |
| Stage 1 | - | - | - | - | 588 - |
| Stage 2 | - | - | - | - | 828 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.3 | 0 | 12 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1040 | - | - | - | 539 |
| HCM Lane V/C Ratio | 0.008 | - | - | - | 0.043 |
| HCM Control Delay (s) | 8.5 | - | - | - | 12 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 7 | 11 | 0 | 4 | 6 |
| Future Vol, veh/h | 0 | 7 | 11 | 0 | 4 | 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 | 78 | 78 | 78 | 78 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 9 | 14 | 0 | 5 | 8 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 9 | 0 | 33 |
| Stage 1 | - | - | - | - | 5 |
| Stage 2 | - | - | - | - | 28 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1611 | - | 980 |
| Stage 1 | - | - | - | - | 1018 |
| Stage 2 | - | - | - | - | 995 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1611 | - | 971 |
| Mov Cap-2 Maneuver | - | - | - | - | 971 |
| Stage 1 | - | - | - | - | 1018 |
| Stage 2 | - | - | - | - | 986 |

| Approach | EB | WB | NB |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0 | 7.3 | 8.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1032 | - | - | 1611 | - |
| HCM Lane V/C Ratio | 0.012 | - | - | 0.009 | - |
| HCM Control Delay (s) | 8.5 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 13 | 410 | 250 | 0 | 0 | 7 |
| Future Vol, veh/h | 13 | 410 | 250 | 0 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 446 | 272 | 0 | 0 | 9 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 272 | 0 | - | 0 | 746 272 |
| Stage 1 | - | - | - | - | 272 - |
| Stage 2 | - | - | - | - | 474 - |
| 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 | 1291 | - | - | - | 381 767 |
| Stage 1 | - | - | - | - | 774 - |
| Stage 2 | - | - | - | - | 626 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1291 | - | - | - | 377 767 |
| Mov Cap-2 Maneuver | - | - | - | - | 377 - |
| Stage 1 | - | - | - | - | 765 - |
| Stage 2 | - | - | - | - | 626 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 0.2 | 0 | 9.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1291 | - | - | - | 767 |
| HCM Lane V/C Ratio | 0.011 | - | - | - | 0.012 |
| HCM Control Delay (s) | 7.8 | - | - | - | 9.7 |
| HCM Lane LOS | A | - | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|--------|--------|--------|-------|-------|-------|
| Int Delay, s/veh | 7.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 2 | 5 | 0 | 4 | 9 |
| Future Vol, veh/h | 0 | 2 | 5 | 0 | 4 | 9 |
| 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 | 0 | 3 | 6 | 0 | 5 | 12 |
| Major/Minor | Major1 | Major2 | Minor1 | | | |
| Conflicting Flow All | 0 | 0 | 3 | 0 | 14 | 2 |
| Stage 1 | - | - | - | - | 2 | - |
| 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 | - | - | 1619 | - | 1005 | 1082 |
| Stage 1 | - | - | - | - | 1021 | - |
| Stage 2 | - | - | - | - | 1011 | - |
| Platoon blocked, % | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1619 | - | 1001 | 1082 |
| Mov Cap-2 Maneuver | - | - | - | - | 1001 | - |
| Stage 1 | - | - | - | - | 1021 | - |
| Stage 2 | - | - | - | - | 1007 | - |
| Approach | EB | WB | NB | | | |
| HCM Control Delay, s | 0 | 7.2 | 8.5 | | | |
| HCM LOS | | | | | A | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 1056 | - | - | 1619 | - | |
| HCM Lane V/C Ratio | 0.016 | - | - | 0.004 | - | |
| HCM Control Delay (s) | 8.5 | - | - | 7.2 | 0 | |
| HCM Lane LOS | A | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 17 | 300 | 840 | 3 | 4 | 44 |
| Future Vol, veh/h | 17 | 300 | 840 | 3 | 4 | 44 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 93 | 93 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 326 | 903 | 3 | 5 | 56 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 906 | 0 | - | 0 | 1267 905 |
| Stage 1 | - | - | - | - | 905 - |
| Stage 2 | - | - | - | - | 362 - |
| 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 | 751 | - | - | - | 186 335 |
| Stage 1 | - | - | - | - | 395 - |
| Stage 2 | - | - | - | - | 704 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 751 | - | - | - | 182 335 |
| Mov Cap-2 Maneuver | - | - | - | - | 182 - |
| Stage 1 | - | - | - | - | 386 - |
| Stage 2 | - | - | - | - | 704 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0 | 19.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 751 | - | - | - | 313 |
| HCM Lane V/C Ratio | 0.025 | - | - | - | 0.197 |
| HCM Control Delay (s) | 9.9 | - | - | - | 19.3 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.7 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Traffic Vol, veh/h | 0 | 23 | 25 | 0 | 10 | 11 |
| Future Vol, veh/h | 0 | 23 | 25 | 0 | 10 | 11 |
| 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 | 0 | 29 | 32 | 0 | 13 | 14 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0 | 0 | 29 | 0 | 79 15 |
| Stage 1 | - | - | - | - | 15 - |
| Stage 2 | - | - | - | - | 64 - |
| 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 | - | - | 1584 | - | 924 1065 |
| Stage 1 | - | - | - | - | 1008 - |
| Stage 2 | - | - | - | - | 959 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1584 | - | 906 1065 |
| Mov Cap-2 Maneuver | - | - | - | - | 906 - |
| Stage 1 | - | - | - | - | 1008 - |
| Stage 2 | - | - | - | - | 940 - |

| Approach | EB | WB | NB |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0 | 7.3 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|------|-----|
| Capacity (veh/h) | 983 | - | - | 1584 | - |
| HCM Lane V/C Ratio | 0.027 | - | - | 0.02 | - |
| HCM Control Delay (s) | 8.8 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 44 | 715 | 435 | 4 | 2 | 26 |
| Future Vol, veh/h | 44 | 715 | 435 | 4 | 2 | 26 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 92 | 92 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 47 | 769 | 473 | 4 | 3 | 33 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 477 | 0 | - | 0 | 1338 475 |
| Stage 1 | - | - | - | - | 475 - |
| Stage 2 | - | - | - | - | 863 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1085 | - | - | - | 169 590 |
| Stage 1 | - | - | - | - | 626 - |
| Stage 2 | - | - | - | - | 413 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1085 | - | - | - | 162 590 |
| Mov Cap-2 Maneuver | - | - | - | - | 162 - |
| Stage 1 | - | - | - | - | 599 - |
| Stage 2 | - | - | - | - | 413 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0 | 12.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1085 | - | - | - | 496 |
| HCM Lane V/C Ratio | 0.044 | - | - | - | 0.072 |
| HCM Control Delay (s) | 8.5 | - | - | - | 12.8 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 13 | 15 | 0 | 23 | 25 |
| Future Vol, veh/h | 0 | 13 | 15 | 0 | 23 | 25 |
| 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 | 0 | 17 | 19 | 0 | 29 | 32 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 17 | 0 | 47 |
| Stage 1 | - | - | - | - | 9 |
| Stage 2 | - | - | - | - | 38 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1600 | - | 963 |
| Stage 1 | - | - | - | - | 1014 |
| Stage 2 | - | - | - | - | 984 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1600 | - | 951 |
| Mov Cap-2 Maneuver | - | - | - | - | 951 |
| Stage 1 | - | - | - | - | 1014 |
| Stage 2 | - | - | - | - | 972 |

| Approach | EB | WB | NB |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0 | 7.3 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1011 | - | - | 1600 | - |
| HCM Lane V/C Ratio | 0.061 | - | - | 0.012 | - |
| HCM Control Delay (s) | 8.8 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 18 | 300 | 840 | 3 | 5 | 48 |
| Future Vol, veh/h | 18 | 300 | 840 | 3 | 5 | 48 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 93 | 93 | 83 | 83 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 20 | 326 | 903 | 3 | 6 | 58 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 906 | 0 | - | 0 | 1271 905 |
| Stage 1 | - | - | - | - | 905 - |
| Stage 2 | - | - | - | - | 366 - |
| 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 | 751 | - | - | - | 185 335 |
| Stage 1 | - | - | - | - | 395 - |
| Stage 2 | - | - | - | - | 702 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 751 | - | - | - | 180 335 |
| Mov Cap-2 Maneuver | - | - | - | - | 180 - |
| Stage 1 | - | - | - | - | 384 - |
| Stage 2 | - | - | - | - | 702 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.6 | 0 | 19.6 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 751 | - | - | - | 310 |
| HCM Lane V/C Ratio | 0.026 | - | - | - | 0.206 |
| HCM Control Delay (s) | 9.9 | - | - | - | 19.6 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.8 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 23 | 29 | 0 | 10 | 12 |
| Future Vol, veh/h | 0 | 23 | 29 | 0 | 10 | 12 |
| 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 | 0 | 29 | 37 | 0 | 13 | 15 |

| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 29 | 0 | 89 |
| Stage 1 | - | - | - | - | 15 |
| Stage 2 | - | - | - | - | 74 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1584 | - | 912 |
| Stage 1 | - | - | - | - | 1008 |
| Stage 2 | - | - | - | - | 949 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1584 | - | 891 |
| Mov Cap-2 Maneuver | - | - | - | - | 891 |
| Stage 1 | - | - | - | - | 1008 |
| Stage 2 | - | - | - | - | 927 |

| Approach | EB | WB | NB |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0 | 7.3 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 978 | - | - | 1584 | - |
| HCM Lane V/C Ratio | 0.029 | - | - | 0.023 | - |
| HCM Control Delay (s) | 8.8 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 48 | 715 | 435 | 4 | 3 | 28 |
| Future Vol, veh/h | 48 | 715 | 435 | 4 | 3 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 270 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 78 | 78 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 52 | 777 | 473 | 4 | 4 | 36 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 477 | 0 | - | 0 | 1356 475 |
| Stage 1 | - | - | - | - | 475 - |
| Stage 2 | - | - | - | - | 881 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1085 | - | - | - | 165 590 |
| Stage 1 | - | - | - | - | 626 - |
| Stage 2 | - | - | - | - | 405 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1085 | - | - | - | 157 590 |
| Mov Cap-2 Maneuver | - | - | - | - | 157 - |
| Stage 1 | - | - | - | - | 596 - |
| Stage 2 | - | - | - | - | 405 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0 | 13.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1085 | - | - | - | 466 |
| HCM Lane V/C Ratio | 0.048 | - | - | - | 0.085 |
| HCM Control Delay (s) | 8.5 | - | - | - | 13.4 |
| HCM Lane LOS | A | - | - | - | B |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | 0.3 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 0 | 13 | 17 | 0 | 23 | 30 |
| Future Vol, veh/h | 0 | 13 | 17 | 0 | 23 | 30 |
| 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 | 83 | 83 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 17 | 22 | 0 | 28 | 36 |

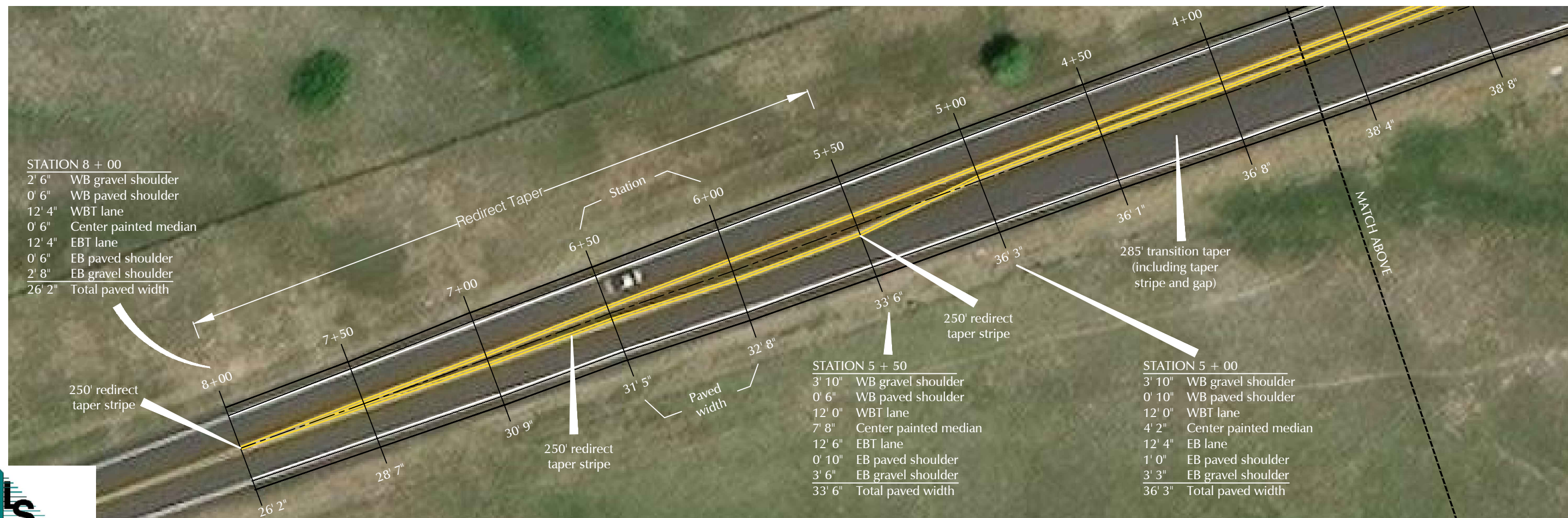
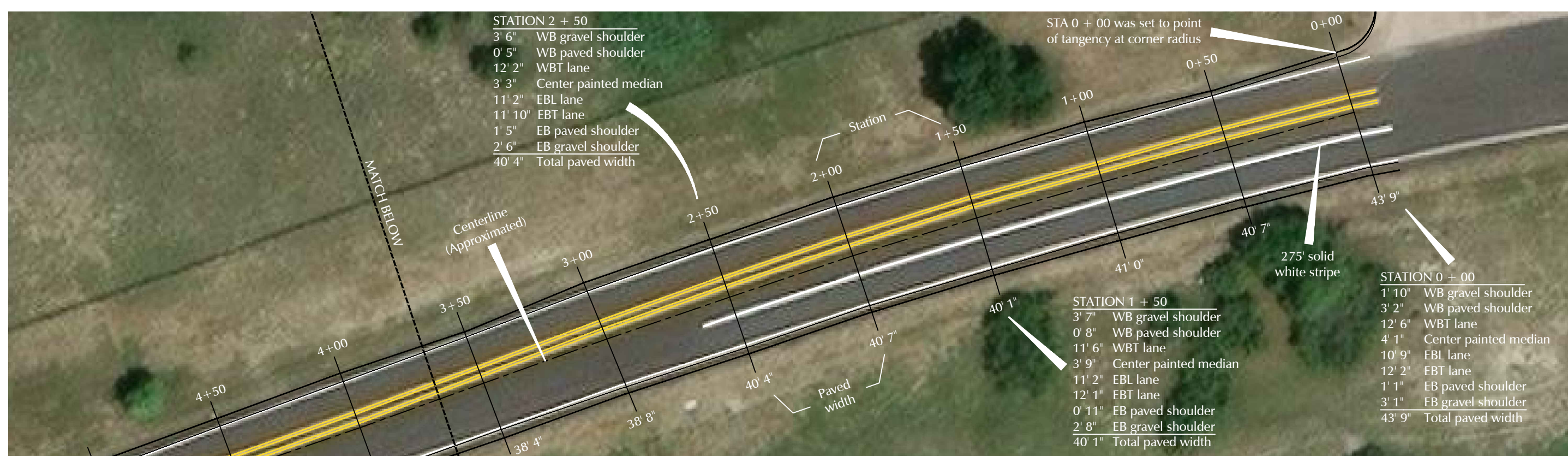
| Major/Minor | Major1 | Major2 | Minor1 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 0 | 0 | 17 | 0 | 53 |
| Stage 1 | - | - | - | - | 9 |
| Stage 2 | - | - | - | - | 44 |
| Critical Hdwy | - | - | 4.12 | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 |
| Pot Cap-1 Maneuver | - | - | 1600 | - | 955 |
| Stage 1 | - | - | - | - | 1014 |
| Stage 2 | - | - | - | - | 978 |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1600 | - | 942 |
| Mov Cap-2 Maneuver | - | - | - | - | 942 |
| Stage 1 | - | - | - | - | 1014 |
| Stage 2 | - | - | - | - | 964 |

| Approach | EB | WB | NB |
|----------------------|----|-----|-----|
| HCM Control Delay, s | 0 | 7.3 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 1012 | - | - | 1600 | - |
| HCM Lane V/C Ratio | 0.063 | - | - | 0.014 | - |
| HCM Control Delay (s) | 8.8 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

Striping Exhibits 1-4



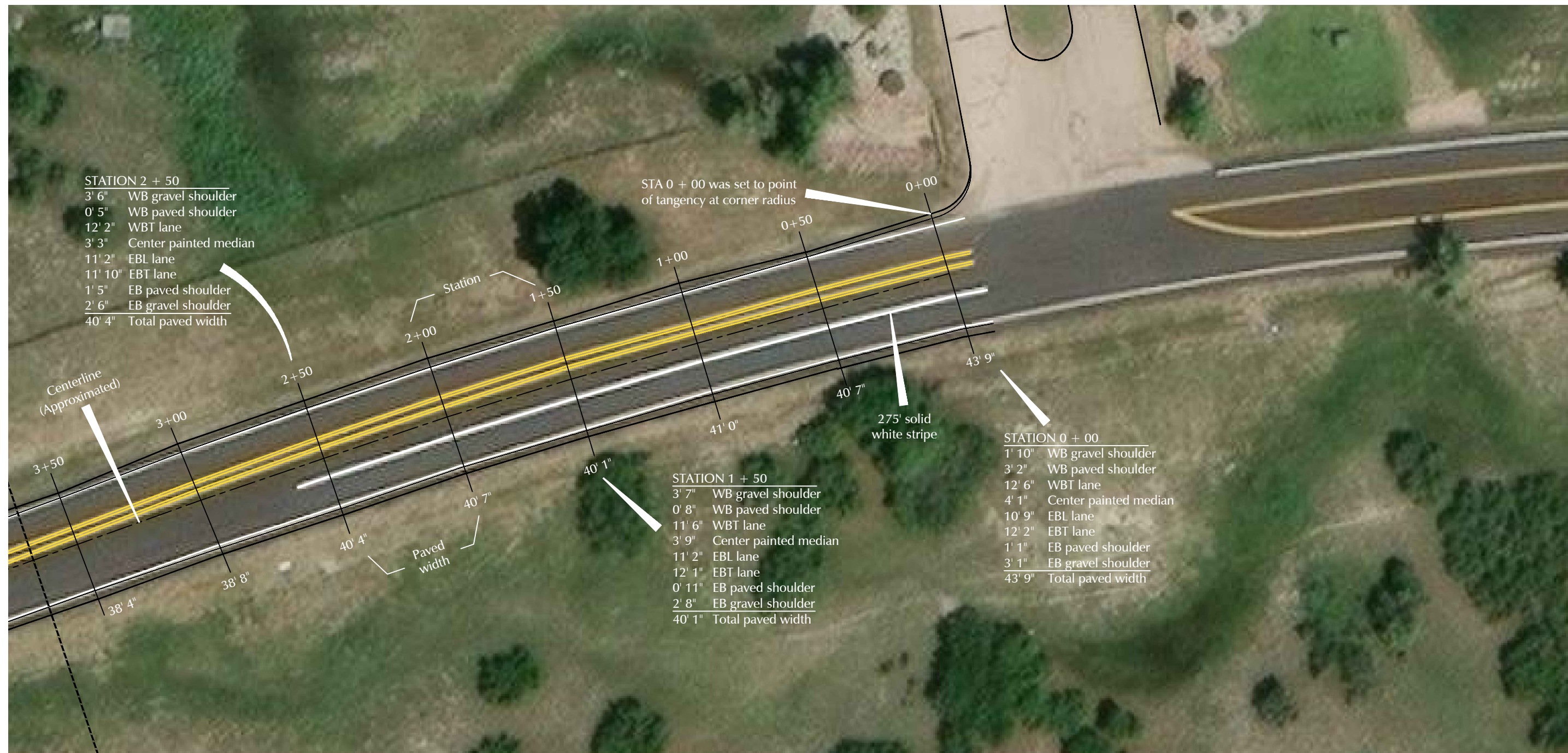


Note: All measurements are based on wheel-measured field measurements by LSC (August 15, 2024)

Existing Pavement Markings

New Breed Ranch (LSC# S224230)

Exhibit 1

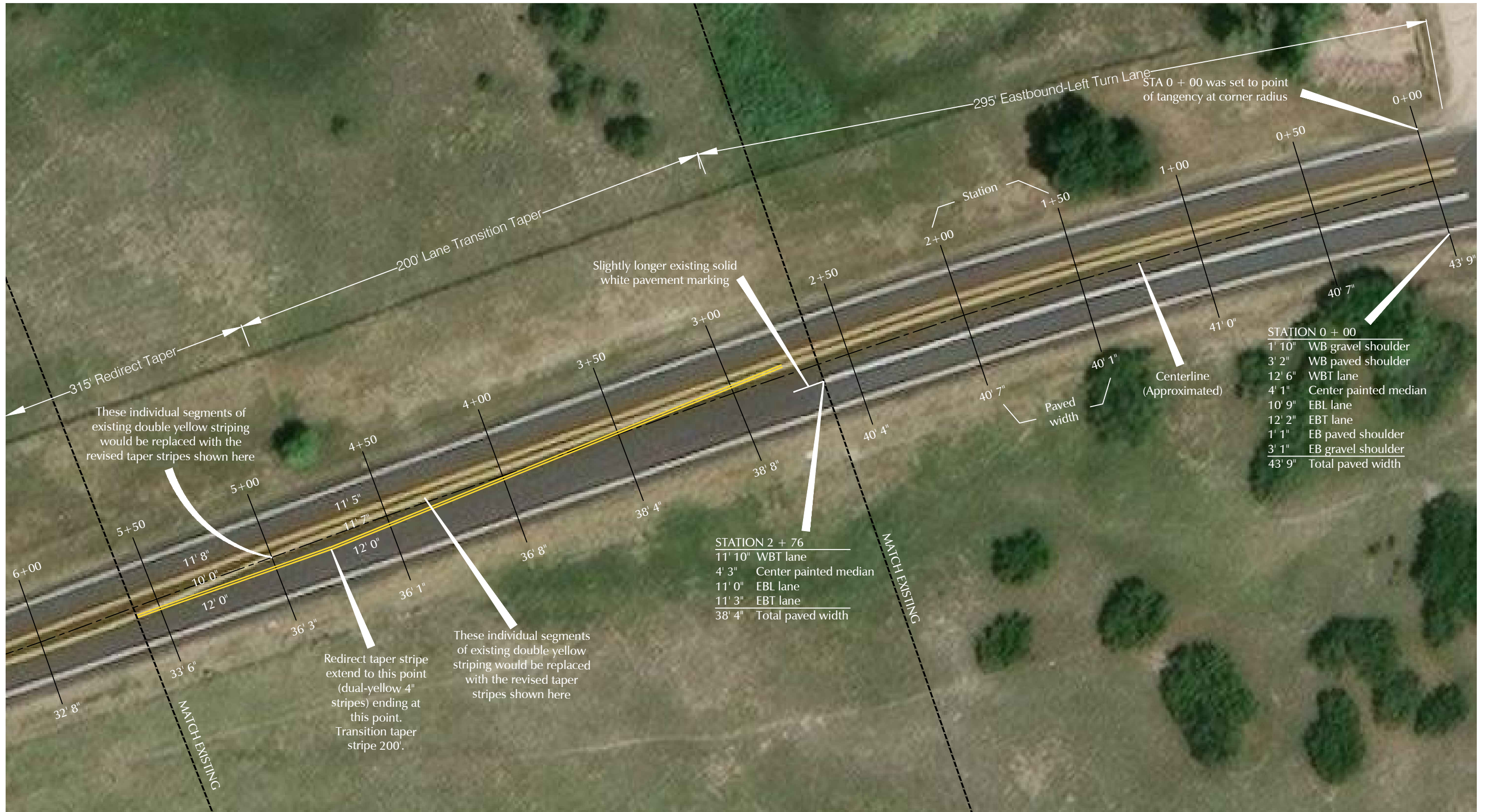


Note: All measurements are based on wheel-measured field measurements by LSC (August 15, 2024)

Exhibit 2

Existing Pavement Markings Detail at the Shoup Rd/New Breed Dr Intersection

New Breed Ranch (LSC# S224230)



* Note: Existing striping is functional as-is and does not require re-striping for this development. These modifications could be made in the future when the roadway is repaved with a mill and overlay, if surface treatment is done such that Shoup Road needs re-striping/re-marking or if the existing markings on Shoup Road are refreshed.

Exhibit 3
**Recommendations for Future*
 Pavement Marking Configuration**

New Breed Ranch (LSC# S224230)



STATION 0 + 00

| | |
|--------|-----------------------|
| 1' 10" | WB gravel shoulder |
| 3' 2" | WB paved shoulder |
| 12' 6" | WBT lane |
| 4' 1" | Center painted median |
| 10' 9" | EBL lane |
| 12' 2" | EBT lane |
| 1' 1" | EB paved shoulder |
| 3' 1" | EB gravel shoulder |
| 43' 9" | Total paved width |



* Note: Existing striping is functional as-is and does not require re-striping for this development. These modifications could be made in the future when the roadway is repaved with a mill and overlay, if surface treatment is done such that Shoup Road needs re-striping/re-marking or if the existing markings on Shoup Road are refreshed.

Recommendations for Future* Pavement Marking Configuration Detail at the Shoup Rd/New Breed Dr Intersection

Exhibit 4