



Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

\_\_\_\_\_  
Jeffrey R. Planck, P.E., PE #53006

\_\_\_\_\_  
August 4, 2021  
Date

Developer's Statement

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

\_\_\_\_\_  
Ms. Kelly Nelson  
Pikes Peak Investments LLC  
c/o The Equity Group  
90 South Cascade Avenue  
Suite 1500  
Colorado Springs, Colorado 80903

\_\_\_\_\_  
8-16-2021  
Date

August 4, 2021

Ms. Kelly Nelson  
Pikes Peak Investments LLC  
c/o The Equity Group  
90 South Cascade Avenue  
Suite 1500  
Colorado Springs, Colorado 80903

**ACCEPTED for FILE**  
**Engineering Review**

08/24/2021 7:04:30 AM  
dsdnijkamp

**EPC Planning & Community  
Development Department**

Re: Meadowbrook Park Traffic Study Letter  
El Paso County, Colorado

Dear Ms. Nelson:

This traffic study letter has been prepared for a proposed residential development, Meadowbrook Park, to be located north of Newt Drive between Meadowbrook Parkway and US-24 in El Paso County, Colorado. This letter is an addendum to the *Crossroads-Meadowbrook-Reagan Ranch Master Traffic Impact Study* (MTIS) completed by Kimley-Horn and Associates in April 2021. This supplement to the MTIS is to provide a site-specific analysis addressing comments from master traffic impact study for the Meadowbrook Park. For the purposes of this analysis, full buildout of Meadowbrook Park is expected to include 67 single family residences using private internal roads. A conceptual site plan of the project is attached.

A vicinity map illustrating the location of the property is attached as **Figure 1**. The surrounding area primarily consists of vacant land, industrial uses, and residential use. The existing site is comprised of undeveloped land while residential and industrial uses are located north and northeast of the project site, respectively. The site area is shown in the aerial of attached **Figure 2**.

The purpose of this study is to identify project traffic generation characteristics and to develop an internal roadway circulation plan for the project based on daily traffic volumes projections, as well as to address comments specific to Meadowbrook Park from the MTIS. The proposed private access intersection of Spatium View and Meadowbrook Parkway was evaluated. The project proposes a shared access with the existing access along Meadowbrook Parkway to Circle K; however, the connection to the project will be gated and will only allow access for emergency vehicles. Therefore, the emergency access to the project was not evaluated.

As requested by El Paso County, it should be noted that all known development traffic studies have been included in this study in the last five years and this includes the *Crossroads-Meadowbrook-Reagan Ranch Master Traffic Impact Study* (MTIS) completed by Kimley-Horn and Associates in April 2021. Applicable documents from this master traffic impact study are attached.

### **Existing Roadway Network**

Regional access to the project is provided by Interstate 25 (I-25) and US-24 while primary access to the project will be provided by Meadowbrook Parkway, State Highway 94 (SH-94), and Newt Drive. Direct access will be provided by one private street access, Spatium View, located along the south side of Meadowbrook Parkway.

Meadowbrook Parkway is an El Paso County Urban Non-Residential Collector roadway that provides one lane of travel in each direction with a 35 mile per hour speed limit through the study area. Newt Drive extends northwest and southeast with one through lane of travel in each direction.

**Trip Generation**

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*<sup>1</sup> published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. Project generated traffic volumes are identified on a weekday daily as well as on a morning peak hour and afternoon peak hour basis. The morning peak hour is the highest one-hour time period of adjacent street traffic during four consecutive 15-minute intervals during the morning peak hour, between 7:00 am and 9:00 am. The afternoon peak hour is the highest one-hour time period of four consecutive 15-minute intervals between the hours of 4:00 pm and 6:00 pm representing the afternoon peak hour.

For this study, Kimley-Horn used the ITE Trip Generation Manual fitted curve equations that apply to Single-Family Detached Housing (ITE 210) for traffic associated with the Meadowbrook Park development.

Meadowbrook Park is expected to generate approximately 720 daily weekday trips with 52 of these trips occurring during the morning peak hour and 69 trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE Trip Generation Manual, 10th Edition – Volume 1: User’s Guide and Handbook, 2017. **Table 1** provides the estimated trip generation for the project with calculation worksheets attached.

**Table 1 – Meadowbrook Parkway Project Traffic Generation**

Use	Quantity	Daily	Weekday Vehicle Trips					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b>Meadowbrook Park</b>								
Single Family Housing (ITE 210)	67 Units	720	13	39	52	43	26	69

**Project Access Spacing Requirements and Internal Roadway Classifications**

The proposed access intersection of Spatium View and Meadowbrook Parkway is proposed to align with Preble Drive and is located approximately 750 feet northeast of Newt Drive and 480 feet south of the Cole View and Meadowbrook Parkway intersection (measured centerline to centerline).

The intersection offsets surrounding the proposed access intersection of Spatium View and Meadowbrook Parkway meets the El Paso County spacing standards of 330 feet along collector roadways with access to local streets.

As the project is only anticipated to generate 720 daily vehicle trips and the internal streets to the project will not have any cut through traffic, all internal streets to the project meet El Paso County average daily traffic threshold standard of 300 vehicles per day for an Urban Local Low Volume street except for Spatium View and the segment of Nova View between Spatium View and Tenebris Point which are classified as an Urban Local street. Specifically, all the internal streets are expected to have daily traffic volumes less than 750 vehicles per day. Attached **Figure 3** illustrates the circulation plan and street classification map for roadways internal to Meadowbrook Park.

<sup>1</sup> Institute of Transportation Engineers, *Trip Generation Manual*, Tenth Edition, Washington DC, 2017.

**Project Access: Lane Configurations, Operational Analysis, and Turn Lane Requirements**

The future access intersection of Spatium View and Meadowbrook Parkway will align with Preble Drive. Left turn movements entering this project access will be provided from an existing two-way left turn lane along Meadowbrook Parkway. The westbound exiting approach of Spatium View should provide stop control with installation of a R1-1 “STOP” sign. Based on the original master traffic impact study, all movements at the intersection of Spatium View and Meadowbrook Parkway are expected to operate acceptably during the peak hours throughout the 2040 horizon. Applicable documents from the master traffic impact study including intersection operational outputs, traffic volume projections, and recommended lane configurations and control are attached.

A vehicle queuing analysis was conducted for the Spatium View/Meadowbrook Parkway intersection. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 2** with calculations provided within the level of service operational sheets.

**Table 2 – Turn Lane Queuing Analysis Results**

Intersection Turn Lane	Existing Turn Lane Length (feet)	2026 Calculated Queue (feet)	2026 Recommended Length (feet)	2040 Calculated Queue (feet)	2040 Recommended Length (feet)
<b>Preble Dr/Spatium View &amp; Meadowbrook Pkwy</b> Southbound Left	125' TWLTL	25'	125' TWLTL	25'	125' TWLTL

As shown in the above table, the vehicle queues for the southbound left turn movements along Meadowbrook Parkway is calculated as 25 feet (one vehicle). Therefore, it is believed that the southbound left turn queue at the intersection of Preble Drive/Spatium View will be accommodated in the existing two-way left turn lane.

The El Paso County ECM was used to determine if a right turn lane is warranted along Meadowbrook Parkway at the project access. El Paso County classifies Meadowbrook Parkway as an Urban Non-Residential Collector. According to El Paso County ECM guidelines for Minor Arterials and Lower Classifications, a right turn lane is required for any access with a projected peak hour right turning volume of 50 vehicles per hour or greater.

Based on 2040 traffic volume projections, right turn lane requirements at the intersection of Spatium View and Meadowbrook Parkway are as follows:

- A northeastbound right turn lane is not warranted for the intersection of Spatium View and Meadowbrook Parkway based on projected 2040 total traffic volumes being 30 northbound right turns during the peak hour and the threshold being 50 vehicles per hour.

**Sight Distance Evaluation**

It is recommended that appropriate sight distance triangles be provided at the future access intersection of Spatium View and Meadowbrook Parkway to give drivers exiting the development areas a clear view of oncoming traffic. Landscaping and objects within sight triangles must not obstruct drivers’ views of the adjacent travel lanes. Intersection sight distances for left turn from stop and right turn from stop were analyzed for the proposed project access along Meadowbrook Parkway.

With El Paso County standards and a design speed of 40 miles per hour along Meadowbrook Parkway, the intersection sight distance for a vehicle turning from stop is 445 feet. Therefore, all



obstructions for turning vehicles from stop should be clear to the right and left within the triangle created with a vertex point located 13 feet (10 feet from local roads) from the edge of the major road traveled way (typical position of the minor road driver’s eye when stopped) and a line of sight distance of 445 feet located in the middle of the northeastbound and southwestbound through lanes along Meadowbrook Parkway. It is believed that the project access is appropriately located to provide the necessary sight distance needed but verification should be provided with sight distance triangles incorporated within the design plans.

**Road Impact Fee**

Road impact fees were evaluated based on the El Paso County Road Impact Fee Schedule. Based on these fee schedule guidelines, the fee per single-family dwelling unit is \$3,830. Therefore, the road impact fee for the proposed 67 single family residences is expected to be \$256,610. Road impact fee calculations are shown in **Table 3**. During the final plat process, the project team will determine if the impact fees are paid up front or if the property will be included in one of the available public improvement districts with reduced upfront costs. The project team will determine payment methods with the final plat.

**Table 3 – Road Impact Fees**

Use	Units	Fee / Unit	Total Fee
Single Family Housing (ITE 210)	67	\$3,830.00	\$256,610.00

**Conclusions and Recommendations**

In summary, this traffic study provides project traffic generation estimates to identify potential project traffic related impacts on the local street system with the proposed Meadowbrook Park project. Based on the analysis presented in this study, Kimley-Horn believes the proposed Meadowbrook Park development will be successfully incorporated into the existing and future roadway network. A deviation request has been submitted to El Paso County to propose the use of private roads within a 50-foot private road easement and tract. The easement includes drainage, public improvement, public utility, landscaping, sidewalks, and pedestrian easement as identified on the planned unit development subdivision preliminary. Ownership and maintenance of the private road facilities will be the responsibility of the Meadowbrook Crossing Metropolitan District No. 1.

The intersection offsets surrounding the proposed access intersection of Spatium View and Meadowbrook Parkway meets the El Paso County spacing standards of 330 feet along collector roadways with access to local streets. It is believed that the Meadowbrook Parkway and Spatium View intersection is appropriately located to provide the necessary intersection sight distance set forth by El Paso County.

The future access intersection of Spatium View and Meadowbrook Parkway will align with Preble Drive. Left turn movements for entering this project access will be provided from an existing two-way left turn lane along Meadowbrook Parkway. The westbound exiting approach of this driveway should provide stop control with installation of a R1-1 “STOP” sign.

The development of Meadowbrook Park is not expected to trigger any of the offsite improvements identified in the *Crossroads-Meadowbrook-Reagan Ranch Master MTIS*. The project is anticipated to be accommodated by the existing street network. If you have any questions or require anything further, please feel free to call me at (720) 943-9962.

Sincerely,

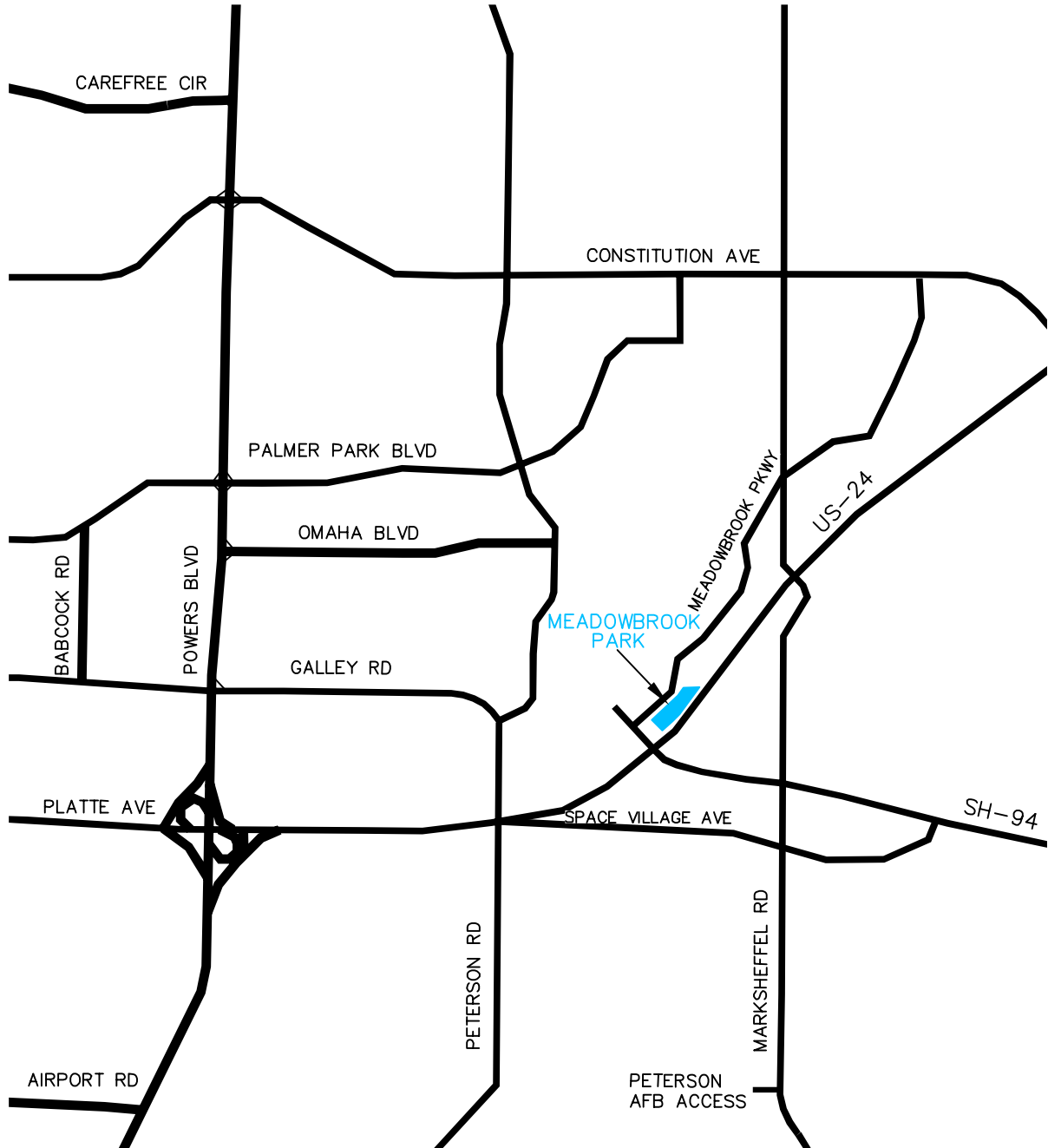
KIMLEY-HORN AND ASSOCIATES, INC.



Jeffrey R. Planck, P.E.  
Project Manager



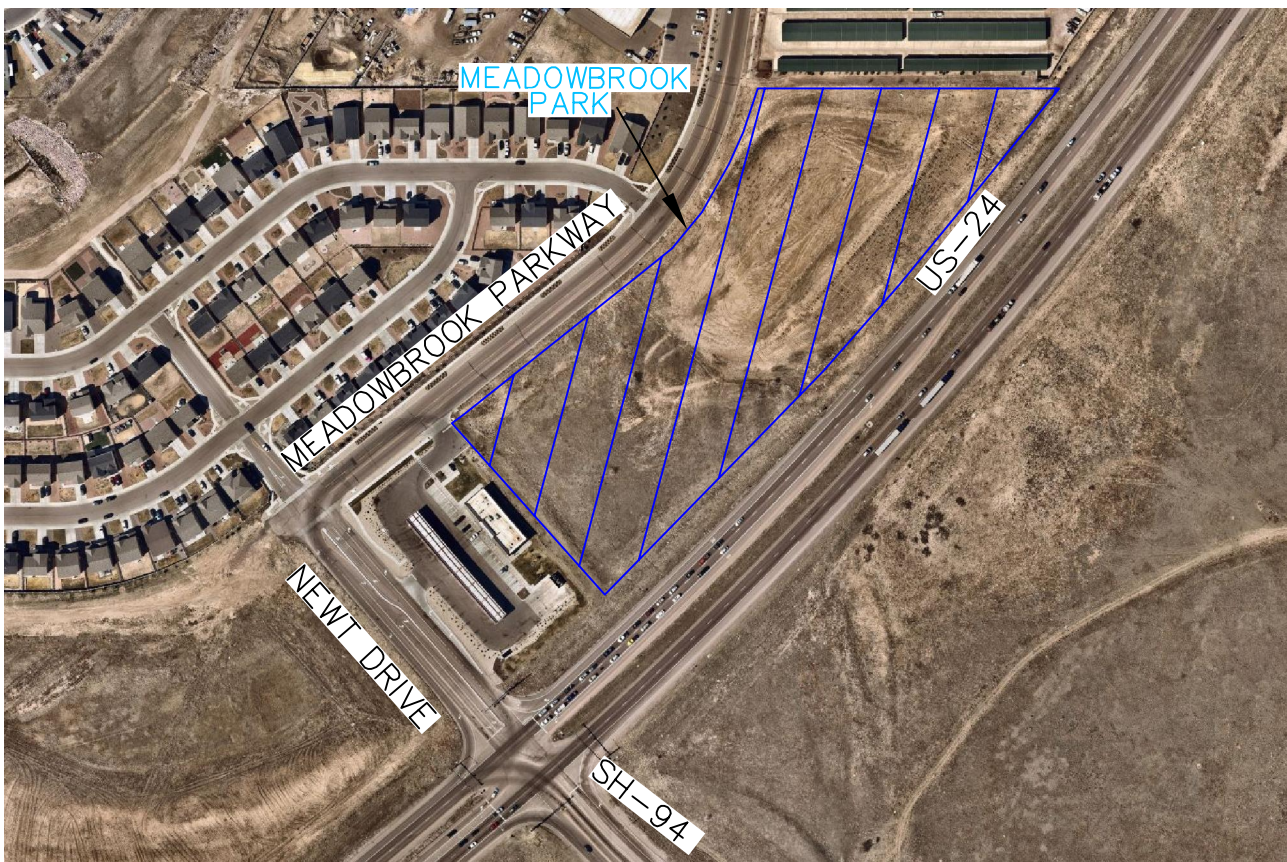
## Figures



MEADOWBROOK PARK  
VICINITY MAP

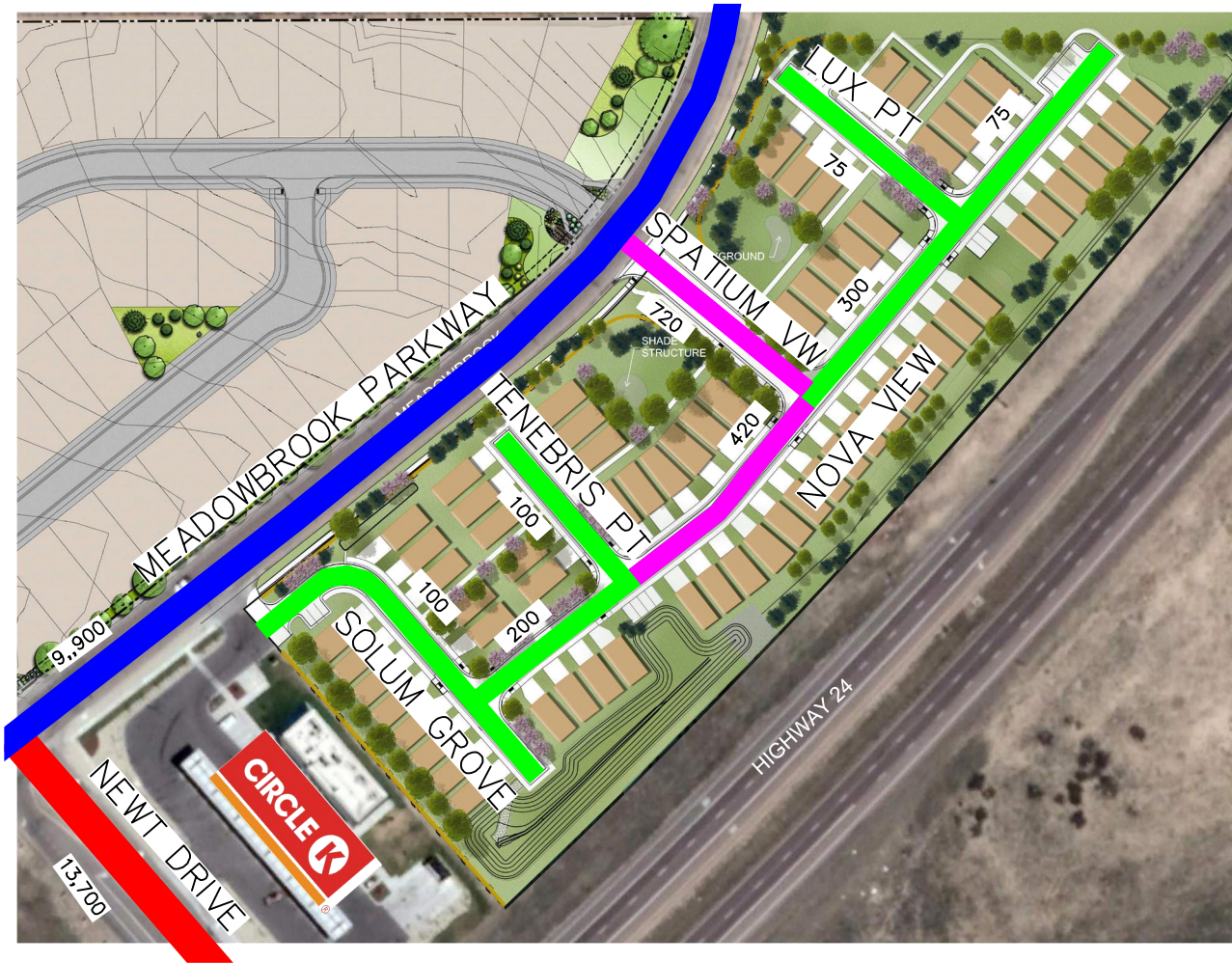
FIGURE 1





MEADOWBROOK PARK  
SITE AREA

FIGURE 2



LEGEND	
<span style="color: red;">█</span>	URBAN MINOR ARTERIAL
<span style="color: blue;">█</span>	URBAN NON-RESIDENTIAL COLLECTOR
<span style="color: magenta;">█</span>	URBAN LOCAL
<span style="color: green;">█</span>	URBAN LOCAL LOW VOLUME
<span style="color: cyan;">█</span>	PRIVATE ACCESS
<span style="border: 1px solid black; padding: 2px;">XX,X00</span>	ESTIMATED 2040 DAILY TRAFFIC VOLUME

MEADOWBROOK PARK  
 CIRCULATION PLAN

FIGURE 3

# Trip Generation Worksheets



Meadowbrook Park Trip Generation Summary

Use	Quantity	Daily	Weekday Vehicle Trips					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b>Meadowbrook Park</b>								
Single Family Housing (ITE 210)	67 Units	720	13	39	52	43	26	69

Project Crossroads-Meadwobrook-Reagan Ranch (Meadowbrook Park)  
 Subject Trip Generation for Single-Family Detached Housing  
 Designed by JRP Date February 08, 2021 Job No. 096956015  
 Checked by \_\_\_\_\_ Date \_\_\_\_\_ Sheet No. \_\_\_\_\_ of \_\_\_\_\_

## **TRIP GENERATION MANUAL TECHNIQUES**

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

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

Independent Variable - Dwelling Units (X)

$$X = 67$$

T = Average Vehicle Trip Ends

### **Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 3)**

Average Weekday	Directional Distribution:	25% ent.	75% exit.
(T) = 0.71 (X) + 4.80	T = 52	Average Vehicle Trip Ends	
(T) = 0.71 * (67) + 4.80	13 entering	39	exiting
	13 + 39 = 52		

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

Average Weekday	Directional Distribution:	63% ent.	37% exit.
Ln(T) = 0.96 Ln(X) + 0.20	T = 69	Average Vehicle Trip Ends	
Ln(T) = 0.96 * Ln(67) + 0.20	43 entering	26	exiting
	43 + 26 = 69		

### **Peak Hour of Generator, Saturday (200 Series Page 8)**

Average Saturday	Directional Distribution:	54% ent.	46% exit.
(T) = 0.84 (X) + 17.99	T = 74	Average Vehicle Trip Ends	
(T) = 0.84 * (67) + 17.99	40 entering	34	exiting
	40 + 34 = 74		

### **Weekday (200 Series Page 2)**

Average Weekday	Directional Distribution:	50% entering,	50% exiting
Ln(T) = 0.92 Ln(X) + 2.71	T = 720	Average Vehicle Trip Ends	
Ln(T) = 0.92 * Ln(67) + 2.71	360 entering	360	exiting
	360 + 360 = 720		

# Original Traffic Study Documents



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	10	30	0	15	5	280	10	5	365	5
Future Vol, veh/h	5	0	10	30	0	15	5	280	10	5	365	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	5	0	11	33	0	16	5	304	11	5	397	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	738	735	400	735	732	310	402	0	0	315	0	0
Stage 1	410	410	-	320	320	-	-	-	-	-	-	-
Stage 2	328	325	-	415	412	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	334	347	650	335	348	730	1157	-	-	1245	-	-
Stage 1	619	595	-	692	652	-	-	-	-	-	-	-
Stage 2	685	649	-	615	594	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	324	344	650	327	345	730	1157	-	-	1245	-	-
Mov Cap-2 Maneuver	439	438	-	440	438	-	-	-	-	-	-	-
Stage 1	617	593	-	689	649	-	-	-	-	-	-	-
Stage 2	667	646	-	602	592	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		12.9		0.1		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1157	-	-	560	507	1245	-
HCM Lane V/C Ratio	0.005	-	-	0.029	0.096	0.004	-
HCM Control Delay (s)	8.1	-	-	11.6	12.9	7.9	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	10	20	0	10	10	210	30	15	405	5
Future Vol, veh/h	5	0	10	20	0	10	10	210	30	15	405	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	11	22	0	11	11	228	33	16	440	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	747	758	443	747	744	245	445	0	0	261	0	0
Stage 1	475	475	-	267	267	-	-	-	-	-	-	-
Stage 2	272	283	-	480	477	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	329	336	615	329	343	794	1115	-	-	1303	-	-
Stage 1	570	557	-	738	688	-	-	-	-	-	-	-
Stage 2	734	677	-	567	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	319	329	615	318	335	794	1115	-	-	1303	-	-
Mov Cap-2 Maneuver	427	420	-	422	423	-	-	-	-	-	-	-
Stage 1	564	550	-	731	681	-	-	-	-	-	-	-
Stage 2	717	670	-	550	549	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.9		12.7		0.3		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1115	-	-	536	500	1303	-
HCM Lane V/C Ratio	0.01	-	-	0.03	0.065	0.013	-
HCM Control Delay (s)	8.3	-	-	11.9	12.7	7.8	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	10	30	0	15	5	315	10	5	420	5
Future Vol, veh/h	5	0	10	30	0	15	5	315	10	5	420	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	5	0	11	33	0	16	5	342	11	5	457	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	836	833	460	833	830	348	462	0	0	353	0	0
Stage 1	470	470	-	358	358	-	-	-	-	-	-	-
Stage 2	366	363	-	475	472	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	287	304	601	288	306	695	1099	-	-	1206	-	-
Stage 1	574	560	-	660	628	-	-	-	-	-	-	-
Stage 2	653	625	-	570	559	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	278	301	601	281	303	695	1099	-	-	1206	-	-
Mov Cap-2 Maneuver	400	404	-	400	405	-	-	-	-	-	-	-
Stage 1	571	558	-	657	625	-	-	-	-	-	-	-
Stage 2	635	622	-	557	557	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.2		13.6		0.1		0.1	
HCM LOS	B		B					

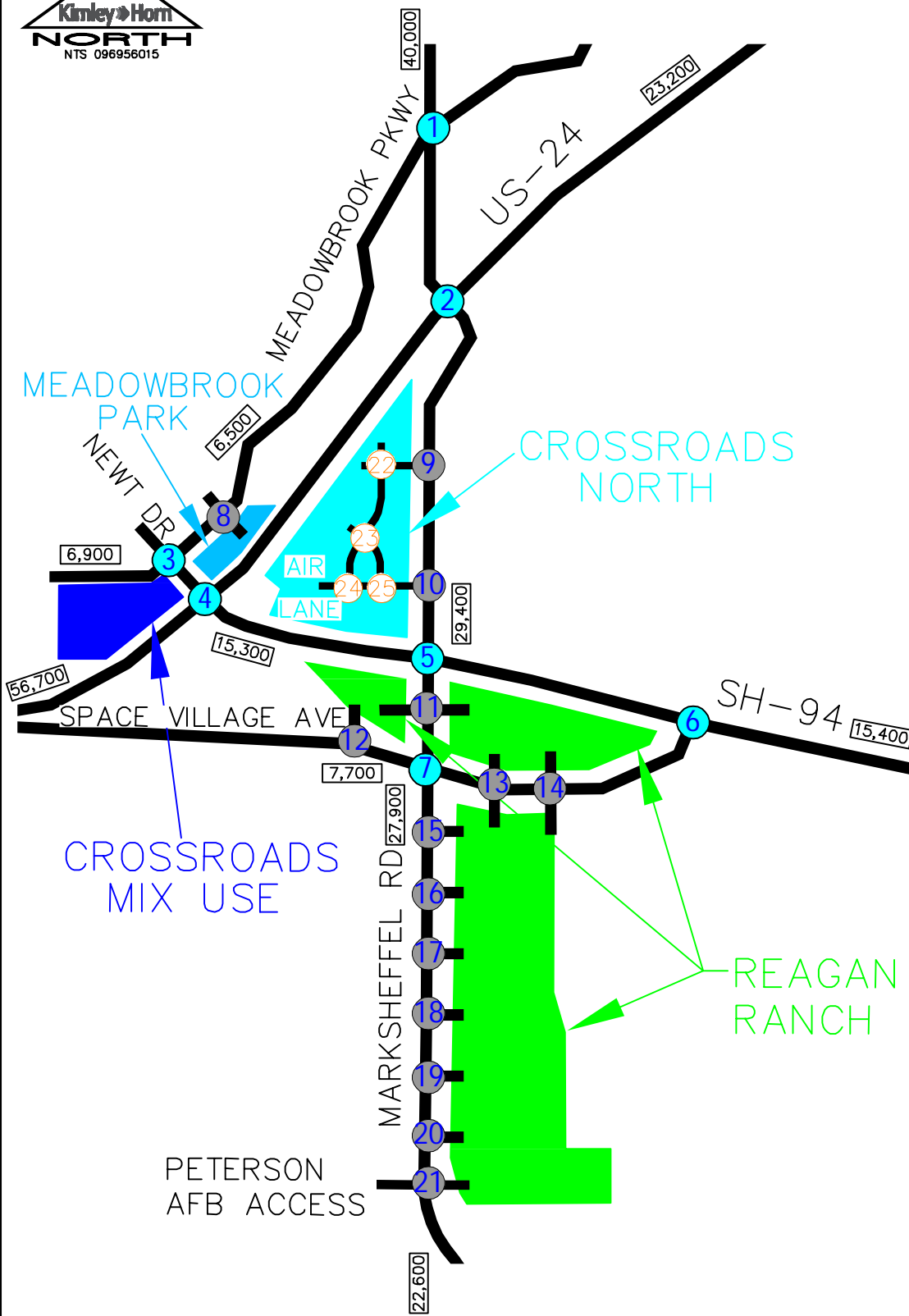
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1099	-	-	515	466	1206	-
HCM Lane V/C Ratio	0.005	-	-	0.032	0.105	0.005	-
HCM Control Delay (s)	8.3	-	-	12.2	13.6	8	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	10	20	0	10	10	255	30	15	480	5
Future Vol, veh/h	5	0	10	20	0	10	10	255	30	15	480	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	11	22	0	11	11	277	33	16	522	5

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	878	889	525	878	875	294	527	0	0	310	0	0
Stage 1	557	557	-	316	316	-	-	-	-	-	-	-
Stage 2	321	332	-	562	559	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	268	282	552	268	288	745	1040	-	-	1250	-	-
Stage 1	515	512	-	695	655	-	-	-	-	-	-	-
Stage 2	691	644	-	512	511	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	259	275	552	258	281	745	1040	-	-	1250	-	-
Mov Cap-2 Maneuver	377	377	-	371	379	-	-	-	-	-	-	-
Stage 1	509	505	-	687	648	-	-	-	-	-	-	-
Stage 2	674	637	-	495	504	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.8		13.7		0.3		0.2	
HCM LOS	B		B					

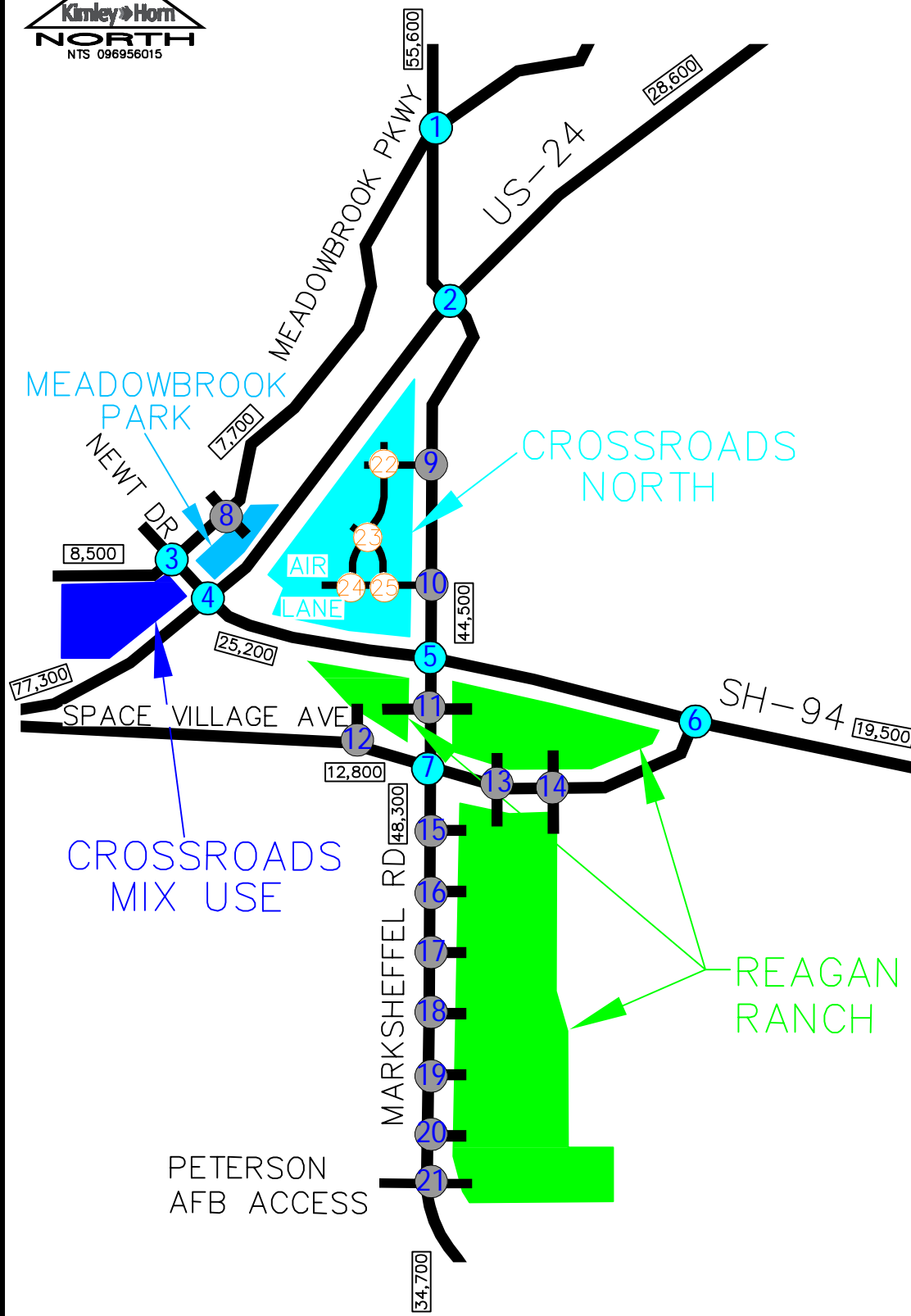
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1040	-	-	478	446	1250	-
HCM Lane V/C Ratio	0.01	-	-	0.034	0.073	0.013	-
HCM Control Delay (s)	8.5	-	-	12.8	13.7	7.9	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-



CROSSROADS-MEADOWBROOK & REAGAN RANCH  
 COLORADO SPRINGS, CO  
 2026 TOTAL TRAFFIC VOLUMES

<b>1</b> 335(270) → 1755(1340) → 10(45) → 30(40) ← 25(15) ← 40(25) ← 270(295) → 10(15) → 40(55) → 30(50) → 1090(1835) → 20(80) →	<b>2</b> MARKSHEFFEL 760(510) → 1025(915) → 10(20) → 20(20) ← 1215(585) ← 350(210) ← 360(670) → 550(1200) → 125(125) → 5(15) → 755(1190) → 105(245) →	<b>3</b> MEADOWBROOK 5(10) → 145(110) → 250(305) → 145(135) ← 10(40) ← 335(255) ← 10(15) → 30(35) → 140(95) → 330(225) →	<b>4</b> US-24 65(60) → 1860(1000) → 5(5) → 5(10) ← 95(65) ← 820(740) ← 45(55) → 90(80) → 495(450) → 425(395) → 985(1925) → 635(625) →	<b>5</b> SH-94 245(255) → 695(845) → 300(200) → 115(395) ← 345(405) ← 35(45) ← 150(140) → 300(340) → 160(265) → 190(225) → 470(1100) → 25(30) →	<b>6</b> 635(790) ← 55(95) ← 815(525) → 5(5) → 5(5) → 115(100) →
MEADOWBROOK PKWY/MARKSHEFFEL R	US-24/MARKSHEFFEL ROAD	NEWT DR/MEADOWBROOK PKWY	SH-94/US-24	SH-94/MARKSHEFFEL RD	SH-94/SPACE VILLAGE AVENUE
<b>7</b> 130(25) → 1095(885) → 70(90) → 40(30) ← 75(80) ← 45(80) ← 40(55) → 80(90) → 135(270) → 325(245) → 770(1265) → 30(45) →	<b>8</b> MEADOWBROOK 5(5) → 365(405) → 5(15) → 15(10) ← 30(20) ← 5(5) → 5(10) → 280(210) → 10(30) → 10(10) →	<b>9</b> ACCESS 200(185) → 1300(1045) → 90(90) → 90(90) → 50(50) → 775(1365) →	<b>10</b> 100(95) → 1290(1040) → 70(70) → 200(200) → 150(140) → 755(1345) →	<b>11</b> 35(10) → 1285(980) → 35(55) ←	<b>12</b> 10(30) → 10(30) → 20(5) ← 505(335) ← 25(5) → 235(380) →
SPACE VILLAGE AVE/MARKSHEFFEL R	MEADOWBROOK PARKWAY ACCESS	MARKSHEFFEL RD NORTH ACCESS	MARKSHEFFEL RD/AIR LANE ACCESS	MARKSHEFFEL ROAD RIRO ACCESS	SPACE VILLAGE AVE FULL ACCESS
<b>13</b> 35(55) → 5(5) → 5(5) → 105(105) ← 5(5) ← 60(55) → 105(145) → 10(25) → 15(20) → 5(5) →	<b>14</b> 65(40) → 10(5) → 5(10) ← 45(70) ← 5(5) ← 20(65) → 85(75) → 5(10) → 10(10) → 5(5) →	<b>15</b> 1265(1225) → 20(20) ← 1100(1525) → 5(5) →	<b>16</b> 1235(1155) → 35(70) → 30(35) ← 1070(1495) → 10(10) →	<b>17</b> 1235(1155) → 40(45) ← 1035(1460) → 10(15) →	<b>18</b> 1200(1075) → 40(80) → 30(35) ← 30(35) ← 1015(1440) → 10(15) →
SPACE VILLAGE AVE W FULL ACCESS	SPACE VILLAGE AVE E FULL ACCESS	MARKSHEFFEL ROAD RIRO ACCESS	MARKSHEFFEL ROAD 3/4 ACCESS	MARKSHEFFEL ROAD RIRO ACCESS	MARKSHEFFEL ROAD FULL ACCESS
<b>19</b> 1225(1105) → 20(20) ← 1005(1430) → 10(15) →	<b>20</b> 1190(1025) → 40(80) → 35(45) ← 975(1405) → 5(10) →	<b>21</b> 680(565) → 490(400) → 30(70) → 45(55) ← 25(30) ← 10(10) ← 540(805) → 10(25) → 125(185) → 160(130) → 395(560) → 5(5) →	<b>22</b> 2(2) → 2(2) → 45(45) → 50(50) ← 50(50) ← 150(140) ← 2(2) → 2(2) → 90(90) → 45(45) → 2(2) →	<b>23</b> 50(50) → 70(70) → 25(25) → 5(5) → 45(45) → 25(25) → 50(45) → 2(2) →	<b>24</b> 110(110) → 100(95) ← 50(50) ← 2(2) → 45(45) →
MARKSHEFFEL ROAD RIRO ACCESS	MARKSHEFFEL ROAD 3/4 ACCESS	MARKSHEFFEL RD FULL ACCESS	CROSSROADS NORTH INT #22	CROSSROADS NORTH INT #23	AIR LANE WEST INTERSECTION
<b>25</b> 5(5) → 110(110) → 100(95) ← 150(140) ← 5(5) → 155(155) →	<b>LEGEND</b> (X) Existing Key Intersection (X) Proposed Access Intersection (X) Proposed Internal Intersection XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes [XX,X00] Estimated Daily Traffic Volume				
AIR LANE EAST INTERSECTION					

FIGURE 11

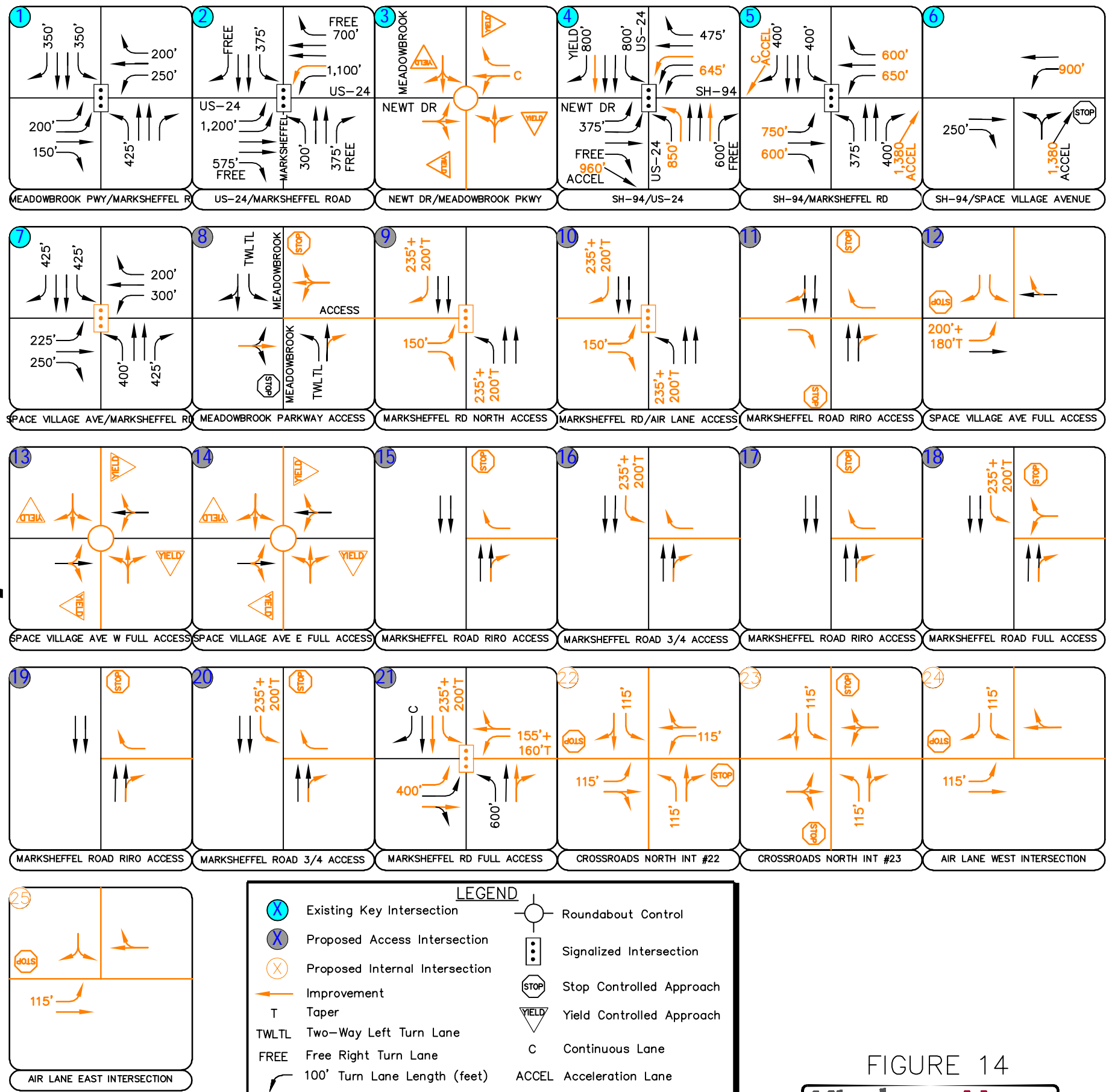
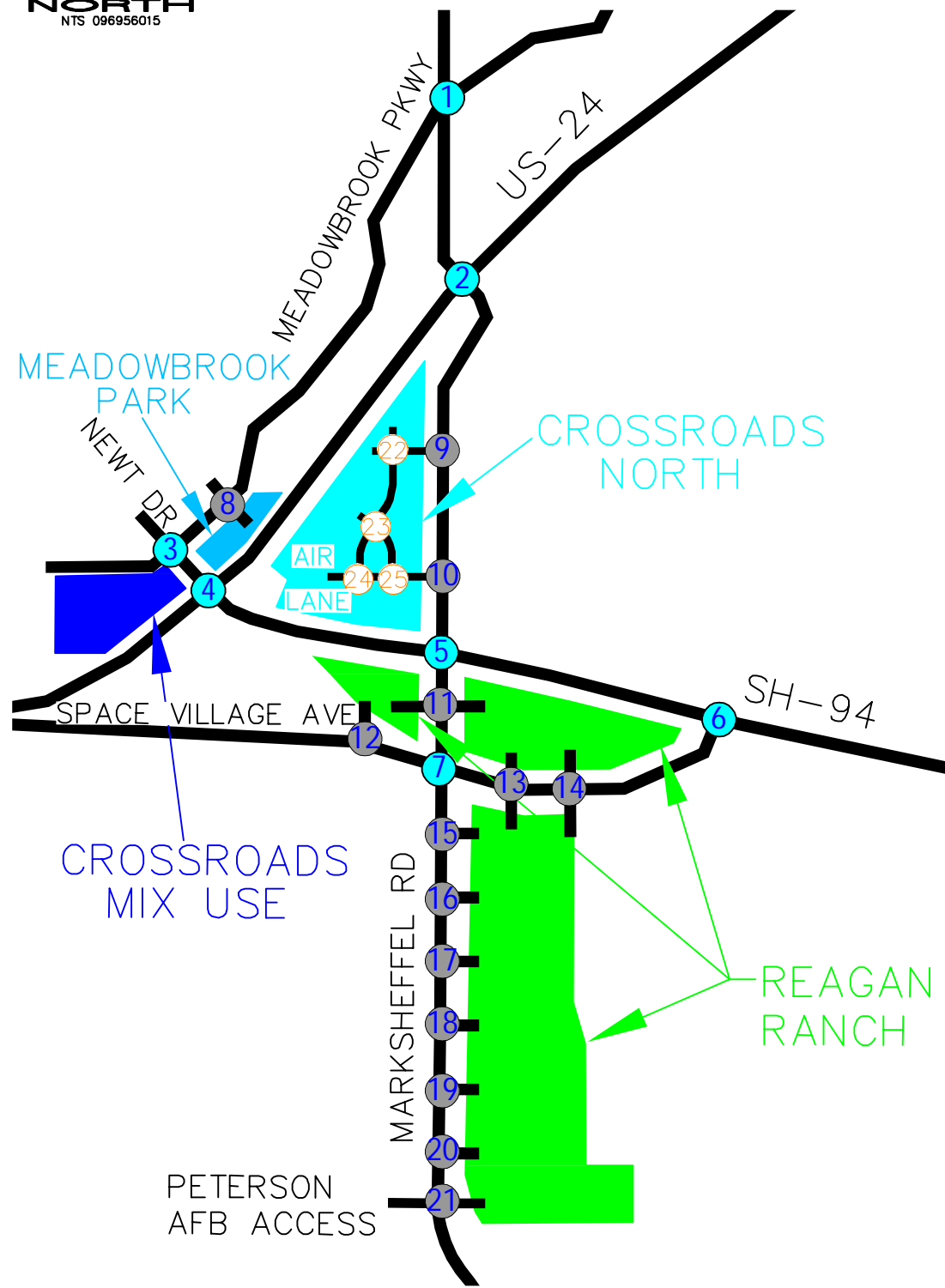


CROSSROADS-MEADOWBROOK & REAGAN RANCH  
 COLORADO SPRINGS, CO  
 2040 TOTAL TRAFFIC VOLUMES

<b>1</b> 380(315) 2185(2060) 1.5(55) 35(45) 25(20) 50(25) 300(355) 10(15) 45(65) 35(55) 1495(2520) 25(95)	<b>2</b> MARKSHEFFEL 890(600) 1330(1560) 1.5(25) 25(20) 1425(690) 435(325) 425(785) 645(1415) 140(205) 5(20) 1100(1765) 160(345)	<b>3</b> MEADOWBROOK 5(15) 160(135) 285(355) 165(150) 15(45) 370(315) 10(15) 35(45) 155(120) 360(280)	<b>4</b> US-24 80(75) 2190(1180) 6(6) 5(10) 105(80) 1155(1160) 55(65) 95(95) 555(535) 480(470) 1150(2325) 855(1165)	<b>5</b> SH-94 275(285) 975(1480) 355(230) 135(480) 405(475) 40(50) 165(235) 350(400) 310(665) 430(565) 810(1735) 30(50)	<b>6</b> 740(940) 85(180) 960(635) 5(5) 5(5) 170(160)
MEADOWBROOK PKWY/MARKSHEFFEL R	US-24/MARKSHEFFEL ROAD	NEWT DR/MEADOWBROOK PKWY	SH-94/US-24	SH-94/MARKSHEFFEL RD	SH-94/SPACE VILLAGE AVENUE
<b>7</b> 150(30) 1520(1735) 105(250) 70(50) 135(225) 75(180) 50(130) 115(195) 180(370) 425(330) 1335(2125) 55(85)	<b>8</b> MEADOWBROOK 5(5) 420(480) 5(15) 15(10) 30(20) 5(5) 10(10) 5(10) 315(255) 10(30)	<b>9</b> MEADOWBROOK 220(310) 1675(1760) 100(100) 100(100) 55(80) 1160(2025)	<b>10</b> 110(155) 1665(1705) 75(75) 225(225) 165(235) 1145(2030)	<b>11</b> 55(15) 1770(1985) 45(205) 10(25) 1390(2150) 60(150)	<b>12</b> 15(50) 15(50) 30(10) 675(575) 35(10) 325(640)
SPACE VILLAGE AVE/MARKSHEFFEL R	MEADOWBROOK PARKWAY ACCESS	MARKSHEFFEL RD NORTH ACCESS	MARKSHEFFEL RD/AIR LANE ACCESS	MARKSHEFFEL ROAD RIRO ACCESS	SPACE VILLAGE AVE FULL ACCESS
<b>13</b> 45(205) 5(5) 10(20) 170(180) 10(20) 80(210) 160(240) 30(85) 55(70) 15(15)	<b>14</b> 100(50) 5(15) 65(140) 10(20) 35(95) 125(125) 15(35) 25(30) 15(15)	<b>15</b> 1765(2275) 70(85) 1745(2455) 10(20)	<b>16</b> 1660(2010) 105(275) 105(135) 1650(2335) 25(30)	<b>17</b> 1660(2010) 140(175) 1525(2200) 25(50)	<b>18</b> 1550(1710) 120(305) 95(120) 95(120) 1450(2130) 25(50)
SPACE VILLAGE AVE W FULL ACCESS	SPACE VILLAGE AVE E FULL ACCESS	MARKSHEFFEL ROAD RIRO ACCESS	MARKSHEFFEL ROAD 3/4 ACCESS	MARKSHEFFEL ROAD RIRO ACCESS	MARKSHEFFEL ROAD FULL ACCESS
<b>19</b> 1640(1825) 70(85) 1405(2095) 25(50)	<b>20</b> 1530(1925) 120(305) 130(165) 1300(1985) 15(35)	<b>21</b> 850(780) 585(500) 100(255) 155(200) 85(110) 35(45) 680(1095) 30(85) 145(220) 190(150) 475(730) 10(20)	<b>22</b> 2(2) 2(2) 50(50) 55(80) 55(80) 165(235) 2(2) 2(2) 100(100)	<b>23</b> 55(80) 80(90) 30(40) 25(25) 5(10) 2(2) 25(25) 5(5) 50(50) 30(40) 55(65) 2(2)	<b>24</b> 2(2) 125(125) 110(155) 55(80) 50(50)
MARKSHEFFEL ROAD RIRO ACCESS	MARKSHEFFEL ROAD 3/4 ACCESS	MARKSHEFFEL RD FULL ACCESS	CROSSROADS NORTH INT #22	CROSSROADS NORTH INT #23	AIR LANE WEST INTERSECTION
<b>25</b> 5(5) 125(125) 110(155) 165(235) 5(5) 175(175)	<b>LEGEND</b> (X) Existing Key Intersection (X) Proposed Access Intersection (X) Proposed Internal Intersection XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes [XX,X00] Estimated Daily Traffic Volume				
AIR LANE EAST INTERSECTION					

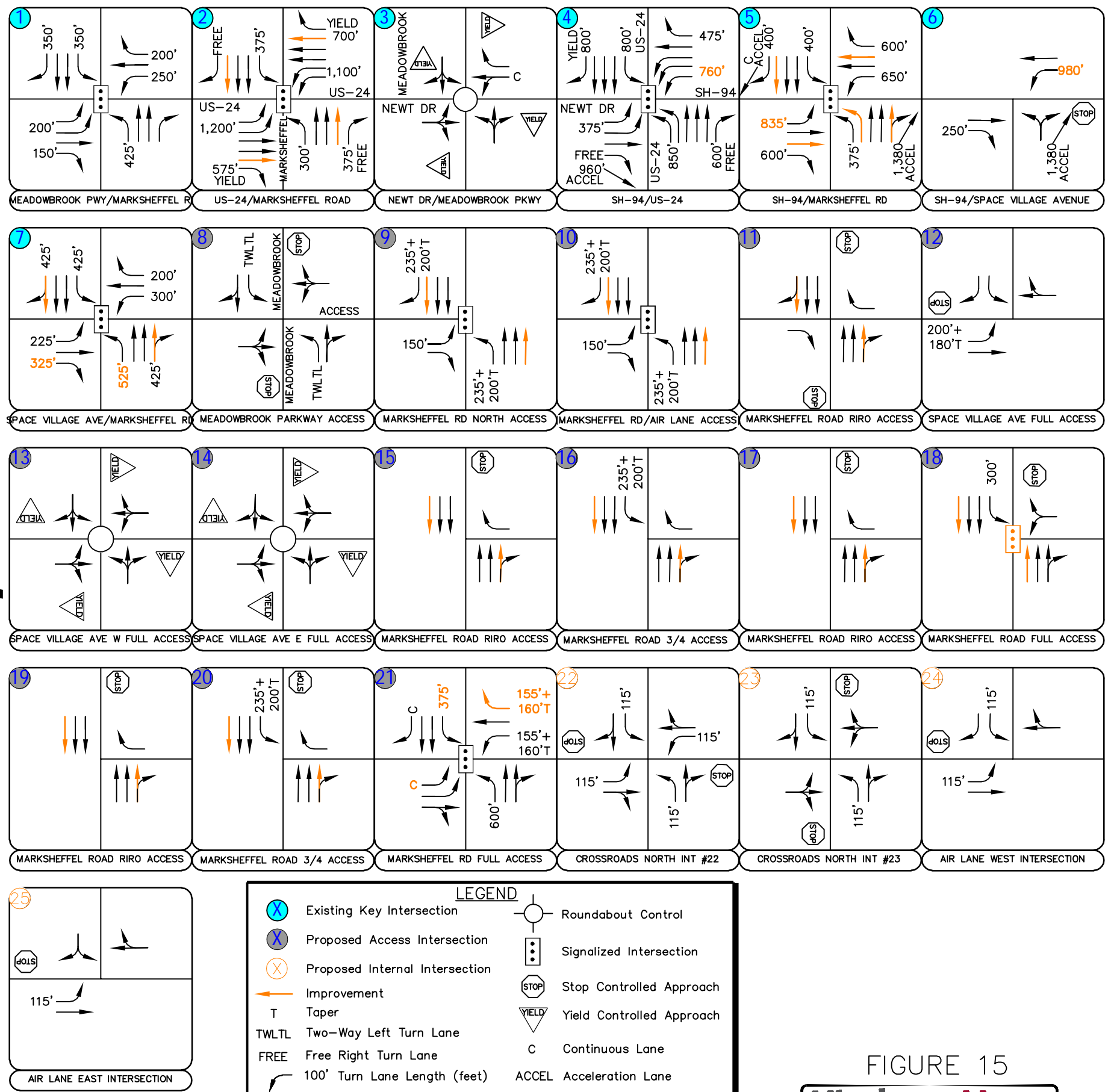
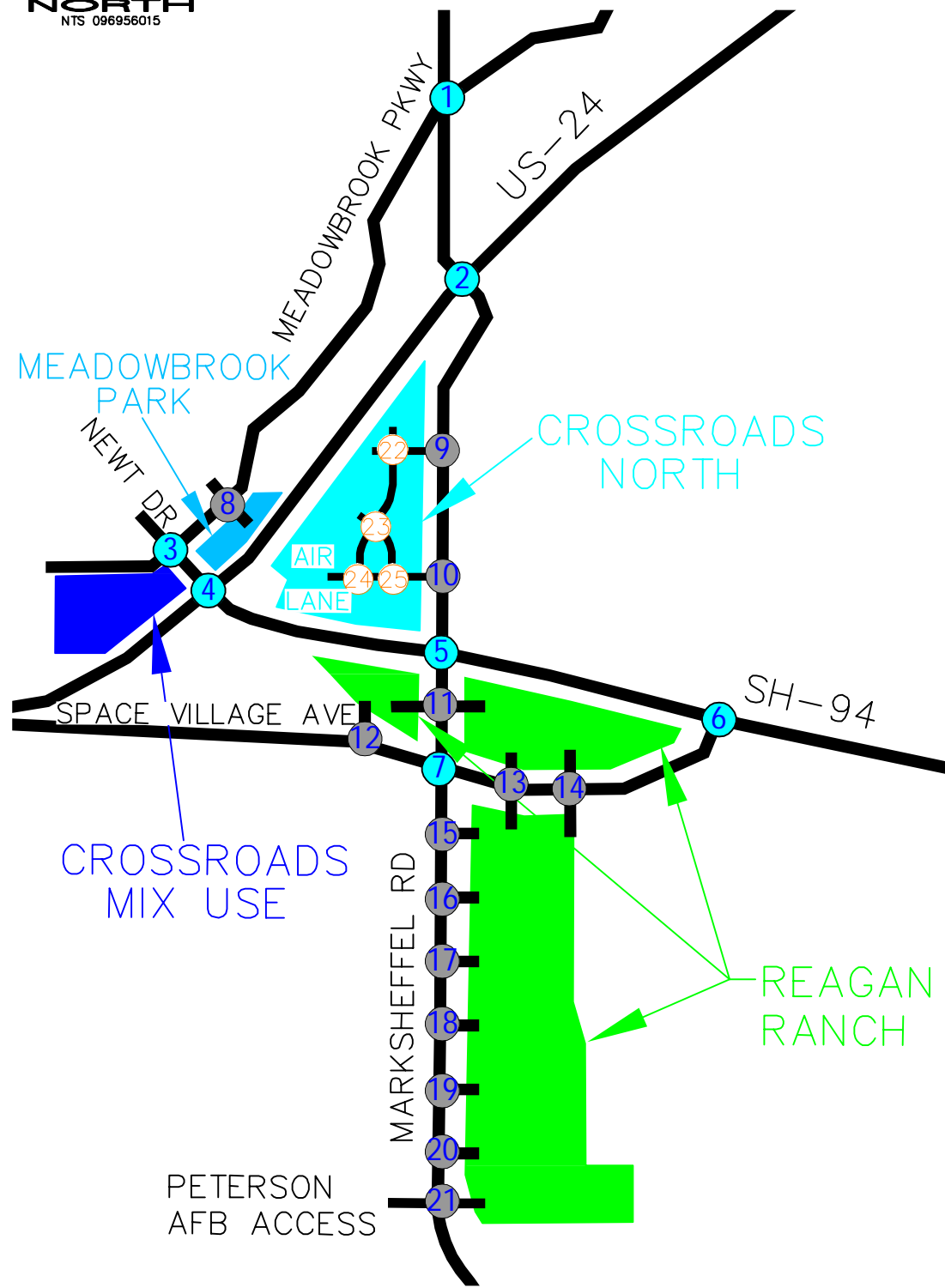
FIGURE 12





CROSSROADS-MEADOWBROOK & REAGAN RANCH  
 COLORADO SPRINGS, CO  
 2026 RECOMMENDED LANE CONFIGURATIONS

FIGURE 14



CROSSROADS-MEADOWBROOK & REAGAN RANCH  
 COLORADO SPRINGS, CO  
 2040 RECOMMENDED LANE CONFIGURATIONS

FIGURE 15

# Conceptual Site Plans







