SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

The 2016 Master TIS is 8 years old. According to ECM Appendix B.1.3. the 2016 TIS will need to be updated.

July 30, 2024

Drew Balsick
Flying Horse Development
2138 Flying Horse Club Drive
Colorado Springs, Colorado 80921

RE: Flying Horse North Filing 4 / Traffic Generation Analysis
El Paso County, Colorado

Dear Drew,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled Flying Horse North Filing 4. This development is located near the southwest corner of Black Forest Road and Old Stagecoach Road in El Paso County, Colorado.

The intent of this analysis is to present traffic volumes likely generated by the proposed development, provide a traffic volume comparison to previous land use assumptions approved for the development site, and consider potential impacts to the adjacent roadway network. This letter also serves as an update to the previously approved Flying Horse North Updated Traffic Impact Analysis[1] prepared for the overall Preliminary Plan application, pursuant to Section B.1.2.D of El Paso County's Engineering Criteria Manual (ECM)[2].

The following is a summary of analysis results.

Site Description and Access

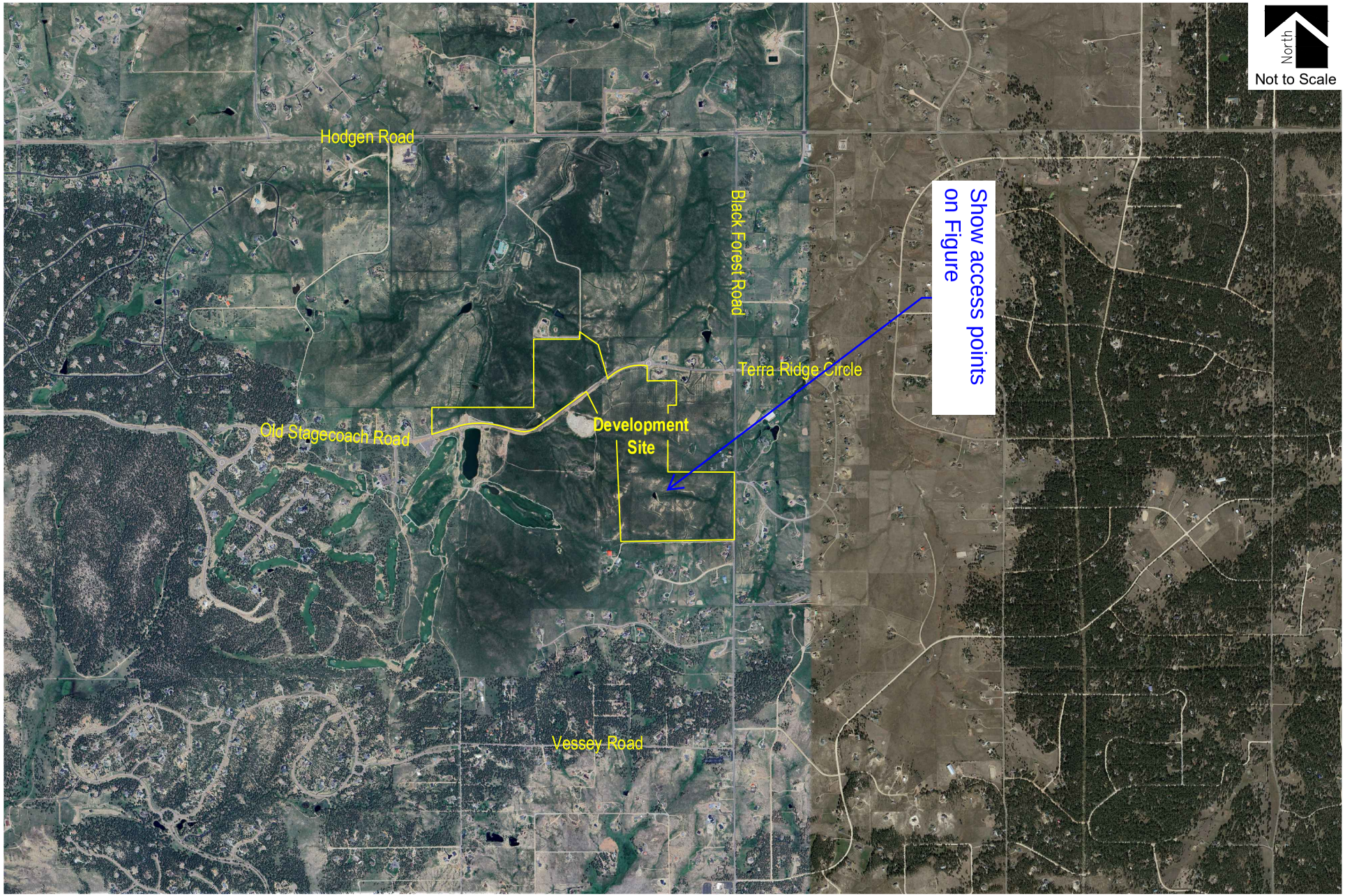
Land for the development is currently vacant and surrounded by a mix of residential and recreational land uses. The proposed development is understood to entail the new construction of 50 single-family detached homes.

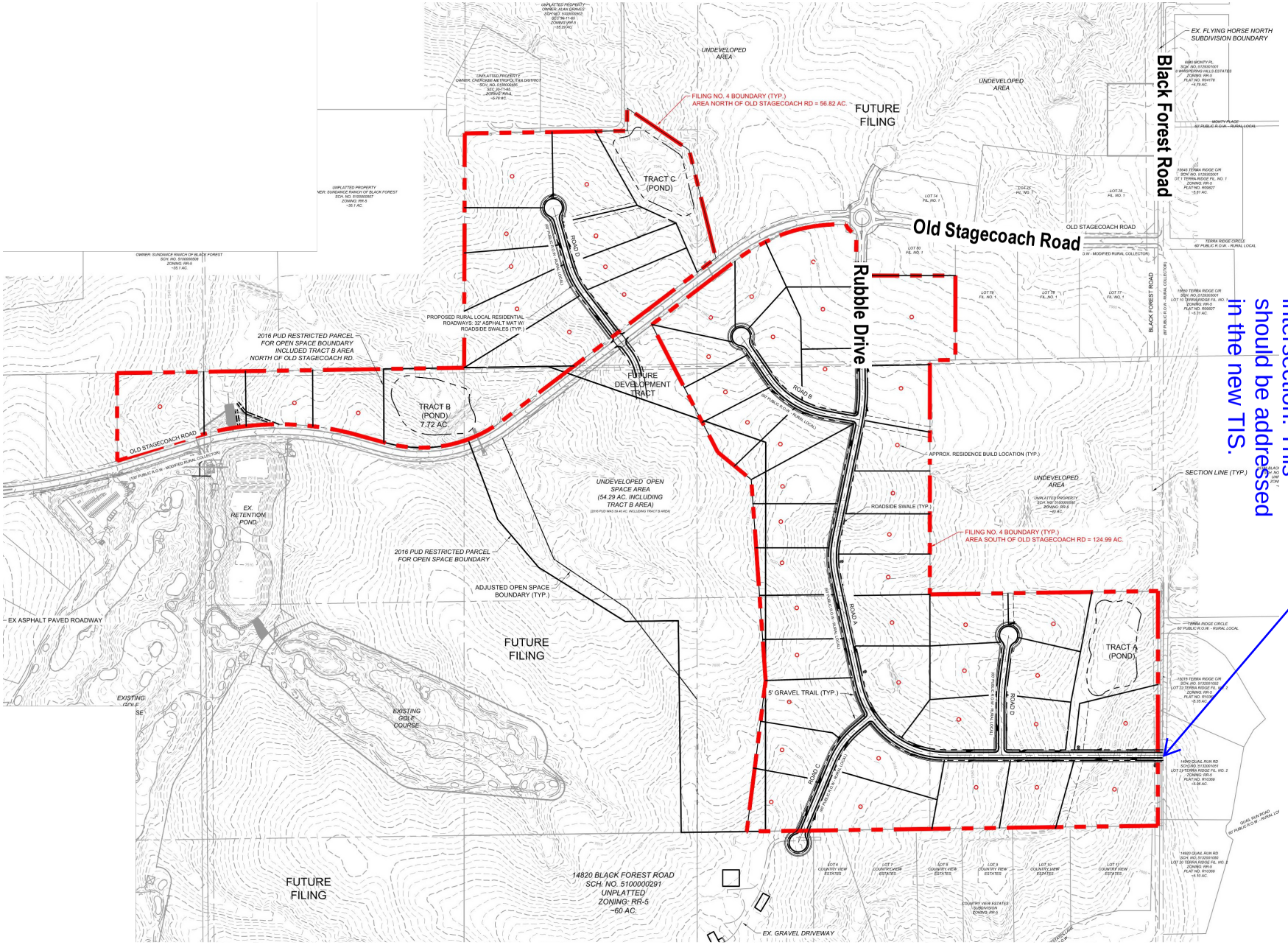
Proposed access to the overall development area is general and provided along Old Stagecoach Road and Rubble Drive.

General site and access locations are shown on Figure 1.

A site plan, as prepared by HR Green, Inc., is shown on Figure 2. This plan is provided for illustrative purposes only.

[1] Flying Horse North: Updated Traffic Impact Analysis, LSC Transportation Consultants, Inc., July 21, 2016.
[2] El Paso County Engineering Criteria Manual, El Paso County, October 2020.


North
Not to Scale
Hodgen Road
Black Forest Road
Show access points on Figure
Terra Ridge Circle
Development Site
Old Stagecoach Road
Vessey Road


North
Not to Scale
Black Forest Road
Old Stagecoach Road
Rubble Drive
FUTURE FILING
TRACT C (POND)
TRACT B (POND) 7.72 AC.
TRACT A (POND)
FUTURE DEVELOPMENT TRACT
UNDEVELOPED AREA
UNDEVELOPED OPEN SPACE AREA (54.29 AC. INCLUDING TRACT B AREA)
2016 PUD RESTRICTED PARCEL FOR OPEN SPACE BOUNDARY INCLUDED TRACT B AREA NORTH OF OLD STAGECOACH RD.
2016 PUD RESTRICTED PARCEL FOR OPEN SPACE BOUNDARY
ADJUSTED OPEN SPACE BOUNDARY (TYP.)
PROPOSED RURAL LOCAL RESIDENTIAL ROADWAYS: 32' ASPHALT MAT W/ ROADSIDE SWALES (TYP.)
FILING NO. 4 BOUNDARY (TYP.) AREA NORTH OF OLD STAGECOACH RD = 56.82 AC.
FILING NO. 4 BOUNDARY (TYP.) AREA SOUTH OF OLD STAGECOACH RD = 124.99 AC.
APPROX. RESIDENCE BUILD LOCATION (TYP.)
ROADSIDE SWALE (TYP.)
5' GRAVEL TRAIL (TYP.)
SECTION LINE (TYP.)
EX. FLYING HORSE NORTH SUBDIVISION BOUNDARY
EX. RETENTION POND
EX ASPHALT PAVED ROADWAY
EXISTING GOLF COURSE
14820 BLACK FOREST ROAD SCH. NO. 5100000291 UNPLATTED ZONING: RR-5 ~60 AC.
EX. GRAVEL DRIVEWAY
ROAD A
ROAD B
ROAD C
ROAD D
There does not exist a recent (post-2016) analysis at this proposed intersection. This should be addressed in the new TIS.

Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land use in order to estimate the average daily traffic (ADT) and peak hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

The previously approved Flying Horse North Updated Traffic Impact Analysis prepared for the overall Preliminary Plan used trip generation rates from ITE's Trip Generation Manual, 9th Edition and included "Single-Family Detached Housing" land use in the same development area as currently proposed with this project.

Table 1 presents average trip generation rates for the development area proposed. Use of average trip generation rates presents a conservative analysis. ITE land use code 210 (Single-Family Detached Housing) was maintained for analysis because of its best fit to the proposed land use.

Table 1 – Trip Generation Rates

ITE			TRIP GENERATION RATES						
			24	AM PEAK HOUR			PM PEAK HOUR		
CODE	LAND USE	UNIT	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
210	Single-Family Detached Housing	DU	9.43	0.18	0.53	0.70	0.59	0.35	0.94

Key: DU = Dwelling Units.
Note: All data and calculations above are subject to being rounded to nearest value.

Table 2 summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed and provides comparison to traffic volume estimates for the previously approved land use.

This is a 24% increase in DUs, which is significant. Please address in the updated TIS

Table 2 – Trip Generation Summary

ITE			TOTAL TRIPS GENERATED						
			24	AM PEAK HOUR			PM PEAK HOUR		
CODE	LAND USE	SIZE	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Site Development - Previously Approved *									
210	Single-Family Detached Housing	41 DU	390	8	23	31	26	15	41
	Previously Approved Total:		*390*	*8*	*23*	*31*	*26*	*15*	*41*
Site Development - Proposed									
210	Single-Family Detached Housing	50 DU	472	9	26	35	30	17	47
	Proposed Total:		*472*	*9*	*26*	*35*	*30*	*17*	*47*
	Difference Total:		***81***	***1***	***3***	***4***	***4***	***2***	***6***

Key: DU = Dwelling Units.
Note: All data and calculations above are subject to being rounded to nearest value.
* = Trip generation rates from ITE's Trip Generation Manual, 9th Edition.

As Table 2 shows, the proposed development area has the potential to generate approximately 472 daily trips with 35 of those occurring during the morning peak hour and 47 during the afternoon peak hour. Compared to the previously approved land use, this represents a potential increase in site generation of approximately 81 daily trips with 4 of those occurring during the morning peak traffic hour and 6 during the afternoon peak traffic hour.

Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

Vehicle Trip Generation Comparison & Development Impacts

As Table 2 shows, there is an increase in peak hour traffic volumes anticipated for the proposed development. However, these volumes are considered minor and are not likely to negatively impact operations of Rubble Drive, Old Stagecoach Road, nor other adjacent roadways or intersections.

Recommended Improvements

Pursuant to the previous Flying Horse North Updated Traffic Impact Analysis prepared for the Flying Horse North PUD dated 2016, the development area proposed with this plat application was previously assumed as part of development Phases 4, 6, and 11.

Table 3 of the referenced traffic analysis shows how auxiliary lane improvements to the State Highway 83 intersection with Stagecoach Road were recommended upon completion of Phase 3 (build-out of 75 dwelling units). However, a recent site visit of the study area concludes how auxiliary lane improvements to the Stagecoach Road and State Highway 83 intersection have already been implemented.

Additionally, the referenced traffic analysis shows that auxiliary lane improvements for the Stagecoach Road and Black Forest Road intersection were recommended upon completion of Phase 7 (build-out of 162 dwelling units).

Upon buildout of Flying Horse North Filing 4, there is expected to be 182 total dwelling units constructed within the overall Flying Horse North development area. As such, it is likely that a northbound left-turn lane along Black Forest Road at Old Stagecoach Road may be needed upon full buildout of Filing 4.

Previous trip generation estimates and recommended improvement information from the 2016 Flying Horse North Updated Traffic Impact Analysis are provided for reference in Attachment A.

Conclusion

This analysis assessed traffic generation for the Flying Horse North Filing 4 development, provided a traffic volume comparison to previous land use assumptions approved for the development site, and considered potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic resulting from the development is expected to create no negative impact to traffic operations for the surrounding roadway network and existing site access, nor at the Old Stagecoach Road intersection with Black Forest Road, and is in compliance with the Flying Horse North Updated Traffic Impact Analysis.

We trust that our findings will assist in the planning and approval of the Flying Horse North Filing 4 development. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants

Megan Bock, EIT
Traffic Engineer

Fred Lantz, PE
Traffic Engineer

ATTACHMENT A

2016 Flying Horse North Updated Traffic Impact Analysis

Table 2
Trip Generation Estimate
Flying Horse at Shamrock Ranch East

Phase	Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates [1]					Total Trips Generated				
				Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
					In	Out	In	Out		In	Out	In	Out
1-2	210	Single-Family Detached Housing	43 DU[2]	9.52	0.19	0.56	0.63	0.37	409	8	24	27	16
1-6	210	Single-Family Detached Housing	136 DU	9.52	0.19	0.56	0.63	0.37	1,295	26	77	86	50
	430	Golf Course	18 holes	35.74	1.63	0.43	1.49	1.43	643	29	8	27	26
									1,938	**55**	**84**	**112**	**76**
Buildout	210	Single-Family Detached Housing	283 DU	9.52	0.19	0.56	0.63	0.37	2,694	53	159	178	105
	430	Golf Course	18 holes	35.74	1.63	0.43	1.49	1.43	643	29	8	27	26
									3,337	**82**	**167**	**205**	**130**

Notes:
(1) Source: "*Trip Generation, 9th Edition, 2012*" by the Institute of Transportation Engineers (ITE)
(2) DU = dwelling unit

Source: LSC Transportation Consultants, Inc.

Table 3
Recommended Improvements
Flying Horse at Shamrock Ranch East

Intersection/Road	Improvement	Lane Length (ft)	Taper Length (ft)	Phase When Required
SH 83/Stagecoach	Northbound Right-Turn Deceleration Lane	378	222	3
	Northbound Right-Turn Acceleration Lane	738	222	3
	Southbound Left-Turn Lane	418	222	3
	Southbound Left-Turn Accleration Lane	738	222	3
Hogden/Full-Movement Site Access	No Auxiliary Lanes Required			
Hodgen/Black Forest (West)	No Additional Auxiliary Lanes Required			
Black Forest/Stagecoach	Northbound Left-Turn Lane	340	240	7
Black Forest/Site Access Points	No Auxiliary Lanes Required			
Holmes Road	Pave	N/A	N/A	9

Source: LSC Transportation Consultants, Inc.