



SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

June 18, 2024

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

RE: Flying Horse North Filing 3 / Traffic Generation Analysis
PCD File No. SF2326

Dear Drew,

SM ROCHA, LLC is pleased to submit vehicle traffic generation information for the proposed subdivision and residential development located near the terminus of Quartz Creek Drive 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 Analysis¹ prepared for the overall Preliminary Plan application, pursuant to Section B.1.2.D of El Paso's County's Engineering Criteria Manual (ECM)².

General Site Description

Land for the development is vacant and surrounded by a mix of residential and recreational land uses.

The proposed development entails a new subdivision plat for the construction of 50 single-family dwelling units.

Primary access to the development is generally provided via the extension of Quartz Creek Drive and Allen Ranch Road.

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.

Site Generated Traffic

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

The previously approved Flying Horse North Updated Traffic Impact Analysis 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 this analysis because of its best fit to the proposed land use.

Table 1 – Trip Generation Rates

| ITE CODE | LAND USE | UNIT | TRIP GENERATION RATES | | | | | | |
|----------|--------------------------------|------|-----------------------|--------------|------|-------|--------------|------|-------|
| | | | 24 HOUR | AM PEAK HOUR | | | PM PEAK HOUR | | |
| | | | | ENTER | EXIT | TOTAL | ENTER | EXIT | TOTAL |
| 210 | Single-Family Detached Housing | DU | 9.43 | 0.18 | 0.53 | 0.71 | 0.59 | 0.53 | 1.12 |

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

Table 2 – Trip Generation Summary

| ITE CODE | LAND USE | SIZE | TOTAL TRIPS GENERATED | | | | | | |
|---|--------------------------------|-------|-----------------------|--------------|-----------|-----------|--------------|----------|----------|
| | | | 24 HOUR | AM PEAK HOUR | | | PM PEAK HOUR | | |
| | | | | ENTER | EXIT | TOTAL | ENTER | EXIT | TOTAL |
| <u>Site Development - Previously Approved *</u> | | | | | | | | | |
| 210 | Single-Family Detached Housing | 49 DU | 466 | 9 | 27 | 37 | 31 | 18 | 49 |
| <i>Previously Assumed Total:</i> | | | 466 | 9 | 27 | 37 | 31 | 18 | 49 |
| <u>Site Development - Proposed</u> | | | | | | | | | |
| 210 | Single-Family Detached Housing | 50 DU | 472 | 9 | 27 | 36 | 30 | 27 | 56 |
| <i>Proposed Total:</i> | | | 472 | 9 | 27 | 36 | 30 | 27 | 56 |
| <i>Difference Total:</i> | | | 5 | 0 | -1 | -1 | -1 | 8 | 7 |

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

As Table 2 illustrates, the proposed development has the potential to generate approximately 472 daily trips with 36 of those occurring during the morning peak traffic hour and 56 during the afternoon peak traffic hour.

Development Impacts

With exception to 24-hour and PM peak hour egress volumes, Table 2 shows how proposed development traffic volumes generally do not exceed that approved in the Flying Horse North Updated Traffic Impact Analysis. The minor increase in 24-hour and PM peak hour egress volume estimates is not likely to negatively impact traffic operations of Old Stagecoach Road, Allen Ranch Road, Quartz Creek Drive, nor other adjacent roadways or intersections.

Recommended Improvements

Pursuant to the previous Flying Horse North Updated Traffic Impact Analysis prepared for the previous Flying Horse North PUD dated 2016, the development area proposed with this plat application was previously assumed as part of development Phases 5 and 7. Table 3 of the referenced traffic analysis shows how auxiliary lane improvements to the Stagecoach Road intersections with State Highway 83 and Black Forest Road were recommended upon completion of Phases 3 and 7, respectively.

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

An updated traffic analysis³ for the previously proposed 2016 PUD was provided to analyze impacts caused by development of Phase 1/Filing 1 of Flying Horse North. In review of the updated traffic analysis, auxiliary lane improvements were recommended as part of Phase 1/Filing 1 (instead of Phase 3 previously identified by the 2016 Flying Horse North Updated Traffic Impact Analysis).

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.

Previous trip generation estimates and recommended improvement information for Filing 1 is provided for reference in Attachment B.

³ Flying Horse North Filing No. 1: Updated Traffic Impact Analysis, LSC Transportation Consultants, Inc., July 10, 2018.

Conclusion

It is our professional conclusion that the site generated traffic volumes presented by the proposed residential development will create no discernable impact to operations of the adjacent roadways and intersections.

In review of previous traffic analyses prepared for the overall and filing-specific development areas, no intersection improvements to the existing public roadway network are warranted nor recommended with this subdivision plat.

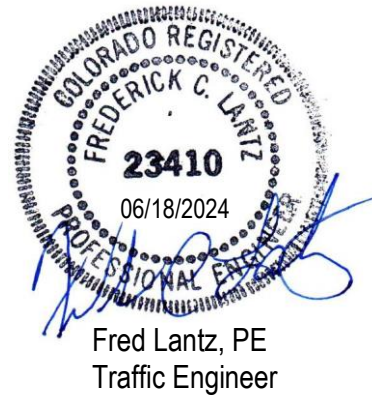
It is trusted that information provided within the amendment letter will assist in the review and approval of the proposed residential development. We remain available should additional assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants



Brandon Wilson, EIT
Traffic Engineer



Fred Lantz, PE
Traffic Engineer

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.



Fred Lantz, P.E. #23410

06/18/2024

Date

Developer's Statement

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



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

06/18/2024

Date

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 | In | Out | In | Out |
| 1-2 | 210 | Single-Family Detached Housing | 43 DU ⁽²⁾ | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 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 | 0.37 | 1,295 | 26 | 77 | 86 | 50 | |
| | 430 | Golf Course | 18 holes | 35.74 | 1.63 | 0.43 | 1.49 | 1.43 | 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 | 0.37 | 2,694 | 53 | 159 | 178 | 105 | |
| | 430 | Golf Course | 18 holes | 35.74 | 1.63 | 0.43 | 1.49 | 1.43 | 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 Acceleration 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.

ATTACHMENT B

Flying Horse North Filing No. 1 Updated Traffic Impact Analysis

Table 2
Trip Generation Estimate
Flying Horse North Filing No. 1

| 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 | In | Out | In | Out |
| Filing No. 1 | | | | | | | | | | | | | | | |
| 1 | 210 | Single-Family Detached Housing | 80 DU ⁽²⁾ | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 762 | 15 | 45 | 50 | 30 | | |
| | 430 | Golf Course | 18 holes | 35.74 | 1.63 | 0.43 | 1.49 | 1.43 | 643 | 29 | 8 | 27 | 26 | | |
| | | Total Phase 1/Filing No. 1 | | | | | | | 1,405 | 44 | 53 | 77 | 56 | | |
| Future Filings | | | | | | | | | | | | | | | |
| 2 | 210 | Single-Family Detached Housing | 55 DU | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 524 | 10 | 31 | 35 | 20 | | |
| | | Total Phases 1 and 2 | 135 DU | | | | | | 1,929 | 55 | 84 | 112 | 76 | | |
| 3 | 210 | Single-Family Detached Housing | 35 DU | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 333 | 7 | 20 | 22 | 13 | | |
| 4 | 210 | Single-Family Detached Housing | 23 DU | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 219 | 4 | 13 | 14 | 9 | | |
| 5 | 210 | Single-Family Detached Housing | 28 DU | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 267 | 5 | 16 | 18 | 10 | | |
| 6 | 210 | Single-Family Detached Housing | 20 DU | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 190 | 4 | 11 | 13 | 7 | | |
| 7 | 210 | Single-Family Detached Housing | 37 DU | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 352 | 7 | 21 | 23 | 14 | | |
| 8 | 210 | Single-Family Detached Housing | 5 DU | 9.52 | 0.19 | 0.56 | 0.63 | 0.37 | 48 | 1 | 3 | 3 | 2 | | |
| | | Total Phases 5-8 | 148 DU | | | | | | 1,409 | 28 | 83 | 93 | 55 | | |
| | | Buildout | 283 DU | | | | | | 3,337 | 82 | 167 | 205 | 131 | | |

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 North Filing No. 1**

| Intersection/Road | Improvement | Lane Length (ft) | Taper Length (ft) |
|---|--|-------------------------|--------------------------|
| SH 83/Stagecoach | Northbound Right-Turn Deceleration Lane | 378 | 222 |
| | Northbound Right-Turn Acceleration Lane ⁽¹⁾ | 738 | 222 |
| | Southbound Left-Turn Lane | 428 | 222 |
| | Southbound Left-Turn Acceleration Lane | 738 | 222 |
| Notes: | | | |
| (1) A northbound right-turn acceleration lane would not be required with Filing 1; however, the applicant may choose to construct this lane with the other auxiliary turn lanes required. | | | |
| <i>Source: LSC Transportation Consultants, Inc.</i> | | | |