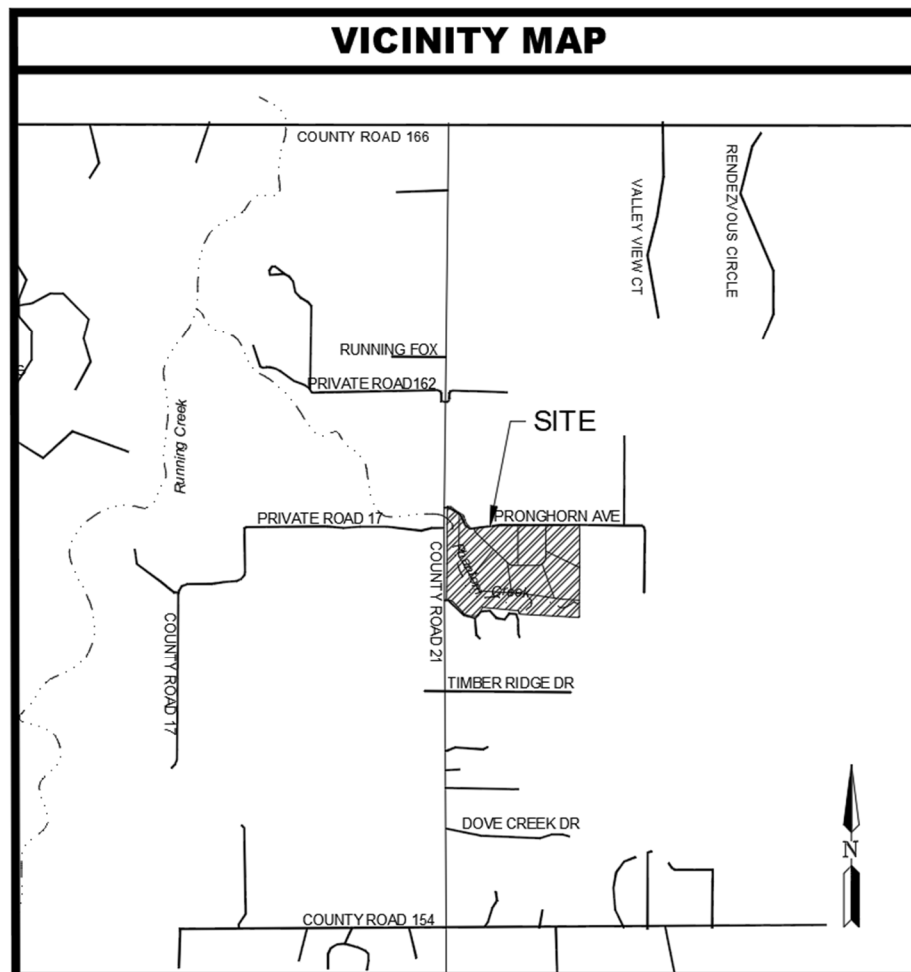


June 6, 2024

Marc Dettenrieder, Director of Community and Economic Development  
Elbert County Government  
215 Comanche Street  
Kiowa, CO 80117

RE: Traffic Impact Letter  
Phantom Creek Ranch  
2N Civil Project No: 22010

This letter serves to outline the traffic impact of the proposed Phantom Creek Ranch, located in Elbert County. The site lies to the east of County Road 21 and south of Pronghorn Ave, approximately 1.5 miles south of County Road 166, see vicinity map below. The subject parcel is part of Section 16, Township 7 South, Range 64 West of the 6<sup>th</sup> Principal Meridian, County of Elbert, State of Colorado.



### County Road 21

The existing public County Road 21, which this project will gain driveway access from, is categorized in the Elbert County Transportation Master Plan as a Major Collector. The roadway is currently a paved surface two-lane road with approximately 12-foot wide travel lanes and 4' gravel shoulders. The road is also represented in the Master Plan on the Project Prioritization map as “High” (priority) as a “Tier 2” project requiring a 4” mill and overlay for 3 miles from CR 166 south to CR 154 which will be adjacent to this project.

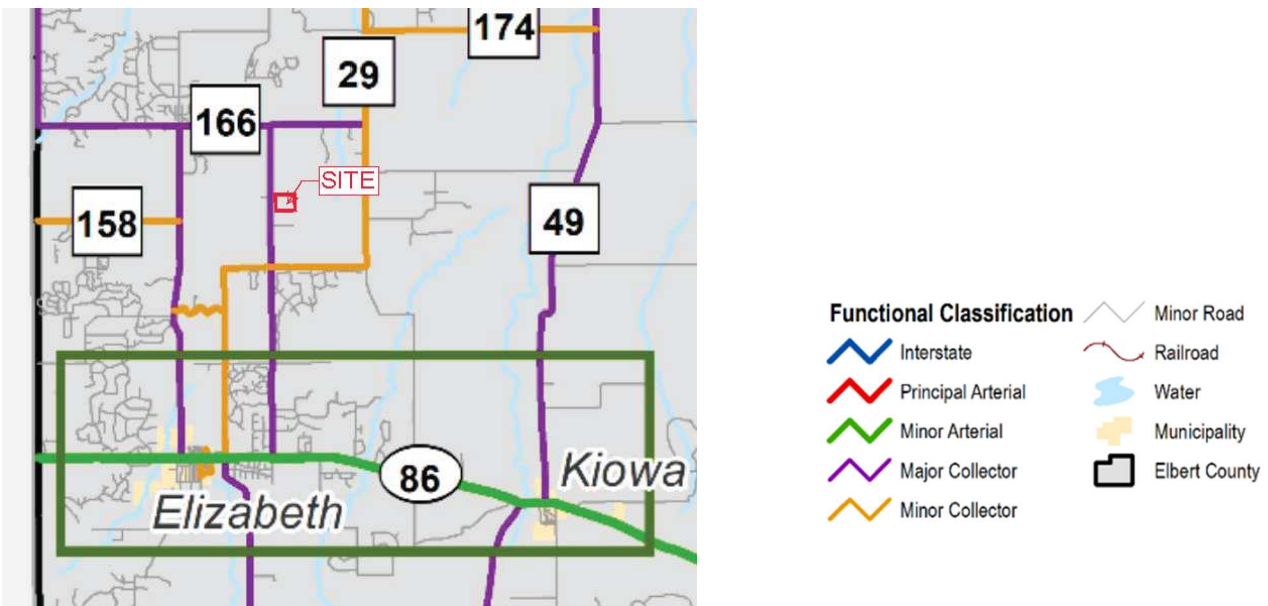


Figure 1 – A portion of Map 13. Roadway Functional Classifications from the Elbert County Transportation Master Plan

A private, looped driveway will be constructed off of Pronghorn Avenue, which intersects CR 21 at the northwest corner of the site. This looped driveway will provide access to the 7 lots proposed in this development.

### Trip Generation

The Master Plan, Map 16 includes existing traffic volumes for CR 21. The existing traffic volumes as stated are 1,000 to 2,500 vehicle trips per day for this section of roadway. The current level of service shown on Map 17 for CR 21 is currently LOS A. Continuing with Maps 18 and 19 represent the future volumes and Level of Service to be 2,500 -5,000 vehicle trips and LOS A respectively.

Trip generation rates for this development were obtained from the ITE Trip Generation Manual, 11<sup>th</sup> Edition for Land Use 210 (Single-Family Detached Housing). Table 1 shows the Daily, AM peak, and PM peak hour trip generation estimates. The estimated trips generated by this development are 66 two-way trips out of which 5 two-way trips occur in the AM peak hour and 7 two-way trips occur in the PM peak hour. Please see the following table:

| Time of Day | Description | ITE Land Use Category | Land Use Code | New Lots | Daily Trip Rate | Daily 2-Way Trips | Directional Distribution IN | Directional Distribution OUT | Daily Trips In (vpd) | Daily Trips Out (vpd) |
|-------------|-------------|-----------------------|---------------|----------|-----------------|-------------------|-----------------------------|------------------------------|----------------------|-----------------------|
| Daily       | SF Housing  | SF Housing            | 210           | 7        | 9.43            | 66                | 50%                         | 50%                          | 33                   | 33                    |
| AM Peak     | SF Housing  | SF Housing            | 210           | 7        | 0.75            | 5                 | 26%                         | 74%                          | 1                    | 4                     |
| PM Peak     | SF Housing  | SF Housing            | 210           | 7        | 1.02            | 7                 | 64%                         | 36%                          | 4                    | 3                     |

### Conclusion

The assumed proposed trips generated will not adversely impact the traffic on County Road 21. Intersections should be designed with adequate paved turn radius and sight distance adequate for the roadway speed. Please see the enclosed site plan and rate tables from the Trip Generation Manual for reference.

Respectfully,

2N Civil, LLC



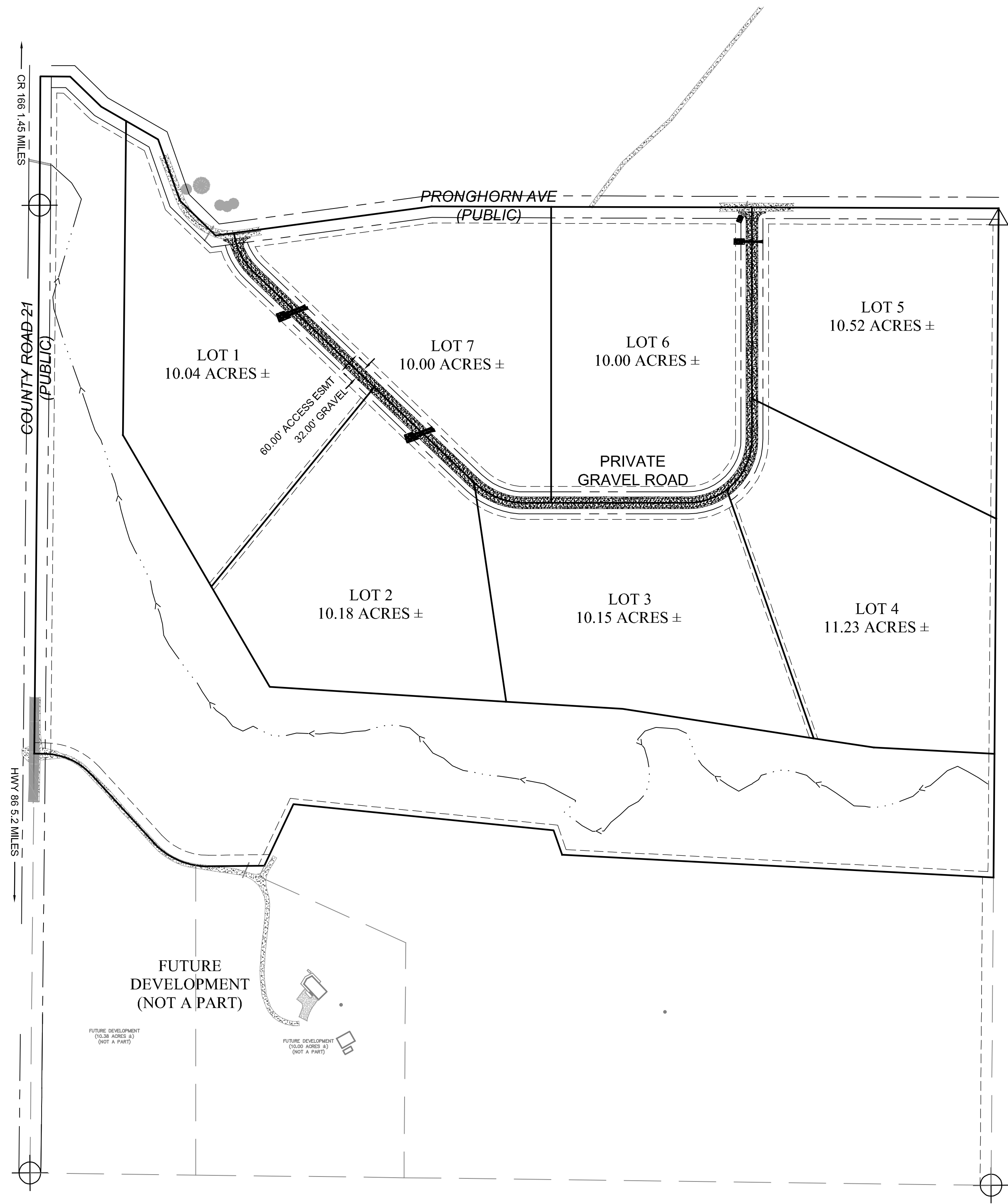
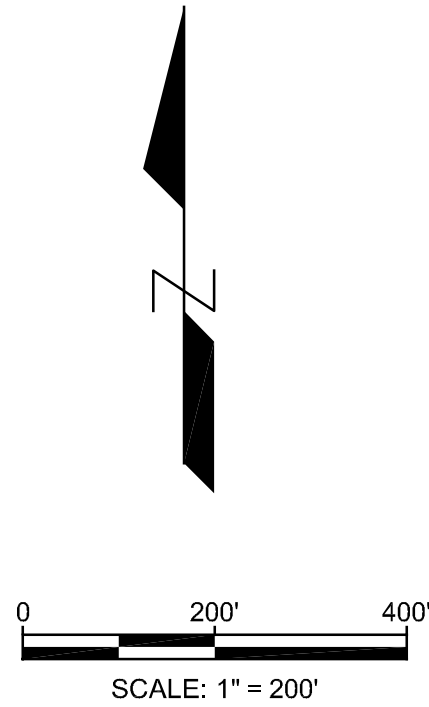
Eric P. Tuin, PE, M.ASCE

Owner


Enc.

Site Plan


ITE Tables



- LEGEND**
- PROPERTY BOUNDARY
  - EX. ADJACENT PROP LINE
  - RIGHT-OF-WAY EASEMENT
  - PROPOSED UTILITY EASEMENT
  - PROPOSED GRAVEL ROAD



303.925.0544  
www.2ncivil.com



PREPARED FOR:  
PHANTOM CREEK DEVELOPMENT  
39622 COUNTY ROAD 21  
ELIZABETH, COLORADO 80107

**SITE PLAN**  
PHANTOM CREEK RANCH  
ELBERT COUNTY, COLORADO

BY:      DATE:

REVISIONS:  
1.  
2.  
3.  
4.

PROJECT NUMBER: 22010  
ISSUED DATE: 6/6/24  
DESIGNED BY: TEW  
REVIEWED BY:

SITE PLAN

1

# Single-Family Detached Housing

## (210)

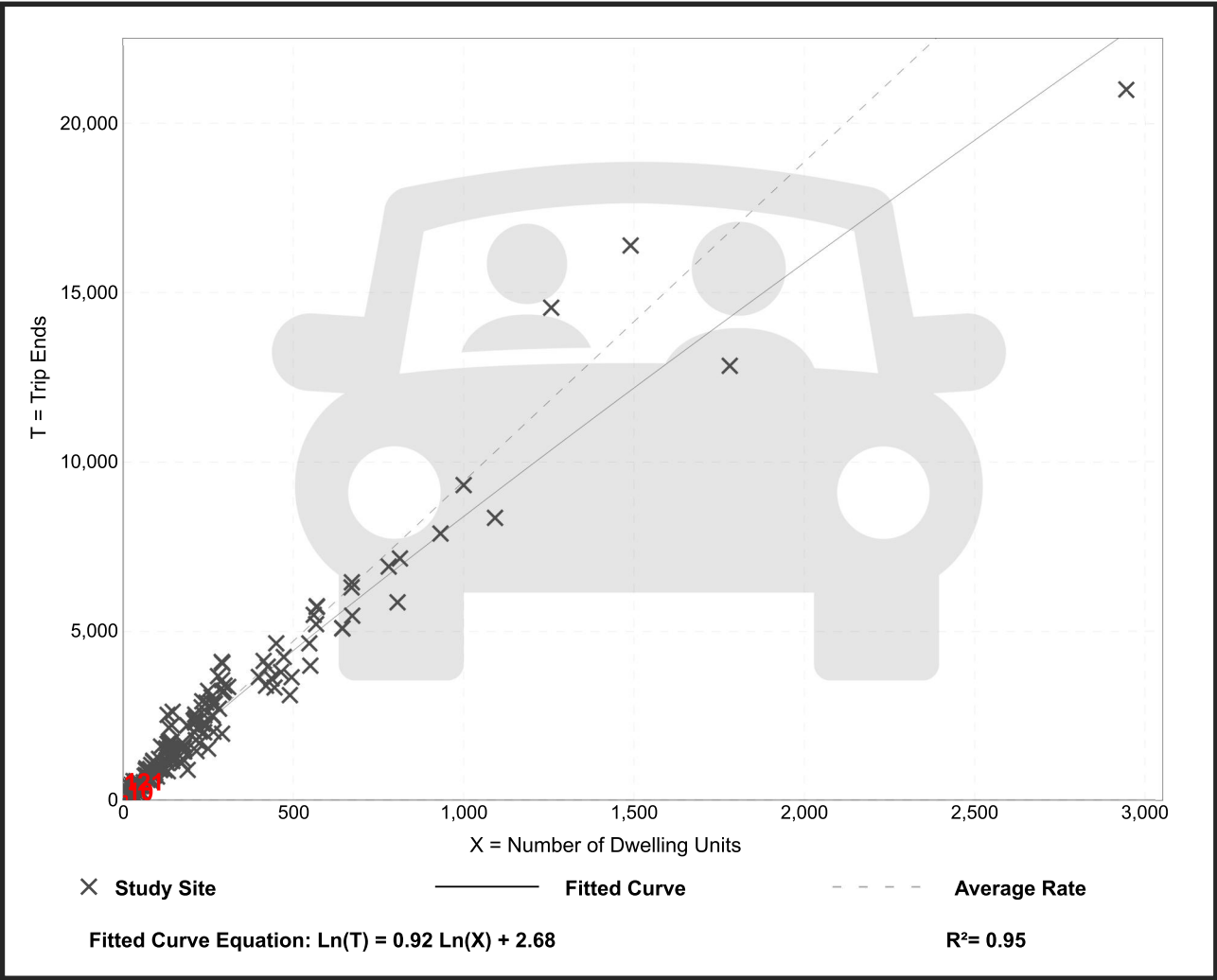
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 174  
Avg. Num. of Dwelling Units: 246  
Directional Distribution: 50% entering, 50% exiting

### Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 9.43         | 4.45 - 22.61   | 2.13               |

### Data Plot and Equation



# Single-Family Detached Housing (210)

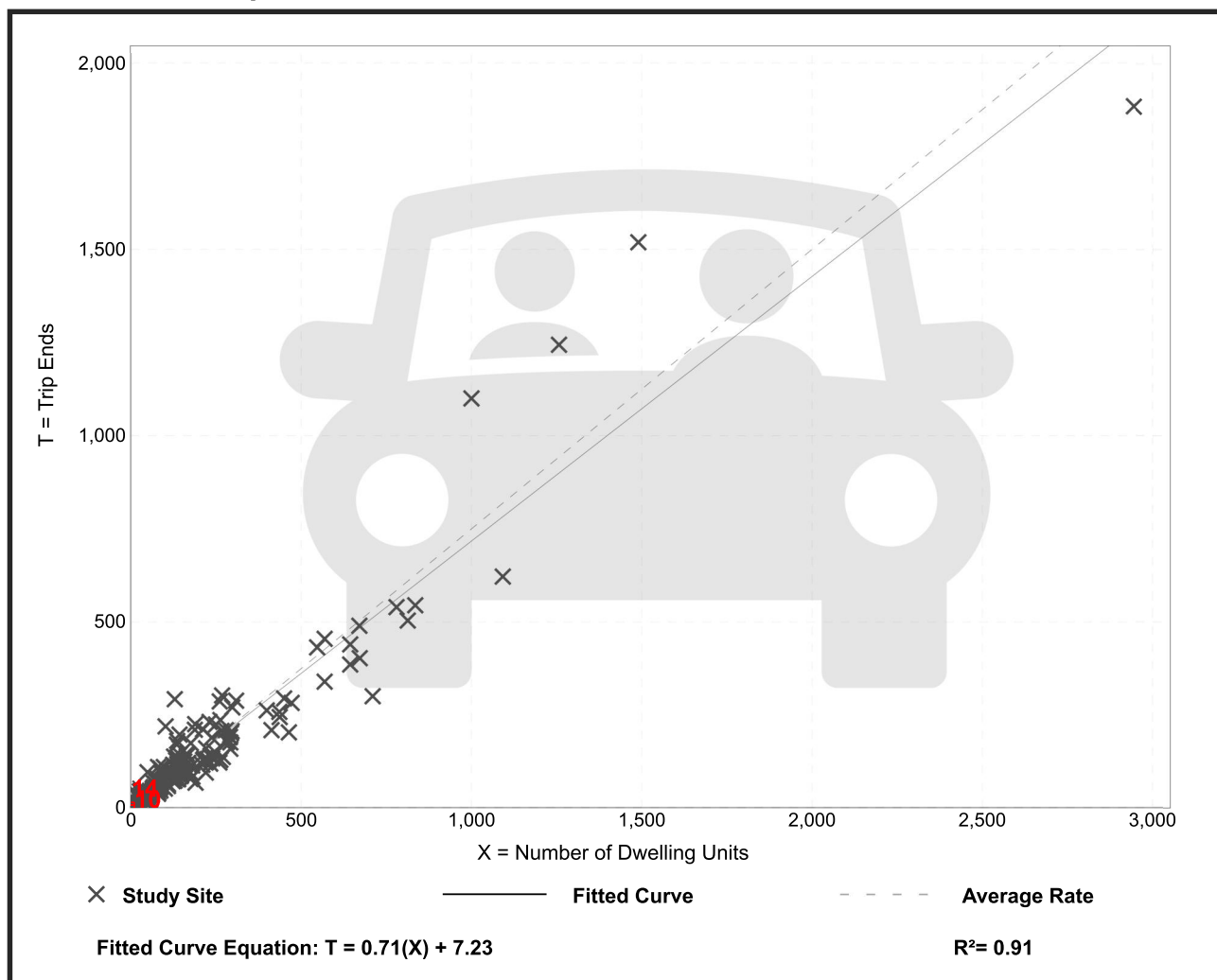
**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**AM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**  
 Number of Studies: 169  
 Avg. Num. of Dwelling Units: 217  
 Directional Distribution: 26% entering, 74% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.75         | 0.34 - 2.27    | 0.25               |

## Data Plot and Equation



# Single-Family Detached Housing (210)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**PM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**  
 Number of Studies: 178  
 Avg. Num. of Dwelling Units: 203  
 Directional Distribution: 64% entering, 36% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.99         | 0.49 - 2.98    | 0.28               |

## Data Plot and Equation

