



SM ROCHA, LLC

TRAFFIC & TRANSPORTATION ENGINEERING CONSULTANTS

April 23, 2025

Jason Wedlick
Woodbury Corporation
2733 East Parleys Way, Suite 300
Salt Lake City, Utah 84109

**RE: Adams Crossing Annexation / Traffic Generation Analysis
Commerce City, Colorado**

Dear Jason,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled Adams Crossing Annexation. This development is located on the northwest corner of E 120th Avenue and Chambers Road in Commerce City, Colorado.

The intent of this analysis is to present traffic volumes likely generated by the proposed annexation and consider potential impacts to the adjacent roadway network. This level of analysis was coordinated and verified with the City of Commerce City. It is understood that as actual land uses, densities, or site plans become defined over time, it is expected that traffic generation characteristics considered within this study will need to be updated by more specific traffic analyses or studies to help assess if transportation improvements are needed to mitigate potential traffic impact specific to the land use.

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 commercial land uses.

The proposed development is conceptual and no specific land uses have been determined. However, for purposes of the annexation, and at the direction of City Staff, land uses and densities were assumed to provide consistency with City zoning districts for adjacent development areas (PUD and commercial zoning districts). Therefore, for purposes of this analysis, there is assumed to be construction for approximately 99,000 square feet of shopping center, 4,000 square feet of fast-food restaurant with drive-through window, and 1,000 square feet of coffee/donut shop with drive-through window.

Considering the conceptual nature of the development area, access drives are not known at this time. However, in order to continue providing for a conservative analysis, it was assumed that direct access is only being provided onto Chambers Road. Overall access is expected to be provided via Chambers Road with potential indirect access via Jasper Street and/or Laredo Street.

It is again noted that as actual land uses, densities, or site plans become defined over time, it is expected that site access characteristics considered within this study will need to be updated by more specific traffic analysis or studies to help assist if transportation improvements are needed to mitigate potential traffic impacts.

General site and access locations are shown on Figure 1.



Not to Scale



ADAMS CROSSING ANNEXATION
Traffic Generation Analysis

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Figure 1
SITE LOCATION

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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 assumed land uses 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.

Due to the conceptual nature of the proposed development, no specific commercial land uses have been determined. As such, land uses were assumed pursuant to those allowed within the City’s C-2 (General Commercial) zoning district. An assumed floor-area-ratio (FAR) of 0.2 was applied to the commercial areas of the Adams Crossing Annexation development.

As actual land uses, densities or site plans within Adams Crossing Annexation become defined over timer, it is expected that traffic generation characteristics considered within this study will need to be updated by more specific traffic analyses or studies to help assess if transportation improvements are needed to mitigate potential traffic impacts.

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 codes 821 (Shopping Plaza (40-150k)), 934 (Fast-Food Restaurant with Drive-Through Window), and 937 (Coffee/Donut Shop with Drive-Through Window) were used for analysis because of their conservative rates and best fit to the assumed land uses.

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
821	Shopping Plaza (40-150k)	KSF	94.49	2.19	1.34	3.53	4.33	4.70	9.03
934	Fast-Food Restaurant (w/DTW)	KSF	467.48	22.75	21.86	44.61	17.18	15.85	33.03
937	Coffee/Donut Shop (w/DTW)	KSF	533.57	43.80	42.08	85.88	19.50	19.50	38.99

Key: KSF = Thousand Square Feet Gross Floor Area.
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.

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
821	Shopping Plaza (40-150k)	99.0 KSF	9,355	217	133	349	429	465	894
934	Fast-Food Restaurant (w/DTW)	4.0 KSF	1,870	91	87	178	69	63	132
937	Coffee/Donut Shop (w/DTW)	1.0 KSF	534	44	42	86	19	19	39
<i>Total:</i>			<i>11,758</i>	<i>351</i>	<i>262</i>	<i>614</i>	<i>517</i>	<i>548</i>	<i>1,065</i>

Key: KSF = Thousand Square Feet Gross Floor Area.
Note: All data and calculations above are subject to being rounded to nearest value.

As Table 2 shows, the development area has the potential to generate approximately 11,758 daily trips with 614 of those occurring during the morning peak hour and 1,065 during the afternoon peak hour.

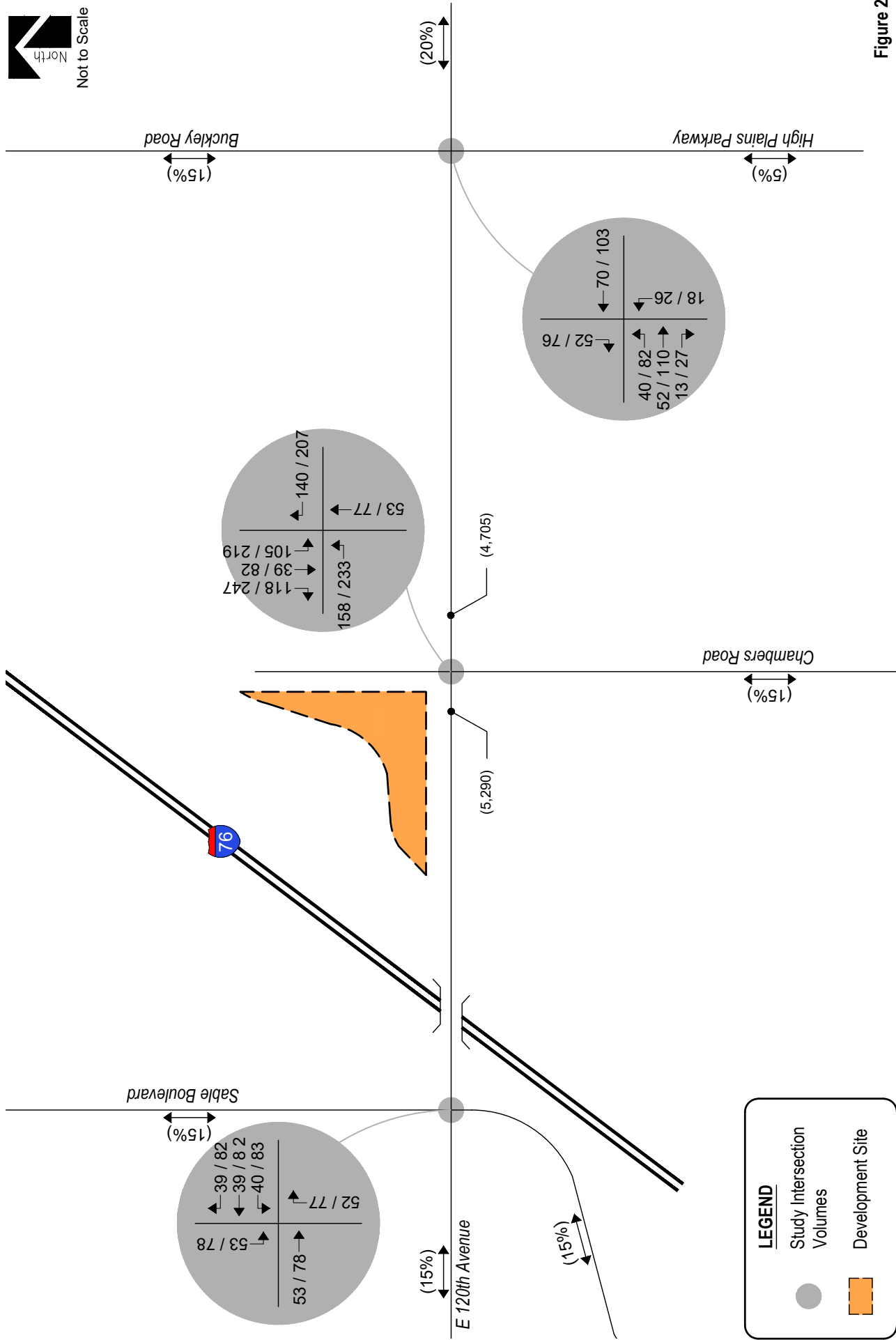
Adjustments to Trip Generation Rates

While a development of this type is likely to attract trips from within area land uses, no trip reduction was taken in this analysis. This assumption provides for a conservative analysis.

Trip Generation Distribution and Assignment

The overall directional distribution of site-generated traffic was determined based on the location of development site within the City, proposed and existing area land uses, allowed turning movements, available roadway network, and in reference to historical traffic count data provided by the Denver Regional Council of Governments' (DRCOG).

Overall trip distribution patterns and site-generated trip assignments are shown in Figure 2.



LEGEND

- Study Intersection
- Volumes
- Development Site

Figure 2
SITE DEVELOPMENT DISTRIBUTION
 (%): Overall
SITE-GENERATED TRIPS
 AM / PM Peak Hour

ADAMS CROSSING ANNEXATION
 Traffic Generation Analysis



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Development Impacts

As Table 2 and Figure 2 show, there is an increase in peak hour traffic volumes anticipated for the proposed development. The potential increase in traffic volumes is considered extensive in nature. As actual land uses, densities, or site plans become defined over time, the impacts to the surrounding roadway network and intersections will be verified by more specific traffic analyses or studies to help assess transportation improvements needed to mitigate potential traffic impacts caused by this development.

Committed Transportation Network

Pursuant to City's C3 Vision Transportation Plan¹, E 120th Avenue will be widened from two to four through lanes. However, the City's C3 Vision Transportation Plan does not mention when this will occur. Additionally, comparison of the existing and planned roadway cross-section of E 120th Avenue to the City of Commerce City Engineering Construction Standards and Specifications (Standards and Specifications)² concludes that it is not built to its ultimate width for accommodation of future transportation demands. E 120th Avenue has potential to become a six-lane roadway (three through lanes in each direction).

Considering the potential future build-out of E 120th Avenue and the existing bridge width for E 120th Avenue over Interstate 76, the bridge may need to be widened to allow for six through lanes.

Recommended Improvements

Auxiliary lanes for E 120th Avenue and Chambers Road were evaluated and are to be based on the City's Standards and Specifications.

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 3.04.1.1 of the City's Standards and Specifications, reveals that a westbound right turn deceleration lane at Chambers Road along E 120th Avenue may be required since the development's current projected peak hour right turn ingress volume exceeds the City's threshold of 15 vehicles per hour.

Other potential improvements may include auxiliary lanes along Chambers Road and E 120th Avenue at future site access drives.

It is again noted that as actual land uses, densities, or site plans become defined over time, the impacts to the surrounding roadway network and intersections will be verified by more specific traffic analyses or studies to help assess transportation improvements needed to mitigate potential traffic impacts caused by this development.

¹ C3 Vision Transportation Plan, Felsburg Holt & Ullevig, July 2010.

² Engineering Construction Standards and Specifications, City of Commerce City, October 2021.

Conclusion

This analysis assessed traffic generation for the Adams Crossing Annexation development and potential impacts to the adjacent roadway network.

Analysis findings indicated that assumed site-generate traffic is extensive in nature. It is therefore anticipated that as actual land uses, densities, or site plans become defined over time, the impacts to the surrounding roadway network will be verified by more specific traffic analyses or studies to help assess if transportation improvements are needed to mitigate potential traffic impacts.

We trust that our findings will assist in the planning and approval of the Adams Crossing Annexation development. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC

Traffic & Transportation Engineering Consultants



Zac Trotter, EIT
Traffic Engineer



Fred Lantz, PE
Traffic Engineer

