

APPENDIX B

YEAR 2025 TRAFFIC PROJECTIONS FOR US 550 (COLORADO STATE LINE TO US 160)

Year 2025 Traffic Projections For US 550 (Colorado State Line to US 160)

For the:

Colorado Department of Transportation Region 5
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Provided by:

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Table of Contents

		Page
1.0	Purpose and Scope	1
2.0	2020 Traffic Forecasts	1
3.0	Actual Verses Forecasted Volumes	1
4.0	Adjustment of 2020 Traffic Volumes	5
5.0	2025 Traffic Volumes	6
6.0	Peak Hour Volumes	6

List of Figures

1.1	US 550 (State Line to CR 318)	2
1.2	US 550 (CR 318 to CR 302)	3
1.3	US 550 (CR 302 to US 160)	4

List of Tables

1	County Road 2020 Traffic Projections	5
2	US 550 2020 Traffic Projections – Non Seasonal	5
3	US 550 Adjusted 2020 Traffic Projections – Non Seasonal	5
4	US 550 Adjusted 2020 Traffic Projections – Seasonal	5
5	US 550 2025 Traffic Projections - Non Seasonal	6
6	US 550 2025 Traffic Projections – Seasonal	6

This report has been prepared based on certain key assumptions made by URS and information supplied by third parties that affect the conclusions and recommendations of this report. These assumptions, although thought to be reasonable and appropriate, may not prove true in the future. URS' conclusions and recommendations are conditioned upon these assumptions and supplied information.

1.0 Purpose and Scope

The purpose of this report is to document the development of the year 2025 traffic volumes from the year 2020 traffic volume projections completed as part of the US 550 & US 160 Feasibility Study, adopted in February 1999. The US 550 design and environmental assessment team determined that year 2025 traffic projections were appropriate and needed for upcoming tasks to be completed on US 550.

The scope of this document included collecting recent traffic counts along US 550, reviewing State Demographer information for year 2025, reviewing traffic analysis done by others, and adjusting the year 2020 projections to year 2025.

2.0 2020 Traffic Forecasts

Two main sources of 2020 traffic forecasts were used in this analysis. The first is CDOT's US 550 & US 160 Feasibility Study, written by URS. The second is the La Plata County Comprehensive Traffic Study, written by Bechtolt Engineering LLC. Both were finalized in 1999, though the US 550 & US 160 Feasibility Study traffic forecasting was completed first.

The US 550 & US 160 Feasibility Study traffic forecasting concentrated on the amount of traffic expected on the State Highway system in La Plata County, and not the County roads. The La Plata County Comprehensive Traffic Study concentrated on the amount of traffic the County roads would have, and not the State highways. Each document had land use and population forecast analysis work provided by the same consultants, and methodology was similar.

The US 550 & US 160 Feasibility Study predicted "non-seasonal" (non-tourist) traffic and "seasonal" (high tourist month) traffic. The La Plata County Comprehensive Traffic Study determined the average daily traffic (ADT). The ADT of the County's study is similar to the "non-seasonal" conditions of the CDOT study.

The methodologies and results of these two comprehensive documents were reviewed and it was determined that they predicted similar traffic growth rates. The US 550 & US 160 Feasibility Study appears to have underestimated the amount of traffic between the Colorado/New Mexico state line and CR 318. This discrepancy was revised to be more reasonable. This adjustment is described later within this document.

3.0 Actual Versus Forecasted Volumes

Traffic counts were taken in October 1996, and July and August of 2001. It should be noted that both sets of traffic counts may have been affected by construction projects occurring at the time of the counts. The 1996 counts were taken when the US 550/US 160 "Farmington Hill" intersection was under construction; the 2001 counts when US 550 in New Mexico was under construction. It is not know how much the construction affected the counts. If they were affected, it is likely they were lower that under normal conditions. US 550 was divided into essentially three segments. Figures 1.1, 1.2 and 1.3 compare actual counts to predicted volumes and CDOT average volumes. Note that the segment from the state line to CR 318 indicates that the 2020 volumes were underestimated.

US 550 (State Line to CR 318)

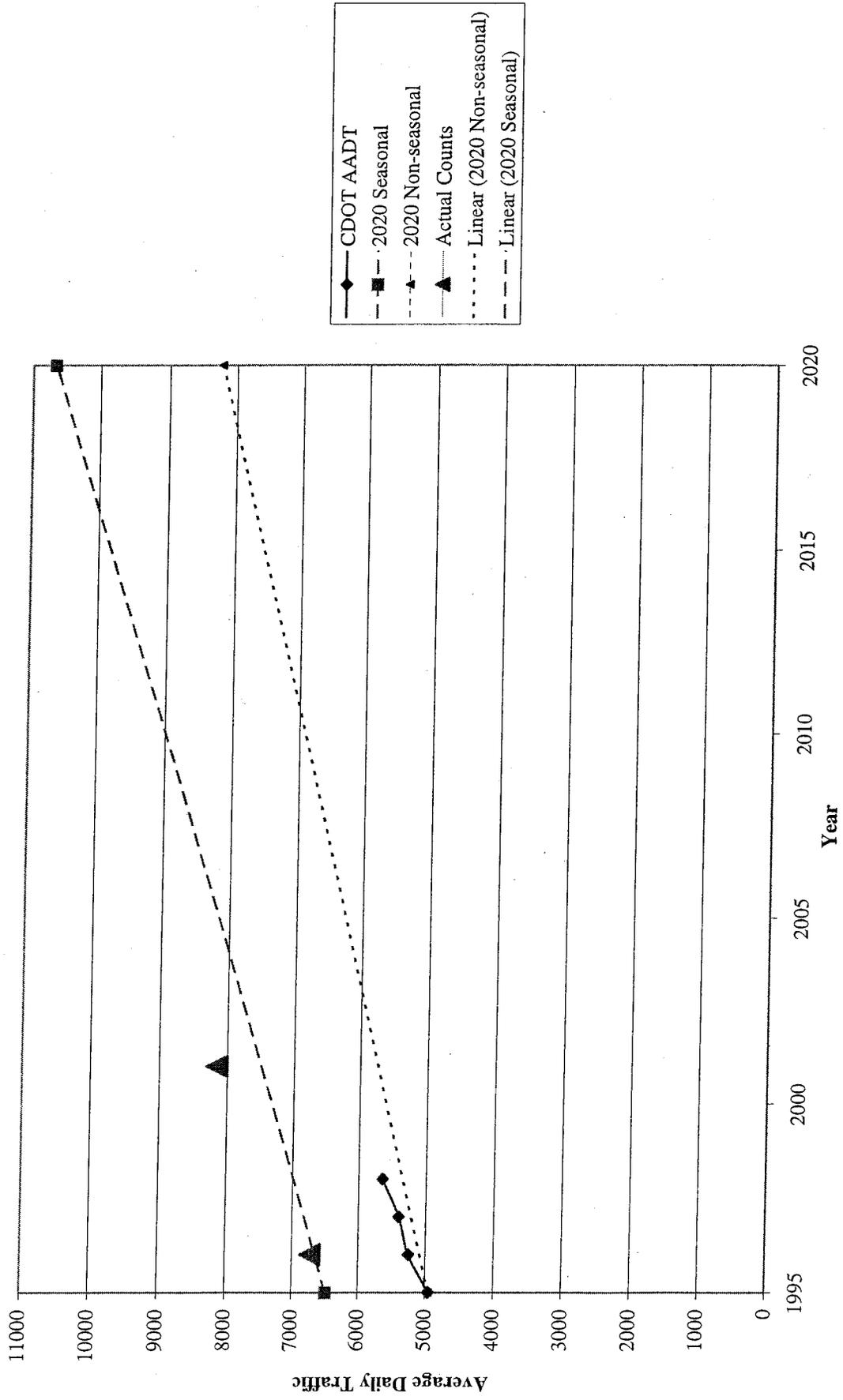


Figure 1.1

US 550 (CR 318 to CR 302)

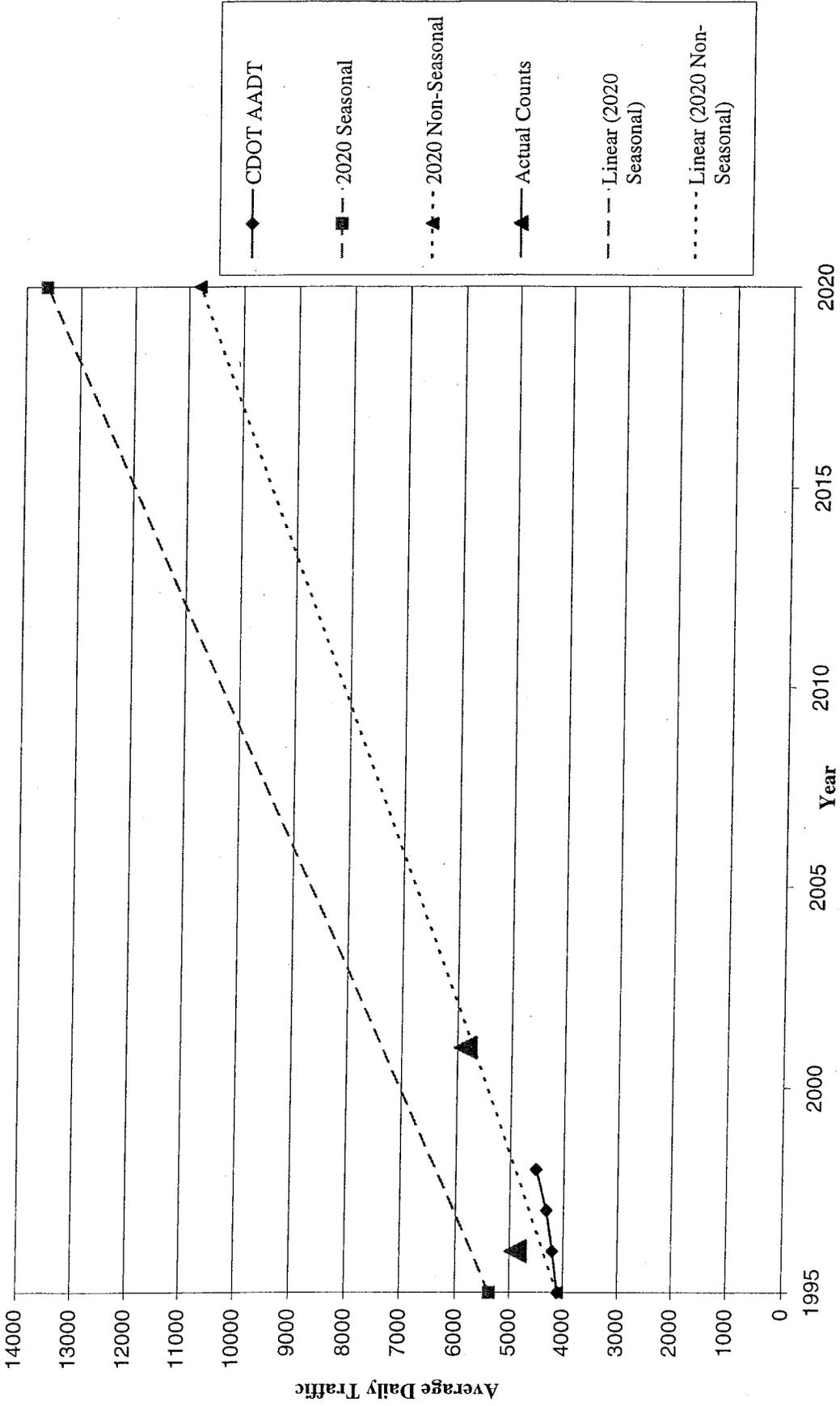


Figure 1.2

US 550 (CR 302 to US160)

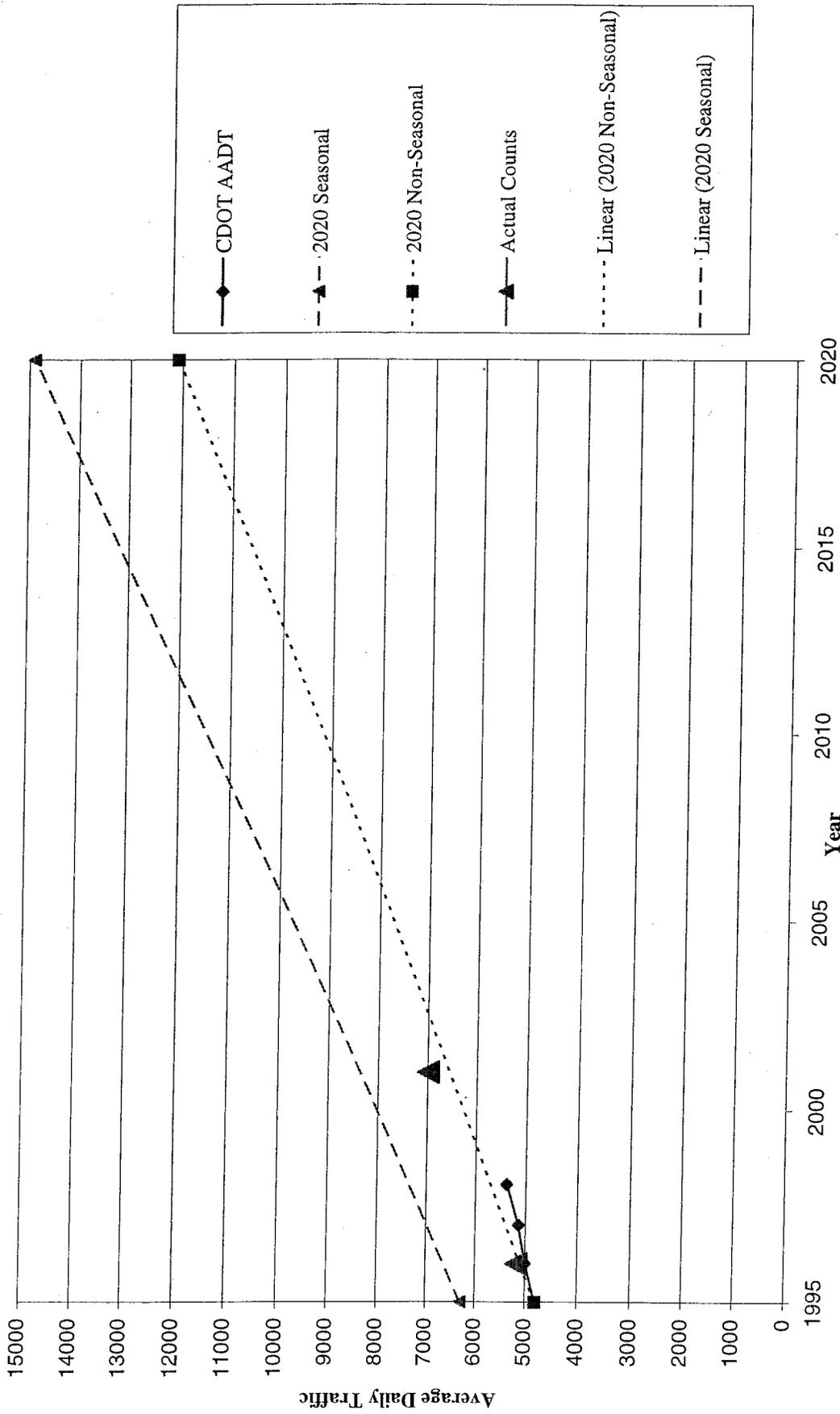


Figure 1.3

4.0 Adjustment of 2020 Traffic Volumes

The first task was to adjust the 2020 forecast between the state line and CR 318 to a more reasonable value. The growth rates for the County roads in the vicinity of US 550 were compared with the US 550 growth rates. Table 1 and Table 2 depict these values. All were similar except for the section of US 550 that needed adjusting. The growth rate was adjusted to reflect the growth rate for CR 318 and is noted in Table 3.

Table 1 – County Road 2020 Traffic Projections

La Plata Traffic Study			
Roadway near US 550	1998 (AADT)	2020 (ADT)	% Growth/Year
CR 318	2578	5336	3.36%
CR 215	351	848	4.09%
CR 214	426	677	2.13%
CR 302	759	1670	3.65%
CR 220	1817	3579	3.13%

Table 2 – US 550 2020 Traffic Projections – Non Seasonal

US 550 & US 160 Feasibility Study			
US 550 Segment	1998 (AADT)	2020 (ADT)	% Growth/Year
State line to CR 318	5645	8220	1.72%
CR 318 to CR 302	4516	10800	4.04%
CR 302 to US 160	5376	12080	3.75%

Table 3 – US 550 Adjusted 2020 Traffic Projections – Non Seasonal

US 550 & US 160 Feasibility Study			
US 550 Segment	1998 (AADT)	2020 (ADT)	% Growth/Year
State line to CR 318	5645	11680	3.36%
CR 318 to CR 302	4516	10800	4.04%
CR 302 to US 160	5376	12080	3.75%

The “seasonal” 2020 projections were also adjusted for the one segment of US 550. Table 4 summarized the change.

Table 4 – US 550 Adjusted 2020 Traffic Projections –Seasonal

US 550 & US 160 Feasibility Study		
US 550 Segment	Original 2020 (ADT)	Adjusted 2020 (ADT)
State line to CR 318	10660	14500
CR 318 to CR 302	13620	13620
CR 302 to US 160	14900	14900

These values were then used to develop the 2025 US 550 traffic projections.

5.0 2025 Traffic Volumes

It was determined that a reasonable method to increase the traffic volumes from the five year period from 2020 to 2025 would be to determine the population growth rate predicted for those years, and use the same rate for the traffic. Since the adjustment is for a relatively short time period, this method was deemed reasonable.

According to Colorado State Demographer population projections for La Plata County, the population is anticipated to grow at an average rate of 1.8%/year between 2020 and 2025. This rate was applied to the US 550 2020 “non-seasonal” volumes to calculate 2025 volumes as noted in Table 5.

Table 5 – US 550 Traffic Projections – Non Seasonal

US 550 Segment	2020 (ADT)	2025 (ADT)	% Growth/Year
State line to CR 318	11680	12770	1.8%
CR 318 to CR 302	10800	11808	1.8%
CR 302 to US 160	12080	13207	1.8%

The “seasonal” volumes were not adjusted the same. Since hotels and resort hotels generate less traffic than homes, the growth rate was assumed to be half of the 1.8% rate and is noted in Table 6.

Table 6 – US 550 Traffic Projections – Seasonal

US 550 Segment	2020 (ADT)	2025 (ADT)	% Growth/Year
State line to CR 318	14500	15164	0.9%
CR 318 to CR 302	13620	14244	0.9%
CR 302 to US 160	14900	15583	0.9%

6.0 Peak Hour Volumes

The peak hour percentages of the ADT that will be used for 2025 analysis are based on the peak hour percentages observed with the summer 2001 counts. Generally the morning (AM) peak hour was 6.7% of the daily traffic; the evening (PM) was 8.7%. These percentages along with County road forecasts and existing intersection counts will be used to evaluate intersections along US 550 for year 2025 as needed.