

Farmdale Avenue

Cheshire to Signal Butte Road

Traffic Calming Project

Ryan Hudson – City Traffic Engineer

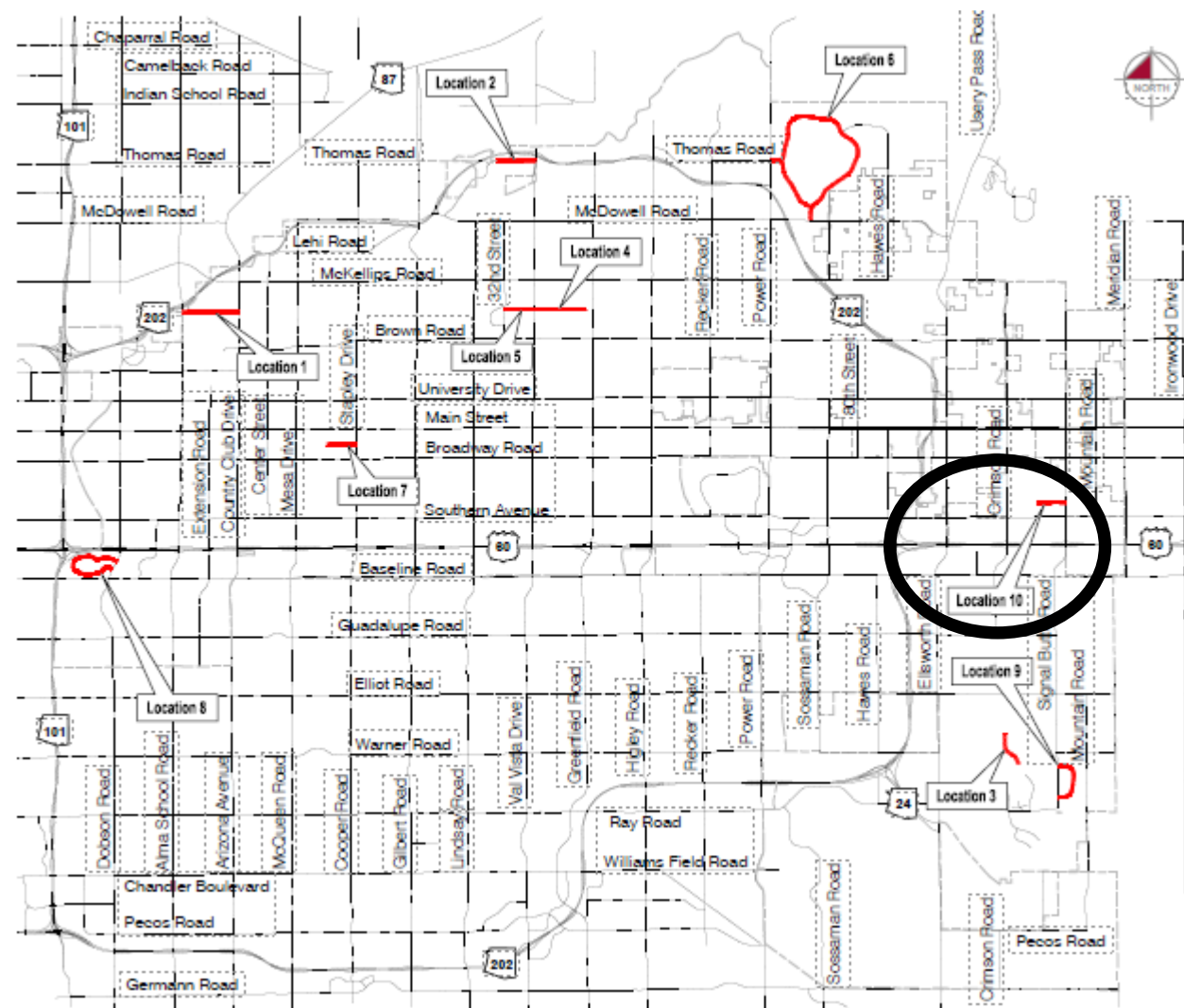
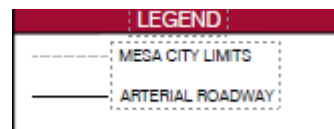


- Project Identification History
- Farmdale Avenue Before Project
- Proposed Traffic Calming Features
- Traffic Calming Design, Construction & Results



Project identification

- Traffic Calming Study
 - 10 Locations
 - Data Collection
 - Evaluation of treatments
 - Renderings
 - Cost estimate
 - Completed in August 2021



Mesa Traffic Calming Practice

Traffic Calming Tools Previously Used

- Speed humps/cushions
 - Average speed reduction > 5 mph
- Dynamic speed feedback signs (DSFS)
 - Average speed reduction < 1 mph
- Lane Narrowing through striping
 - Negligible speed change
- School Zone Flashers
 - Arterial dual speed limit zones

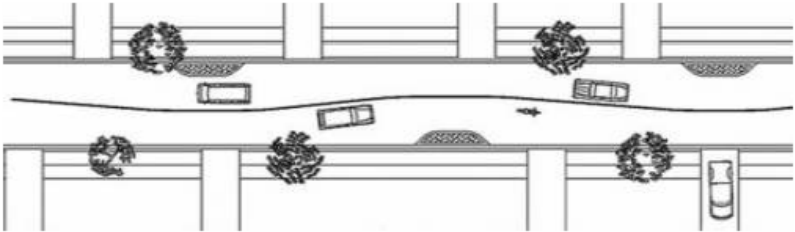




Proposed Traffic Calming Measures

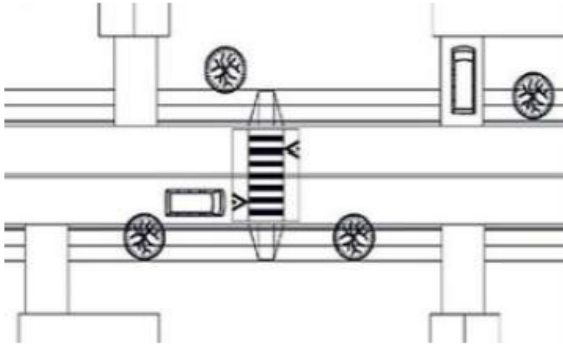



Categories

- Horizontal Deflection
 - Creates horizontal shift in roadway to force motorist to slow the vehicle to comfortably navigate the measure.
- Vertical Deflection
 - Creates change in height of the roadway that forces a motorist to slow down to maintain an acceptable level of comfort
- Street Width Reduction
 - Narrows the width of a vehicle travel lane promoting slower speeds to maintain an acceptable level of comfort and safety.

Proposed Traffic Calming Measures

TRAFFIC CALMING MEASURE	DESCRIPTION ¹	CATEGORY	OBSERVED SPEED REDUCTION (MPH)	DIAGRAM / SAMPLE IMAGES
Chicane Lateral Shift	<p>Realignment of street that causes travel lanes to shift in one direction.</p> <p>Chicane shifts or realigns traffic more than once along the segment.</p>	Horizontal Deflection	3 - 9 ¹	  

Proposed Traffic Calming Measures

TRAFFIC CALMING MEASURE	DESCRIPTION ¹	CATEGORY	OBSERVED SPEED REDUCTION (MPH)	DIAGRAM / SAMPLE IMAGES
Raised Crosswalk	Variation of a flat-topped speed table that is marked and signed as a pedestrian crossing. Typically 3 to 6 inches above street level and 22 feet in length, with the 10-foot flat top conforming to a desired crosswalk width.	Vertical Deflection	11 ²	 
Pavement Markings (On-Street Parking, Narrow Lanes/Shoulder, Centerline/Edgeline)	Narrows roadway travel lanes by adding side friction to traffic flow. Parking can be allowed on one or both sides of roadway.	Street Width Reduction	1 - 5 ¹	 

Farmdale Before Project

Farmdale Avenue – Cheshire to Signal Butte Road

- Two-lane 40 ft wide & ½ mile long local street
- Posted speed limit 25 mph
- No pavement markings
- Lighting
- Parking opportunities along north and south side of roadway
- Public park & retention area along north side of roadway
- History of traffic calming requests



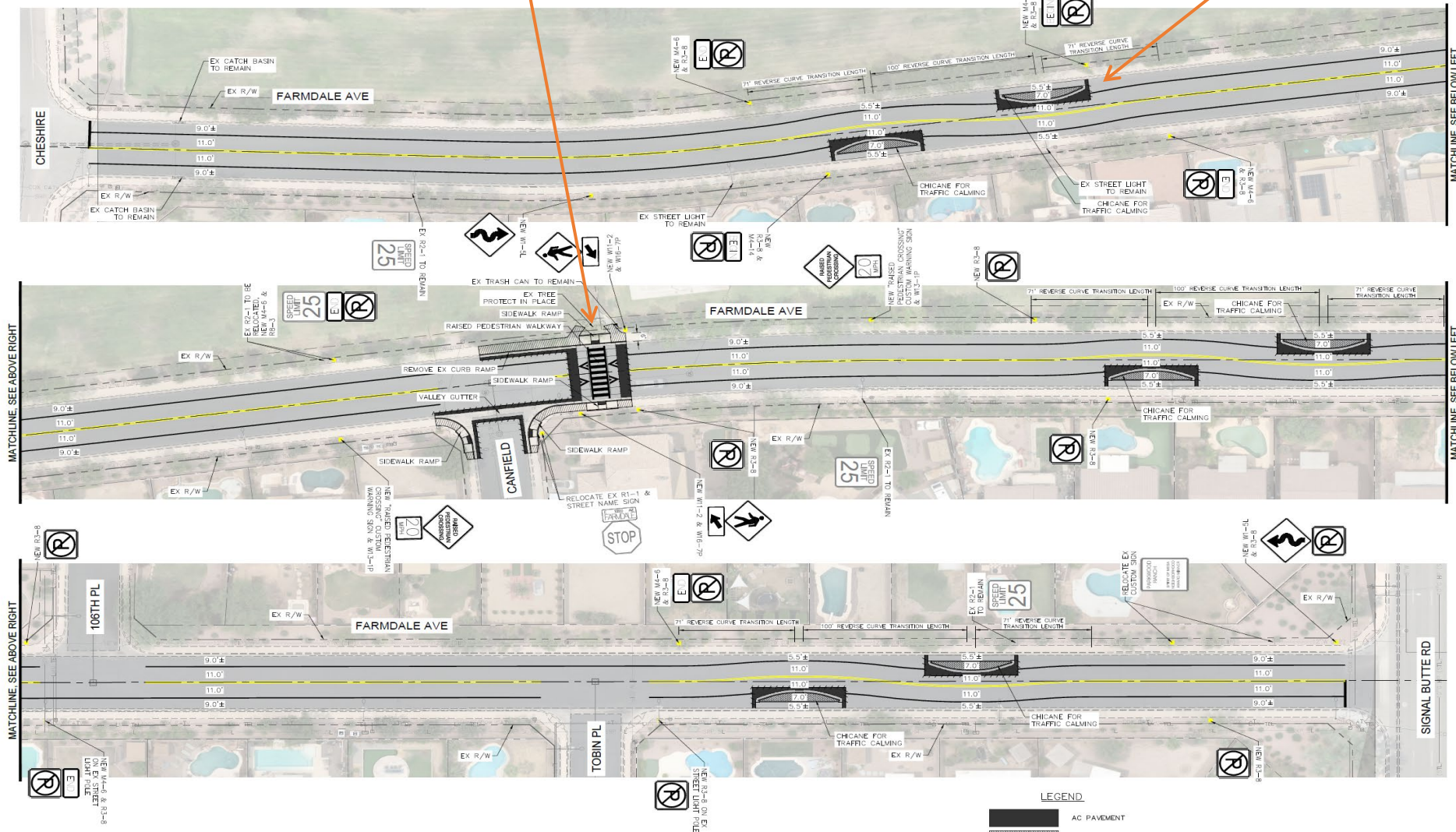
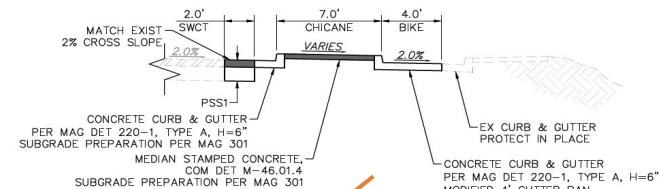
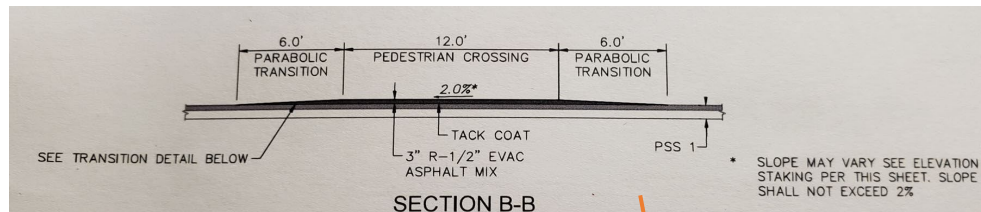
Farmdale Before Construction

Farmdale Avenue – Cheshire to Signal Butte Road

- Posted speed limit: 25 mph
- Historic Traffic Counts:

Year	Average Daily Traffic (ADT)	85th % Speed (mph)		Speed Differential from Posted Speed (mph)	
		EB	WB	EB	WB
2014	1,126	<i>Not available</i>	39.3	<i>Not available</i>	14.3
2021	1,200	38.0	35.5	13.0	10.5
2023	1,252	38.2	35.3	13.2	10.3

Traffic Calming Design



LEGEND



NOTES:

1. ALL DIMENSIONS ARE FROM CENTER OF STRIPE TO FACE OF CURB OR CENTER OF DOUBLE YELLOW TO CENTER OF STRIPE.
2. ALL EXISTING SIGNING TO REMAIN UNLESS OTHERWISE SPECIFIED.



FARMDALE TRAFFIC CALMING CHESHIRE TO SIGNAL BUTTE





Cost

- Design - \$31,000
- Construction - \$373,000

Schedule

- Public Outreach – Winter/Spring 2022
- Project Initiation - Spring 2022
- Final Design - January 2023
- Construction:
 - November 2023 to January 2024



**FARMDALE AVE.
TRAFFIC CALMING
CITY OF MESA
PROJECT# CP1121CAP
NOV 2023-JAN 2024
FOR MORE INFORMATION,
CALL 480-644-3800**

Project Underway - Pictures



Project Underway - Pictures



Project Complete - Pictures



BEFORE



AFTER

Project Complete - Pictures



BEFORE



AFTER

Speeds Before and After Construction



85 th -tile Speeds	E/O Cheshire			W/O Canfield			E/O Canfield			E/O 106th Place		
	EB Speed (mph)	WB Speed (mph)	Volume	EB Speed (mph)	WB Speed (mph)	Volume	EB Speed (mph)	WB Speed (mph)	Volume	EB Speed (mph)	WB Speed (mph)	Volume
2014								39.3	1,126			
2021							38.0	35.5	1,200			
2023							38.2	35.3	1,252			
2024 - Mar	31.9	33.2	1,122	39.0	37.5	1,139	25.4	27.3	1,098	31.8	31.7	1,332
2025 - Mar	31.8	29.5	1,105	30.9	29.4	1,109	28.3	29.2	1,253	29.5	31.1	1,352

Location		Direction	Day	50th Percentile Speed (mph)	85th Percentile Speed (mph)	%>5mph above SL	%>10mph above SL	65+mph	Speed Limit (mph)
1	Farmdale Ave (E/O Cheshire)	EB	1	25.2	31.8	20%	6%	0	25
			2	25.3	31.8	21%	6%	0	
			AVG	25.3	31.8	20%	6%	0	
		WB	1	24.5	29.6	12%	1%	0	
			2	24.2	29.3	11%	2%	0	
			AVG	24.4	29.5	12%	2%	0	
		Overall AVG		24.8	30.6	16%	4%		
2	Farmdale Ave (W/O Canfield)	EB	1	26.0	30.8	17%	1%	0	25
			2	26.0	30.9	18%	3%	0	
			AVG	26.0	30.9	17%	2%	0	
		WB	1	25.4	29.5	11%	1%	0	
			2	25.1	29.3	9%	1%	0	
			AVG	25.3	29.4	10%	1%	0	
		Overall AVG		25.6	30.1	14%	2%		
3	Farmdale Ave (E/O Canfield)	EB	1	23.2	28.2	6%	2%	0	25
			2	23.3	28.4	7%	1%	0	
			AVG	23.3	28.3	6%	2%	0	
		WB	1	24.9	29.2	8%	1%	0	
			2	24.6	29.1	8%	1%	0	
			AVG	24.8	29.2	8%	1%	0	
		Overall AVG		24.0	28.7	7%	1%		
4	Farmdale Ave (E/O 106th Place)	EB	1	24.6	29.5	12%	6%	0	25
			2	24.4	29.5	12%	3%	0	
			AVG	24.5	29.5	12%	4%	0	
		WB	1	26.5	31.8	21%	5%	0	
			2	25.8	30.4	16%	4%	0	
			AVG	26.2	31.1	18%	4%	0	
		Overall AVG		25.3	30.3	15%	4%		

Project Conclusions

- Challenges:
 - Schedule/timeline
 - Costs
 - Displaced RPMs
 - Chicane Scuffing
 - Vehicles Crossing Travel Lanes
- Positive: Overall Speed Reduction
 - 5+ mph reduction in 85th%-tile speeds
 - Reduction in top percentile speeds (% driving over 35 mph)
 - Future traffic calming projects



Other Traffic Calming Projects

Raised Crosswalks

- Red Mountain adjacent to Las Sendas Elementary School
 - 5+ mph reduction in 85%-tile speeds
 - Large reduction in top percentile speeds
- Westwood adjacent to Emerson Elementary, Carson Junior High, and Westwood High Schools
 - Under construction



Questions

