



FEDERALLY FUNDED INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PROJECTS

October 24, 2022

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AGENDA

- Background
- Project Equipment
- Status of Active ITS Projects
- Project Locations
- Next Steps
- Recommendation

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BACKGROUND

- Maximizing and Optimizing Vehicle Efficiency (MOVE) Plan
 - Use of ITS Technology to measure, improve, and report performance of arterial roadways
 - Changing lagging green arrows to leading
 - Completed Summer 2022
 - Prevent unnecessary traffic signal preemptions
 - Preemption used by emergency vehicles to change the traffic signal to green
 - Can take each traffic signal up to five minutes adjust after preemption
 - Approximately 115 of 230 city vehicles have been programmed by Fleet

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PROJECT EQUIPMENT

- Advanced Vehicle Detection
 - Existing video detection is from 2004 and cannot be adjusted remotely
 - Current technology provides Signal Performance Measure (SPM) Data
 - 81 of 106 signalized intersections upgraded
- Advanced Traffic Signal Controllers
 - Existing traffic signal controllers are from 2005
 - Not compatible with advanced video detection and technology

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PROJECT EQUIPMENT (CONTINUED)

Video Detection System



Traffic Signal Controllers



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PROJECT EQUIPMENT (CONTINUED)

- Traffic Signal Coordination of Arterial Roadways
 - Intended to reduce stops on the coordinated arterial street
 - Corridors are generally grouped in one to two mile-long segments
 - Not active during late night/early morning hours
 - Multiple timing plans throughout the day
- Disruptions to Traffic Signal Coordination
 - Preemption from emergency vehicles
 - Pedestrians crossing the arterial roadway

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STATUS OF ACTIVE ITS PROJECTS

- 42031 – Estrella/PebbleCreek Parkway & Traffic Management Center Equipment
 - Project completed September 30th
 - 18 intersections
- 42032 & 42033 – Litchfield Road & McDowell Road ITS Equipment Projects
 - All material anticipated by early December
 - Installation to be completed by end of January 2023 by city staff
 - Upgrades to 25 intersections

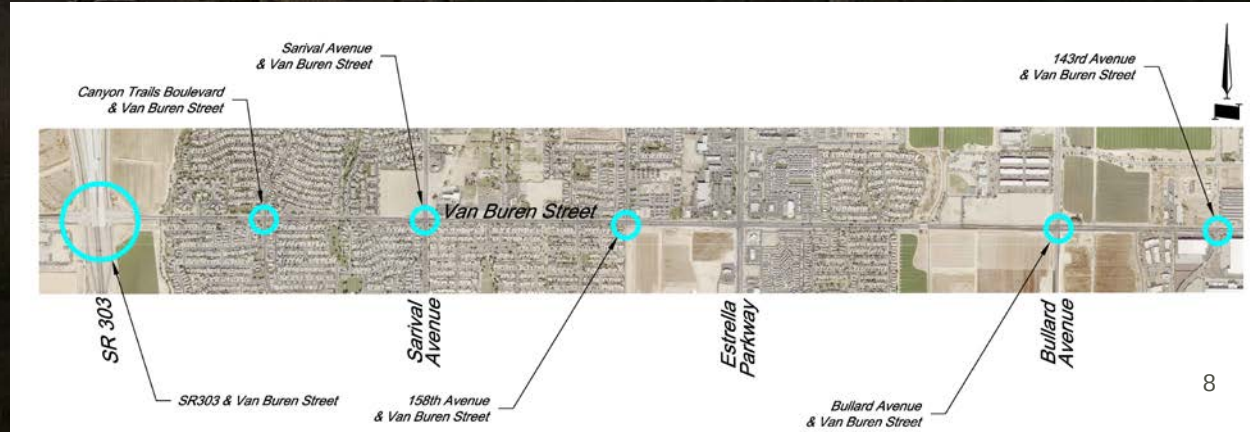
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PROJECT LOCATIONS

- Van Buren Street: SR 303 to 143rd Avenue
 - Integrated Corridor Management: Close proximity to I-10 & SR 303
 - Design and installation by city staff
 - Scheduled completion in Spring 2024
 - Six intersections

Federal Cost: \$368,713
City Cost: \$62,787
Total Cost: \$431,500



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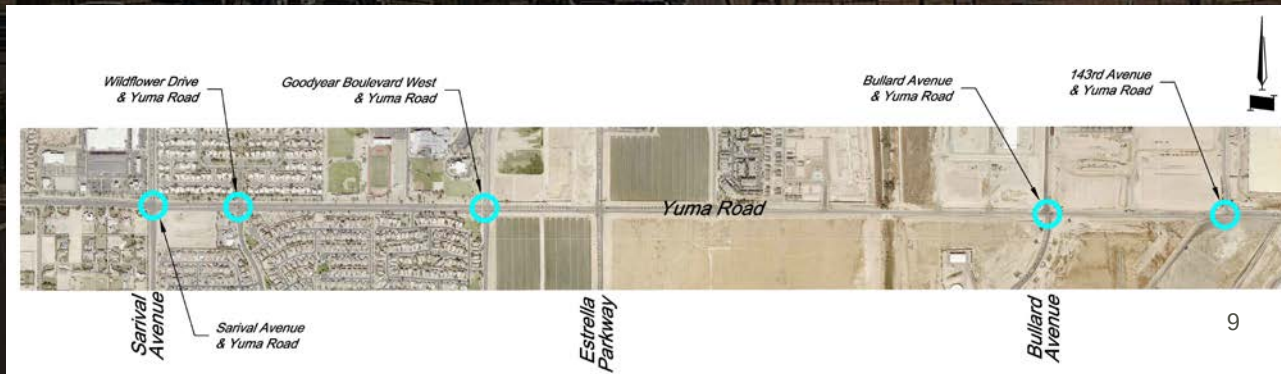
PROJECT LOCATIONS

- Yuma Road: Sarival Avenue to 143rd Avenue
 - Regional Priority Arterial Roadway by MAG
 - Design and installation by city staff
 - Scheduled completion in Spring 2024
 - Five intersections

Federal Cost: \$209,818

City Cost: \$53,182

Total Cost: \$263,000

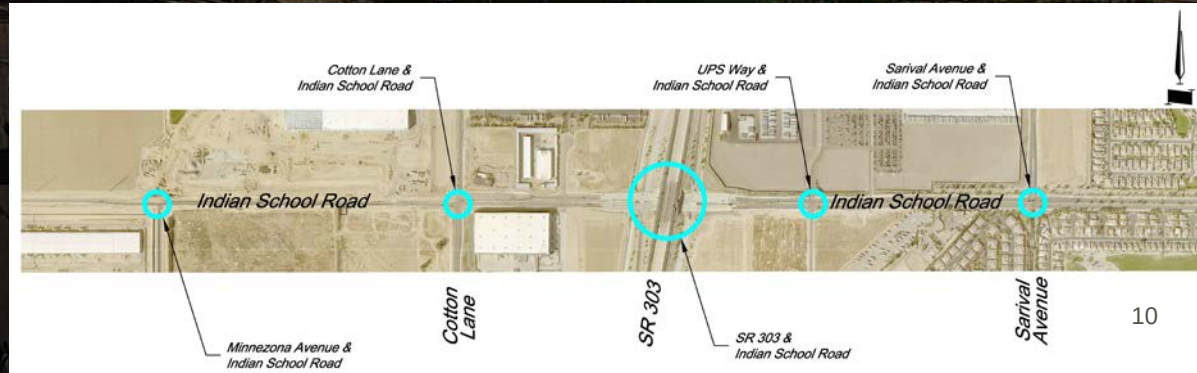


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PROJECT LOCATIONS

- Indian School Road: Minnezona Avenue to Sarival Avenue
 - Integrated Corridor Management: Close proximity to SR 303
 - Design and installation by city staff
 - Scheduled completion in Spring 2024
 - Five intersections

Federal Cost: \$192,844
City Cost: \$52,156
Total Cost: \$245,000

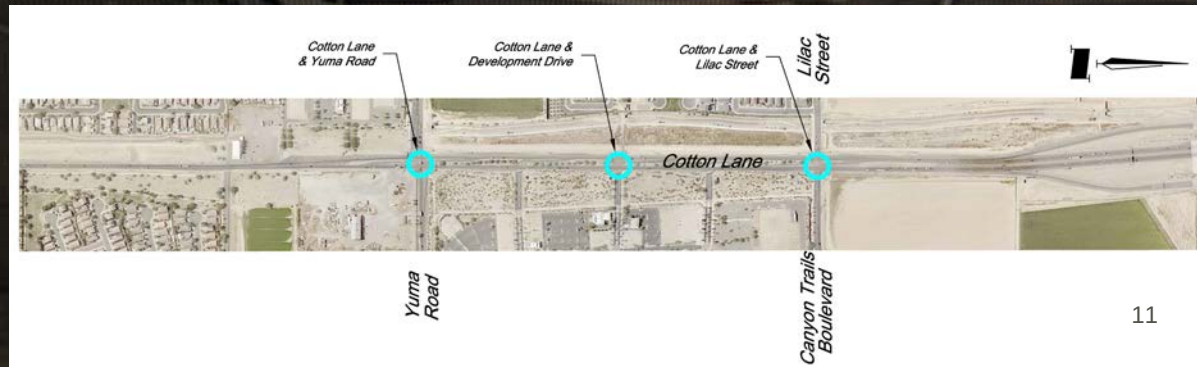


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PROJECT LOCATIONS

- Cotton Lane: Yuma Road to Lilac Street
 - Regional Priority Arterial Roadway by MAG
 - Design and installation by city staff
 - Scheduled completion in Spring 2024
 - Three intersections

Federal Cost: \$87,228
City Cost: \$45,272
Total Cost: \$133,000



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PROJECT LOCATIONS

CIP Project	Federal Cost	Local Cost	Total Cost
42066: Van Buren Street	\$368,713	\$62,787	\$431,500
42067: Yuma Road	\$209,818	\$53,182	\$263,000
42065: Indian School Road	\$192,844	\$52,156	\$245,000
42064: Cotton Lane	\$87,228	\$45,272	\$133,000
Total	\$858,603	\$213,897	\$1,072,500

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NEXT STEPS

- Continue the replacement of outdated traffic signal equipment
- Identify roadway capacity issues through the Transportation Master Plan
- We're not "there" yet, but we have a vision and a new multi-pronged action plan.

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RECOMMENDATION

- Approve four Intergovernmental Agreements with the Arizona Department of Transportation for ITS Projects along Van Buren Street, Yuma Road, Indian School Road and Cotton Lane.