



ADOT

State Route 88 (Apache Trail) Study

MP 222 to MP 229

Public Meeting



August 16, 2023

WELCOME!
Thank you for attending



Tonight's Presenters

Courtney King, ADOT Southern Area Community Relations Supervisor

Chris LaVoie, ADOT Project Manager

Jackie Noblitt, P.E., Senior Project Manager, Stanley Consultants

Other project team members available for the Q&A session



Purpose of Tonight's Meeting

To provide:

- Study background
- Overview of SR 88 alternatives
- Preliminary recommendations
- Opportunity to ask questions and provide comments



SR 88 Background

- Historic, scenic road
- On easement from Tonto National Forest, adjacent to Superstition Wilderness
- Sharp curves, steep grades
- This section is unpaved



SR 88 Damage

- 2019 large storms caused severe erosion damage, rockslide that closed section of SR 88
- ADOT repaired/reopened SR 88 where possible to provide access
- MP 222-227 remains closed due to extent of damage
- Erosion, stormwater runoff, damaged drainage create potential for recurring issues





SR 88 Video



<https://vimeo.com/659718334>



SR 88 Video



SR 88 Study Purpose

- Evaluate improvement options to safely reopen SR 88
 - ID strategies to improve the resilience of the roadway to storms
 - Determine cost, feasibility
- Recommend a preferred alternative
- Outline needed steps for potential future project





Existing SR 88 Issues





- Large rockslide blocks the road





- Narrow road
- Roadway surface eroded
- Rock and sediment deposits
- Road difficult to maintain





- Guardrail is damaged and in poor condition





- Severe erosion at culverts
- Plugged or small culverts





- Bridges are old but will need repairs soon
- Roadway approaches are rutted and eroded

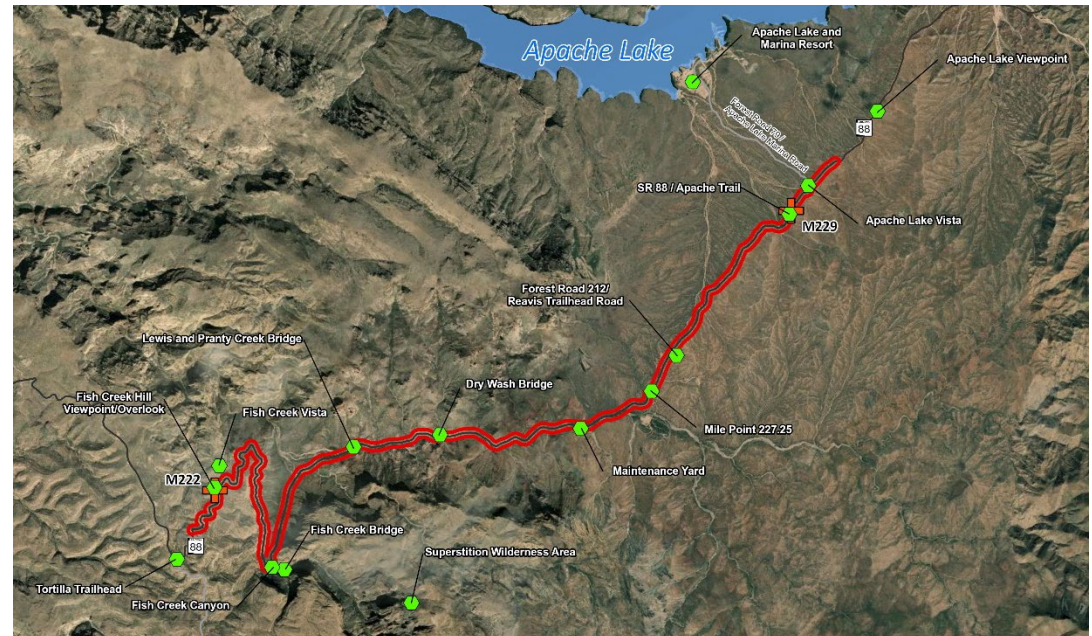


Environmental Overview

The purpose of the Environmental Overview (EO) is to:

- provide preliminary environmental information
- provide recommendations and guidance for compliance requirements

The environmental review area for the EO consists of a 300-foot-wide corridor





Environmental Overview Components

- Section 106 of the National Historic Preservation Act (NHPA)
- Arizona State Historic Preservation Act
- Endangered Species Act (ESA)
- Migratory Bird Treaty Act (MBTA)
- Clean Water Act



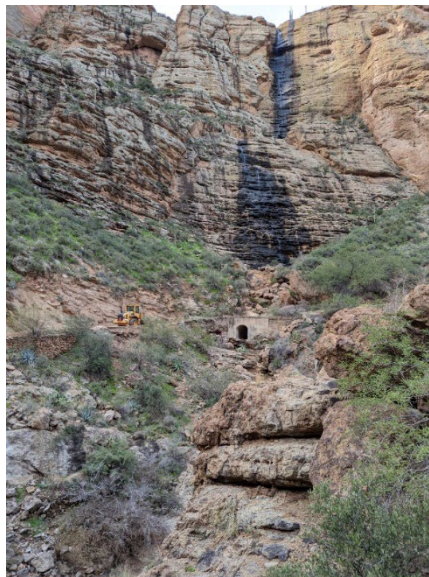
Environmental Resources

- Biological
- Cultural/historic
- Recreation
- Visual
- Wilderness Areas
- Waters



SR 88 Constraints

- Mountainous terrain
- Rock faces adjacent to roadway
- Adjacent Superstition Wilderness boundary





Study Alternatives

- Looked at three Build alternatives
- Developed based on levels of resiliency and risks of future closures



Improvements Evaluated

In addition to repairing damaged sections of roadway, the team evaluated options for:

- Widening roadway
- Improving the roadway surface
- Repairing and upgrading drainage features
- Stabilizing slopes, rockfall and erosion control
- Adding and replacing guardrail
- Adding other miscellaneous safety improvements



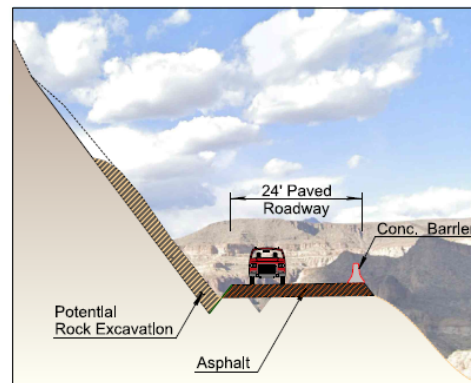
Stormwater Drainage Analysis

- Evaluated how to improve drainage to minimize potential for future damage.
- Current culverts designed for 25-year storm event (Approx 2" of rain in 1 hour).
- Modeled the potential for future increased large storms (55-83% increase in precipitation and runoff).
- Modeling shows a high likelihood of an increase in storm intensity.
- Steep slopes and burn scar increase flows.
- Alternatives include increasing size of culverts to handle more water.

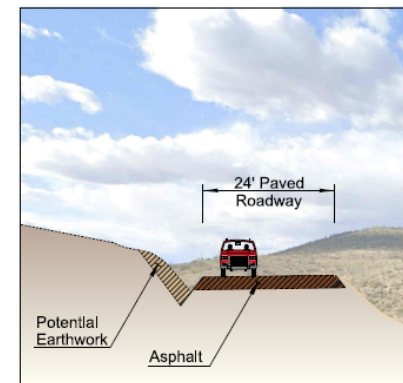


Alternative 1

- Resilience level to closures: High
- Cost: \$\$\$\$
- New 24' asphalt paved roadway
- New barrier in several locations
- Replace existing bridges with new one-lane bridges
- Upsize drainage to accommodate 2.5 inches of rain in 1 hour)
 - Add V-ditch on Fish Creek Hill
- Largest footprint/highest impact on environmental resources
- New easement required



FISH CREEK HILL TYPICAL AREA

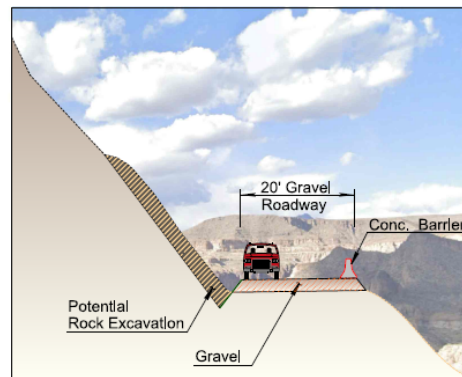


EAST OF FISH CREEK HILL TYPICAL AREA

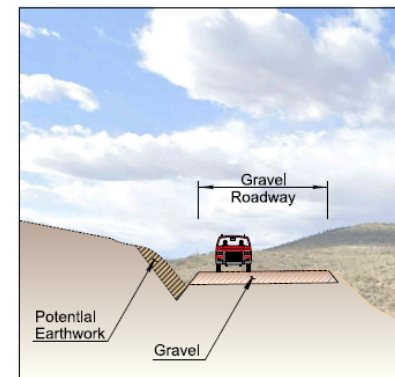


Alternative 2

- Resilience level to closures: Medium
- Cost: \$\$\$
- New 20' gravel roadway
- New barrier on Fish Creek Hill
- Rehab/repair existing bridges
- Upsize drainage to accommodate 2.25 inches of rain in 1 hour)
 - Add V-ditch on Fish Creek Hill
- Medium footprint/medium impact on environmental resources
- New easement required



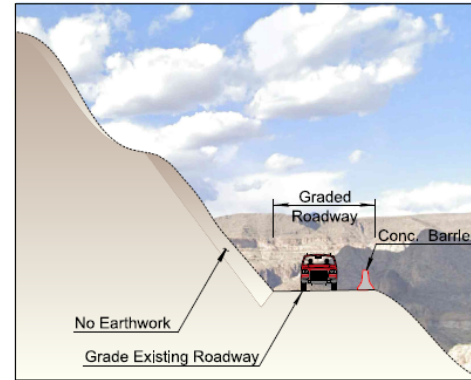
FISH CREEK HILL TYPICAL AREA



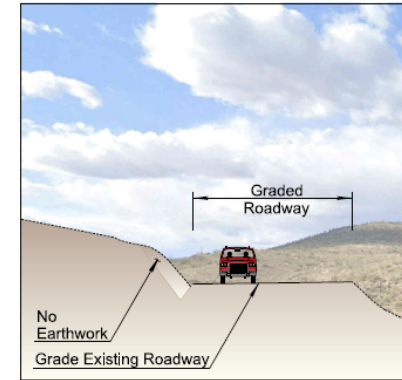
EAST OF FISH CREEK HILL TYPICAL AREA

Alternative 3

- Resilience level to closures: Low
- Cost: \$\$
- Regrade/repair roadway
- New barrier on Fish Creek Hill
- Repair existing bridges
- Clean and re-establish existing roadside drainage ditches
- Small footprint/least impact on environmental resources
- No new easement required



FISH CREEK HILL TYPICAL AREA



EAST OF FISH CREEK HILL TYPICAL AREA



Evaluation Criteria

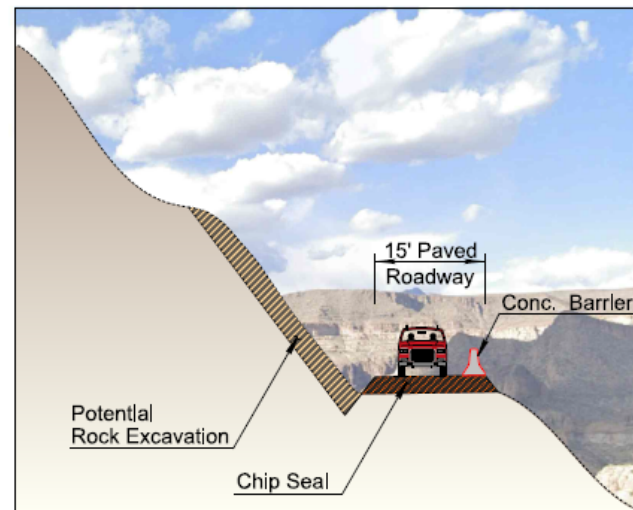
- Predicted resiliency
- Accommodates traffic in both directions
- Stormwater conveyance
- Added safety improvements
- Preliminary environmental considerations
- Potential impacts to Forest lands/wilderness
- Estimated construction cost





Preferred Hybrid Alternative

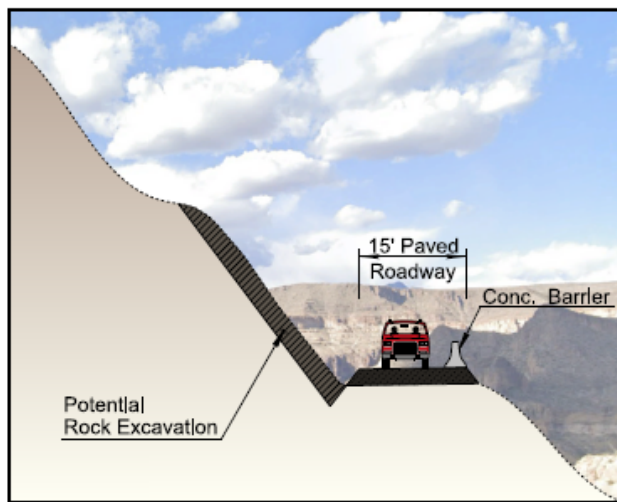
- Resilience level to closures: Medium Cost: \$\$\$
- Medium footprint on environmental resources
- Chip seal roadway on flatter sections; pave with asphalt on steep sections
- New concrete barrier on Fish Creek Hill
- Rehab/repair existing bridges
- Construct retaining walls where needed to contain slopes without impacting wilderness areas
- Add rock bolts to potentially unstable rock faces.
- Add reflectors along curves, signs, pullouts
- Upsize drainage to accommodate greater storm event (2.25" of rain in 1 hour). Add V-ditch.
- Some new easement required



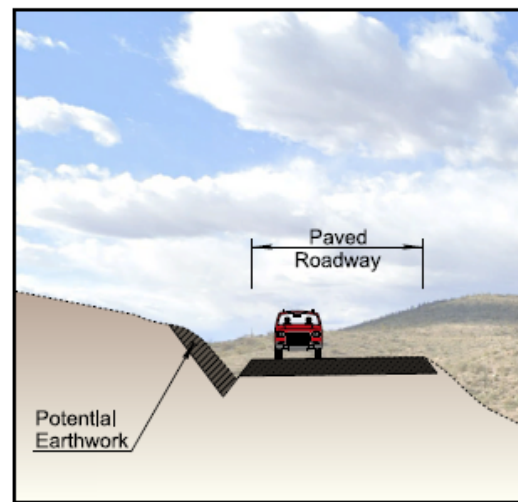
FISH CREEK HILL TYPICAL AREA



Widen roadway on Fish Creek Hill; add barrier and ditch for drainage



FISH CREEK HILL TYPICAL AREA



EAST OF FISH CREEK HILL
TYPICAL AREA



Add chip seal surface

- More stable than gravel
- Less erosion, easier to maintain
- Less dust than dirt road
- Matches project to the east





Add rock bolts

- Install rock bolts to reduce rockfall from potentially unstable areas





Culvert improvements

- Clean, increase size of culverts to safely convey stormwater under roadway





Repair/rehabilitate bridges

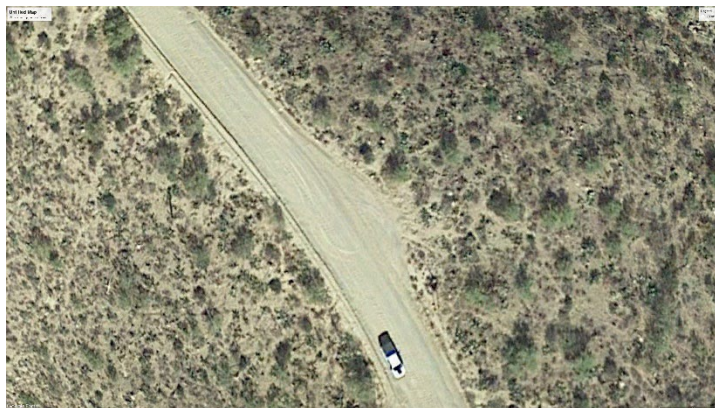
- Remove light corrosion on steel bridges
- Replace bridge decks to increase service life





Miscellaneous Safety Improvements

- Add pullouts
- Add signs
- Add delineators





Next Steps/Process

- Select preferred alternative and conclude study (fall 2023)
- Identify funding for project (TBD)
- Conduct design and environmental study
- Advertise and construct project



Study Comments

- Comments on the study will be accepted through September 15
- Comments can be submitted in the following ways:
 - At tonight's meeting
 - Online comment form: azdot.gov/SR88apachetrail
 - Email: mhayes@logansimpson.com
 - Phone (480) 967-1343
 - Mail: SR 88 Study, c/o Marshall Hayes, Logan Simpson, 51 West Third St., Suite 450, Tempe, AZ 85281

A pre-recorded version of the meeting presentation is posted to the SR 88 website at <https://azdot.gov/SR88apachetrail>



Questions

- We will take questions from the audience for 15 minutes, then go back into open house where attendees can ask questions directly to the team.
- Please use question cards.
- The team may consolidate similar questions for time.
- If there is time after written questions, we will take verbal questions.