

Appendix C: TAC Meeting Notes



SR 87 Corridor Development Study
Technical Advisory Committee Meeting No. 1 / Kick-off Meeting

Tuesday, September 25, 2018
1:00 pm – 2:00 pm
ADOT Engineering Building
205 S. 17th Avenue
Room 115, Gecko Conference Room
Phoenix, AZ 85007

Attendees

Asad Karim, Arizona Department of Transportation
Steve O’Brien, Arizona Department of Transportation, Sr. Division Administrator, Project Management Group
Jerry James, Arizona Department of Transportation, Central District
Raul Amavisca, Arizona Department of Transportation, Central District
Muhammad Saleque, Arizona Department of Transportation, Traffic Design
James J. Lemmon, Arizona Department of Transportation, Geotechnical
Heidi Yaqub, Arizona Department of Transportation, Major Project Development
Yudi Lei, Arizona Department of Transportation, Transportation Systems Management and Operations
Michelle Ogburn, Arizona Department of Transportation, Environmental Planning Group
Jerry McCoy, Arizona Department of Transportation, Communications
Brent Crowther, Kimley-Horn
Michael Grandy, Kimley-Horn
Allen Hathcock, Kimley-Horn
Chris Joannes, Kimley-Horn
Taylor Dunkle, Kimley-Horn
Yung Koprowski, Y2K Engineering
Robert Cummings, Saguaro Geoservices

Telephone:
Nate Reisner, Arizona Department of Transportation, Northcentral District
Joan Lovell, Arizona Department of Transportation, Transportation Systems Management and Operations
Scott Beck, Arizona Department of Transportation, Transportation Systems Management and Operations
Lydia Warnick, Arizona Department of Transportation, Transportation Technology Group

Meeting Notes

Introduction

Technical Advisory Committee (TAC) members and project team members provided brief introductions and detailed which organization they work for.

B. Crowther began the meeting by discussing the study purpose for the SR 87 Corridor Development Study (CDS).

He stated that the CDS will advance recommendations made in the SR 87 / SR 260 / SR 377 Corridor Profile Study (CPS) completed in March 2017. M. Grandy was the Kimley-Horn project manager for the CPS. While the CPS study area was 200 miles of corridor, the CDS will instead focus on approximately 60 miles of roadway between MP 191 and MP 250. The CDS is comprised of four study tasks as follows: Project



Management, Initial Scoping Report and Public Meeting Summary Reports, Traffic Analysis, and Feasibility Report.

Group Discussion of Project Focus Areas

B. Crowther led the group through a PowerPoint (attached) and subsequent discussion of initial issues identified for each segment. The corridor is separated into 5 segments.

Segment 1 – Bush Highway Area (MP 191 – MP 213):

- J. Lovell mentioned existing plans for a southbound DMS sign on a butterfly structure at the same location as existing northbound DMS (between MP 191 and 192), but mentioned that the existing northbound structure could be replaced.
- B. Crowther suggested that the concept is for a DMS to be relocated in advance of Bush Highway.
- M. Grandy requested statewide masterplan for DMS; J. Lovell will look for the document.

Segment 2 – Sunflower Area (MP 213 – MP 229):

- R. Cummings stated that he was familiar with some of the cuts along this section. He suggested that the limits of the rock fall areas be expanded to address issues along the segment. Portions of the section between MP 216 and MP 218 were highlighted as an additional rockfall area. NB 214-214.6, MP 216.2-216.3 may need to be added for consideration. He stated that the old northbound alignment has narrow shoulders and rock fall issues.
- R. Cummings continued by suggesting the frequent occurrence of landslides in the area as a potential study issue to be addressed. He mentioned instances of pavement settling by as much as a foot in certain areas.
- J. Lemmon stated that the landslides are a known issue caused by varying rock types and poor soil along the corridor. MP 226.2 was identified as an area of concern due to gravel falling onto the roadway.
- R. Amavisca mentioned that a limited amount of funding for mitigating rock fall issues was to be allocated to the various districts.
- N. Reisner mentioned that efforts have been made between MP 222 and MP 226 to temporarily address rock fall and landslide concerns, but that more permanent intervention is necessary.
- J. Lemmon confirmed that ADOT took material from the Slate Creek area to flatten the slope at MP 224.
- R. Cummings suggested MP 224- MP 226 as a potential study focus area. There are traditional treatments available except for the landslide and this is a monster challenge. How much money will be considered for investment for this known problem?
- M. Grandy – if we focus too much on this aspect, we’ll lose sight of the rest of the corridor. Bob and JL agrees. Discussion about whether to exclude this area from project.
- R. Amavisca agreed that the land slide and rock fall issues should be documented fully so that everyone is aware of the issues in this area, but the landslide mitigation will be too complex to mitigate as part of this project.
- N. Reisner – North Central District completed a project referred to as a temporary solution. Slide area is right over Slade Creek where pipe is moving.
- J. Lemmon – project is fix for Slade Creek embankment and slope was flattened.
- R. Amavisca mention that SR 188 has been used as a detour in the past.
- J. Lovell commented that the ADOT Permits Department now limits DMS to side mounts / butterfly only; overheard DMS is no longer allowed so as not to impede the roadway for over-size loads.

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- R. Cummings stated the need to look at potential crossover locations as they are currently very limited. May be of concern for DPS as well and opportunities to add more.
- R. Cummings continued by mentioning that fixing shoulder widths in the Slate Creek area is very difficult due to existing site constraints.

Segment 3 – Safety Focus Area (MP 229 – MP 234):

- J. Lemmon – MP extents for segments is described as 229 and 230. Need to clarify extents so there is not a missing one mile.
- B. Crowther asked N. Reisner if he can locate the RSA report for Segment 3.
- N. Reisner stated he is unaware of an RSA in that area, only of an RSA at SR 188.
- R. Cummings stated that a portion of fill in the segment may be in old filler. He asked J. Lemmon if he could locate information on cuts in native or fill materials. J. Lemmon responded he will investigate.

Segment 4 – Rye Area (MP 234 – MP 241):

- B. Crowther commented on the previously identified issue of evaluating the need for a southbound acceleration lane at the SR 188 intersection and expanded that to include the need to extend the northbound acceleration lane.

Segment 5 – Ox Bow Estates/Mazatzal Area (MP 241 – MP 250):

- R. Cummings emphasized the need to address the southbound horizontal curves along the segment, referring to the previously identified issue of reviewing the horizontal curves and superelevation for this segment.
- R. Cummings - Transverse rumble strips and advisory truck roll over sign are suggested.
- A. Hathcock – if shoulders are widened then additional rockfall mitigation may be needed or the slopes cut further back.

B. Crowther transitioned the discussion to additional key stakeholders for the project. R. Amavisca stated that he invited the local maintenance supervisor to the October meeting. Additional stakeholders suggested by the team:

- Maricopa County
- Gila County
- Town of Fountain Hills
- Town of Payson
- Bureau of Land Management
- Salt River Project
- Tonto Apache Nation
- Unincorporated communities along the corridor
- Commercial recreation companies with knowledge of the corridor

J. Lemmon suggested that Arizona Game and Fish Department may have an interest due to the number of wildlife strikes in the study area. He stated there may be the potential for wildlife crossings.

R. Cummings noted that there are commercial four-wheeling companies in the area that may have insight of issues along the corridor.

R. Amavisca mentioned that there is a towing company in Sunflower that may have insight on turnaround locations.

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J. McCoy stated that further discussion can be made into the best way to engage private companies and small communities along the route. Gila County may have contacts.

J. Lemmon suggested that casinos at either end of the corridor would be good places to hold public meetings. M. Ogburn suggested that the Gila County Fair in Payson would be a good location to engage the public as well.

J. McCoy stated that a combination of online and in-person engagement opportunities may be necessary.

M. Ogburn stated that she was available to assist with environmental work for the project; she emphasized the necessity of including environmental impacts in the study. Cultural resources and 4F properties would be identified in the Environmental Overview.

R. Cummings stated that past projects in the area have had to pipe water across great distances to avoid impacts to endangered species.

S. Beck noted that there are several recommendations for projects utilizing solar powered speed feedback signs. They have implemented these on I-18 and results have shown very limited impact (about a 1% benefit) compared to the cost of installation and maintenance. He mentioned that with no enforcement there was no impact, and limited shoulder widths along the corridor limit enforcement opportunities as there isn't room for DPS to pull people over.

B. Crowther ended the meeting by discussing the remainder of the project schedule.

The meeting was completed around 2:05 pm.

Next Steps

B. Crowther reviewed next steps. These include initiating contact with the additional stakeholders identified in the meeting and finalizing the Project Management Plan (PMP).

It is anticipated that stakeholder interviews and Public Meeting No. 1 will take place during October and November. TAC Meeting No. 2 will be held in December of 2018 or early 2019.

Attachments

- PowerPoint presentation
- Sign-in sheet

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SR 87 Corridor Development Study Technical Advisory Committee Meeting No. 2

Wednesday, December 12, 2018
1:00 pm – 2:00 pm
ADOT Engineering Building
205 S. 17th Avenue
Room 117, Arizona Conference Room
Phoenix, AZ 85007

Attendees

Asad Karim, *Arizona Department of Transportation*
Michelle Ogburn, *Arizona Department of Transportation, Environmental Planning Group*
Lydia Warnick, *Arizona Department of Transportation, Transportation Technology Group*
John Wennes, *Arizona Department of Transportation, Multimodal Planning*
Jerry Turner, *Arizona Department of Transportation, Central Distr. Highway Operations Technician Supervisor*
Eunice Chan, *Federal Highway Administration, Project Delivery – Central*
Bob Hazlett, *Maricopa Association of Governments*
Brent Crowther, *Kimley-Horn*
Allen Hathcock, *Kimley-Horn*
Chris Joannes, *Kimley-Horn*
Yung Koprowski, *Y2K Engineering*
Robert Cummings, *Saguaro Geoservices*

Telephone:

Nate Reisner, *Arizona Department of Transportation, Northcentral District*
Raul Amavisca, *Arizona Department of Transportation, Central District*
Charla Glendening, *Arizona Department of Transportation, Multimodal Planning*
Michael Grandy, *Kimley-Horn*

Meeting Notes

Technical Advisory Committee (TAC) members and project team members provided brief introductions and detailed which organization they work for.

B. Crowther led the group through a PowerPoint (attached) and subsequent discussion about progress on the project to date, including the completion of the Initial Scoping Report and stakeholder outreach efforts. Additionally, R. Cummings led the group through a series of photographs documenting geotechnical and rock-fall issues he had identified along the corridor.

Y. Koprowski then led the group through the initial safety analysis she had performed. Discussion regarding the safety analysis included:

- R. Cummings asked if the southbound segment between MP 213 and 214 should be evaluated as a crash hot spot because it appears to have a concentration of crashes in the maps.
 - Y. Koprowski responded that she would evaluate adding that area as an additional hot spot.
- B. Hazlett asked if the team could overlay the crash hot spots with the geotechnical issues to see if there is a correlation between the two.

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- Y. Koprowski responded that there were not many crashes in the data that indicated that debris in the roadway was the cause, but that further analysis could be performed to see if there was indeed a correlation.
- J. Turner added that every time there is an appreciable amount of rain his team has to clear debris from the roadway in this segment.
- J. Turner stated that the southbound segment between MP 213 and 214 has a concentration of truck crashes and that he believes the addition of curve chevron signage would help address the safety issue.
 - Y. Koprowski asked if J. Turner could provide any data on the frequency of guardrail strikes in this segment.
 - J. Turner responded that he could provide that information to the team.
- B. Hazlett asked if in most of the motorcycle crashes the rider was wearing a helmet.
 - Y. Koprowski responded that the majority were, but that there were some sever crashes involving motorcycles where the rider was not wearing a helmet.

B. Crowther then took the TAC members through the listing of initial projects compiled by the team to address the identified deficiencies and safety issues. The following is discussion regarding the initial projects:

- A. Hathcock asked if wildlife-involved crashes were being evaluated as part of the safety analysis.
 - Y. Koprowski responded that they were included in the crash data from ADOT.
 - M. Ogburn asked if the team could pull crash data from the elk detection system on SR 260 east of Star Valley to see if it has been effective in reducing wildlife crashes.
 - Y. Koprowski responded that the team would look into that location.
- B. Crowther asked the group if there were additional types of projects that should be evaluated or avoided.
 - J. Turner stated that the deceleration/turn lanes along the corridor work well, but that additional acceleration lanes would be beneficial to reduce crashes.
- B. Crowther asked if there have been any realignment studies performed in the vicinity of Corvair Curve (southbound MP 246) to address the safety issues at that location.
 - N. Reisner stated that he is not aware of any studies, but that it would have been completed under the old Prescott District of ADOT. He added that there was a project assessment completed to evaluate adding concrete barriers to the outside of the curve, but that it never moved past the evaluation phase.
 - N. Reisner asked if anyone has performed a ball-bank test to determine if the appropriate superelevation is present through the curve.
 - B. Crowther stated that he was not aware of any such studies, but that it could be a test that the team performs as part of this study.
- B. Crowther asked if ADOT was able to pull 85th percentile speed statistics from the speed feedback signs on I-17 to determine their effectiveness.
 - ADOT staff was not sure if those statistics could be obtained or not.
- B. Hazlett suggested that locations with concentrations of crashes could be designated as “Safety Corridors”.
 - M. Ogburn added that safety corridors have doubled fines for infractions and that there is a zero-tolerance policy for speeding.



- B. Hazlett stated that adequate locations for enforcement would be needed to make this strategy effective.

B. Crowther ended the meeting by discussing the remainder of the project schedule. He asked the group to provide any additional comments on the Initial Scoping Report by January 4th, 2019.

The meeting was concluded around 2:00 pm.

Next Steps

- Produce the Final Scoping Report
- Complete the Draft Traffic Analysis Report
- The next TAC meeting is estimated to occur in mid-February, 2019

Attachments

- PowerPoint presentation



SR 87 Corridor Development Study Technical Advisory Committee Meeting No. 3

Wednesday, February 13, 2019
1:00 pm – 2:00 pm
ADOT Engineering Building
205 S. 17th Avenue
Room 117, Arizona Conference Room
Phoenix, AZ 85007

Attendees

Asad Karim, *Arizona Department of Transportation*
Michelle Ogburn, *Arizona Department of Transportation, Environmental Planning Group*
Jose Rojas, *Arizona Department of Transportation, Central District*
Marcos Espinosa, *Arizona Department of Transportation, Central District*
John Wennes, *Arizona Department of Transportation, Multimodal Planning*
Ali Zareh, *Arizona Department of Transportation, Pavement Design*
Brent Crowther, *Kimley-Horn*
Chris Joannes, *Kimley-Horn*
Yung Koprowski, *Y2K Engineering*
Robert Cummings, *Saguaro Geoservices*

Participating by Teleconference:

Lydia Warnick, *Arizona Department of Transportation, Transportation Technology Group*
Nate Reisner, *Arizona Department of Transportation, Northcentral District*
Steve Orosz, *Arizona Department of Transportation, TSMO - Northern Region Traffic*
Michael Grandy, *Kimley-Horn*
Jennifer Simpkins, *Kimley-Horn*

Meeting Notes

B. Crowther led the group through a PowerPoint (attached) and subsequent discussion about progress on the project to date, including the completion of the Traffic Analysis, Environmental Overview, and Initial Project Packaging document. The traffic analysis portion of the report was discussed first; topics included:

- M. Ogburn asked why the traffic counts collected by Field Data Services of Arizona (FDS) were conducted on a weekday in November.
 - B. Crowther responded that traffic counts are typically collected mid-week (Tuesdays, Wednesdays, and Thursdays). While the team would have preferred to collect counts during the summer, the project schedule dictated a count collection period late in the year.
- B. Cummings asked why the counts at MP 214 were lower than surrounding counts.
 - B. Crowther and C. Joannes responded that there is likely a seasonal influence on the counts collected in November. The counts from ADOT are annualized to account for typical seasonal fluctuations and a similar methodology could be used to annualize the counts collected by FDS.
- S. Orosz asked what growth rate was used to forecast future traffic volume.

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- C. Joannes replied that the forecasts were developed based on trendlines from annual counts performed between 1990 and 2018, not a specific growth rate that was applied to the latest count data. However, the annual growth rate could be back-calculated and added to the report.
- Y. Koprowski suggested that the forecasted levels of service be based on weekend volumes rather than weekday volumes as there are higher volumes on weekends than weekdays.
 - B. Crowther responded that an analysis for forecasted weekend volumes can be added to the report.
- S. Orosz asked if a weekend factor could be applied to the counts.
 - B. Crowther responded that data from the continuous count station on the corridor could be used to establish a weekend factor that could be applied to the counts.
- L. Warnick asked if a directional split for Fridays and Sundays could be added to the report.
 - C. Joannes responded that the team had already calculated the directional split and that it could be easily added into the report.

J. Simpkins led the group through the Environmental Overview portion of the document; topics discussed included:

- J. Wennes stated that he believed the environmental portion of the document was very good, but he had some additional comments on future steps of the process:
 - Make sure to double-check vegetation quantities for areas where it comes right up to the edge of the roadway, because that has been an oversight on recent ADOT projects where the environmental impacts end up larger than originally anticipated.
 - ADOT is anticipated to be assuming NEPA approval responsibility for FHWA to streamline the environmental process for transportation projects. There is currently a memorandum of understanding available for public comment regarding this proposal.
 - The Army Corps of Engineers may also give up Section 404 approval responsibility to the Arizona Department of Environmental Quality, which is also intended to streamline the environmental approval process.

C. Joannes led the group through the initial project packaging portion of the document; topics discussed included:

- M. Ogburn asked if the crash analysis period was long enough to capture crash trends along the corridor.
 - Y. Koprowski stated that the five-year analysis period is longer than most crash analyses, so it is highly likely that any existing crash trends would be visible. However, she stated that she would like to back-check the crash concentrations to ensure that all crashes are being considered and not just fatal and serious injury crashes.
- M. Ogburn stated that she would like to see the projects grouped geographically, regardless of cost, rather than by intervention level as proposed by the project team.
 - C. Joannes stated that the projects can be grouped that way, but it may be difficult to define project package limits due to the high number of projects throughout the length of the corridor.
- S. Orosz stated to be careful about removing treatments at specific locations, using intersection warning signage as an example, to make sure that there are consistent treatments throughout the corridor.

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- B. Crowther added that there may be some projects that can be treated programmatically across the corridor, such as signage and ITS improvements.

B. Crowther ended the meeting by discussing the remainder of the project schedule. He asked the group to provide any additional comments on the Traffic Analysis, Environmental Overview, and Initial Project Packaging document by February 27th, 2019. He stated that an additional TAC meeting may be added in March to review the changes to the document.

The meeting was concluded around 2:00 pm.

Next Steps

- Update the Traffic Analysis, Environmental Overview, and Initial Project Packaging document based on feedback from the TAC.
- Begin the feasibility analysis of the project packages.
- The next TAC meeting is estimated to occur in mid-March 2019

Attachments

- PowerPoint presentation

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SR 87 Corridor Development Study
Technical Advisory Committee Meeting No. 4

Thursday, May 2, 2019
1:00 pm – 2:00 pm
ADOT Engineering Building
205 S. 17th Avenue
Room 117, Arizona Conference Room
Phoenix, AZ 85007

Attendees

Asad Karim, Arizona Department of Transportation
Jose Rojas, Arizona Department of Transportation, Central District
Jerry James, Arizona Department of Transportation, Central District
Raul Amavisca, Arizona Department of Transportation, Central District
John Wennes, Arizona Department of Transportation, Multimodal Planning
Lydia Warnick, Arizona Department of Transportation, Transportation Technology Group
Don Sneed, Arizona Department of Transportation, Tribal Coordination
James Lemmon, Arizona Department of Transportation, Geotechnical
Brent Crowther, Kimley-Horn
Michael Grandy, Kimley-Horn
Allen Hathcock, Kimley-Horn
Taylor Dunkle, Kimley-Horn
Robert Cummings, Saguro Geoservices

Participating by Teleconference:
Jason Bottjen, Arizona Department of Transportation, Multimodal Planning
Jennifer Simpkins, Kimley-Horn

Meeting Notes

B. Crowther led the group through a PowerPoint (attached) and subsequent discussion about progress on the project to date, including updates from the last TAC meeting, how various projects were packaged together, and the P2P scoring methodology that will be used to rank projects. Discussion topics included:

- B. Crowther summarized the field review of potential projects that took place on March 5, 2019. During the field review projects were evaluated for overall feasibility and potential impacts to cost estimates were determined.
- The geotechnical projects are still under review at the time of this meeting. The rockfall hazard rating system was recently acquired and R. Cummings is in the process rating the geotechnical-focused projects, determining appropriate countermeasures, and establishing planning-level costs.
- B. Crowther summarized how identified projects were grouped together. Seven focus areas, split by mile posts (MP), were identified based on geographic clustering of projects which were subsequently assembled to form larger, grouped projects. B. Crowther then went through each of the seven grouped projects and the following items were discussed:
 - Project 1: NB MP 212-217
 - The main component of this project is the northbound climbing lane.

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- L. Warnick commented that ADOT Transportation Technology Group wants fiber/conduit included in all project packages.
- B. Crowther mentioned that speed feedback signs were still included within the projects and inquired on opinion of the ADOT Transportation Technology Group wants on those as potential projects.
 - L. Warnick responded that Traffic Operations and Safety groups are better equipped to discuss the inclusion of speed feedback signs within the projects.
- B. Cummings asked if the climbing lane cost is inclusive of addressing rockfall issues due to widening the roadway to accommodate the climbing lane. Rockfall mitigation would be grouped in with the climbing lane if a new slope needs to be cut.
 - B. Crowther suggested leaving rockfall mitigation as a separate component, in case that piece is chosen to move forward, and the climbing lane is not.
 - A. Hathcock suggested coordination moving forward, identifying a correct cost for rockfall mitigation and stating that the rockfall would be mitigated with the climbing lane component.
- Project 2: NB MP 218.5-223
 - The major components of this project is a climbing lane and widening. The climbing lane component includes the widening of the two bridges, Whiskey Springs bridge and Kitty Joe Creek bridge.
 - It was mentioned that Whiskey Springs bridge needs foundation improvements regardless of widening.
- Project 3: MP 224.5-229
 - The major component of this project is shoulder widening.
 - J. Lemmon noticed a typo in the project 3 exhibit. MP was incorrectly listed as 214.5-229, the correct MP is 224.5-229. B. Crowther responded that the typo would be corrected.
 - A. Hathcock commented that often there are barriers are on the inside of this segment, so cost is inclusive of widening the outside and shifting the striping as part of widening the inside shoulders.
 - B. Cummings asked if slope modification was included in the pricing of widening to the outside.
 - A. Hathcock responded that the widening estimate was determined by the site visit, he will go back and revisit the opinion of probable cost to confirm.
- Project 4: MP 239-241
 - The major components of this project are the left and right turn lanes at Matlock Gas and S. Rye Crossover.
- Project 5: MP 241-246
 - The main components of this project are addressing the superelevation on the southbound lanes and a northbound climbing lane.
- Project 6: MP 246-251
 - The major component of this project is widening the southbound shoulders.
 - A question was asked if the estimated costs including right-of-way acquisition.

- B. Crowther and A. Hathcock responded that they were unaware of any right-of-way concerns in this area.
- J. Wennes commented that a tree removal project is scheduled for FY 2022 within the limits of this project. This project may coincide with the wildlife fencing, warning signage, and crossing included as part of this project.
- Project 7: Corvair Curve
 - The purpose the realignment options identified for Corvair Curve was to address the crashes in the area.
 - A. Hathcock highlighted the two main alternatives identified. The first alternative is straightening the southbound alignment between existing MP 244 and 248. The second alternative is to widen the northbound alignment so both north and southbound follow the same alignment.
 - A. Hathcock described limitations of the alternative to straighten the alignment between MP 244 and 248. With the topography of the proposed alignment, and the fact that the second alternative would tie in at max 6% grade at both ends, the alignment would require tunneling, which was deemed infeasible.
 - A. Hathcock then discussed the other alternative to realign the southbound lanes to parallel the northbound lanes. This would require 325,000 CY of borrow and would cost \$30-40 million to construct.
 - B. Cummings asked if widening would happen on one side or from the center.
 - A. Hathcock responded that widening will occur primarily to the west.
 - B. Cummings raised concerns from the type of cut material in this area, stating the closer to Payson the more rock there is.
 - It was brought up that project 5 includes a northbound climbing lane that is separate from the cost of this project.
 - B. Cummings asked who owns the land adjacent to this project.
 - B. Crowther responded that USFS owns the land in this area.
 - M. Grandy stated that project 5 includes improvements to the Corvair curve, which may not be necessary with realignment.
 - A. Hathcock stated that the profile exhibit shown includes guardrail, which was assumed cheaper than more cut for a wider median.
 - B. Crowther asked if the project team wanted to move forward with the option 2 (widening the northbound alignment) and agree that option 1 (straightening the southbound alignment) is infeasible.
 - M. Grandy suggested making the Corvair curve improvements from project 5 as a second alternative, eliminating the current option 2.
 - A. Hathcock suggests making a statement in the final report as to why option 2 was not feasible.
 - B. Crowther inquired about past effectiveness of improvements in this area.
 - R. Amavisca requested that proposed alternatives be compared with signage and rumble strips.
 - R. Amavisca suggested concrete barrier to improve the suggested alternative.

- A. Hathcock suggested looking at the types of crashes to determine the need for the various proposed alignments.
- It was mentioned that snow plows operate in the area, which may be why there is no concrete barrier.
- B. Crowther transitioned the conversation to discussing the P2P scoring methodology; the current method being used to score projects statewide. He stated that the team is considering applying the technical score and safety score portion of the P2P scoring process to prioritize SR 87 projects. He highlighted that the P2P technical scoring groups methodology has been obtained for bridge and geohazard groups. Safety, rest area, pavement, and environmental methodology is still needed.
 - The group suggested the following contacts to obtain the methodology:
 - Rest area – Robert Wheeler
 - Pavement – Yongki Li and Mafiz Mian
 - Safety – Kerry Wilcoxon
 - J. Lemmon stated that scoring 100 projects is a lot of work and focus should be given to the 7 large projects identified.
 - L. Warnick questioned if priorities were established in the Corridor Profile Study.
 - B. Crowther clarified that Kimley-Horn would apply the P2P methodology and is seeking methodology from the groups, and not for them to score the projects in response to questions about ADOT's availability to score the SR 87 projects.
 - R. Cummings wants to clarify if scoring is prioritizing projects within the project or statewide.
 - B. Crowther states that P2P scoring will accomplish both.
 - A. Karim suggested listing projects by area and scoring larger area projects.
 - B. Crowther stated this would be scoring the 7 larger projects identified.
 - R. Amavisca states that the methodology should be what Charla Glendening requires for ranking of projects, whether this be the Corridor Profile Study ranking or P2P scoring.
- A. Karim to coordinate a meeting to discuss prioritization methodology with D. Gabiou and C. Glendening.

The meeting was concluded around 2:00 pm.

Next Steps

- Meeting to finalize scoring methodology.
- Meeting with Northcentral District.
- Meeting with Central District.
- Refine and rank projects using scoring methodology identified.

Attachments

- PowerPoint presentation

Kimley»Horn

SR 87 Corridor Development Study Technical Advisory Committee Meeting No. 5

Tuesday, August 27, 2019
1:00 pm – 2:00 pm
ADOT Engineering Building
205 S. 17th Avenue
Room 117, Arizona Conference Room
Phoenix, AZ 85007

Attendees

Asad Karim, *Arizona Department of Transportation*
Jose Rojas, *Arizona Department of Transportation, Central District*
John Wennes, *Arizona Department of Transportation, Multimodal Planning*
James Lemmon, *Arizona Department of Transportation, Geotechnical*
Eunice Chan, *Federal Highway Administration*
Brent Crowther, *Kimley-Horn*
Michael Grandy, *Kimley-Horn*
Chris Joannes, *Kimley-Horn*
Robert Cummings, *Saguaro GeoServices*
Yung Koprowski, *Y2K Engineering*

Participating by Teleconference:
Jennifer Simpkins, *Kimley-Horn*

Meeting Notes

B. Crowther led the group through a PowerPoint (attached) and subsequent discussion about progress on the project to date, including updates from the last TAC meeting, project packaging, and results from the project prioritization methodologies. Discussion topics included:

- J. Rojas asked if conduit costs were included in the project cost estimates.
 - B. Crowther and C. Joannes responded that conduit costs were not included with all projects because it was deemed infeasible to construct conduit with all projects.
- J. Lemmon stated that he had performed a relatively in-depth review of the rock-fall mitigation projects and that he generally agreed with the results and project packaging. He also stated that he noticed one of the project packages includes a wildlife overpass, but that ADOT has had limited success in identifying funding for such projects.
 - J. Wennes added that ADOT MPD would be coming out with an RFP in the near future which would address wildlife crashes statewide and identify funding opportunities for wildlife crossing enhancements. He stated that America's Transportation Infrastructure Act (ATIA) has identified approximately \$250M in wildlife funding.
- J. Lemmon stated that the slopes around MP 226.1 has a high potential for debris to roll into the roadway. He also stated that it may be difficult to fund the larger rock-fall project packages at once because some locations are much more critical than others. He recommended an approach of securing funding for the high-priority rock-fall locations individually.
- R. Cummings noticed that Project #52 is already included within the milepost limits of Project #51 and should be removed.

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- C. Joannes stated that the justification for removing Project #52 would be amended to state that.
- R. Cummings stated that the rankings are inconsistent between the Project Prioritization and Implementation sections.
 - C. Joannes stated that the order of the projects in the table in the Implementation section would be corrected.
- Y. Koprowski stated that MAG is implementing additional funding for ITS safety improvements, which could be added to the Implementation chapter of the report as an additional funding source for the Central District ITS/Signage Improvement project package.
- While discussing the proposed public engagement plan, Y. Koprowski suggested Nextdoor as another potential media outlet through which to promote the public survey.
- While discussing the preliminary roadway plans, R. Cummings asked if there was a way to include cut lines on the slopes to evaluate the level of earthwork required for roadway projects that will impact rock-fall mitigation locations.
 - B. Crowther responded that the budget and time allowed on this project could only support plan-view drawings; no survey has been completed so it is not possible to determine cut lines with any sort of accuracy.
- R. Cummings suggested reaching out to the National Parks Service to inquire about any rock-fall mitigation strategies that would not be acceptable to the Tonto National Forest for aesthetic reasons.
 - C. Joannes stated that he would reach out to NPS.
- A. Karim asked if the project packages are ready to be submitted into the P2P process during the next round of scoring.
 - B. Crowther stated that pre-scoping forms have been completed for all 12 packaged projects.

The meeting was concluded around 2:00 pm.

Next Steps

- Finalize the Feasibility Report based on the feedback from the TAC meeting and additional comments from the TAC upon further review of the draft report.

Attachments

- PowerPoint presentation