



# TRANSPORTATION ADVISORY COMMITTEE AGENDA

|                    |                                                                                                                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Date:</b>       | September 17, 2020                                                                                                                                                                                                |
| <b>Time:</b>       | 10 a.m.                                                                                                                                                                                                           |
| <b>Location:</b>   | <b>Zoom Meeting</b>                                                                                                                                                                                               |
| <b>Call-in No.</b> | <a href="https://us02web.zoom.us/j/84289040104?pwd=TFp6YTZEbjRRY3o2ZjgzVmhXaW45Zz09">https://us02web.zoom.us/j/84289040104?pwd=TFp6YTZEbjRRY3o2ZjgzVmhXaW45Zz09</a><br>Meeting ID: 842 8904 0104 Password: 672628 |

Individuals wishing to participate in the meeting telephonically may do so by contacting Randy Heiss at (520) 432-5301 Extension 202. Contact must be made at least 48 hours before the meeting in order to obtain the call-in information. Please note that the option to participate telephonically may not be available unless requested as instructed above.

Si necesita acomodaciones especiales o un intérprete para esta conferencia, deben ponerse en contacto con Randy Heiss al número (520) 432-5301, Extensión 202, por lo menos setenta y dos (72) horas antes de la conferencia.

|                                                    |                                                                                                                                                                                                          |                                                                                                                                                                                                                        |                                                                                                                                                     |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Voting TAC Members</b>                          | Michael Bryce– Graham County (Chair)<br>Lance Henrie – Safford<br>Mark Hoffman – ADOT MPD<br>Michelle Johnson – Benson<br>Jesus Haro – Bisbee<br>Rudy Perez – Clifton<br>Jackie Watkins – Cochise County | Dave Swietanski – Douglas<br>John Basteen – Duncan<br>David Manuz–Greenlee Co.<br>Juan Guerra – Nogales<br>Sean Lewis – Pima<br>Charles Russell – San Carlos Apache Tribe (SCAT)<br>Leonard Fontes – Santa Cruz County | Tom Palmer - Thatcher (Vice Chair)<br>William Teeters – Willcox<br>Regina Duran - Tombstone<br>Ronald Robinson –Patagonia<br>Reed Larson - Greenlee |
| <b>Guests, Staff, and Other Expected Attendees</b> | Randy Heiss – SEAGO<br>Jennifer Henderson – ADOT<br>Mark Henige - ADOT<br>Karen Lamberton – SVMPO                                                                                                        |                                                                                                                                                                                                                        |                                                                                                                                                     |

**Shaded areas indicate items for possible action.**

| ITEM | SUBJECT                                                                                                                                                                                                                                                                                              | PRESENTER                       | PAGE  |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------|
| 1.   | Call to Order and Introductions                                                                                                                                                                                                                                                                      | Michael                         | N/A   |
| 2.   | Call to the Public                                                                                                                                                                                                                                                                                   | Michael                         | N/A   |
| 4.   | Approval of Minutes of July 16, 2020                                                                                                                                                                                                                                                                 | Michael                         | 3-5   |
| 5.   | STBG Ledger Report                                                                                                                                                                                                                                                                                   | Chris                           | 6     |
| 6.   | Project Reviews                                                                                                                                                                                                                                                                                      | Chris                           | 7     |
| 7.   | TIP Report <ul style="list-style-type: none"> <li>• Possible TIP Amendment(s)</li> <li>• Possible Administrative Amendments</li> </ul>                                                                                                                                                               | Chris                           | 8-12  |
| 8.   | SEAGO STBG Project Programming Procedures Review and Revision                                                                                                                                                                                                                                        | Chris                           | 13-15 |
| 9.   | ADOT LPA Section Updates                                                                                                                                                                                                                                                                             | Jennifer Mark                   | 16-69 |
| 10.  | District Engineers' Report <ul style="list-style-type: none"> <li>• Status of State Highway Projects</li> <li>• Quarterly Project Report</li> </ul>                                                                                                                                                  | TBD                             | N/A   |
| 11.  | Regional Local Program Reports <ul style="list-style-type: none"> <li>• Status of Local Projects <ul style="list-style-type: none"> <li>○ STP Projects</li> <li>○ Update on Enhancement Projects</li> <li>○ Update on HSIP Projects</li> <li>○ Update on all Planning Studies</li> </ul> </li> </ul> | Towns, Cities, Counties, & ADOT | N/A   |
| 12.  | Items for General Discussion                                                                                                                                                                                                                                                                         | All                             | N/A   |

|     |                             |         |     |
|-----|-----------------------------|---------|-----|
| 12. | Next Meeting Date: 11/19/20 | Michael | N/A |
| 13. | <b>Adjourn</b>              | Michael | N/A |

**Direction may be given to SEAGO staff on any item on the agenda**



# SEAGO TRANSPORTATION ADVISORY COMMITTEE

## DRAFT MEETING MINUTES FOR JULY 16, 2020

|                                           |                                                                                                                                                 |                                                                                                            |  |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--|
| <b>Date:</b>                              | July 16, 2020                                                                                                                                   |                                                                                                            |  |
| <b>Time:</b>                              | 10 a.m.                                                                                                                                         |                                                                                                            |  |
| <b>Location:</b>                          | Zoom Conference - SEAGO                                                                                                                         |                                                                                                            |  |
| <b>Voting TAC Members Present</b>         | Michael Bryce, Graham County (Chair)<br>Michelle Johnson, Benson<br>Reed Larson, Greenlee County<br>Mark Hoffman, ADOT<br>Tom Palmer – Thatcher | Valarie Fuller - Cochise County<br>Lance Henrie, Safford<br>Jesus Haro, Bisbee<br>Dave Swietanski, Douglas |  |
| <b>Guests, Staff, and Other Attendees</b> | Chris Vertrees, SEAGO<br>Mark Henige, ADOT<br>Jennifer Henderson, ADOT<br>Sage Donaldson, ADOT<br>James Meyer, ADOT                             | Adam Langford, Works Consulting                                                                            |  |

### 1. Call to Order and Introductions

Chair Michael Bryce called the meeting to order at 10:01 a.m. Chris Vertrees conducted a roll call of members and guests that were participating on Zoom and on the phone.

### 2. Call to the Public

Chairman Bryce made a Call to the Public and no one spoke.

### 3. ADOT Presentation - New AZGeo Change Request Tool

Sage Donaldson, James Meyer, and Adam Langford provided the TAC a presentation involving Federal Functional Classification Rebalancing project and the new functional classification **change request tool**. They also provided information on the validation of road ownership, Certified Public Mileage (CPM), an introduction to the statewide traffic counting program.

### 4. Approval of May 21, 2020 Meeting Minutes

Chairman Bryce asked the TAC to review the minutes for needed corrections. Michael Bryce asked for a motion to approve the May 21, 2020 Meeting Minutes.

**MOTION:** Mark Hoffman moved to approve

**SECOND:** Jesus Haro

**ACTION:** APPROVED UNANIMOUSLY

### 5. STBG Ledger Report

Chris Vertrees referred the TAC to the Ledger Report located on page 7 of their packet. Chris noted that SEAGO STBG is fully committed through FFY2024. Safford will be responsible for any additional costs that exceed the \$3,653,581 programmed. If there are no significant changes in population data from the 2020 Census we should have \$433,199 in apportionments and \$380,421 in OA available for programming/loan in FY25.

## 6. Project Reviews

Chris advised the TAC that at our last meeting, we had a limited discussion involving our two FY21 HSIP projects and our FY25 (Placeholder) Chino Road Extension Phase 2 project. Chris reviewed the two HSIP projects:

**Cochise County – CCH21-01 (Charleston, Double Adobe, Barataria Roads – Edge & Center Rumble Strips):** The County has expressed concern that the chip seal surface and lack of shoulders impacts the viability of the project. The project is currently programmed for design in FY21 in the amount of \$264,000. It is programmed for construction in FY22 in the amount of \$383,940.

**Graham County – GGH 21-01 (Golf Course Road, Cottonwood Wash Road - Shoulders and Rumble Strips):** Graham County advised that US-70 has had a significant increase in crashes. Graham County indicated a desire to pursue reallocating this funding to address the concerns involving US-70. The project is currently programmed for design in FY21 in the amount of \$225,454. It is programmed for construction in FY22 in the amount of \$2,111,866.

**The sponsoring agencies requested additional time to review the projects and to make determinations on whether they would proceed with the projects.**

**City of Douglas – DGS 17-01 (Chino Road Extension Phase 2)** - This project was pushed back several times due to inaction involving design updates to cost estimates and required clearances. The project is currently being held as a placeholder in FY25 in the amount of \$80,000 for design and \$3,000,000 in construction.

**City of Douglas Deputy Director Public Works Dave Swietanski indicated that Douglas was seeing a change in leadership with a new Mayor and City Manager. Dave will seek direction from the new leadership and advise Chris of the direction the City will pursue concerning the project.**

Chris advised that we would review the status of these projects at our September meeting.

## 7. TIP Report

Chris advised the TAC that no TIP amendment requests were received for this meeting.

He also advised that the SEAGO 2021-2025 TIP completed its 45-day Public Comment period on May 18, 2020. SEAGO received no public comments. The 2021 TIP has been submitted to ADOT.

## 8. Update-TAC Contact Information

Chris advised the TAC that the current TAC Membership List is on page 24 of the TAC Packet. Chris noted that we have had several changes to membership over the past few months. He asked the TAC to review their contact information and advise him if any changes are needed. Chris indicated that he will send the membership list out in Word so that members can make the changes to the list.

## 8. LPA Section Updates

Mark Henige provided updates for the LPA section. He advised the TAC that the Clifton Chase Creek Bridge OSB project had been approved. During the bridge discussion Michael Bryce noted that the ROW would not be needed on the Fort Thomas River Bridge project. The ROW funding had been added to design which resulted in the TIP not matching the IGA. After discussion with Mark Hoffman, the Chase Creek OSB project will be administratively added to the TIP and the Fort Thomas River Bridge project will be

administratively changed so that the TIP match the IGA.

## **9. District Engineer's Report**

There was no staff present from the Southeast and Southcentral Districts to provide project updates.

## **10. Regional Program Reports**

Those in attendance reported their current status of local projects and issues.

## **11. Items for General Discussion**

Chris Vertrees indicated that we will need to review our FY21 HSIP projects at our September meeting. He also stated that we will be reviewing our STBG project programming procedures. The SEAGO Strategic Planning Committee had recommended changes to the procedures including a funding cap on STBG projects and a by County rotation of STBG funding.

**12. Next Meeting Date:** September 17, 2020.

***Meeting adjourned at 11:50 a.m.***

DRAFT

SEAGO STBGP Ledger 2021-2025

Revised: September 10, 2020

| OA rate from ADOT<br>Action                            | 94.9% *<br>OA Rate | Projected Fed Funds * |                  | Cumulative Balance |                  |
|--------------------------------------------------------|--------------------|-----------------------|------------------|--------------------|------------------|
|                                                        |                    | Apportionment         | OA               | Apportionment      | OA               |
| STBGP Carry Forward FY 2020                            | 94.9%              | \$0                   | \$0              | \$0                | \$0              |
| <b>FY 2021 Allocation*</b>                             | <b>94.9%</b>       | <b>\$909,856</b>      | <b>\$857,078</b> | \$909,856          | \$857,078        |
| <b>STBG ADOT Loan Repayment (IN)</b>                   |                    | \$6,503               | \$6,503          | \$916,359          | \$863,581        |
| <b>Loan Funds from ADOT for Safford 20th Ave. (IN)</b> |                    | \$2,800,000           | \$2,800,000      | \$3,716,359        | \$3,663,581      |
| <b>Safford: 20th Avenue</b>                            |                    | -\$3,653,581          | -\$3,653,581     | \$62,778           | \$10,000         |
| <b>Tech Transfer (LTAP)</b>                            |                    | -\$10,000             | -\$10,000        | \$52,778           | \$0              |
| FY 2021 Balance                                        |                    |                       |                  | <b>\$52,778</b>    | <b>\$0</b>       |
| FY 2022 Allocation                                     | 94.9%              | \$909,856             | \$857,078        | \$909,856          | \$857,078        |
| <b>FY2020 STBG Loan Repayment (IN)</b>                 |                    | \$177,096             | \$177,096        | \$1,086,952        | \$1,034,174      |
| <b>Partial repayment Safford 20th Ave. Loan (OUT)</b>  |                    | -\$971,396            | -\$971,396       | \$115,556          | \$62,778         |
| <b>Tech Transfer (LTAP)</b>                            |                    | -\$10,000             | -\$10,000        | \$105,556          | <b>\$52,778</b>  |
| <b>Loan Out -?</b>                                     |                    | <b>-\$52,778</b>      | <b>-\$52,778</b> | \$52,778           | \$0              |
| FY 2022 Balance                                        |                    |                       |                  | <b>\$52,778</b>    | <b>\$0</b>       |
| FY 2023 Allocation                                     | 94.9%              | \$909,856             | \$857,078        | \$909,856          | \$857,078        |
| <b>Repay SVMPO Loan (OUT) for Thatcher Part 2</b>      |                    | -\$395,617            | -\$395,617       | \$514,239          | \$461,461        |
| <b>Partial repayment Safford 20th Ave. Loan (OUT)</b>  |                    | -\$451,461            | -\$451,461       | \$62,778           | \$10,000         |
| <b>Tech Transfer (LTAP)</b>                            |                    | -\$10,000             | -\$10,000        | <b>\$52,778</b>    | \$0              |
| FY 2023 Balance                                        |                    |                       |                  | <b>\$52,778</b>    | <b>\$0</b>       |
| FY 2024 Allocation                                     | 94.9%              | \$909,856             | \$857,078        | \$909,856          | \$857,078        |
| <b>Partial repayment Safford 20th Ave. Loan (OUT)</b>  |                    | -\$847,078            | -\$847,078       | \$62,778           | \$10,000         |
| <b>FY 2022 Loan In - ?</b>                             |                    | <b>\$52,778</b>       | <b>\$52,778</b>  | \$115,556          | \$62,778         |
| <b>Tech Transfer (LTAP)</b>                            |                    | -\$10,000             | -\$10,000        | \$105,556          | <b>\$52,778</b>  |
| <b>Loan Out?</b>                                       |                    | -\$52,778             | -\$52,778        | <b>\$52,778</b>    | \$0              |
| FY 2024 Balance                                        |                    |                       |                  | <b>\$52,778</b>    | <b>\$0</b>       |
| FY2025 Allocation                                      | 94.9%              | \$909,856             | \$857,078        | \$909,856          | \$857,078        |
| <b>Final repayment Safford 20th Ave. Loan (OUT)</b>    |                    | -\$529,435            | -\$529,435       | \$380,421          | \$327,643        |
| <b>FY 2024 Loan In - ?</b>                             |                    | <b>\$52,778</b>       | <b>\$52,778</b>  | \$433,199          | \$380,421        |
| <b>Tech Transfer (LTAP)</b>                            |                    | -\$10,000             | -\$10,000        | \$423,199          | \$370,421        |
| FY 2024 Balance                                        |                    |                       |                  | <b>\$423,199</b>   | <b>\$370,421</b> |

- \* Notes:
1. OA = Obligated Authority. This is the amount of money that can actually be obligated to SEAGO based upon the OA %.
  2. STBGP = Surface Transportation Block Grant Program. This amount is allocated to SEAGO based upon the 2010 population
  3. OA Rate of 94.9% is subject to change
  4. in addition to the OA Rate of 94.9%, \$6,375 of OA is taken annually for the SPR funding to the SEAGO region.
  5. STBGP Apportionments are SEAGO estimates and subject to change.
  6. Reflects loss of \$86,326 from SVMPO boundary expansion
  7. Balance carry forward is no longer allowed. Excess funds must be utilized or loaned to another COG or to the State.

*This is an internal SEAGO document, and is used to provide a general overview of STBGP funds for a five year period.*



# TAC PACKET

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**TO:** SEAGO TAC  
**FROM:** CHRIS VERTREES, SEAGO TRANSPORTATION ADMINISTRATOR  
**DATE:** SEPTEMBER 10, 2020  
**RE:** SEAGO PROJECT REVIEWS

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At our last meeting, we discussed the status of 3 programmed projects. This included a discussion involving our two FY21 HSIP projects and our Douglas Chino Road project that is programmed for construction in FY25. At our last meeting, the sponsoring agencies requested additional time to review the projects and to make determinations on whether they would proceed with the projects. The following is an update involving the projects under discussion:

**Graham County – GGH 21-01 (Golf Course Road, Cottonwood Wash Road - Shoulders and Rumble Strips):** Graham County advised that US-70 has had a significant increase in crashes. Graham County indicated a desire to pursue reallocating this funding to address the concerns involving US-70. *The project is currently programmed for design in FY21 in the amount of \$225,454. It is programmed for construction in FY22 in the amount of \$2,111,866.*

**Update:** Michael Bryce has indicated that Graham County will be proceeding with the project.

**Cochise County – CCH21-01 (Charleston, Double Adobe, Barataria Roads – Edge & Center Rumble Strips):** The County has expressed concern that the chip seal surface and lack of shoulders impacts the viability of the project. *The project is currently programmed for design in FY21 in the amount of \$264,000. It is programmed for construction in FY22 in the amount of \$383,940.*

**Update:** I have not yet heard back from Cochise County. *We may have a TIP amendment to consider at this meeting, if the County decides to forego the project.*

**City of Douglas – DGS 17-01 (Chino Road Extension Phase 2) -** This project was pushed back several times due to inaction involving design updates to cost estimates and required clearances. **The project is currently being held as a placeholder in FY25 in the amount of \$80,000 for design and \$3,000,000 in construction.**

**Update:** I have had conversations with Douglas' new Deputy Director Public Works Dave Swietanski. We have discussed the history and the issues that stalled this project. Dave has indicated that Douglas is committed to moving this project forward and on schedule. For the near future, the project will remain on the TIP as a FY2025 placeholder.



# TAC PACKET

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**TO: SEAGO TAC**  
**FROM: CHRIS VERTREES, SEAGO TRANSPORTATION ADMINISTRATOR**  
**DATE: SEPTEMBER 10, 2020**  
**RE: SEAGO 2020-2024 & 2021-2025 TIP REPORT**

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SEAGO did not receive any requests to amend our 2020-2024 TIP this period. However, SEAGO did administratively amend the TIP on August 14, 2020 to reflect the following:

**GGH-BR-02 - Graham County - Ft. Thomas River Structure No. 8131:** This is an OSB project that is programmed for design in FY20 for \$328,290 Federal, ROW in FY21 for \$69,699 (Federal) and construction in FY22 for \$602,011 (Federal). ROW acquisition was not required. The IGA was amended removing ROW. The programmed ROW funding was moved to design in the updated IGA. ***The TIP has been administratively amended so that the TIP and IGA match.*** The following were the changes made to the FY20 TIP:

**FY2020:** ADOT PDA Fees; Federal - \$28,290; Local - \$1,710; Total- \$30,000  
**FY2020:** Design; Federal - \$369,699; Local - \$22,347; Total - \$392,046  
**FY2022:** Construction; Federal - \$602,011; Local - \$36,389; Total - \$638,400

**CLF 21-01 - Town of Clifton -Chase Creek Bridge #1 Replacement:** This project has been added to the TIP. The Town of Clifton applied for OSB funding in the State FY2021 OSB Program Call for applications. On August 10, 2020, Clifton was notified that it was eligible for OSB funding. ***The project was added to the TIP based upon the following cost estimates provided by ADOT in Clifton's eligibility letter:***

**FY2020;** Design/PDA Fees; Federal - \$273, 179; Local - \$16,512; Total - \$289,691  
**FY2022;** Construction; Federal - \$726,821; Local - \$43,933; Total - \$770,754

The SEAGO 2021-2025 TIP was also amended to reflect the above changes/additions.

**SEAGO 2020-2024 TIP Amendment #2 is attached for your records.**  
**SEAGO 2021-2025 (Updated) TIP is also attached for your records.**

SEAGO REGION  
 2020- 2024 TIP Amendment #2 (Administrative)  
 Approved By: TAC - 3/19/20 Administrative Council- 4/2/20 Executive Board - 4/2/20

| TIP YEAR<br>Project ID | PROJECT<br>SPONSOR | PROJECT<br>NAME                                                      | PROJECT<br>LOCATION                                                                                                                                               | LENGTH      | TYPE OF<br>IMP - WK - STRU     | Functional<br>Classifications | LANES<br>BEFORE | LANES<br>AFTER | FED AID<br>TYPE          | FEDERAL<br>FUNDS      | HURF<br>EXCHANGE | LOCAL<br>MATCH   | OTHER<br>FUNDS | TOTAL<br>COST         |
|------------------------|--------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------|-------------------------------|-----------------|----------------|--------------------------|-----------------------|------------------|------------------|----------------|-----------------------|
| <b>2020</b>            |                    |                                                                      |                                                                                                                                                                   |             |                                |                               |                 |                |                          |                       |                  |                  |                |                       |
| SCC 20-01              | Santa Cruz County  | Santa Cruz County Chip Seal Road Improvement Project                 | 10.39 miles of 27 unpaved road segments in unincorporated Santa Cruz County.                                                                                      | 10.39 miles | PMDR Fee                       | Rural Local                   | 2               | 2              | CMAQ                     | \$28,290              |                  | \$1,710          |                | \$30,000              |
| SCC20-01               | Santa Cruz County  | Santa Cruz County Chip Seal Road Improvement Project                 | 10.39 miles of 27 unpaved road segments in unincorporated Santa Cruz County.                                                                                      | 10.39 miles | Construction                   | Rural Local                   | 2               | 2              | CMAQ                     | \$719,917             |                  | \$43,516         |                | \$763,433             |
| NOG 20-02              | City of Nogales    | Pathway Project, Baffert Dr to Nogales High School                   | Baffert Drive to Country Club Drive. Intersects with Grand Avenue path on south side of Frank Reed Road to Nogales High                                           | 3 miles     | Design                         | N/A                           | N/A             | N/A            | CMAQ                     | \$358,340             |                  | \$21,660         |                | \$380,000             |
| SCC12-03               | Santa Cruz County  | Rio Rico and Pendleton Drive Intersection Improvements               | Intersection                                                                                                                                                      |             | Construction                   | Rural Major Collector         |                 |                | HRRRP                    | \$984,555             |                  | \$59,512         |                | \$1,044,067           |
| GGH-BR-02              | Graham County      | Ft. Thomas River Structure No. 8131 Phase 1                          | Ft. Thomas River Road @ Gila River                                                                                                                                |             | PDA Fees                       | Minor Collector               | 2               | 2              | Off System Bridge        | \$28,290              |                  | \$1,710          |                | \$30,000              |
| GGH-BR-02              | Graham County LTAP | Ft. Thomas River Structure No. 8131 Phase 1                          | Ft. Thomas River Road @ Gila River                                                                                                                                |             | Scoping, Design, Environmental | Minor Collector               | 2               | 2              | Off System Bridge STP    | \$369,699<br>\$10,000 |                  | \$22,347         |                | \$392,046<br>\$10,000 |
| <b>TOTAL FOR 2020</b>  |                    |                                                                      |                                                                                                                                                                   |             |                                |                               |                 |                |                          | <b>\$2,499,091</b>    |                  | <b>\$150,454</b> |                | <b>\$2,649,545</b>    |
| <b>2021</b>            |                    |                                                                      |                                                                                                                                                                   |             |                                |                               |                 |                |                          |                       |                  |                  |                |                       |
| SAF12-02               | City of Safford    | 20th Ave, Phase II                                                   | Relation St to Golf Course Rd                                                                                                                                     | .63 Miles   | Construction                   | Urban Minor Arterial          | 3               | 5              | STP                      | \$3,653,581           |                  | \$220,842        |                | \$3,874,423           |
| CCH 21-01              | Cochise County     | Charleston, Double Adobe, Barataria Rds - E & C Rumble Strips        | Charleston Road from Tombstone to 4.8 miles south of Tombstone; Double Adobe Road from SR 80 to Frontier Road; Barataria Boulevard from Moson Road to Ranch Road. | 10.7 miles  | Design                         | Major Collector               | 2               | 2              | HSIP                     | \$264,000             |                  | \$0              |                | \$264,000             |
| CLF21-01               | Town of Clifton    | Chase Creek Bridge #1 Replacement                                    | Structure# 08536Frisco Avenue - 0.1 mile north of Junction with Park Avenue                                                                                       | .01 mile    | Design/PDA                     | Rural Local                   | 2               | 2              | Off System Bridge        | \$273,179             |                  | \$16,512         |                | \$289,691             |
| SCC 21-01              | Santa Cruz County  | Pendleton Drive - Roadway Dip Elimination                            | Pendleton Drive Dip at Sonoita Creek Wash                                                                                                                         | .25 miles   | Design                         | Major Collector               | 2               | 2              | HSIP                     | \$241,408             |                  | \$14,592         |                | \$256,000             |
| GGH 21-01              | Graham County LTAP | Golf Course Road, Cottonwood Wash Road - Shoulders and Rumble Strips | Golf Course Road from Hoopes Avenue to just west of 20th Avenue; Cottonwood Wash Road from Cottonwood Wash Loop to 1200 South.                                    | 5.1 miles   | Design                         | Major Collector               | 2               | 2              | HSIP<br>STP              | \$212,803<br>\$10,000 |                  | \$12,851         |                | \$225,454<br>\$10,000 |
| <b>TOTAL FOR 2021</b>  |                    |                                                                      |                                                                                                                                                                   |             |                                |                               |                 |                |                          | <b>\$4,654,771</b>    |                  | <b>\$264,797</b> |                | <b>\$4,919,568</b>    |
| <b>2022</b>            |                    |                                                                      |                                                                                                                                                                   |             |                                |                               |                 |                |                          |                       |                  |                  |                |                       |
| CCH 21-01              | Cochise County     | Charleston, Double Adobe, Barataria Rds - E & C Rumble Strips        | Charleston Road from Tombstone to 4.8 miles south of Tombstone; Double Adobe Road from SR 80 to Frontier Road; Barataria Boulevard from Moson Road to Ranch Road. | 10.7 miles  | Construction                   | Major Collector               | 2               | 2              | HSIP                     | \$383,940             |                  | \$0              |                | \$383,940             |
| SCC 21-01              | Santa Cruz County  | Pendleton Drive - Roadway Dip Elimination                            | Pendleton Drive Dip at Sonoita Creek Wash                                                                                                                         | .25 miles   | Construction                   | Major Collector               | 2               | 2              | HSIP                     | \$424,350             |                  | \$25,650         |                | \$450,000             |
| CLF21-01               | Town of Clifton    | Chase Creek Bridge #1 Replacement                                    | Structure# 08536Frisco Avenue - 0.1 mile north of Junction with Park Avenue                                                                                       | .01 mile    | Construction                   | Rural Local                   | 2               | 2              | Off System Bridge        | \$726,821             |                  | \$43,933         |                | \$770,754             |
| GGH 21-01              | Graham County      | Golf Course Road, Cottonwood Wash Road - Shoulders and Rumble Strips | Golf Course Road from Hoopes Avenue to just west of 20th Avenue; Cottonwood Wash Road from Cottonwood Wash Loop to 1200 South.                                    | 5.1 miles   | Construction                   | Major Collector               | 2               | 2              | HSIP                     | \$1,991,490           |                  | \$120,376        |                | \$2,111,866           |
| GGH-BR-02              | Graham County LTAP | Ft. Thomas River Structure No. 8131 Phase 3                          | Ft. Thomas River Road @ Gila River                                                                                                                                |             | Construction                   | Minor Collector               | 2               | 2              | Off System Bridge<br>STP | \$602,011<br>\$10,000 |                  | \$36,389         |                | \$638,400<br>\$10,000 |
| <b>TOTAL FOR 2022</b>  |                    |                                                                      |                                                                                                                                                                   |             |                                |                               |                 |                |                          | <b>\$4,138,612</b>    |                  | <b>\$226,348</b> |                | <b>\$4,364,960</b>    |
| <b>2023</b>            |                    |                                                                      |                                                                                                                                                                   |             |                                |                               |                 |                |                          |                       |                  |                  |                |                       |

**SEAGO REGION**  
**2020- 2024 TIP Amendment #2 (Administrative)**  
**Approved By: TAC - 3/19/20 Administrative Council- 4/2/20 Executive Board - 4/2/20**

|                           |                         |                                                    |                                                                                                                                                               |           |              |                      |     |     |             |                         |                  |                         |                 |
|---------------------------|-------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|----------------------|-----|-----|-------------|-------------------------|------------------|-------------------------|-----------------|
| NOG 20-02                 | City of Nogales<br>LTAP | Pathway Project, Baffert Dr to Nogales High School | East side of Grand Avenue from Baffert Drive to Country Club Drive. Intersects with Grand Avenue path on south side of Frank Reed Road to Nogales High School | 3 miles   | Construction | N/A                  | N/A | N/A | CMAQ<br>STP | \$891,135<br>\$10,000   | \$53,865         | \$945,000<br>\$10,000   |                 |
| <b>TOTAL FOR 2023</b>     |                         |                                                    |                                                                                                                                                               |           |              |                      |     |     |             | <b>\$10,000</b>         | <b>\$0</b>       | <b>\$0</b>              | <b>\$10,000</b> |
| <b>2024 (Placeholder)</b> |                         |                                                    |                                                                                                                                                               |           |              |                      |     |     |             |                         |                  |                         |                 |
| DGS17-01                  | City of Douglas         | Chino Road Extension Phase 2                       | Chino Road: 9th Street to SR90                                                                                                                                | .85 miles | Design       | Urban Minor Arterial | 2   | 2   | STP         | \$75,440                | \$4,560          | \$80,000                |                 |
| DGS17-01                  | City of Douglas<br>LTAP | Chino Road Extension Phase 2                       | Chino Road: 9th Street to SR90                                                                                                                                | .85 miles | Construction | Urban Minor Arterial | 2   | 2   | STP<br>STP  | \$2,829,000<br>\$10,000 | \$171,000        | \$3,000,000<br>\$10,000 |                 |
| <b>TOTAL FOR 2024</b>     |                         |                                                    |                                                                                                                                                               |           |              |                      |     |     |             | <b>\$2,914,440</b>      | <b>\$175,560</b> | <b>\$3,090,000</b>      |                 |

|                                  |                         |                                                       |                                                                                         |            |              |                       |   |   |            |                       |                    |                       |                  |                    |
|----------------------------------|-------------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------|------------|--------------|-----------------------|---|---|------------|-----------------------|--------------------|-----------------------|------------------|--------------------|
| <b>FUNDING OBLIGATED IN 2019</b> |                         |                                                       |                                                                                         |            |              |                       |   |   |            |                       |                    |                       |                  |                    |
| THR12-13                         | Town of Thatcher        | Church Street Widening                                | US 70 to Stadium Avenue                                                                 | 5,400 feet | Construction | Urban Major Collector | 2 | 3 | HU         | \$2,402,528           | \$243,981          | \$2,646,509           |                  |                    |
| GGH12-04                         | Graham County           | 8th Ave & Airport Rd Intersection                     | Intersection                                                                            |            | Construction | Rural Major Collector | 2 | 2 | HPP        | \$996,375             | \$60,226           | \$1,056,601           |                  |                    |
| GGH12-04                         | Graham County           | 8th Ave & Airport Rd Intersection                     | Intersection                                                                            |            | Construction | Rural Major Collector | 2 | 2 | HRRRP      | \$2,300,000           |                    | \$2,300,000           |                  |                    |
| NOG 19-01                        | City of Nogales         | Valle Verde/Paseo Verde Paving Project                | Valle Verde Dr. and Paseo Verde Drive between Grand Ave. and W. Mesa Verde Dr.          | 1150 Feet  | Construction | Urban Local           | 2 | 2 | CMAQ       | \$537,510             | \$32,490           | \$570,000             |                  |                    |
| SCC12-12                         | Santa Cruz County       | River Road and Pendleton Drive Safety Improvements    | Pendleton Drive, Via Caliente to Circulo Cerro & Pendleton Drive/Ruby Road Intersection | Varies     | Construction | Rural Major Collector | 2 | 2 | CMAQ       | \$672,213             | \$40,632           | \$712,845             |                  |                    |
| SCC 18-01                        | Santa Cruz County       | I-19/Ruby Road TI-Improvements                        | I-19/Ruby Road TI                                                                       |            | Design       | Rural Major Collector | 2 | 2 | CMAQ       | \$984,256             | \$59,494           | \$1,043,750           |                  |                    |
| CLF16-01                         | Town of Clifton<br>LTAP | Zorilla Street Bridge Rehabilitation, Structure #9633 | Zorilla Street between US 191 and Park, Avenue, Clifton, AZ                             | 216 Feet   | Construction | Rural Local           | 2 | 2 | STP<br>STP | \$200,000<br>\$10,000 | \$12,089           | \$212,089<br>\$10,000 |                  |                    |
| <b>TOTAL FOR 2019</b>            |                         |                                                       |                                                                                         |            |              |                       |   |   |            | <b>\$5,700,354</b>    | <b>\$2,402,528</b> | <b>\$204,931</b>      | <b>\$243,981</b> | <b>\$8,551,794</b> |

|                                     |                 |                         |                                             |            |                                                |                       |   |   |     |              |           |              |
|-------------------------------------|-----------------|-------------------------|---------------------------------------------|------------|------------------------------------------------|-----------------------|---|---|-----|--------------|-----------|--------------|
| <b>Future Construction Projects</b> |                 |                         |                                             |            |                                                |                       |   |   |     |              |           |              |
| CCH12-10                            | Cochise County  | Davis Rd. Improvements  | Davis Road MP 13                            | 1 mile     | Construction of Safety & Drainage Improvements | Rural Major Collector | 2 | 2 | STP | \$924,560    | \$55,885  | \$980,445    |
| CCH15-01                            | Cochise County  | Davis Rd. Improvements  | Davis Road MP 5                             | 0.61 miles | Construction of Safety & Drainage Improvements | Rural Major Collector | 2 | 2 | STP | \$1,045,000  | \$63,165  | \$1,108,165  |
| TBD                                 | City of Willcox | Bisbee Ave              | 729 N. Bisbee Ave to 165 S. Bisbee Ave      | 0.57 miles | Design                                         | Rural Major Collector | 2 | 2 | STP | \$4,715      | \$285     | \$5,000      |
| TBD                                 | City of Willcox | Bisbee Ave              | 729 N. Bisbee Ave to 165 S. Bisbee Ave      | 0.57 miles | Construction                                   | Rural Major Collector | 2 | 2 | STP | \$730,526    | \$44,157  | \$774,683    |
| TBD                                 | City of Safford | 14th Avenue Improvement | 14th Ave from Relation Street to 8th Street | 1 mile     | Construction                                   | Rural Major Collector | 2 | 3 | TBD | \$11,771,300 | \$711,521 | \$12,482,821 |

SEAGO REGION  
2021- 2025 TIP

Approved By: TAC - 3/19/20 Administrative Committee- 4/2/20 Executive Committee - 4/2/20

| TIP YEAR<br>Project ID | PROJECT<br>SPONSOR    | PROJECT<br>NAME                                                      | PROJECT<br>LOCATION                                                                                                                                               | LENGTH     | TYPE OF<br>IMP - WK - STRU | Functional<br>Classifications | LANES<br>BEFORE | LANES<br>AFTER | FED AID<br>TYPE   | FEDERAL<br>FUNDS | HURF<br>EXCHANGE   | LOCAL<br>MATCH   | OTHER<br>FUNDS | TOTAL<br>COST      |
|------------------------|-----------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------|-------------------------------|-----------------|----------------|-------------------|------------------|--------------------|------------------|----------------|--------------------|
| <b>2021</b>            |                       |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  |                    |                  |                |                    |
| SAF12-02               | City of Safford       | 20th Ave, Phase II                                                   | Relation St to Golf Course Rd to 4.8 miles south of Tombstone;                                                                                                    | .63 Miles  | Construction               | Urban Minor Arterial          | 3               | 5              | STP               | \$3,653,581      |                    | \$220,842        |                | \$3,874,423        |
| CCH 21-01              | Cochise County        | Charleston, Double Adobe, Barataria Rds - E & C Rumble Strips        | Double Adobe Road from SR 80 to Frontier Road; Barataria Boulevard from Moson Road to                                                                             | 10.7 miles | Design                     | Major Collector               | 2               | 2              | HSIP              | \$264,000        |                    | \$0              |                | \$264,000          |
| SCC 21-01              | Santa Cruz County     | Pendleton Drive - Roadway Dip Elimination                            | Pendleton Drive Dip at Sonoita Creek Wash                                                                                                                         | .25 miles  | Design                     | Major Collector               | 2               | 2              | HSIP              | \$241,408        |                    | \$14,592         |                | \$256,000          |
| CLF21-01               | Town of Clifton       | Chase Creek Bridge #1 Replacement                                    | Structure# 08536 Frisco Avenue - 0.1 mile north of Junction with Park Avenue                                                                                      | .01 mile   | Design/PDA                 | Rural Local                   | 2               | 2              | Off System Bridge | \$273,179        |                    | \$16,512         |                | \$289,691          |
| GGH 21-01              | Graham County         | Golf Course Road, Cottonwood Wash Road - Shoulders and Rumble Strips | Golf Course Road from Hoopes Avenue to just west of 20th Avenue; Cottonwood Wash Road from Cottonwood Wash Loop to 1200 South.                                    | 5.1 miles  | Design                     | Major Collector               | 2               | 2              | HSIP              | \$212,603        |                    | \$12,851         |                | \$225,454          |
|                        | LTAP                  |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                | STP               | \$10,000         |                    |                  |                | \$10,000           |
|                        | <b>TOTAL FOR 2021</b> |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  | <b>\$4,654,771</b> | <b>\$264,797</b> |                | <b>\$4,919,568</b> |
| <b>2022</b>            |                       |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  |                    |                  |                |                    |
| CCH 21-01              | Cochise County        | Charleston, Double Adobe, Barataria Rds - E & C Rumble Strips        | Charleston Road from Tombstone to 4.8 miles south of Tombstone; Double Adobe Road from SR 80 to Frontier Road; Barataria Boulevard from Moson Road to Ranch Road. | 10.7 miles | Construction               | Major Collector               | 2               | 2              | HSIP              | \$383,940        |                    | \$0              |                | \$383,940          |
| SCC 21-01              | Santa Cruz County     | Pendleton Drive - Roadway Dip Elimination                            | Pendleton Drive Dip at Sonoita Creek Wash                                                                                                                         | .25 miles  | Construction               | Major Collector               | 2               | 2              | HSIP              | \$424,350        |                    | \$25,650         |                | \$450,000          |
| CLF21-01               | Town of Clifton       | Chase Creek Bridge #1 Replacement                                    | Structure# 08536 Frisco Avenue - 0.1 mile north of Junction with Park Avenue                                                                                      | .01 mile   | Construction               | Rural Local                   | 2               | 2              | Off System Bridge | \$726,821        |                    | \$43,933         |                | \$770,754          |
| GGH 21-01              | Graham County         | Golf Course Road, Cottonwood Wash Road - Shoulders and Rumble Strips | Golf Course Road from Hoopes Avenue to just west of 20th Avenue; Cottonwood Wash Road from Cottonwood Wash Loop to 1200 South.                                    | 5.1 miles  | Construction               | Major Collector               | 2               | 2              | HSIP              | \$1,991,490      |                    | \$120,376        |                | \$2,111,866        |
| GGH-BR-02              | Graham County         | Ft. Thomas River Structure No. 8131 Phase 3                          | Ft. Thomas River Road @ Gila River                                                                                                                                |            | Construction               | Minor Collector               | 2               | 2              | Off System Bridge | \$602,011        |                    | \$36,389         |                | \$638,400          |
|                        | LTAP                  |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                | STP               | \$10,000         |                    |                  |                | \$10,000           |
|                        | <b>TOTAL FOR 2022</b> |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  | <b>\$4,138,612</b> | <b>\$226,348</b> |                | <b>\$4,364,960</b> |
| <b>2023</b>            |                       |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  |                    |                  |                |                    |
| NOG 20-02              | City of Nogales       | Pathway Project, Baffert Dr to Nogales High School                   | East side of Grand Avenue from Baffert Drive to Country Club Drive. Intersects with Grand Avenue path on south side of Frank Reed Road to Nogales High School     | 3 miles    | Construction               | N/A                           | N/A             | N/A            | CMAQ              | \$891,135        |                    | \$53,865         |                | \$945,000          |
|                        | LTAP                  |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                | STP               | \$10,000         |                    |                  |                | \$10,000           |
|                        | <b>TOTAL FOR 2023</b> |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  | <b>\$10,000</b>    | <b>\$0</b>       |                | <b>\$10,000</b>    |
| <b>2024</b>            |                       |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  |                    |                  |                |                    |
|                        | LTAP                  |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                | STP               | \$10,000         |                    |                  |                | \$10,000           |
|                        | <b>TOTAL FOR 2024</b> |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  | <b>\$10,000</b>    | <b>\$0</b>       | <b>\$0</b>     | <b>\$10,000</b>    |
| <b>2025</b>            |                       |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  |                    |                  |                |                    |
| DGS17-01               | City of Douglas       | Chino Road Extension Phase 2                                         | Chino Road: 9th Street to SR90                                                                                                                                    | .85 miles  | Design                     | Urban Minor Arterial          | 2               | 2              | STP               | \$75,440         |                    | \$4,560          |                | \$80,000           |
| DGS17-01               | City of Douglas       | Chino Road Extension Phase 2                                         | Chino Road: 9th Street to SR90                                                                                                                                    | .85 miles  | Construction               | Urban Minor Arterial          | 2               | 2              | STP               | \$2,829,000      |                    | \$171,000        |                | \$3,000,000        |
|                        | LTAP                  |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                | STP               | \$10,000         |                    |                  |                | \$10,000           |
|                        | <b>TOTAL FOR 2025</b> |                                                                      |                                                                                                                                                                   |            |                            |                               |                 |                |                   |                  | <b>\$2,914,440</b> | <b>\$175,560</b> |                | <b>\$3,090,000</b> |

| <b>FUNDING OBLIGATED IN 2020</b> |                   |                                                      |                                                                                                                                                               |             |              |             |     |     |      |           |  |          |  |           |
|----------------------------------|-------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|-------------|-----|-----|------|-----------|--|----------|--|-----------|
| NOG 20-02                        | City of Nogales   | Pathway Project, Baffert Dr to Nogales High School   | East side of Grand Avenue from Baffert Drive to Country Club Drive. Intersects with Grand Avenue path on south side of Frank Reed Road to Nogales High School | 3 miles     | Design       | N/A         | N/A | N/A | CMAQ | \$358,340 |  | \$21,660 |  | \$380,000 |
| SCC 20-01                        | Santa Cruz County | Santa Cruz County Chip Seal Road Improvement Project | 10.39 miles of 27 unpaved road segments in unincorporated Santa Cruz County.                                                                                  | 10.39 miles | PMDR Fee     | Rural Local | 2   | 2   | CMAQ | \$28,290  |  | \$1,710  |  | \$30,000  |
| SCC20-01                         | Santa Cruz County | Santa Cruz County Chip Seal Road Improvement Project | 10.39 miles of 27 unpaved road segments in unincorporated Santa Cruz County.                                                                                  | 10.39 miles | Construction | Rural Local | 2   | 2   | CMAQ | \$719,917 |  | \$43,516 |  | \$763,433 |

SEAGO REGION  
2021- 2025 TIP

Approved By: TAC - 3/19/20 Administrative Committee- 4/2/20 Executive Board - 4/2/20

|           |                   |                                                        |                                    |  |                                |                       |   |   |                   |                    |            |                  |            |                    |
|-----------|-------------------|--------------------------------------------------------|------------------------------------|--|--------------------------------|-----------------------|---|---|-------------------|--------------------|------------|------------------|------------|--------------------|
| GGH-BR-02 | Graham County     | Ft. Thomas River Structure No. 8131 Phase 1            | Ft. Thomas River Road @ Gila River |  | PDA Fees                       | Minor Collector       | 2 | 2 | Off System Bridge | \$28,290           |            | \$1,710          |            | \$30,000           |
| GGH-BR-02 | Graham County     | Ft. Thomas River Structure No. 8131 Phase 1            | Ft. Thomas River Road @ Gila River |  | Scoping, Design, Environmental | Minor Collector       | 2 | 2 | Off System Bridge | \$369,699          |            | \$22,347         |            | \$392,046          |
| SCC12-03  | Santa Cruz County | Rio Rico and Pendleton Drive Intersection Improvements | Intersection                       |  | Construction                   | Rural Major Collector |   |   | HRRRP             | \$984,555          |            | \$59,512         |            | \$1,044,067        |
|           |                   | LTAP                                                   |                                    |  |                                |                       |   |   | STP               | \$10,000           |            |                  |            | \$10,000           |
|           |                   | <b>TOTAL FOR 2020</b>                                  |                                    |  |                                |                       |   |   |                   | <b>\$2,499,091</b> | <b>\$0</b> | <b>\$150,454</b> | <b>\$0</b> | <b>\$2,649,545</b> |

| <b>Future Construction Projects</b> |                 |                         |                                             |            |                                                |                       |   |   |     |              |  |           |  |              |
|-------------------------------------|-----------------|-------------------------|---------------------------------------------|------------|------------------------------------------------|-----------------------|---|---|-----|--------------|--|-----------|--|--------------|
| CCH12-10                            | Cochise County  | Davis Rd. Improvements  | Davis Road MP 13                            | 1 mile     | Construction of Safety & Drainage Improvements | Rural Major Collector | 2 | 2 | STP | \$924,560    |  | \$55,885  |  | \$980,445    |
| CCH15-01                            | Cochise County  | Davis Rd. Improvements  | Davis Road MP 5                             | 0.61 miles | Construction of Safety & Drainage Improvements | Rural Major Collector | 2 | 2 | STP | \$1,045,000  |  | \$63,165  |  | \$1,108,165  |
| TBD                                 | City of Willcox | Bisbee Ave              | 729 N. Bisbee Ave to 165 S. Bisbee Ave      | 0.57 miles | Design                                         | Rural Major Collector | 2 | 2 | STP | \$4,715      |  | \$285     |  | \$5,000      |
| TBD                                 | City of Willcox | Bisbee Ave              | 729 N. Bisbee Ave to 165 S. Bisbee Ave      | 0.57 miles | Construction                                   | Rural Major Collector | 2 | 2 | STP | \$730,526    |  | \$44,157  |  | \$774,683    |
| TBD                                 | City of Safford | 14th Avenue Improvement | 14th Ave from Relation Street to 8th Street | 1 mile     | Construction                                   | Rural Major Collector | 2 | 3 | TBD | \$11,771,300 |  | \$711,521 |  | \$12,482,821 |



# TAC PACKET

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**TO: SEAGO TAC**

**FROM: CHRIS VERTREES, SEAGO TRANSPORTATION ADMINISTRATOR**

**DATE: JULY 7, 2020**

**RE: SEAGO PROJECT PROGRAMMING PROCEDURES REVIEW AND REVISION**

---

In February, members of the SEAGO Executive Board and Administrative Council met to update SEAGO's Strategic Plan. One of the strategic goals they set was to revise the STBG programming process to make it more equitable for smaller jurisdictions. The committee made the following recommendations:

1. Cap on STBG project requests;
2. Eliminate Right-of-Way acquisition as an eligible activity for use of local STBG funds;
3. Establish a rotation of STBG funds by County.

To facilitate discussion and to draft an update our Federal Fund Programming Procedures a survey was sent to each of our TAC members. We had 11 responses. Some of the survey results provided clear direction while other response data was less definitive.

A cap on STBG funding requests was highly supported. However no consensus cap number could be determined by the data.

A consensus on eliminating ROW acquisition as an eligible funding activity was not established. There was consensus that if it continues to be allowed it should be capped. However, no clear determination could be made as to the cap number.

The responses for and against a by county STBG rotation were close with 6 no responses and 5 yes responses. There was clear consensus on not including additional criteria if a by county rotation was established.

There was no clear direction on how to address our future project list in any revised project programming procedures.

My original goal was to have a draft of the revised procedures for review at this meeting. However, the lack of clear direction in the survey data made this task difficult. At this meeting, I would like to review the survey results and work to a consensus on how to precede with the Strategic Planning Committees recommendations.

**Attachment: Survey Results**



## Project Programming Procedures Review and Revision Survey Results

1. Should STBG project programming requests be capped?

| Response  | #  |
|-----------|----|
| Yes       | 10 |
| No        | 1  |
| No Answer | 0  |

2. What should the cap be?

| Response                                                         | # |
|------------------------------------------------------------------|---|
| 1 Year - SEAGO STBG Apportionment (approximately \$900,000)      | 1 |
| Hard Cap - \$1.0 Million                                         | 3 |
| 2 Years - SEAGO STBG Apportionment (approximately \$1.8 million) | 3 |
| Hard Cap - \$1.5 Million                                         | 2 |
| Other - Percentage                                               | 1 |
| Not Answered                                                     | 1 |

3. The strategic planning committee recommended removing right-a-way (ROW) acquisition as an eligible activity for the use of SEAGO STBG funds. ROW would become a local responsibility, thereby stretching construction funding. Should ROW remain an eligible cost?

| Response  | # |
|-----------|---|
| Yes       | 5 |
| No        | 5 |
| No Answer | 1 |

4. If ROW continues to be an eligible funding activity, should it be capped?

| Response  | # |
|-----------|---|
| Yes       | 8 |
| No        | 3 |
| No Answer | 0 |

5. If ROW is capped, what should the cap be?

| Response          | # |
|-------------------|---|
| \$50,000          | 0 |
| \$100,000         | 4 |
| \$150,000         | 0 |
| \$200,000         | 3 |
| Other: Percentage | 2 |
| Not Answered      | 2 |



## Project Programming Procedures Review and Revision Survey Results

6. The strategic planning committee recommended that a rotation of STBG funds by county be established. Should a by county rotation be implemented?

| Response  | # |
|-----------|---|
| Yes       | 5 |
| No        | 6 |
| No Answer | 0 |

7. Should an additional variable such as population or local roadway miles be considered when developing a rotation schedule?

| Response  | # |
|-----------|---|
| Yes       | 3 |
| No        | 8 |
| No Answer | 0 |

8. If an additional variable is applied to a rotation schedule should it be?

| Response              | # |
|-----------------------|---|
| Population            | 1 |
| Local Roadway Miles   | 2 |
| Both                  | 1 |
| Other: Public Benefit | 2 |
| No Answer             | 5 |

9. Should our future project list be grandfathered (in terms of cost) into any new procedures developed?

| Response  | # |
|-----------|---|
| Yes       | 6 |
| No        | 5 |
| No Answer | 0 |

10. Should our future project list be subject to a rotation schedule?

| Response  | # |
|-----------|---|
| Yes       | 5 |
| No        | 5 |
| No Answer | 1 |



# TAC PACKET

---

**TO: SEAGO TAC**  
**FROM: CHRIS VERTREES, SEAGO TRANSPORTATION ADMINISTRATOR**  
**DATE: SEPTEMBER 10, 2020**  
**RE: HOW TO DO A PLANNING LEVEL ESTIMATE TRAINING**

---

The ADOT LPA Section canceled the September EDC Arizona Local Public Agency Stakeholder Council Meeting and replaced it with the **How To Do A Planning Level Estimate** training webinar. I have attached the presentations from that webinar. I found the training to be very interesting and useful. Mark Henige has advised that he would make the training available to the COG's. During the meeting I would like to determine the interest in a stand-alone training or an agenda item for a future TAC meeting.



# **How To Do A Planning Level Estimate**

## **Using E2C2 (Estimated Engineering Construction Cost)**

**David Do**  
**September, 2020**



Figure 1-1 Overview of the Project Development Process

## How do we do a planning level estimate?

What is engineering at the planning level?

- A discovery process
- Identify unknowns
- Minimizing uncertainties

Uncertainties = Risk

A **detailed description of work** will minimize risk and improve the planning level estimate.



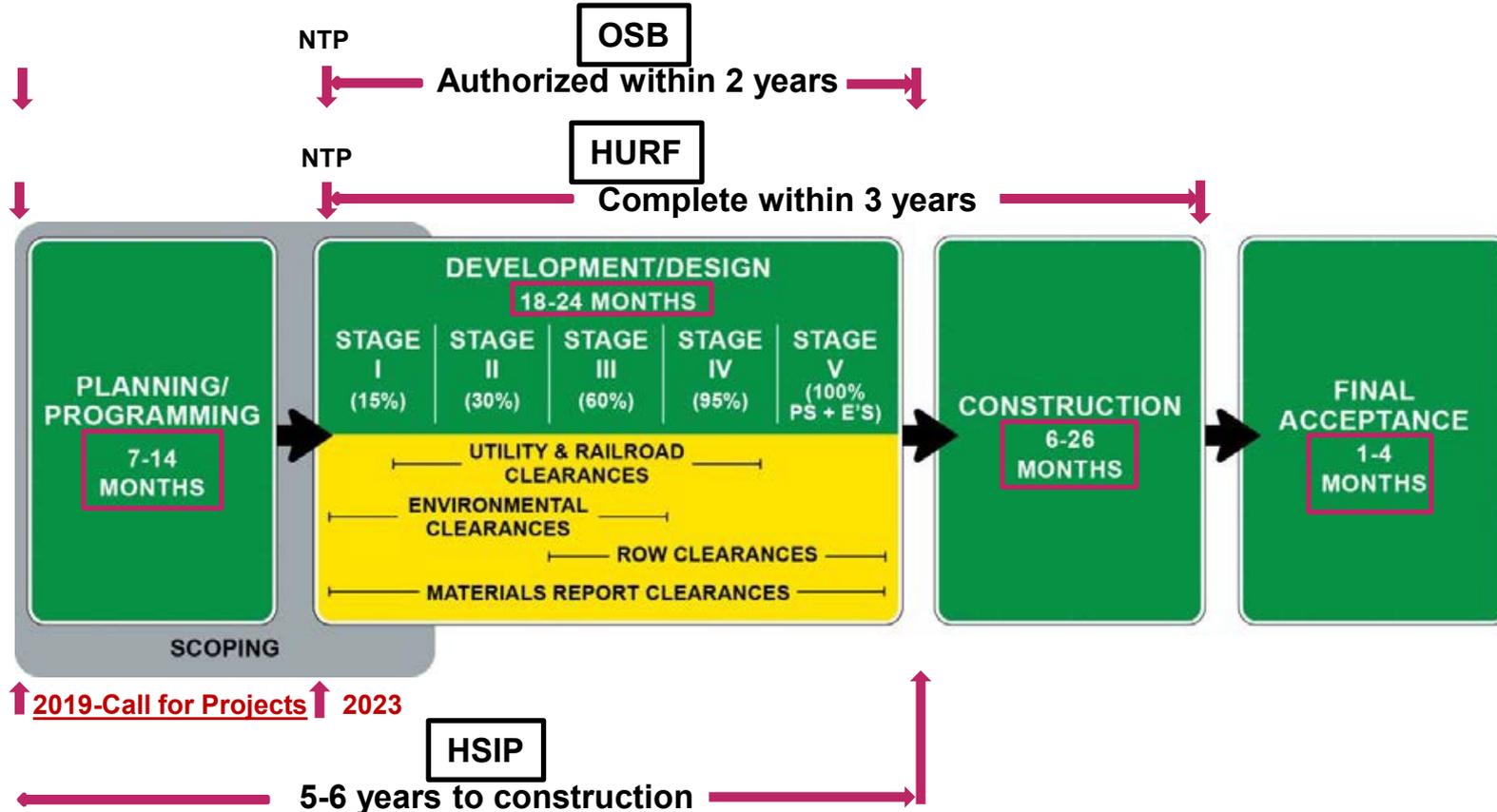
Figure 1-1 Overview of the Project Development Process



## Lessons Learned in ADOT Contracts & Specifications Section Before COVID-19

- Contractor bids for projects were coming in higher than expected. Why?
  - Plenty of work out there.
  - Steel, concrete & labor costs were high.
  - Shortage of labor, leading to competitive bids for laborers on projects.
- The number of bidders affects the bidding environment.
- Multiple types of work on one project can lead to a lower number of bidders.
- Different types of work combinations (i.e. traffic & drainage, pavement & scour, signal & median) also create issues with generating number of bidders.

Figure 1-2: Life Cycle of the Project Development Process



## ADOT Cost Estimate Tool (Page 1 of 4)

<https://azdot.gov/sites/default/files/2019/06/adot-cost-estimate-form.xls>

Scoping Costs

Design Costs

| Estimated Project Costs                                                                                                                                                                                                                       |      |       |                                                                                |        |                       |                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|--------------------------------------------------------------------------------|--------|-----------------------|-------------------------------|
| <b>INSTRUCTIONS:</b> List all items necessary to develop and construct your project. The applicant is responsible for verifying all costs and their accuracy. Construction cost overruns will be the responsibility of the sponsoring agency. |      |       |                                                                                |        |                       |                               |
| Enter values into GREEN CELLS.                                                                                                                                                                                                                |      |       | The program will automatically calculate the Totals and Federal Share at 94.3% |        |                       |                               |
| <b>LOCAL PROJECTS:</b> Please note that the Stage I Costs shown below are to be funded by the sponsoring agency and are not eligible for Federal Reimbursement.                                                                               |      |       |                                                                                |        |                       |                               |
| ITEM DESCRIPTION                                                                                                                                                                                                                              | UNIT | QUAN. | UNIT PRICE                                                                     | TOTAL  | FEDERAL FUNDS @ 94.3% | SPONSOR MATCHING FUNDS @ 6.7% |
| <b>STAGE I – SCOPING (15% Preliminary Design)</b>                                                                                                                                                                                             |      |       |                                                                                |        |                       |                               |
| <b>SCOPING COSTS</b>                                                                                                                                                                                                                          |      |       |                                                                                |        |                       |                               |
| Costs cannot be applied toward the federal participation or local match                                                                                                                                                                       |      |       |                                                                                |        |                       |                               |
| BITE TOPOGRAPHIC SURVEY (2%-5% of contract cost) <i>Enter \$0 in Unit Price column if none required</i>                                                                                                                                       | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| SCOPING DOCUMENT (Scoping Letter, Project Assessment or DCR)                                                                                                                                                                                  | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| ENVIRONMENTAL DETERMINATION (including technical supporting documents)                                                                                                                                                                        | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| HAZARDOUS MATERIALS ASSESSMENT (including heavy metals & asbestos. If an assessment is necessary, anticipate \$1,500. <i>Enter \$0 in Unit Price column if none required</i> )                                                                | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| <b>SUBTOTAL – PROJECT SCOPING COSTS</b>                                                                                                                                                                                                       |      |       |                                                                                | \$ -   | \$0                   | \$0                           |
| <b>STAGES II, III, IV – DESIGN (30%, 60%, 95%-100% Design)</b>                                                                                                                                                                                |      |       |                                                                                |        |                       |                               |
| <b>DESIGN COSTS</b>                                                                                                                                                                                                                           |      |       |                                                                                |        |                       |                               |
| Note: The use of federal funds for design is optional and subject to authorization. Design should not go beyond Stage II (20%) without environmental approval.                                                                                |      |       |                                                                                |        |                       |                               |
| PS&E's - Plans, Special Provisions, Cost Estimates & Schedules (10%-20% of construction cost.) (Shall be refunded if project is not constructed)                                                                                              | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| GEOTECHNICAL INVESTIGATION (if a report is necessary, anticipate 5% of construction cost) includes testing, Geotech Report, Materials & Pavement Design Report) <i>Enter \$0 in Unit Price column if none required.</i>                       | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| DRAINAGE REPORT (if a report is necessary, anticipate 5% of construction cost) <i>Enter \$0 in Unit Price column if none required</i>                                                                                                         | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| STORM WATER POLLUTION PREVENTION PLAN (Required if there is over 1 acre of total disturbance, 1% of construction cost) <i>Enter \$0 in Unit Price column if none required.</i>                                                                | LS   | 1     |                                                                                | \$0.00 |                       |                               |
| <b>SUBTOTAL – PROJECT DESIGN COSTS</b>                                                                                                                                                                                                        |      |       |                                                                                | \$ -   | \$0                   | \$0                           |
| Federal Funds for design are calculated at 94.3% of the total design cost. If requesting less than 94.3% Federal Funds for design, enter new total or 0 in the Federal column.                                                                |      |       |                                                                                |        |                       |                               |

## ADOT Cost Estimate Tool (Page 2 of 4)

**R.O.W. Acquisition Costs**

**Utility Relocation Costs**

| ITEM DESCRIPTION                                                                                                                                                                                                                                               | UNIT | QUAN. | UNIT PRICE | TOTAL  | FEDERAL FUNDS @ 34.3% | SPONSOR MATCHING FUNDS @ 5.7% |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|------------|--------|-----------------------|-------------------------------|
| <b>STAGE V – CONSTRUCTION</b>                                                                                                                                                                                                                                  |      |       |            |        |                       |                               |
| <b>SITE ACQUISITION &amp; HARDSCAPE CONSTRUCTION</b>                                                                                                                                                                                                           |      |       |            |        |                       |                               |
| RIGHT-OF-WAY ACQUISITION (if necessary)                                                                                                                                                                                                                        | LS   | 1     |            | \$0.00 | \$0.00                | \$0.00                        |
| INSTALLATION OF STORMWATER POLLUTION PREVENTION MEASURES (if over 1 acre of disturbance, 5% of const. costs) Enter \$0 in Unit Price column if area of disturbance is less than one acre.                                                                      | LS   | 1     |            | \$0.00 | \$0.00                | \$0.00                        |
| SITE PREPARATION (Clearing and grubbing, plant salvage)                                                                                                                                                                                                        | LS   | 1     |            | \$0.00 | \$0.00                | \$0.00                        |
| <b>DEMOLITION</b>                                                                                                                                                                                                                                              |      |       |            |        |                       |                               |
| Sawcut                                                                                                                                                                                                                                                         | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Remove Structures and Obstructions                                                                                                                                                                                                                             | LS   | 1     |            | \$0.00 | \$0.00                | \$0.00                        |
| Remove Fencing                                                                                                                                                                                                                                                 | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Remove Structural Concrete                                                                                                                                                                                                                                     |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Remove Asphaltic Concrete Pavement                                                                                                                                                                                                                             | CY   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Remove Concrete Sidewalks, Slabs                                                                                                                                                                                                                               |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| HAZARDOUS MATERIALS ABATEMENT (if applicable, include heavy metals & asbestos, 5% of construction cost) Enter \$0 in Unit Price column if none required.                                                                                                       | LS   | 1     |            | \$0.00 | \$0.00                | \$0.00                        |
| UTILITY RELOCATION (if necessary) Only the cost of utilities needing relocation as a direct result of the enhancement project are eligible for federal reimbursement. Because of the costs involved, the undergrounding of overhead utilities is not eligible. | LS   | 1     |            | \$0.00 | \$0.00                | \$0.00                        |
| RETAINING WALL (Concrete SF of face above the footing)                                                                                                                                                                                                         | SFF  |       |            | \$0.00 | \$0.00                | \$0.00                        |
| <b>EARTHWORK</b>                                                                                                                                                                                                                                               |      |       |            |        |                       |                               |
| General Excavation                                                                                                                                                                                                                                             |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Drainage Excavation                                                                                                                                                                                                                                            |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Structural Excavation                                                                                                                                                                                                                                          | CY   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Structural Backfill                                                                                                                                                                                                                                            |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Borrow (In Place)                                                                                                                                                                                                                                              |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| CURB & GUTTER                                                                                                                                                                                                                                                  | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| AGGREGATE BASE                                                                                                                                                                                                                                                 | CY   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| <b>PATHWAY OR SIDEWALK MATERIALS</b>                                                                                                                                                                                                                           |      |       |            |        |                       |                               |
| Concrete                                                                                                                                                                                                                                                       |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Colored Concrete                                                                                                                                                                                                                                               | SF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Stamped Color Concrete                                                                                                                                                                                                                                         |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Precast Concrete Pavers                                                                                                                                                                                                                                        |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Asphaltic Concrete                                                                                                                                                                                                                                             | Ton  |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Polymer or Resin Stabilized Surface                                                                                                                                                                                                                            | SF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| <b>CROSSWALK ENHANCEMENT</b>                                                                                                                                                                                                                                   |      |       |            |        |                       |                               |
| Concrete Pavers                                                                                                                                                                                                                                                |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Stamped Asphalt                                                                                                                                                                                                                                                |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Stamped Concrete                                                                                                                                                                                                                                               | SF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Concrete                                                                                                                                                                                                                                                       |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Integral Color Concrete                                                                                                                                                                                                                                        |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| PEDESTRIAN ADA RAMP                                                                                                                                                                                                                                            | SF   |       |            | \$0.00 | \$0.00                | \$0.00                        |

### ADOT Cost Estimate Tool (Page 3 of 4)

Landscaping/Irrigation Costs

| ITEM DESCRIPTION                                                                                                   | UNIT | QUAN. | UNIT PRICE | TOTAL  | FEDERAL FUNDS @ 34.3% | SPONSOR MATCHING FUNDS @ 5.7% |
|--------------------------------------------------------------------------------------------------------------------|------|-------|------------|--------|-----------------------|-------------------------------|
| CULVERT EXTENSIONS                                                                                                 | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| PEDESTRIAN LIGHTING<br>(Includes conduit and trenching) Street lighting is not eligible for federal reimbursement. | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| HANDRAIL                                                                                                           |      |       |            |        |                       |                               |
| Standard                                                                                                           | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Decorative                                                                                                         |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| <b>SUBTOTAL - SITE ACQUISITION &amp; HARDSCAPE CONSTRUCTION</b>                                                    |      |       |            | \$ -   | \$0                   | \$0                           |
| <b>LANDSCAPING &amp; IRRIGATION ITEMS</b>                                                                          |      |       |            |        |                       |                               |
| TREES<br>(Above 15 gallon in size as required per local code or special design requirements)                       | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| TREES (15 GALLON SIZE)                                                                                             | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| TREES (5 GALLON SIZE)                                                                                              | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| SHRUBS (5 GALLON SIZE)                                                                                             | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| SHRUBS (1 GALLON SIZE)                                                                                             | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| CACTUS (5 GALLON SIZE)                                                                                             | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| MULCH                                                                                                              |      |       |            |        |                       |                               |
| Decomposed Granite                                                                                                 | CY   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Organic                                                                                                            |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| TOPSOIL                                                                                                            | CY   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| SEEDING                                                                                                            | Acre |       |            | \$0.00 | \$0.00                | \$0.00                        |
| TURF SOD                                                                                                           | SY   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| BOULDERS                                                                                                           | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| IRRIGATION SYSTEM                                                                                                  |      |       |            |        |                       |                               |
| Drip                                                                                                               | SF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Turf                                                                                                               |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| SLEEVING FOR IRRIGATION SYSTEM                                                                                     |      |       |            |        |                       |                               |
| Directional Bore                                                                                                   | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| Cut and Patch                                                                                                      |      |       |            | \$0.00 | \$0.00                | \$0.00                        |
| LANDSCAPE HEADER CURB                                                                                              | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| LANDSCAPE ESTABLISHMENT<br>(Typically 4.5% of the cost of landscaping)                                             | LS   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| <b>SUBTOTAL - LANDSCAPING &amp; IRRIGATION ITEMS</b>                                                               |      |       |            | \$ -   | \$0                   | \$0                           |
| <b>SITE FURNISHINGS</b>                                                                                            |      |       |            |        |                       |                               |
| BENCHES                                                                                                            | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| SEATWALLS                                                                                                          | LF   |       |            | \$0.00 | \$0.00                | \$0.00                        |
| BIKE RACKS                                                                                                         | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| TRASH RECEPTACLES                                                                                                  | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| DRINKING FOUNTAINS                                                                                                 | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| SIGNAGE (Standard Traffic Control)                                                                                 | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| TREE GRATES                                                                                                        | Each |       |            | \$0.00 | \$0.00                | \$0.00                        |
| <b>SUBTOTAL - SITE FURNISHINGS</b>                                                                                 |      |       |            | \$ -   | \$0                   | \$0                           |

## ADOT Cost Estimate Tool (Page 4 of 4)

**Traffic Control Costs**  
**Construction Contingencies**  
**Construction Administration**

**ADOT Review Fees**

| ITEM DESCRIPTION                                                                                                                                                                                            | UNIT | QUAN. | UNIT PRICE  | TOTAL       | FEDERAL FUNDS @ 94.3% | SPONSOR MATCHING FUNDS @ 6.7% |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|-------------|-------------|-----------------------|-------------------------------|
| <b>OTHER CONSTRUCTION ITEMS</b> (List line items)                                                                                                                                                           |      |       |             |             |                       |                               |
|                                                                                                                                                                                                             |      |       |             | \$0.00      | \$0.00                | \$0.00                        |
|                                                                                                                                                                                                             |      |       |             | \$0.00      | \$0.00                | \$0.00                        |
|                                                                                                                                                                                                             |      |       |             | \$0.00      | \$0.00                | \$0.00                        |
|                                                                                                                                                                                                             |      |       |             | \$0.00      | \$0.00                | \$0.00                        |
|                                                                                                                                                                                                             |      |       |             | \$0.00      | \$0.00                | \$0.00                        |
|                                                                                                                                                                                                             |      |       |             | \$0.00      | \$0.00                | \$0.00                        |
|                                                                                                                                                                                                             |      |       |             | \$0.00      | \$0.00                | \$0.00                        |
| <b>SUBTOTAL - OTHER CONSTRUCTION LINE ITEMS</b>                                                                                                                                                             |      |       |             | \$ -        | \$0                   | \$0                           |
| <b>MOBILIZATION AND ADMINISTRATION COSTS</b>                                                                                                                                                                |      |       |             |             |                       |                               |
| CONTRACTOR MOBILIZATION (Typically 8% of construction cost)                                                                                                                                                 | LS   | 1     |             | \$0.00      | \$0.00                | \$0.00                        |
| TRAFFIC CONTROL (0-4% of construction cost)                                                                                                                                                                 | LS   | 1     |             | \$0.00      | \$0.00                | \$0.00                        |
| CONSTRUCTION SURVEY & LAYOUT (Typically 1% of construction cost)                                                                                                                                            | LS   | 1     |             | \$0.00      | \$0.00                | \$0.00                        |
| CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)                                                                                                                                              | LS   | 1     |             | \$0.00      | \$0.00                | \$0.00                        |
| CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)                                                                                                                                            | LS   | 1     |             | \$0.00      | \$0.00                | \$0.00                        |
| <b>SUBTOTAL - MOBILIZATION &amp; ADMINISTRATION COSTS</b>                                                                                                                                                   |      |       |             | \$ -        | \$0.00                | \$0.00                        |
| <b>TOTAL STAGE V COSTS (CONSTRUCTION)</b>                                                                                                                                                                   |      |       |             | \$ -        | \$0.00                | \$0.00                        |
| (Enter this amount in Box A below.)                                                                                                                                                                         |      |       |             |             |                       |                               |
| ADOT REVIEW FEES (Cannot be applied to the federal participation or the local match. On local Certification Acceptance or Self-administration projects, charge to \$3,000)                                  | LS   | 1     | \$30,000.00 | \$30,000.00 | NO ENTRY              |                               |
| <b>TOTAL PROJECT COST (All subtotals + ADOT review fee)</b>                                                                                                                                                 |      |       |             | \$ 30,000   | NO ENTRY              |                               |
| <b>SUMMARY OF FEDERAL AND LOCAL FUNDS</b>                                                                                                                                                                   |      |       |             |             |                       |                               |
| <b>TOTAL STAGE V COSTS (CONSTRUCTION) FROM THE ESTIMATE ABOVE, AND DESIGN COSTS IF REQUESTING FEDERAL FUNDS FOR DESIGN.</b>                                                                                 |      |       |             |             |                       |                               |
| Include design costs (Stages II thru IV) if federal funds are requested for design as shown under Design Costs in the federal column above.                                                                 |      |       |             |             |                       | BOX A                         |
| TOTAL FEDERAL FUNDS CAPPED @ 94.3% (94.3 x amount shown in Box A above).<br><i>Note: For local projects, the maximum federal funds that can be requested is \$500,000 (\$1,000,000 for state projects).</i> |      |       |             |             |                       | \$ -                          |
| TOTAL SPONSOR MATCHING FUNDS (6.7 x cost shown in Box A above).<br><i>Note: The maximum amount that should be shown on this line is \$30,223 for local projects (\$60,445 for state projects).</i>          |      |       |             |             |                       | \$ -                          |
| TOTAL SPONSOR ADDITIONAL FUNDS (OVERMATCH). Enter the amount in Box A in excess, if any, of \$530,223 for local projects or \$1,060,445 for state projects.                                                 |      |       |             |             |                       | \$ -                          |
| <b>TOTAL SPONSOR FUNDS</b> (Sum of Box C and Box D).                                                                                                                                                        |      |       |             |             |                       | \$ -                          |

**Bid Tabs** (available for four months after the State Transportation Award Date) can be found at:  
<https://azdot.gov/business/contracts-and-specifications/bid-tabulations>

4/21/2020 Bid Tabulations | ADOT

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### Bid Tabulations

| Bid Tabulation Results                                                            | Route County Milepost | TRACS #  | Project #    | Board Award Date |
|-----------------------------------------------------------------------------------|-----------------------|----------|--------------|------------------|
|  | 0000 GE 0             | T002701C | CLF-0(201)T  | 1/17/2020        |
|  | 180 NA 325            | H893901C | 180-B-(208)T | 1/17/2020        |
|  | 0000 PN CLG           | T016901C | CLG-0-(208)T | 1/17/2020        |
|  | 040 CN 198            | H881501C | 040-D-(234)T | 1/17/2020        |
|  | 010 PN 176            | F011301C | 010-C-(216)T | 2/21/2020        |

Bid Tabulations are available for four months after the State Transportation Award Date. Other Bid Tabulations can be requested by making a [Public Records Request](#) through the Office of Safety and Risk Management: 602-712-7327



## Bid Tab for A Roundabout Project in Flagstaff

ARIZONA DEPARTMENT OF TRANSPORTATION  
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION  
CONTRACTS AND SPECIFICATIONS SECTION

### TABULATION OF BIDS

|                      |                    |                        |                   |
|----------------------|--------------------|------------------------|-------------------|
| <b>TRACS No.</b>     | <b>Project No.</b> | <b>Highway Termini</b> | <b>Contract #</b> |
| 0000 CN FLA SH51101C | FLA-0-(209)T       | CITY OF FLAGSTAFF      | 2017065           |

|               |                 |                                |             |
|---------------|-----------------|--------------------------------|-------------|
| <b>County</b> | <b>District</b> | <b>Location</b>                | <b>Item</b> |
| COCONINO      | NORTHCENT       | SWITZER CANYON/TURQUOISE DR RO | LOCAL       |

|                     |                   |                         |                     |
|---------------------|-------------------|-------------------------|---------------------|
| <b>Gross Length</b> | <b>Net Length</b> | <b>Work Description</b> | <b>Prepared By:</b> |
| 0                   |                   | CONSTRUCT ROUNDABOUT    | Kamal Jalal         |

Printed: 02/07/2020

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### BID RESULTS FOR 2017065

Bid Opening Date : 03/02/2018

Prequalification Required, Engineer Specialist : Kamal Jalal

**Completion Date:**

150 Working Days

The proposed project is located in Coconino County in the City of Flagstaff at the intersection of Switzer Canyon Drive and Turquoise Drive. The work consists of constructing a new single lane roundabout, constructing retaining walls, raised medians and reconstruction of the existing Flagstaff Urban Trail System (FUTS). The work also includes removing and replacing asphalt concrete pavement, installing pipe, placing pavement markings, and other related work.

|                        | Bid Rank | Compared To Department Estimate | Bid Amount     | Contractor                                                                            | Extended Sum of Items |
|------------------------|----------|---------------------------------|----------------|---------------------------------------------------------------------------------------|-----------------------|
| <b>Low Bidder</b> →    | 1        | -1.5%                           | \$1,388,872.69 | MCDONALD BROS. CONSTRUCTION, INC.<br>1535 S. QUARTER HORSE LANE CAMP VERDE, AZ 86322  | \$1,388,872.69        |
| <b>ADOT Estimate</b> → |          | +                               | \$1,409,332.60 | DEPARTMENT ESTIMATE                                                                   | \$1,409,332.60        |
|                        | 2        | +6.4%                           | \$1,499,664.45 | VASTCO, INC.<br>425 INDUSTRIAL DRIVE CHINO VALLEY, AZ 86323                           | \$1,499,664.45        |
|                        | 3        | +9.3%                           | \$1,540,475.93 | FANN CONTRACTING, INC<br>PO BOX 4356 PRESCOTT, AZ 86302                               | \$1,540,475.93        |
|                        | 4        | +31.7%                          | \$1,856,363.00 | J. BANICKI CONSTRUCTION, INC.<br>4720 E. Cotton Gin Loop, Suite 240 Phoenix, AZ 85040 | \$1,856,363.00        |
|                        | 5        | +44.3%                          | \$2,033,333.33 | COMBS CONSTRUCTION COMPANY, INC.<br>P.O. BOX 10789 GLENDALE, AZ 85318                 | \$2,033,333.33        |
|                        | 6        | +54.3%                          | \$2,175,231.77 | HAYDON BUILDING CORP<br>4640 E. COTTON GIN LOOP PHOENIX, AZ 85040                     | \$2,175,231.77        |

**Bids for Construction Cost**

Winning Bidder is 1.5% Under Department Estimate (Difference = (\$20,459.91))

Printed: 02/07/2020

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\*\*\* Bid Tabs for Project SH51101C \*\*\*

| Item Number | Unit of Measure | Item Description                                   | Quantity  | Unit Price  | Extended Amount | Compared To Dept Estimate |
|-------------|-----------------|----------------------------------------------------|-----------|-------------|-----------------|---------------------------|
| 2010020     | EACH            | REMOVAL OF TREES                                   |           |             |                 |                           |
| Bid Rank    |                 | Department Estimate                                | 21.000    | \$700.000   | \$14,700.00     |                           |
| 1           |                 | MCDONALD BROS. CONSTRUCTION, INC.                  |           | \$635.000   | \$13,335.00     | -9.3%                     |
| 2           |                 | VASTCO, INC.                                       |           | \$400.000   | \$8,400.00      | -42.9%                    |
| 3           |                 | FANN CONTRACTING, INC                              |           | \$500.000   | \$10,500.00     | -28.6%                    |
| 4           |                 | J. BANICKI CONSTRUCTION, INC.                      |           | \$1,214.000 | \$25,494.00     | +73.4%                    |
| 5           |                 | COMBS CONSTRUCTION COMPANY, INC.                   |           | \$1,417.050 | \$29,758.05     | +102.4%                   |
| 6           |                 | HAYDON BUILDING CORP                               |           | \$1,100.000 | \$23,100.00     | +57.1%                    |
| 2020021     | L.F.T.          | REMOVAL OF CONCRETE CURB AND GUTTER                |           |             |                 |                           |
| Bid Rank    |                 | Department Estimate                                | 1,522.000 | \$10.000    | \$15,220.00     |                           |
| 1           |                 | MCDONALD BROS. CONSTRUCTION, INC.                  |           | \$4.720     | \$7,183.84      | -52.8%                    |
| 2           |                 | VASTCO, INC.                                       |           | \$4.150     | \$6,316.30      | -58.5%                    |
| 3           |                 | FANN CONTRACTING, INC                              |           | \$10.000    | \$15,220.00     | +0.0%                     |
| 4           |                 | J. BANICKI CONSTRUCTION, INC.                      |           | \$6.700     | \$10,197.40     | -33.0%                    |
| 5           |                 | COMBS CONSTRUCTION COMPANY, INC.                   |           | \$20.220    | \$30,774.84     | +102.2%                   |
| 6           |                 | HAYDON BUILDING CORP                               |           | \$9.300     | \$14,154.60     | -7.0%                     |
| 2020025     | SQ.FT.          | REMOVAL OF CONCRETE SIDEWALKS, DRIVEWAYS AND SLABS |           |             |                 |                           |
| Bid Rank    |                 | Department Estimate                                | 5,518.000 | \$2.000     | \$11,036.00     |                           |
| 1           |                 | MCDONALD BROS. CONSTRUCTION, INC.                  |           | \$1.350     | \$7,449.30      | -32.5%                    |
| 2           |                 | VASTCO, INC.                                       |           | \$2.050     | \$11,311.90     | +2.5%                     |
| 3           |                 | FANN CONTRACTING, INC                              |           | \$3.000     | \$16,554.00     | +50.0%                    |
| 4           |                 | J. BANICKI CONSTRUCTION, INC.                      |           | \$2.100     | \$11,587.80     | +5.0%                     |
| 5           |                 | COMBS CONSTRUCTION COMPANY, INC.                   |           | \$2.970     | \$16,388.46     | +48.5%                    |
| 6           |                 | HAYDON BUILDING CORP                               |           | \$2.100     | \$11,587.80     | +5.0%                     |
| 2020029     | SQ.YD.          | REMOVAL OF ASPHALTIC CONCRETE PAVEMENT             |           |             |                 |                           |
| Bid Rank    |                 | Department Estimate                                | 3,326.000 | \$8.000     | \$26,608.00     |                           |
| 1           |                 | MCDONALD BROS. CONSTRUCTION, INC.                  |           | \$6.500     | \$21,951.60     | -17.5%                    |
| 2           |                 | VASTCO, INC.                                       |           | \$4.250     | \$14,135.50     | -46.9%                    |
| 3           |                 | FANN CONTRACTING, INC                              |           | \$10.000    | \$33,260.00     | +25.0%                    |
| 4           |                 | J. BANICKI CONSTRUCTION, INC.                      |           | \$7.200     | \$23,947.20     | -10.0%                    |
| 5           |                 | COMBS CONSTRUCTION COMPANY, INC.                   |           | \$8.020     | \$26,674.52     | +0.2%                     |
| 6           |                 | HAYDON BUILDING CORP                               |           | \$15.750    | \$52,384.50     | +96.9%                    |
| 2020041     | L.F.T.          | REMOVAL OF PIPE                                    |           |             |                 |                           |
| Bid Rank    |                 | Department Estimate                                | 52.000    | \$40.000    | \$2,080.00      |                           |
| 1           |                 | MCDONALD BROS. CONSTRUCTION, INC.                  |           | \$48.800    | \$2,537.60      | +22.0%                    |
| 2           |                 | VASTCO, INC.                                       |           | \$15.400    | \$800.80        | -61.5%                    |
| 3           |                 | FANN CONTRACTING, INC                              |           | \$60.000    | \$3,120.00      | +50.0%                    |
| 4           |                 | J. BANICKI CONSTRUCTION, INC.                      |           | \$40.000    | \$2,080.00      | +0.0%                     |
| 5           |                 | COMBS CONSTRUCTION COMPANY, INC.                   |           | \$64.420    | \$3,349.84      | +61.1%                    |

Item Number



Bid Unit Prices





## Cost Estimating:

- ❑ Two basic ways to estimate a unit price:

### 1) Historical Data

- E2C2 (Estimated Engineering Construction Cost)
- Bid Tabs
- Input/Suggestions from Co-Workers
- Input/Suggestions from Consultants
- Input from C&S (Contracts & Specifications)
- Input from Contractors
- Input from District Resident Engineers

- ### 2) Cost-based Data (Equipment, Labor, Material Cost, Haul Cost, Production Rate)

**2008 Standard Specifications for Road and Bridge Construction**  
<https://azdot.gov/business/contracts-and-specifications/specifications>  
 Click “2008 Standard Specifications for Road and Bridge Construction”

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**Grading Roadway for Pavement** →

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## 2008 Standard Specifications for Road and Bridge Construction

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## Pay Item List:

<https://azdot.gov/business/contracts-and-specifications/specifications>

Click "Pay items". Download PDF. Press Ctrl F or click Find toolbar to open text search box.

| ITEM NUMBER | DESCRIPTION                                        | UNIT     |
|-------------|----------------------------------------------------|----------|
| 1070001     | CLAIMS AND ESCALATION SETTLEMENTS                  | L.SUM    |
| 1070001     | INSURANCE (ADDITIONAL REQUIRED)                    | L.SUM    |
| 1080100     | CONSTRUCTION PROGRESS SCHEDULE ADJUSTMENT          | L.SUM    |
| 1080200     | PROSECUTION AND PROGRESS ADJUSTMENT                | L.SUM    |
| 1080300     | SUBCONTRACTOR EARLY START SANCTION                 | L.SUM    |
| 1080400     | MAINTENANCE OF TRAFFIC CLOSURE SANCTION            | L.SUM    |
| 1080500     | DBE SUBSTITUTION/TERMINATION SANCTION              | L.SUM    |
| 1080505     | NOT MEETING CONTRACT DBE GOAL SANCTION             | L.SUM    |
| 1080600     | QUALITY CONTROL REPORTS SANCTION                   | L.SUM    |
| 1080800     | CONTRACT TIME EXTENDED OVERHEAD                    | EACH-DAY |
| 1080900     | PAYROLL SUBMITTALS SANCTION                        | L.SUM    |
| 1080905     | PAYMENT REPORTING SANCTIONS                        | L.SUM    |
| 1080910     | PROMPT PAY NON-COMPLIANCE SANCTION                 | L.SUM    |
| 1090025     | CASH FLOW PAYMENT                                  | EACH     |
| 2010001     | CLEARING AND GRUBBING                              | L.SUM    |
| 2010002     | CLEARING AND GRUBBING (                            | L.SUM    |
| 2010011     | CLEARING AND GRUBBING                              | ACRE     |
| 2010020     | REMOVAL OF TREES                                   | EACH     |
| 2020001     | REMOVAL OF STRUCTURES AND OBSTRUCTIONS             | L.SUM    |
| 2020002     | REMOVE BRIDGE                                      | L.SUM    |
| 2020003     | REMOVE BRIDGE (                                    | L.SUM    |
| 2020005     | REMOVAL OF BRIDGE RAILING                          | L.SUM    |
| 2020007     | REMOVAL OF MISCELLANEOUS CONCRETE                  | L.SUM    |
| 2020008     | REMOVAL OF STRUCTURAL CONCRETE                     | L.SUM    |
| 2020009     | REMOVAL OF STRUCTURAL CONCRETE                     | CU.YD.   |
| 2020010     | REMOVAL OF STRUCTURAL CONCRETE (                   | L.SUM    |
| 2020011     | REMOVAL OF BUILDINGS                               | EACH     |
| 2020014     | REMOVAL OF STRUCTURES AND OBSTRUCTIONS (           | L.SUM    |
| 2020017     | REMOVAL OF ASPHALTIC CONCRETE (                    | L.SUM    |
| 2020019     | REMOVAL OF EMBANKMENT CURB                         | L.FT.    |
| 2020020     | REMOVAL OF CONCRETE CURB                           | L.FT.    |
| 2020021     | REMOVAL OF CONCRETE CURB AND GUTTER                | L.FT.    |
| 2020023     | REMOVE EXISTING CONCRETE MEDIAN BARRIER            | L.FT.    |
| 2020024     | REMOVAL OF CONCRETE SIDEWALKS, DRIVEWAYS AND SLABS | L.SUM    |
| 2020025     | REMOVAL OF CONCRETE SIDEWALKS, DRIVEWAYS AND SLABS | SQ.FT.   |
| 2020027     | REMOVAL OF CONCRETE BARRIER                        | L.FT.    |
| 2020029     | REMOVAL OF ASPHALTIC CONCRETE PAVEMENT             | SQ.YD.   |
| 2020030     | REMOVAL OF ASPHALTIC CONCRETE PAVEMENT (           | SQ.YD.   |
| 2020031     | REMOVAL OF PORTLAND CEMENT CONCRETE PAVEMENT       | SQ.YD.   |
| 2020032     | REMOVAL OF ASPHALTIC CONCRETE PAVEMENT (           | SQ.YD.   |
| 2020033     | REMOVE (                                           | SQ.YD.   |
| 2020034     | REMOVAL OF SIGNS                                   | L.SUM    |

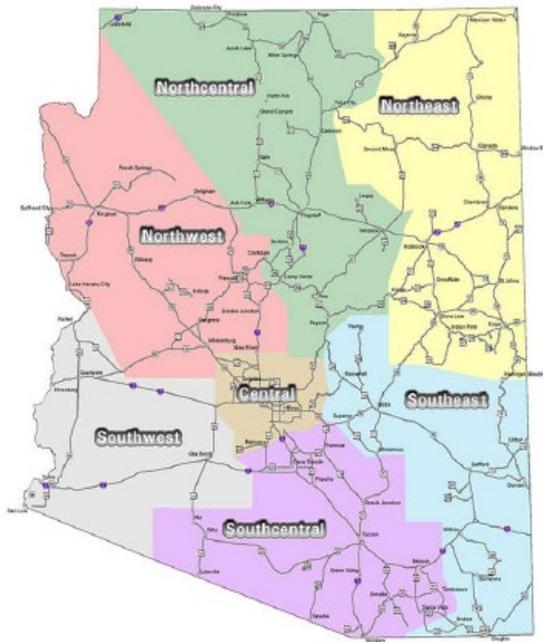


## ADOT District Map:

<https://azdot.gov/business/district-contacts>

### District Contacts

- Overview
- Central
- Northcentral
- Northeast
- Northwest
- Southcentral
- Southeast
- Southwest



## E2C2 – Estimated Engineering Construction Cost can be found at:

ADOT LPA Website: <https://azdot.gov/business/programs-and-partnerships/local-public-agency>

Click “Project Initiation”. Click “Historical Bid Unit Prices E2C2”.

OR Click: <https://apps.azdot.gov/e2c2/HistoricalPrice.aspx>

**E2C2**



### Project Initiation

|                    |                              |                               |                     |
|--------------------|------------------------------|-------------------------------|---------------------|
| Home (LPA)         | Federal Aid Highway Programs | Certification Acceptance (CA) | Self-Administration |
| Project Initiation | Communication Bulletins      | Stakeholder Meetings          |                     |
| Resource Materials | Trainings                    | Contact Us                    |                     |

**Required Documents:**

- [Project Initiation Sample Letter](#) Rev. 1/23/20
- [Project Initiation Form](#) Rev. 1/23/20
- [ADOT Functional Classification Map](#)
- A legible copy of the local MPO/COG TIP page, with the project highlighted and all phases of the project shown in a programmed year
- Supporting Documentation

**Supporting Documentation:**

Supporting documentation is a required part of the packet; however, the type of supporting documentation is up to you.

The ADOT LPA Section has tools available on our website to help with projecting schedule and estimated costs, including:

- [Sample Scoping Document](#) (.doc) Rev. 2/6/18
- [Project Scoping Document Guidelines](#) (.pdf)
- [ADOT Cost Estimate Tool](#) (.xls) Rev. 4/10/19
- [Historical Bid Unit Prices E2C2](https://apps.azdot.gov)** (apps.azdot.gov)

Other types of supporting documentation can include: A copy of the approved COG/MPO funding application or workbook, PA, any other types of planning and scoping documents that give details about the project.

**Additional Resources:**

- [Project Initiation Flow Chart](#) (.pdf)

**BUSINESS**

- ADOT Business Coach On Demand
- Business Engagement and Compliance
- Engineering and Construction
- Contracts and Specifications
- Project Management Services
- Highway Maintenance
- Procurement
- Engineering Consultants
- Programs and Partnerships
  - Adopt a Highway
  - Border Liaison Unit
  - Every Day Counts Initiative
  - Grand Canyon State Logo Sign Program
  - Joint Project Agreement
  - Local Public Agency
    - Home (LPA)
      - Certification Acceptance
      - Federal Aid Highway Programs
    - Project Initiation**
    - Resource Materials
    - Self-Administration (SA)
    - Trainings (LPA)
    - Communication Bulletins
    - Stakeholder Council
    - Contact Us

## E2C2 – Estimated Engineering Construction Cost

4/20/2020
E2C2 Historical Unit Price

### Estimated Engineering Construction Cost E2C2

Version 5.0.20.31

---

**Bid Item History**

Please select at least one parameter condition:

Route:

Bid Opening (From mm-dd-yyyy):  1

Bid Opening (To mm-dd-yyyy):

County:

Item Number:  2

Item Description:

TRACS Number:

District:  3

Beg. MilePost:  +/-

Quantity:  +/-

**Sort Report By:**

| Criteria:   |    | Selected: |
|-------------|----|-----------|
| Route       | >> |           |
| County      | << |           |
| Bid Opening |    |           |
| Tracs       |    |           |

Retrieve
→

Retrieve

Close

Disclaimer: The Bid History information displayed is NOT intended to be a recommended unit price. Other resources may be required in determining an accurate unit prices for your project.



## Sample Project Initiation Request From a Local for Pathway Project

ADOT LPA Project Initiation Form (includes Scope, Schedule, Budget):

### Project Scope (Detailed Description of Work):

This project consists of the design and construction of approximately 3 miles of a 10 ft wide asphalt multiuse (ped & bike) pathway along a railroad and a wash. The pathway is to be located on the east side of Grand Avenue from Baffert Drive to Country Club Drive with a spur link along the south side of Apache Boulevard between Grand Avenue and the high school. The trail pavement section is to be 2 in. asphalt placed on 4 in. compacted aggregate base course. The project includes additional construction work items to make a fully functional multiuse path.



## Quantity Takeoff Check

### Grading Roadway for Pavement (S.Y.):

3 miles x (5,280 ft./mile) x 10 ft. (wide) = 158,400 sq. ft. x (1 sq. yd. / 9 sq. ft.) =  
**17,600 S.Y.**

### Aggregate Base (C.Y.):

3 miles x (5,280 ft./mile) x 10 ft. (wide) x (4 in./12 in./ft.) = 52,800 cu. ft. x (1 cu. yd. / 27 cu. ft.) =  
**1,955 C.Y.**

### Asphaltic Concrete (TON):

3 miles x 5,280 ft./mile) x 10 ft. (wide) x (2 in./12 in./ft.) = 26,400 cu. ft. x (150 lb./cu.ft.)—unit weight of AC =  
3,960,000 lbs. x (1 ton/2000 lbs.) = **1,980 TONS**

# Local Pathway Estimate

Pathway (w/ Maricopa edge)

| ITEM No. | ITEM DESCRIPTION                  | UNIT | DATE: 10/22/15 | QUANTITY | UNIT PRICE  | AMOUNT       |
|----------|-----------------------------------|------|----------------|----------|-------------|--------------|
| 2050001  | Grading Roadway for Pavement      | S.Y. |                | 3,872    | \$1.00      | \$3,872.00   |
| 3030003  | Aggregate Base                    | C.Y. |                | 1,244    | \$60.00     | \$74,640.00  |
| 4060002  | Asphaltic Concrete (No. 2)        | TON  |                | 2,519    | \$110.00    | \$277,090.00 |
| 5150101  | Utility Impact Allowance          | F.A. |                | 15,000   | \$1.00      | \$15,000.00  |
| 7010005  | Traffic Control                   | L.S. |                | 1        | \$10,000.00 | \$10,000.00  |
| 8100001  | AZPDES/NPDES (Original)           | L.S. |                | 1        | \$10,000.00 | \$10,000.00  |
| 8100012  | AZPDES/NPDES Allowance (Modified) | F.A. |                | 5,000    | \$1.00      | \$5,000.00   |
| 9010001  | Mobilization                      | L.S. |                | 1        | \$55,000.00 | \$55,000.00  |
| 9300100  | Incidental Items Allowance        | F.A. |                | 25,000   | \$1.00      | \$25,000.00  |
| Subtotal |                                   |      |                |          |             | \$475,602.00 |

|       |                               |  |
|-------|-------------------------------|--|
| Check | 2050001<br>3030003<br>4060002 |  |
|-------|-------------------------------|--|

|       |                                                                           |                             |
|-------|---------------------------------------------------------------------------|-----------------------------|
| Check | Unknowns<br>Construction Contingency (20%)<br>CONSTRUCTION COST SUBTOTAL: | \$95,120.40<br>\$570,722.40 |
|-------|---------------------------------------------------------------------------|-----------------------------|

|       |                                                                                                                                           |                                                                                                                              |        |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------|
| Check | Design Cost<br>Engineering Design (12%)<br>Environmental Clearance<br>Construction Administration (15%)<br>Construction Survey and Layout | Programmed Design Cost:<br>\$98K+\$30K(ADOT Review Fee) = \$128K<br>\$68,486.69<br>\$30,000.00<br>\$85,608.36<br>\$20,000.00 | ~\$98K |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------|

|                           |                     |
|---------------------------|---------------------|
| <b>TOTAL PROJECT COST</b> | <b>\$774,817.45</b> |
|---------------------------|---------------------|

## Arizona Department of Transportation

Estimated Engineering Construction Cost

Arizona Unit Price Bid History

Qty.

Bidder's Unit Prices

| Bid Date                  | Item #  | Description                  | Measure | Tracs    | Rt/Co/MP     | Project Name                                 | Length | Quantity  | State  | Bidder 1 | Bidder 2 | Bidder 3 |
|---------------------------|---------|------------------------------|---------|----------|--------------|----------------------------------------------|--------|-----------|--------|----------|----------|----------|
| <b>SOUTHCENT DISTRICT</b> |         |                              |         |          |              |                                              |        |           |        |          |          |          |
| 05/22/2015                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | H841101C | 010 PM 284.3 | DAVIDSON CANYON WB BRIDGE, STR #598          | 0.5    | 3,048.00  | 5.00   | 3.00     | 2.00     | 1.50     |
| 05/22/2015                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | H866501C | 010 CH 296.0 | MESCAL ROAD - JCT SR 90                      | 5.0    | 2,408.00  | 5.00   | 3.00     | 2.00     | 1.50     |
| 10/30/2015                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | B898201C | 0000 PN CLG  | CENTRAL AVE; AZ BLVD - MAIN STREET, COOLIDGE | 0.4    | 17,174.00 | 3.12   | 5.00     | 8.00     | 4.50     |
| 08/21/2015                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | H817101C | 008 PN 170.2 | BIANCO ROAD - JCT I-10                       | 8.7    | 3,211.00  | 5.00   | 3.00     | 3.00     | 18.00    |
| 08/14/2015                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | H838501C | 086 PM 114.9 | TOWN OF BELLS PEDESTRIAN BRIDGES             | 0.2    | 1,581.00  | 15.00  | 15.00    | 40.00    | 15.00    |
| 07/22/2016                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | H877401C | 010 PM 287.0 | CRAYCROFT T10P, STR 594-#595                 | 2.0    | 259.00    | 15.00  | 5.00     | 18.00    | 15.00    |
| 06/09/2017                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | S203501C | 0000 SC NO9  | CRAWFORD ST, SONOITA AVE - MCNAB DR.         | 0.4    | 8,402.00  | 7.00   | 8.15     | 17.25    | .00      |
| 05/28/2017                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | S213001C | 0000 PN CLG  | MAIN ST, COOLIDGE AVE- PINKLEY AVE           | 0.5    | 18,065.00 | 6.00   | 4.50     | 7.50     | 8.50     |
| 10/28/2016                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | H868301C | 082 SC 28.0  | MP-28 - JCT SR-83                            | 5.0    | 800.00    | 12.00  | 22.50    | 18.00    | 18.00    |
| 05/05/2017                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | T005501C | 0000 PN C86  | FLORENCE BLVD PEDESTRIAN HYBRID BEACON       | 0.0    | 10.00     | 100.00 | 75.00    | 125.00   | 275.00   |
| 09/22/2017                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | F006301C | 010 PM 287.0 | WILMOT ROAD T10P AND EARP WASH TRIG BR       | 3.0    | 223.00    | 15.00  | 30.00    | 10.00    | 9.30     |
| 02/09/2018                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | H871701C | 092 CH 321.2 | JCT SR 90 - KACHINA                          | 4.0    | 10,560.00 | 5.00   | 5.00     | 1.25     | 9.00     |
| 06/08/2018                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | 8L84901C | 0000 PM MRN  | SANTA CRUZ RIVER SHARED USE PATH             | 2.7    | 21,714.00 | 5.00   | 1.00     | 3.50     | 5.25     |
| 01/11/2019                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | F011201C | 008 PN 147.8 | SW OF MARICOPA - S OF STANFIELD              | 10.9   | 9,901.00  | 9.00   | 15.00    | 6.00     | 18.00    |
| 03/08/2019                | 2050001 | GRADING ROADWAY FOR PAVEMENT | SQ.YD.  | T014201C | 0000 SC NO9  | VALLE VERDE/PASEO VERDE DRIVE PAVING PROJECT | 0.2    | 4,187.00  | 15.00  | 12.00    | .00      | .00      |

## Key Items in Local Pathway Estimate

| ITEM NO. | DESCRIPTION                        | UNIT   | LOCAL |            |                  | ADOT LPA |            |                  |
|----------|------------------------------------|--------|-------|------------|------------------|----------|------------|------------------|
|          |                                    |        | QTY.  | UNIT PRICE | AMOUNT           | QTY.     | UNIT PRICE | AMOUNT           |
| 2050001  | GRADING ROADWAY FOR PAVEMENT       | SQ.YD. | 3,872 | 1.00       | \$3,872          | 17,600   | 5.00       | \$88,000         |
| 3030022  | AGGREGATE BASE, CLASS 2            | CU.YD. | 1,244 | 60.00      | \$74,640         | 1,955    | 110.00     | \$215,050        |
| 4090003  | ASPHALTIC CONCRETE (MISC. STRUCT.) | TON    | 2,519 | 110.00     | \$277,090        | 1,980    | 120.00     | \$237,600        |
|          | <b>TOTAL FOR 3 ITEMS:</b>          |        |       |            | <b>\$355,602</b> |          |            | <b>\$540,650</b> |
|          | <b>CONSTRUCTION COST:</b>          |        |       |            | <b>\$676,331</b> |          |            |                  |
|          | <b>DESIGN COST:</b>                |        |       |            | <b>\$128,486</b> |          |            | <b>\$380,000</b> |
|          | <b>GRAND TOTAL:</b>                |        |       |            | <b>\$804,817</b> |          |            |                  |

## Key Items in Local Pathway Estimate

| ITEM NO. | DESCRIPTION                        | UNIT   | <u>LOCAL</u> |            |                  | <u>ADOT LPA</u> |            |                  | <u>REVISED LOCAL</u> |            |                    |
|----------|------------------------------------|--------|--------------|------------|------------------|-----------------|------------|------------------|----------------------|------------|--------------------|
|          |                                    |        | QTY.         | UNIT PRICE | AMOUNT           | QTY.            | UNIT PRICE | AMOUNT           | QTY.                 | UNIT PRICE | AMOUNT             |
| 2050001  | GRADING ROADWAY FOR PAVEMENT       | SQ.YD. | 3,872        | 1.00       | \$3,872          | 17,600          | 5.00       | \$88,000         | 17,600               | 5.00       | \$88,000           |
| 3030022  | AGGREGATE BASE, CLASS 2            | CU.YD. | 1,244        | 60.00      | \$74,640         | 1,955           | 110.00     | \$215,050        | 1,955                | 110.00     | \$215,050          |
| 4090003  | ASPHALTIC CONCRETE (MISC. STRUCT.) | TON    | 2,519        | 110.00     | \$277,090        | 1,980           | 120.00     | \$237,600        | 1,980                | 120.00     | \$237,600          |
|          | <b>TOTAL FOR 3 ITEMS:</b>          |        |              |            | <b>\$355,602</b> |                 |            | <b>\$540,650</b> |                      |            | <b>\$540,650</b>   |
|          | <b>CONSTRUCTION COST:</b>          |        |              |            | <b>\$676,331</b> |                 |            |                  |                      |            | <b>\$945,000</b>   |
|          | <b>DESIGN COST:</b>                |        |              |            | <b>\$128,486</b> |                 |            | <b>\$380,000</b> |                      |            | <b>\$380,000</b>   |
|          | <b>GRAND TOTAL:</b>                |        |              |            | <b>\$804,817</b> |                 |            |                  |                      |            | <b>\$1,325,000</b> |

## Sample Project Initiation Request From A Local Agency for Roundabout (Included a Detailed Construction Estimate)

### 7. Detailed Con Estimate

| ITEM NO. | ITEM DESCRIPTION                                            | UNIT   | QUANTITY | UNIT PRICE | AMOUNT       |
|----------|-------------------------------------------------------------|--------|----------|------------|--------------|
| 2010020  | REMOVAL OF TREES                                            | EACH   | 2        | \$550.00   | \$1,100.00   |
| 2020021  | REMOVAL OF CONCRETE CURB AND GUTTER                         | L.FT.  | 1,600    | \$15.00    | \$24,000.00  |
| 2020025  | REMOVAL OF CONCRETE SIDEWALKS, DRIVEWAYS AND SLABS          | SQ.FT. | 5,600    | \$4.00     | \$22,400.00  |
| 2020029  | REMOVAL OF ASPHALTIC CONCRETE PAVEMENT                      | SQ.YD. | 6,000    | \$10.00    | \$60,000.00  |
| 2020041  | REMOVAL OF PIPE                                             | L.FT.  | 60       | \$40.00    | \$2,400.00   |
|          | REMOVAL OF TRAFFIC SIGNAL CABINET                           | EACH   | 1        | \$8,000.00 | \$8,000.00   |
| 2020052  | REMOVE (WOODEN POSTS)                                       | L.FT.  | 150      | \$8.00     | \$1,200.00   |
| 2020053  | REMOVE (CATCH BASIN)                                        | EACH   | 5        | \$750.00   | \$3,750.00   |
| 2020057  | REMOVE AND SALVAGE (SIGNS)                                  | EACH   | 20       | \$100.00   | \$2,000.00   |
| 2020060  | REMOVE AND SALVAGE (STREET LIGHT POLE AND LUMINAIRE)        | EACH   | 7        | \$800.00   | \$5,600.00   |
| 2030301  | ROADWAY EXCAVATION                                          | CU.YD. | 1,500    | \$20.00    | \$30,000.00  |
| 3030022  | AGGREGATE BASE, CLASS 2                                     | CU.YD. | 1000     | \$105.00   | \$105,000.00 |
| 4090003  | ASPHALTIC CONCRETE (MISCELLANEOUS STRUCTURAL)               | TON    | 1,200    | \$150.00   | \$180,000.00 |
| 5011015  | PIPE, REINFORCED CONCRETE, CLASS V, 18"                     | L.FT.  | 60       | \$100.00   | \$6,000.00   |
| 5011501  | PIPE, REINFORCED CONCRETE (CLASS V 14" X 23")               | L.FT.  | 35       | \$175.00   | \$6,125.00   |
| 5019007  | PIPE (SLEEVES) (6")                                         | L.FT.  | 195      | \$65.00    | \$12,675.00  |
| 5030091  | CONCRETE CATCH BASIN (C-15.40) SUMP ONLY, H=8' OR LESS      | EACH   | 1        | \$4,000.00 | \$4,000.00   |
| 5030092  | CONCRETE CATCH BASIN (C-15.40) ONE 3.5' WING, H=8' OR LESS  | EACH   | 1        | \$4,250.00 | \$4,250.00   |
| 5030094  | CONCRETE CATCH BASIN (C-15.40) ONE 7.5' WING, H=8' OR LESS  | EACH   | 1        | \$5,000.00 | \$5,000.00   |
| 5030104  | CONCRETE CATCH BASIN (C-15.40) ONE 19.5' WING, H=8' OR LESS | EACH   | 2        | \$7,000.00 | \$14,000.00  |
| 5050201  | RESET FRAME AND COVER FOR MANHOLE (DETAIL O)                | EACH   | 6        | \$900.00   | \$5,400.00   |
| 6070038  | SLIP BASE (PERFORATED POSTS)                                | EACH   | 35       | \$250.00   | \$8,750.00   |
| 6070055  | SIGN POST (PERFORATED) (2 1/2 S)                            | L.FT.  | 30       | \$14.00    | \$420.00     |
| 6070057  | SIGN POST (PERFORATED) (2 1/2 T)                            | L.FT.  | 490      | \$18.00    | \$8,820.00   |
| 6070060  | FOUNDATION FOR SIGN POST (CONCRETE)                         | EACH   | 40       | \$250.00   | \$10,000.00  |
| 6080005  | WARNING, MARKER, OR REGULATORY SIGN PANEL                   | SQ.FT. | 270      | \$30.00    | \$8,100.00   |
| 6080025  | FLAT SHEET ALUMINUM SIGN PANEL                              | SQ.FT. | 120      | \$30.00    | \$3,600.00   |
| 7015091  | SPECIALTY SIGNS                                             | SQ.FT. | 140      | \$20.00    | \$2,800.00   |
| 7080001  | PERMANENT PAVEMENT MARKING (PAINTED) (WHITE)                | L.FT.  | 2,300    | \$0.15     | \$345.00     |
| 7080011  | PERMANENT PAVEMENT MARKING (PAINTED) (YELLOW)               | L.FT.  | 3,700    | \$0.15     | \$555.00     |

## Key Items in Local Roundabout Estimate

| ITEM NO.                  | DESCRIPTION                                          | UNIT    | <u>LOCAL</u> |            |                    | <u>BID TABS or RESULTS</u> |            |                    | <u>E2C2 (NOW)</u> |            |                    |
|---------------------------|------------------------------------------------------|---------|--------------|------------|--------------------|----------------------------|------------|--------------------|-------------------|------------|--------------------|
|                           |                                                      |         | QTY.         | UNIT PRICE | AMOUNT             | QTY.                       | UNIT PRICE | AMOUNT             | QTY.              | UNIT PRICE | AMOUNT             |
| 3030022                   | AGGREGATE BASE, CLASS 2                              | CU. YD. | 1,000        | 105.00     | \$105,000          | 1,000                      | 105.00     | \$105,000          | 1,000             | 110.00     | \$110,000          |
| 4090003                   | ASPHALTIC CONCRETE (MISC. STRUCT.)                   | TON     | 1,200        | 150.00     | \$180,000          | 1,200                      | 130.00     | \$156,000          | 1,200             | 130.00     | \$156,000          |
| 9240139                   | MISCELLANEOUS WORK (CONCRETE TRUCK APRON) (DETAIL J) | SQ. YD. | 265          | 65.00      | \$17,225           | 265                        | 130.00     | \$34,450           | 265               | 130.00     | \$34,450           |
| <b>TOTAL FOR 3 ITEMS:</b> |                                                      |         |              |            | <b>\$302,225</b>   |                            |            | <b>\$295,450</b>   |                   |            | <b>\$300,450</b>   |
| <b>CONSTRUCTION COST:</b> |                                                      |         |              | Original:  | <b>\$1,385,000</b> |                            |            | <b>\$1,671,648</b> |                   | Final:     | <b>\$1.7-\$2.2</b> |
| <b>DESIGN COST:</b>       |                                                      |         |              | Original:  | <b>\$360,000</b>   |                            |            | <b>\$582,000</b>   |                   | Final:     | <b>\$480,000</b>   |
| <b>ROW COST:</b>          |                                                      |         |              | Original:  | <b>\$123,000</b>   |                            |            | <b>\$0</b>         |                   | Final:     | <b>\$123,000</b>   |
| <b>GRAND TOTAL:</b>       |                                                      |         |              |            | <b>\$1,868,000</b> |                            |            | <b>\$2,253,648</b> |                   |            | <b>\$2,303,000</b> |



## Summary

- What do you need to do a planning level estimate?
  - Develop a **detailed description of work** (Itemize your assumptions).
    - Consider all disciplines (development through construction).
    - Identify unknowns or uncertainties to minimize risk.
    - Make some assumptions and do some calculations; Spot check.
  - Consider the funding program and timeframe and it's impacts to the cost.
  - Research project costs and bid tabs for similar types of projects.
    - Look up recent historical unit prices using E2C2.
  - **Revisit the project cost estimate when you initiate the project.**
- Our goal of stewardship and oversight is to deliver a quality and safe project for a reasonable price.

# Questions?

# ADOT LPA Section Contacts/Resources

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**LPA Section Website**

<https://azdot.gov/node/5434>

(Azdot.gov- Business- Programs and Partnerships- Local Public Agency Section)

- ❖ Certification Acceptance (CA) Information
- ❖ Project Initiation
- ❖ Federal Aid Program Overviews
- ❖ Communication Bulletins
- ❖ EDC Stakeholder Meetings
- ❖ Training Resources
- ❖ Resource Materials (LPA Manual, CA Manual)
- ❖ Links to other ADOT Technical Group Pages

**Federal-aid Essentials for Local Public Agencies**

<http://www.fhwa.dot.gov/federal-aidessentials/index.cfmFedera>



# Planning Level Cost Estimating

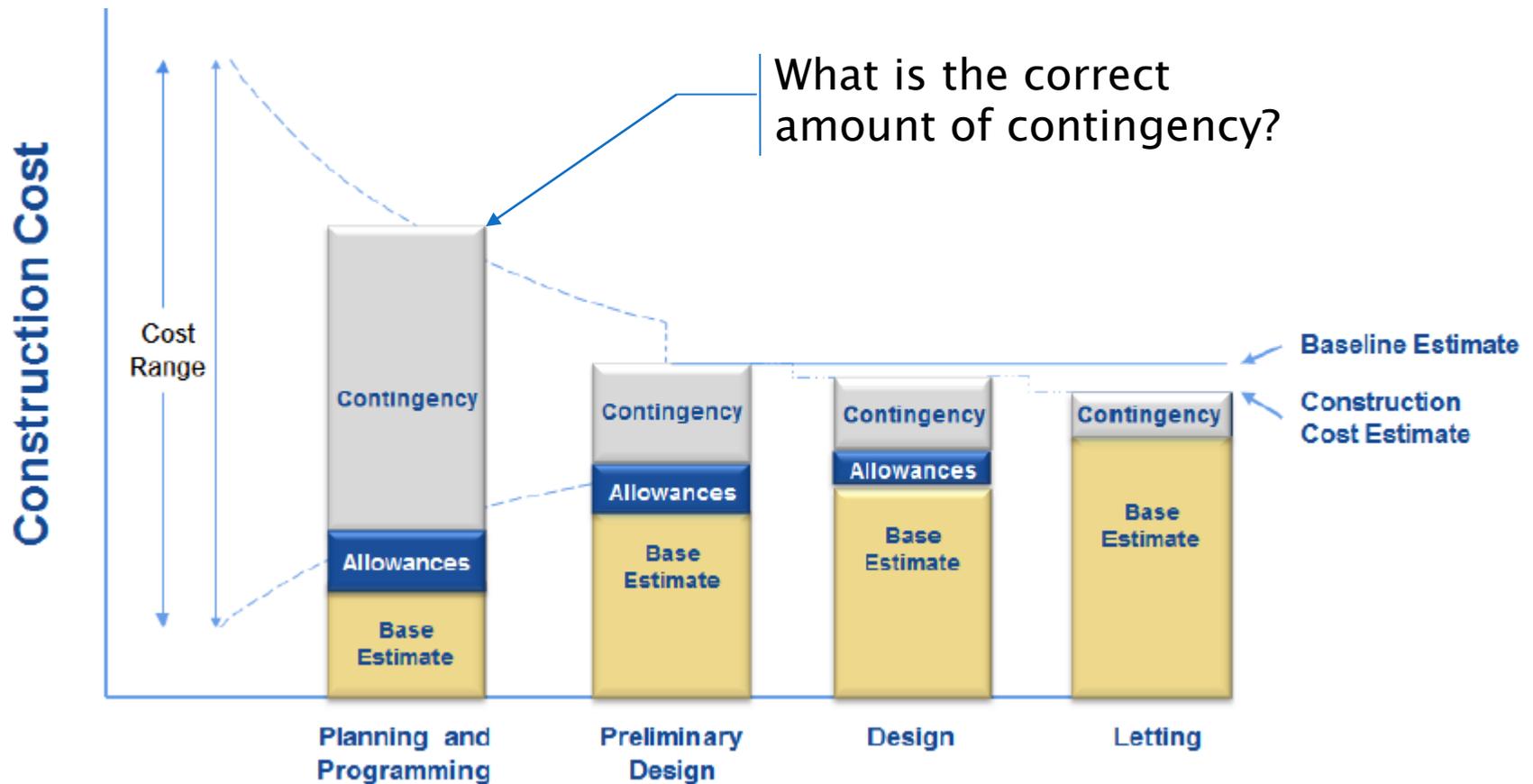
**Steve Wilson P.E.**

September 10, 2020

# Planning Level Cost Estimating Goals:

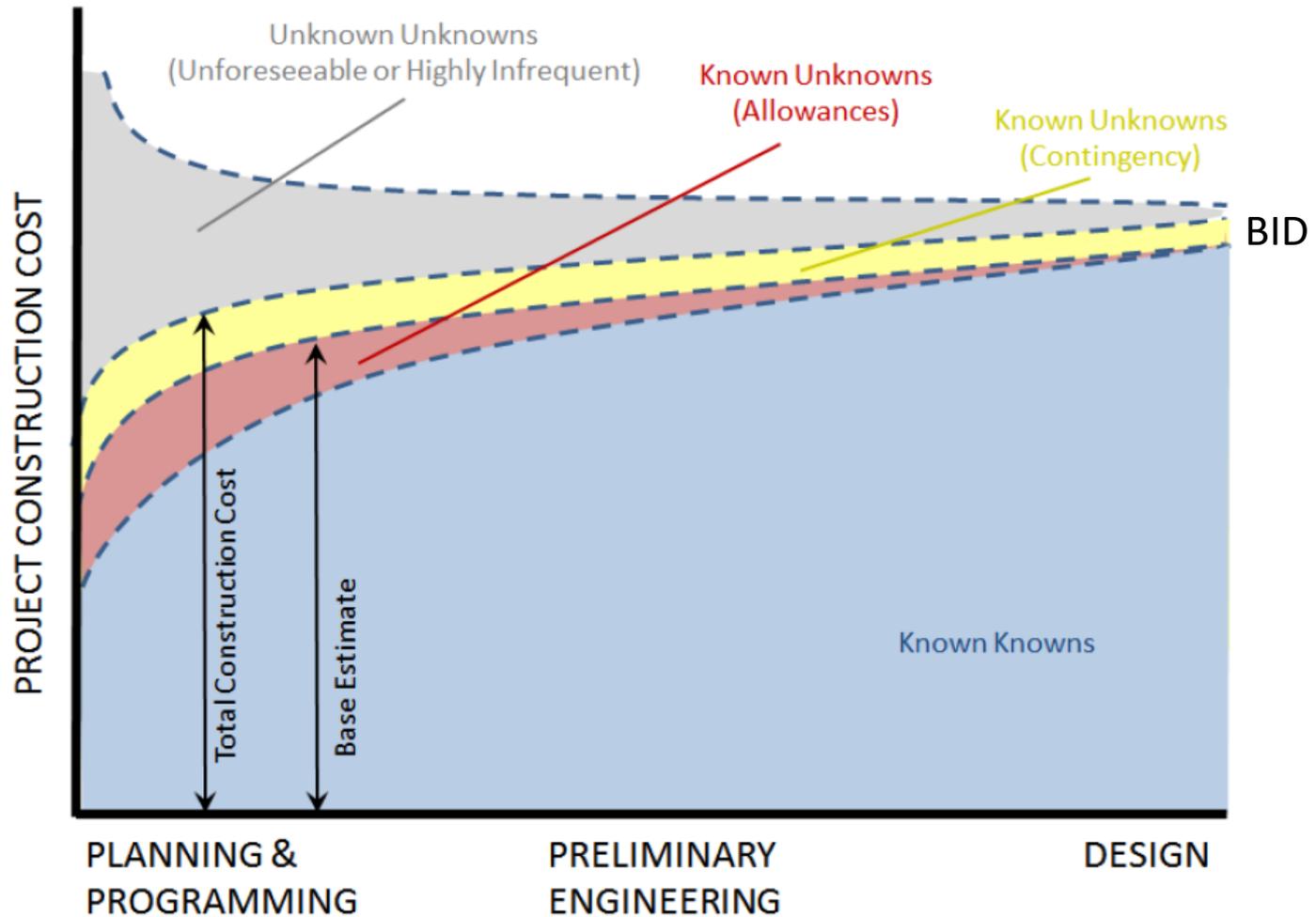
- Establish a framework for the cost estimating process
- Acknowledge uncertainty and manage risks
- Achieve accuracy

# Maturity of Cost Estimate



*The more mature a project is, the more defined the scope is.*

# Project Development



# Cost Estimate Information types

| Information Types    | Principles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Known/<br>Knowns     | Estimators should prepare their estimates considering what is defined in the project scope or drawings and apply the appropriate estimating method to determine the Base Estimate costs. For some known work items, it may not be possible to break down the cost to bid items and quantities until the design has matured. These known items, however, can be accounted for in the Base Estimate through an allowance that serves as a placeholder until the design advances with detailed information. For example, placing an allowance in the estimate for “drainage items” because it is known to be needed but the design of the drainage system has not been designed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Known/<br>Unknowns   | <p>Known Unknowns are items that are known to be required on the project, but at a particulate project development stage are not yet drawn on the plans and not yet quantifiable. typically fall within two categories:</p> <ul style="list-style-type: none"><li>• general uncertainties such as the variability in unit prices and quantities for bid items, or an allowance for drainage when the drainage plan has not be determined or designed; and</li><li>• uncertain events – risks – that the project team attempts to identify and quantify.</li></ul> <p>Allowances are used to account for the first category of known unknowns.</p> <p>Contingency is needed in an estimate to account for the second type of known unknowns. Risk management practices and tools can assist in the calculation of appropriate contingencies to account for these costs. Note: documentation of assumptions and methods for identifying and accounting for known unknowns within an estimate is critical to ensure that risk – and associated contingency – is not double-counted. For example, if a risk is associated with lack of geotechnical information which may impact the pavement design, this could be captured in either the bid item quantity variability or as a discrete risk. Either way is acceptable, however the risk should not be double counted which would lead to essentially doubling the contingency allocated for that item.</p> |
| Unknown/<br>Unknowns | These are costs that an Estimator typically will not account for in an estimate because they are unforeseeable or happen so infrequently that they would make the project estimate unrealistically high.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

# Importance of Scoping

## Good Scoping Provides:

- ✓ Better accuracy
- ✓ Less rework
- ✓ Greater trust
- ✓ Predictable delivery
- ✓ Better programming

## Poor Scoping Brings:

- X Higher than programmed costs
- X Delivery delays
- X Rework
- X Erosion of trust
- X Can result in ripple effect to programming

# Preparing a Scope of Work

- Define the Need and Purpose of the project
- Make a listing of possible solutions/alternatives
- Draw an exhibit(s) showing possible solution(s)
  - Suggestions:
    - Draw exhibit to scale on aerial background
    - Show culverts, guardrail, lane lines, shoulders and EP's
    - Identify utility conflicts and estimate new R/W
- Visit the site
- Refine Scope of Work & recheck Need and Purpose

# Quantity Take-offs

- Calculate area of new AC and AB from exhibit(s)
  - Determine approximate structural section(s)
  - Calculate Tons of AC
  - Calculate C.Y. of AB
- Calculate Roadway Excavation
  - Sketch cross section(s) as needed
  - Calculate cross section areas (in cut and fill)
  - Calculate C.Y. excavation and fill
  - Calculate borrow (if required)
- Determine lengths & areas of various items
  - Refer to similar project estimate for listing of possible items

# Quantity Take-offs (continued)

- Determine Drainage Improvements
  - Approximate culvert lengths, sizes and appurtenances
  - Approximate the number of inlets (if possible)
  - Approximate the quantity of drainage excavation and backfill
  - Approximate the quantity of Rip-Rap and/or channel lining
- Determine Signing and Striping & Pavement Symbols
  - Approximate the number of signs (need sheeting area, post lengths and number of foundations)
  - Approximate striping (lengths are in 4" equivalent widths)
  - Approximate the number of pavement symbols
- Determine if structure improvements are needed
  - Calculate areas of structures (i.e. bridges, retaining walls, and quantity of structure excavation and backfill)

# Quantity Take-offs (continued)

- Determine if Traffic Signal(s) are required
  - Use similar project major items (if available)
- Determine Lighting is required
  - Use similar project major items (if available)
- Determine quantities for other major items specific to project

Estimate what you know!

# Prepare a Construction Cost Estimate

- Spreadsheet of bid items
  - Obtain ADOT standard bid item list
  - Create list of items using ADOT standard bid items
  - Add quantities and any allowances
- Obtain Unit Costs
  - Use E2C2 to determine unit costs of items
  - Consider project location and cost trends
  - Adjust unit costs accordingly
- Use appropriate contingency
- Add costs for CA, post-design and ICAP

# Estimate of Design & R/W costs

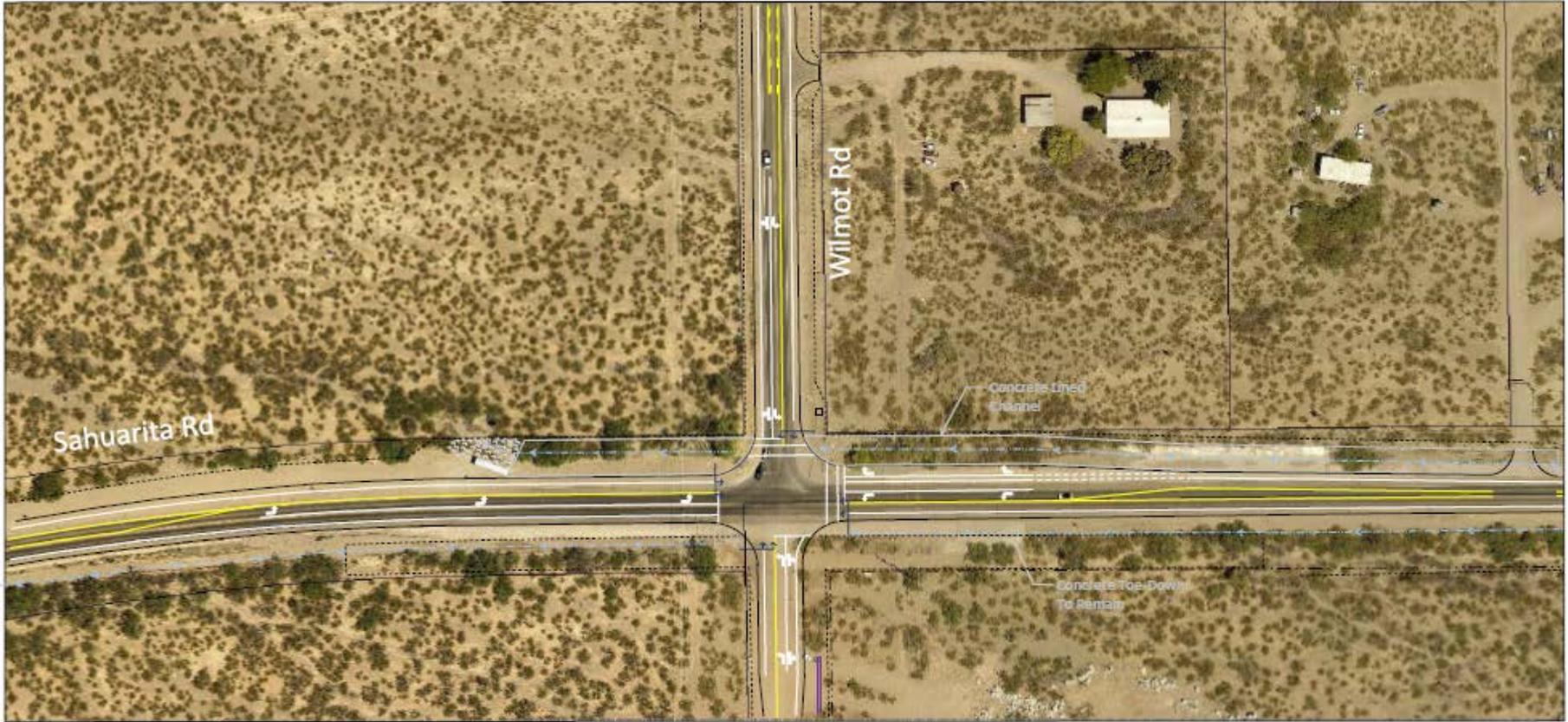
- Estimates for Design
  - Calculated as a percentage of construction
  - Calculated per sheet count / hours per sheet and reports
  - Include additional costs for scoping, technical reports, environmental, cultural data recovery, noise, geotechnical, drainage, structural, traffic, lighting, topo, survey, etc.)
  - Design contingency
- Estimates for Right-of-Way
  - Determine area (in acres) & estimate based on land sales
  - Include cost of R/W plans, monumetation, appraisals, acquisition and any relocation and demolition costs
  - Include additional internal costs ADOT

# Estimate of Utility Costs

- Determine what utilities are in conflict
  - Make an assumptions on prior rights
  - Estimate cost of relocations for any utilities with assumed prior rights
  - Add to estimate

## Cost Escalation

- Determine number of years from planning estimate to construction
  - Make an assumption cost escalation
  - Add to estimate



----- Approximate grading limits

Traffic Signal Option

## Sahuarita Rd and Wilmot Road

**Project Cost Estimate**  
**Sahuarita Rd / Wilmot Rd Intersection Improvements**

Option 2A - Traffic Signal (without Access Control)

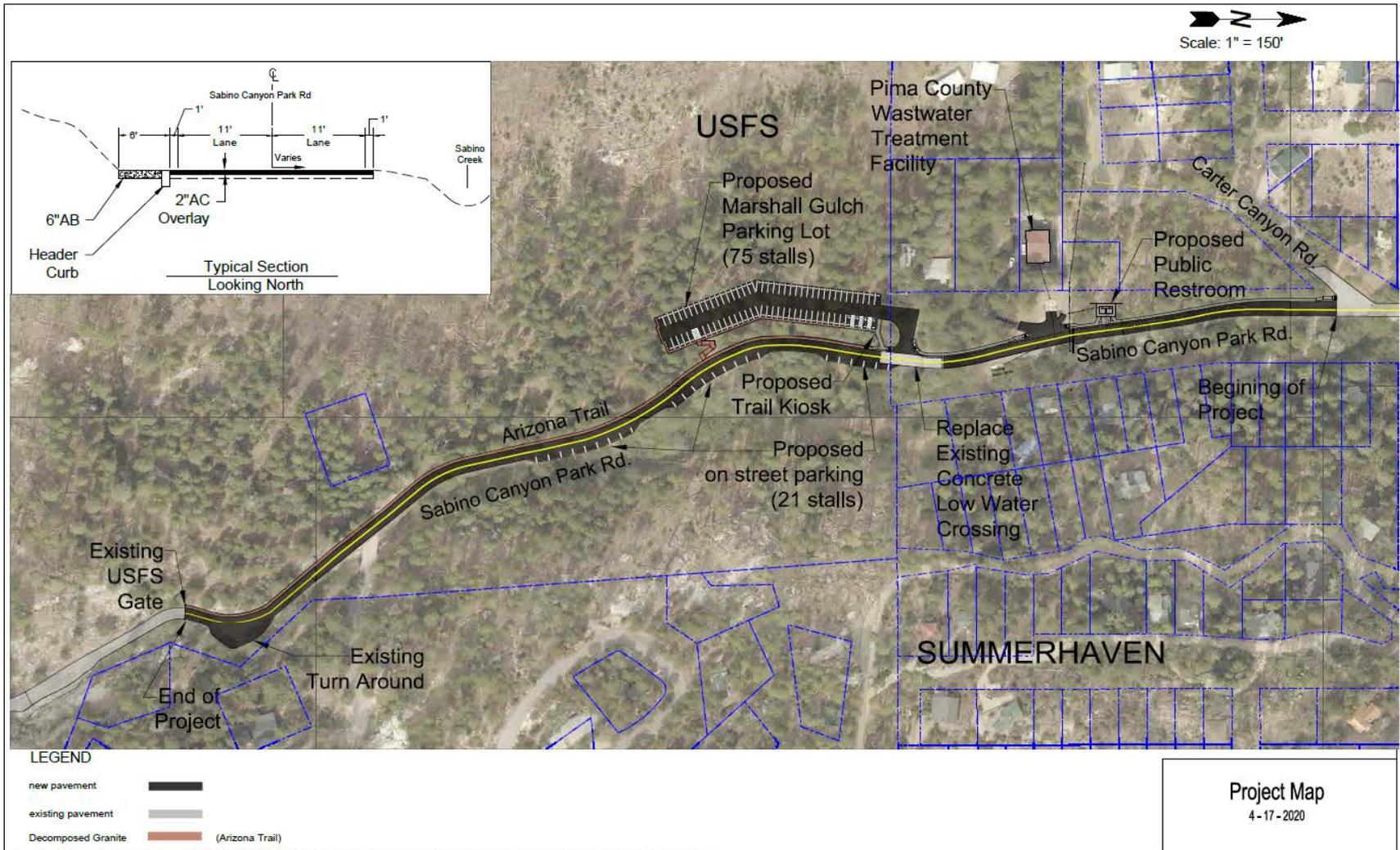
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| ITEM NO. | ITEM DESCRIPTION                                                        | UNIT | QUANTITY | UNIT PRICE  | AMOUNT       |
|----------|-------------------------------------------------------------------------|------|----------|-------------|--------------|
| 2010001  | Clearing and Grubbing                                                   | L.S. | 1        | \$20,000.00 | \$20,000.00  |
| 2010004  | Preservation Fencing                                                    | L.F. | 1,000    | \$2.75      | \$2,750.00   |
| 2010010  | Clearing and Grubbing (Noxious and Invasive Species Control Allowance)  | USD  | 5,000    | \$1.00      | \$5,000.00   |
| 2020001  | Removal of Structures & Obstructions                                    | L.S. | 1        | \$15,000.00 | \$15,000.00  |
| 2020030  | Removal of Bituminous Pavement by Milling                               | S.Y. | 12,316   | \$3.50      | \$43,106.00  |
| 2020061  | Relocate Mailbox                                                        | EACH | 18       | \$25.00     | \$450.00     |
| 2020062  | Relocate CBU                                                            | EACH | 1        | \$2,600.00  | \$2,600.00   |
| 2030300  | Roadway Excavation                                                      | C.Y. | 1,766    | \$15.00     | \$26,490.00  |
| 2030401  | Drainage Excavation                                                     | C.Y. | 1,334    | \$15.00     | \$20,010.00  |
| 3030003  | Aggregate Base                                                          | C.Y. | 963      | \$35.00     | \$33,705.00  |
| 4040111  | Tack Coat                                                               | TON  | 2        | \$1,500.00  | \$3,000.00   |
| 4060001  | Asphaltic Concrete                                                      | TON  | 3,112    | \$100.00    | \$311,200.00 |
| 4060510  | Bituminous Material Price Adjustment Allowance                          | USD  | 30,000   | \$1.00      | \$30,000.00  |
| 5150005  | Utility Potholing, Depth < 12'                                          | EACH | 25       | \$350.00    | \$8,750.00   |
| 5150007  | Utility Potholing, Depth ≥ 12'                                          | EACH | 5        | \$375.00    | \$1,875.00   |
| 5150101  | Utility Impact Allowance                                                | USD  | 10,000   | \$1.00      | \$10,000.00  |
| 6017001  | Concrete Slope Paving                                                   | S.Y. | 4,545    | \$30.00     | \$136,350.00 |
| 6050401  | Welded Wire Fabric                                                      | S.F. | 40,900   | \$0.50      | \$20,450.00  |
| 6070010  | Sign Post (Perforated) (Single)                                         | L.F. | 468      | \$8.50      | \$3,978.00   |
| 6070110  | Foundation for Sign Post (Perforated)                                   | EACH | 39       | \$180.00    | \$7,020.00   |
| 6080020  | Sign Panel (Traffic Control) (Permanent) (Diamond Grade)                | S.F. | 387      | \$25.00     | \$9,675.00   |
| 7010001  | Maintenance and Protection of Traffic                                   | L.S. | 1        | \$25,000.00 | \$25,000.00  |
| 7010007  | Construction Area Elements (Predetermined Reimbursement Rate Allowance) | USD  | 10,000   | \$1.00      | \$10,000.00  |
| 7010000  | Traffic Control Items                                                   | L.S. | 1        | \$75,000.00 | \$75,000.00  |
| 7040005  | Pavement Marking (White Extruded Thermoplastic) (0.090")                | L.F. | 11,084   | \$0.60      | \$6,650.40   |
| 7040006  | Pavement Marking (Yellow Extruded Thermoplastic) (0.090")               | L.F. | 9,116    | \$0.60      | \$5,469.60   |
| 7040032  | Pavement Marking (White Extruded Thermoplastic) Sgl. Arrow (0.090")     | EACH | 15       | \$120.00    | \$1,800.00   |
| 7040062  | Pavement Legend (White Extruded Thermoplastic) (ONLY) (0.090")          | EACH | 3        | \$120.00    | \$360.00     |
| 7040130  | Pavement Marking (White Extruded Thermoplastic) (Transverse) (0.090")   | L.F. | 1,716    | \$0.80      | \$1,372.80   |

|         |                                                           |      |        |             |             |
|---------|-----------------------------------------------------------|------|--------|-------------|-------------|
| 7060025 | Pavement Marker, Reflective, (Type D, Yellow, Two-Way)    | EACH | 456    | \$3.50      | \$1,596.00  |
| 7060035 | Pavement Marker, Reflective, (Type G, Yellow, One-Way)    | EACH | 56     | \$3.50      | \$196.00    |
| 7080001 | Painted Pavement Marking                                  | L.F. | 21,916 | \$0.40      | \$8,766.40  |
| 7080010 | Painted Pavement Symbol or Legend                         | EACH | 18     | \$52.00     | \$936.00    |
| 7310000 | Pole Base (Type A) (Alum. Frangible) (17" High)           | EACH | 2      | \$450.00    | \$900.00    |
| 7310010 | Pole (Type A) (10')                                       | EACH | 2      | \$650.00    | \$1,300.00  |
| 7310030 | Pole (Type G)                                             | EACH | 6      | \$2,000.00  | \$12,000.00 |
| 7310035 | Pole (Type J)                                             | EACH | 2      | \$3,500.00  | \$7,000.00  |
| 7310045 | Pole (Type Q)                                             | EACH | 2      | \$4,200.00  | \$8,400.00  |
| 7310060 | Pole (Type 2B Street Light)                               | EACH | 1      | \$2,000.00  | \$2,000.00  |
| 7310085 | Post (Type I) (Pedestrian Push Button)                    | EACH | 2      | \$500.00    | \$1,000.00  |
| 7310200 | Pole Foundation (Type A)                                  | EACH | 2      | \$700.00    | \$1,400.00  |
| 7310215 | Pole Foundation (Type G)                                  | EACH | 6      | \$1,000.00  | \$6,000.00  |
| 7310220 | Pole Foundation (Type J)                                  | EACH | 2      | \$2,500.00  | \$5,000.00  |
| 7310230 | Pole Foundation (Type Q)                                  | EACH | 2      | \$2,500.00  | \$5,000.00  |
| 7310240 | Pole Foundation (Type 2A, 2B and 2C Street Light)         | EACH | 1      | \$1,000.00  | \$1,000.00  |
| 7310255 | Post Foundation (Type 1) (Pedestrian Push Button)         | EACH | 2      | \$425.00    | \$850.00    |
| 7310350 | Control Cabinet Foundation                                | EACH | 1      | \$1,100.00  | \$1,100.00  |
| 7310377 | BBS Cabinet Foundation                                    | EACH | 1      | \$700.00    | \$700.00    |
| 7310420 | Mast Arm (40 ft.) (Tapered)                               | EACH | 4      | \$2,200.00  | \$8,800.00  |
| 7310535 | Mast Arm (20 ft.) (Tapered) (Luminaire)                   | EACH | 4      | \$750.00    | \$3,000.00  |
| 7320015 | Electrical Conduit (1 1/2") (PVC)                         | L.F. | 5,000  | \$7.50      | \$37,500.00 |
| 7320025 | Electrical Conduit (2 1/2") (PVC)                         | L.F. | 250    | \$9.00      | \$2,250.00  |
| 7320030 | Electrical Conduit (3") (PVC)                             | L.F. | 1,500  | \$8.00      | \$12,000.00 |
| 7320040 | Electrical Conduit (4") (PVC)                             | L.F. | 500    | \$11.00     | \$5,500.00  |
| 7320041 | Electrical Conduit (4") (PVC) (Second in Trench)          | L.F. | 500    | \$6.00      | \$3,000.00  |
| 7320150 | Tracer Wire                                               | L.F. | 15,000 | \$1.50      | \$22,500.00 |
| 7320400 | Pull Box (No. 3 1/2)                                      | EACH | 8      | \$425.00    | \$3,400.00  |
| 7320420 | Pull Box (No. 7)                                          | EACH | 3      | \$640.00    | \$1,920.00  |
| 7320421 | Pull Box (No. 7) (with Extension)                         | EACH | 1      | \$750.00    | \$750.00    |
| 7320600 | Conductors (Traffic Signals and Integral Street Lighting) | L.S. | 1      | \$22,500.00 | \$22,500.00 |
| 7320690 | Ground Rod (3/4" Dia. X 10')                              | EACH | 3      | \$190.00    | \$570.00    |
| 7320820 | Battery Back Up Power System                              | EACH | 1      | \$7,000.00  | \$7,000.00  |
| 7330045 | Traffic Signal Face (Type F)                              | EACH | 8      | \$675.00    | \$5,400.00  |
| 7330050 | Traffic Signal Face (Type Q)                              | EACH | 8      | \$850.00    | \$6,800.00  |

|         |                                                |      |        |                        |              |
|---------|------------------------------------------------|------|--------|------------------------|--------------|
| 7330045 | Traffic Signal Face (Type F)                   | EACH | 8      | \$675.00               | \$5,400.00   |
| 7330050 | Traffic Signal Face (Type Q)                   | EACH | 8      | \$850.00               | \$6,800.00   |
| 7330200 | Traffic Signal Face (Pedestrian) (Man/Hand)    | EACH | 8      | \$500.00               | \$4,000.00   |
| 7330315 | Traffic Signal Mounting Assembly (Type IV)     | EACH | 1      | \$600.00               | \$600.00     |
| 7330320 | Traffic Signal Mounting Assembly (Type V)      | EACH | 7      | \$510.00               | \$3,570.00   |
| 7330350 | Traffic Signal Mounting Assembly (Type XI)     | EACH | 8      | \$300.00               | \$2,400.00   |
| 7330370 | Traffic Signal Mounting Assembly (Astro-Brac)  | EACH | 8      | \$275.00               | \$2,200.00   |
| 7330500 | Pre-Empt Beacon                                | EACH | 4      | \$650.00               | \$2,600.00   |
| 7330510 | Relocate Pre-Empt Beacon                       | EACH | 4      | \$900.00               | \$3,600.00   |
| 7340040 | Traffic Signal Controller Assembly (Type IV)   | EACH | 1      | \$26,500.00            | \$26,500.00  |
| 7350000 | Video Detection System                         | EACH | 1      | \$25,000.00            | \$25,000.00  |
| 7350100 | Loop Detector (6' x 6')                        | EACH | 3      | \$850.00               | \$2,550.00   |
| 7350405 | Pedestrian Push Button (Vibrotactile)          | EACH | 8      | \$1,050.00             | \$8,400.00   |
| 7360050 | Luminaire (Horizontal Mount) (LED)             | EACH | 9      | \$850.00               | \$7,650.00   |
| 7360190 | Photo Electric Control                         | EACH | 2      | \$100.00               | \$200.00     |
| 8070000 | Landscape Allowance                            | L.S. | 1      | \$99,000.00            | \$99,000.00  |
| 8100001 | AZPDES/NPDES (Original)                        | L.S. | 1      | \$30,000.00            | \$30,000.00  |
| 8100005 | Sediment Log (Discretionary)                   | L.F. | 615    | \$6.00                 | \$3,690.00   |
| 8100006 | Sediment Wattle (Discretionary)                | L.F. | 2,100  | \$2.50                 | \$5,250.00   |
| 8100012 | AZPDES/NPDES Allowance (Modified)              | USD  | 10,000 | \$1.00                 | \$10,000.00  |
| 9010001 | Mobilization                                   | L.S. | 1      | \$120,000.00           | \$120,000.00 |
| 9080292 | Concrete Landing with Detectable Warning Strip | EACH | 4      | \$1,500.00             | \$6,000.00   |
| 9080402 | Concrete Header                                | L.F. | 3,150  | \$35.00                | \$110,250.00 |
| 9080504 | Concrete Ford Walls (1'X4')                    | L.F. | 48     | \$35.00                | \$1,680.00   |
| 9090002 | Survey Monument                                | EACH | 1      | \$350.00               | \$350.00     |
| 9130001 | RIPRAP (DUMPED)                                | C.Y. | 260    | \$80.00                | \$20,800.00  |
| 9240170 | Contractor Quality Control                     | L.S. | 1      | \$50,000.00            | \$50,000.00  |
| 9250100 | Reset Property Corners                         | EACH | 2      | \$400.00               | \$800.00     |
| 9250001 | Construction Survey and Layout                 | L.S. | 1      | \$40,000.00            | \$40,000.00  |
| 9260001 | Engineer's Field Office                        | L.S. | 1      | \$20,000.00            | \$20,000.00  |
| 9300100 | Incidental Items Allowance                     | USD  | 15,000 | \$1.00                 | \$15,000.00  |
|         |                                                |      |        | CONSTRUCTION SUBTOTAL: | \$1,667,186  |
|         |                                                |      |        | CONTENGENCY (30%):     | \$500,156    |
|         |                                                |      |        | CONSTRUCTION SUBTOTAL: | \$2,167,342  |
|         |                                                |      |        |                        |              |

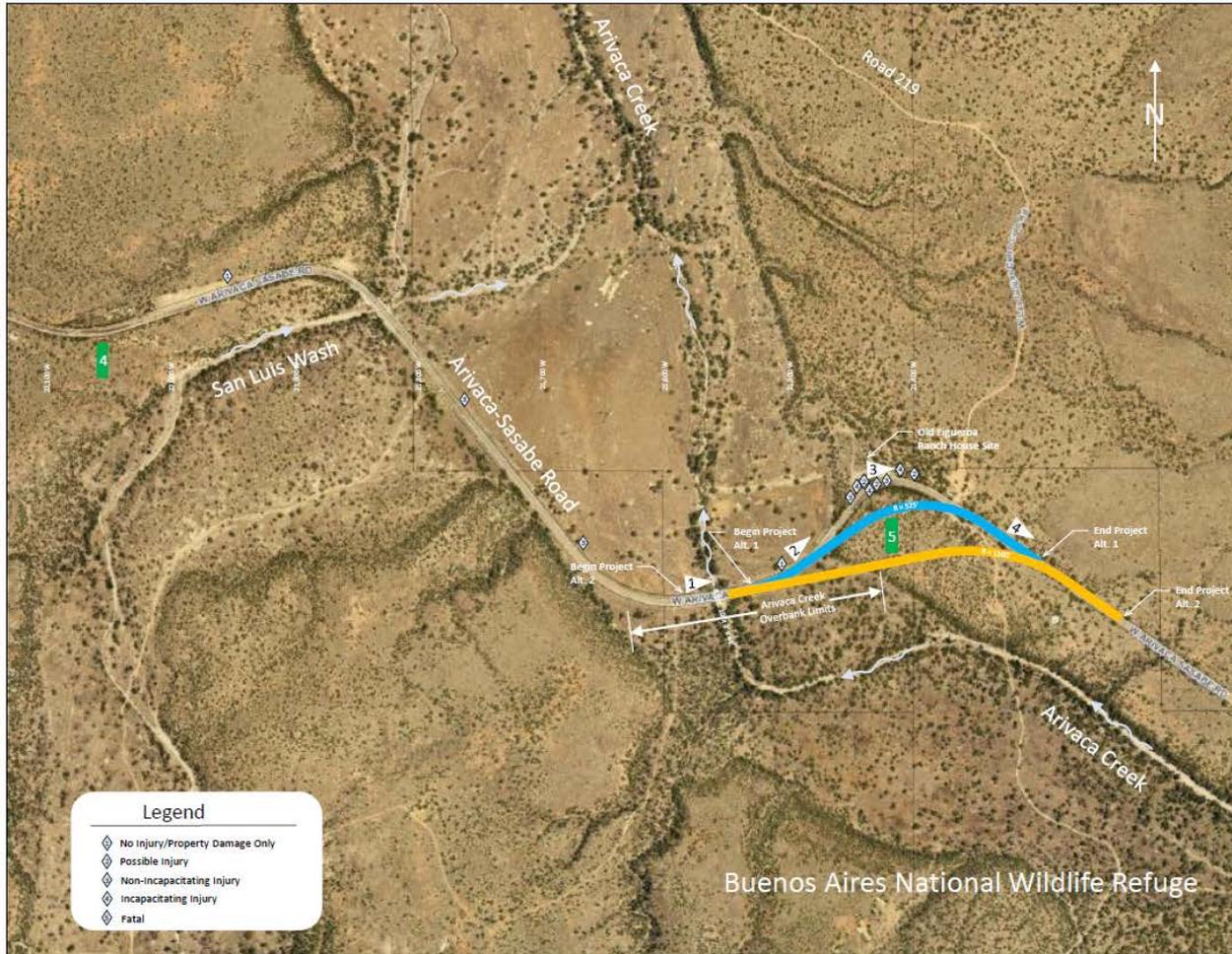
|         |                                |      |        |                                     |                    |
|---------|--------------------------------|------|--------|-------------------------------------|--------------------|
| 9250001 | Construction Survey and Layout | L.S. | 1      | \$40,000.00                         | \$40,000.00        |
| 9260001 | Engineer's Field Office        | L.S. | 1      | \$20,000.00                         | \$20,000.00        |
| 9300100 | Incidental Items Allowance     | USD  | 15,000 | \$1.00                              | \$15,000.00        |
|         |                                |      |        | <b>CONSTRUCTION SUBTOTAL:</b>       | <b>\$1,667,186</b> |
|         |                                |      |        | CONTENGENCY (30%):                  | <b>\$500,156</b>   |
|         |                                |      |        | <b>CONSTRUCTION SUBTOTAL:</b>       | <b>\$2,167,342</b> |
|         |                                |      |        |                                     |                    |
|         |                                |      |        | CONSTRUCTION ADMIN (13%):           | <b>\$281,754</b>   |
|         |                                |      |        | POST DESIGN/AS-BUILTS (1%):         | <b>\$21,673</b>    |
|         |                                |      |        | <b>CONSTRUCTION SUBTOTAL</b>        | <b>\$2,449,097</b> |
|         |                                |      |        |                                     |                    |
|         |                                |      |        | DESIGN (incl. design survey)        | <b>\$330,000</b>   |
|         |                                |      |        | RIGHT-OF-WAY                        | <b>\$65,000</b>    |
|         |                                |      |        | UTILITY RELOCATION                  | <b>\$5,000</b>     |
|         |                                |      |        | ENVIRONMENTAL (internal staff only) | <b>\$10,000</b>    |
|         |                                |      |        | PUBLIC ART (1%)                     | <b>\$25,000</b>    |
|         |                                |      |        | PCDOT INTERNAL                      | <b>\$80,000</b>    |
|         |                                |      |        | DESIGN CONTINGENCY                  | <b>\$25,000</b>    |
|         |                                |      |        | <b>SUBTOTAL</b>                     | <b>\$540,000</b>   |
|         |                                |      |        |                                     |                    |
|         |                                |      |        | <b>PROJECT TOTAL</b>                | <b>\$2,990,000</b> |
|         |                                |      |        |                                     |                    |



# Sabino Canyon Rd: Carter Canyon Rd to USFS Gate

|         |                                  |      |        |                                          |                    |
|---------|----------------------------------|------|--------|------------------------------------------|--------------------|
| 9250001 | Construction Survey and Layout   | L.S. | 1      | \$45,000.00                              | \$45,000.00        |
| 9260001 | Engineer's Field Office          | L.S. | 1      | \$35,000.00                              | \$35,000.00        |
| 9300100 | Incidental Items Allowance       | USD  | 30,000 | \$1.00                                   | \$30,000.00        |
| 9750010 | Furnish Premanufactured Restroom | L.S. | 1      | \$165,000.00                             | \$165,000.00       |
| 9750011 | Install Premanufactured Restroom | L.S. | 1      | \$35,000.00                              | \$35,000.00        |
| 9750011 | Furnish Premanufactured Kiosk    | L.S. | 1      | \$20,000.00                              | \$20,000.00        |
| 9750011 | Install Premanufactured Kiosk    | L.S. | 1      | \$6,400.00                               | \$6,400.00         |
|         |                                  |      |        | <b>CONSTRUCTION SUBTOTAL:</b>            | <b>\$1,829,604</b> |
|         |                                  |      |        | CONTINGENCY (35%):                       | <b>\$640,361</b>   |
|         |                                  |      |        | <b>CONSTRUCTION SUBTOTAL:</b>            | <b>\$2,469,965</b> |
|         |                                  |      |        |                                          |                    |
|         |                                  |      |        | CONSTRUCTION ADMIN (14%):                | <b>\$345,795</b>   |
|         |                                  |      |        | POST DESIGN/AS-BUILTS (1%):              | <b>\$24,700</b>    |
|         |                                  |      |        | <b>CONSTRUCTION SUBTOTAL</b>             | <b>\$2,815,761</b> |
|         |                                  |      |        |                                          |                    |
|         |                                  |      |        | DESIGN (incl. design survey)             | <b>\$400,000</b>   |
|         |                                  |      |        | RIGHT-OF-WAY                             | <b>\$20,000</b>    |
|         |                                  |      |        | UTILITY RELOCATION                       | <b>\$0</b>         |
|         |                                  |      |        | ENVIRONMENTAL (included in design above) | <b>\$0</b>         |
|         |                                  |      |        |                                          |                    |
|         |                                  |      |        | PCDOT INTERNAL                           | <b>\$20,000</b>    |
|         |                                  |      |        | DESIGN CONTINGENCY                       | <b>\$40,000</b>    |
|         |                                  |      |        | <b>SUBTOTAL</b>                          | <b>\$480,000</b>   |
|         |                                  |      |        |                                          |                    |
|         |                                  |      |        | <b>PROJECT TOTAL</b>                     | <b>\$3,295,761</b> |

## Sabino Canyon Rd: Carter Canyon Rd to USFS Gate



## Project Map

### Arivaca-Sasabe Rd Realignment

- Alternative 1 (Approx. 1170')  
35 mph
- Alternative 2 (Approx. 1770')  
45 mph



# Arivaca-Sasabe Rd Curve Realignment at MP 5.0

|         |                                |      |        |                               |                    |
|---------|--------------------------------|------|--------|-------------------------------|--------------------|
| 9050020 | Guard Rail Terminal (MASH)     | EACH | 4      | \$2,750.00                    | \$11,000.00        |
| 9050038 | Guard Rail Anchor Assembly     | EACH | 4      | \$600.00                      | \$2,400.00         |
| 9130001 | Rip Rap (Hand Placed)(Grouted) | C.Y. | 1,297  | \$250.00                      | \$324,250.00       |
| 9240170 | Contractor Quality Control     | L.S. | 1      | \$25,000.00                   | \$25,000.00        |
| 9250001 | Construction Survey and Layout | L.S. | 1      | \$40,000.00                   | \$40,000.00        |
| 9260001 | Engineer's Field Office        | L.S. | 1      | \$30,000.00                   | \$30,000.00        |
| 9300100 | Incidental Items Allowance     | USD  | 10,000 | \$1.00                        | \$10,000.00        |
|         |                                |      |        | <b>CONSTRUCTION SUBTOTAL:</b> | <b>\$1,571,700</b> |
|         |                                |      |        | CONTINGENCY (40%):            | <b>\$628,680</b>   |
|         |                                |      |        | <b>CONSTRUCTION SUBTOTAL:</b> | <b>\$2,200,380</b> |
|         |                                |      |        |                               |                    |
|         |                                |      |        | CONSTRUCTION ADMIN (14%):     | <b>\$308,053</b>   |
|         |                                |      |        | POST DESIGN/AS-BUILTS (1%):   | <b>\$22,004</b>    |
|         |                                |      |        | <b>CONSTRUCTION SUBTOTAL</b>  | <b>\$2,508,433</b> |
|         |                                |      |        |                               |                    |
|         |                                |      |        | DESIGN & ENIV.                | <b>\$350,000</b>   |
|         |                                |      |        | RIGHT-OF-WAY (TCE's)          | <b>\$65,000</b>    |
|         |                                |      |        | UTILITY RELOCATION            | <b>\$0</b>         |
|         |                                |      |        | PCDOT INTERNAL                | <b>\$30,000</b>    |
|         |                                |      |        | DESIGN CONTINGENCY            | <b>\$35,000</b>    |
|         |                                |      |        | <b>SUBTOTAL</b>               | <b>\$480,000</b>   |
|         |                                |      |        |                               |                    |
|         |                                |      |        | <b>PROJECT TOTAL</b>          | <b>\$2,988,433</b> |
|         |                                |      |        |                               |                    |

## Arivaca–Sasabe Rd Curve Realignment at MP 5.0