



PROJECT CHARTER

DEPARTMENT: RFCD

PROJECT NAME: El Vado Wash Drainage Improvements

PROJECT ID: CFC.5ELVDO

Prepared By: Janice Hughes

Date Prepared: 5/11/2017

Approval of this Project Charter indicates 1) approval of the constraining factor established for this project, 2) an understanding of the purpose and content as described in this document, and 3) agreement with the Scope, Schedule, Budget and Quality of the recommended alternative. By signing this document, each individual agrees that work should be initiated on this project with **all necessary resources allocated** and commits to fulfill his/her role and responsibilities as described herein.

Approver Name	Position	Signature	Date
Janice Hughes	Project Manager		5/25/17
Eric Shepp	Acting Department Director		5/25/17
<i>NANETTE SWISSER</i>	County Administration		6/5/17

***Note:** Not all sections of the Project Charter format are applicable to all projects. To insure all sections have been completed as needed, do not delete any sections from this document. If a section is not applicable to the project, simply type "Not Applicable". See "Guidance for Preparing a Project Charter" and "Checklists for Project Charter & Gates" for additional information.

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PROJECT OVERVIEW

Background:

In a letter to Suzanne Shields, Flood Control Director, from Fred Felix, City of Tucson City Engineer/Floodplain Administrator, dated September 2, 2016, the City of Tucson requested improvements in the El Vado Watershed as their seventh ranked project request. The CFC.5ELVDO, Airport Wash/El Vado Wash Drainage Improvements Description of Need indicates, as outlined in the City of Tucson Request, enlarging the El Vado Wash from Corona Road to 12th Avenue, including soil cement bank protection along the reach. The City of Tucson indicated that this would provide flood relief for 106 homes.

The City of Tucson requested project originate from the Tucson Stormwater Management Study (TSMS) completed in 1995. At that time this El Vado project had a priority ranking of seven and included construction of a concrete box culvert at 12th Avenue. The plans for the culvert are I-2002-036C. The culvert was constructed but the associated channel and bank protection have not yet been designed or constructed.

Pima County Regional Flood Control District has completed the Airport Wash South Basin Management Study (AWSBMS) to identify the drainage and flooding hazards within the Valencia, El Vado, Santa Clara, and Hughes watersheds and develop alternatives to address those hazards. These washes include the Elvira, Barrio Nepal and Sunnyside neighborhoods. A Basin Management Study is a comprehensive study that estimates flood and erosion potential for a watershed, maps watercourses, identifies existing and potential problems and develops preliminary solutions and standards for sound floodplain and stormwater management.

The initial effort consisted of collecting data to identify known flooding hazards and map floodplains. This included researching historical flooding data, drainage complaints, existing studies and current land-use.

The team then formulated a floodplain management approach consisting of structural and non-structural alternative solutions to reduce or eliminate flooding hazards, which were further compared and evaluated to develop a set of preferred alternatives.

With alternatives identified, the District held a public meeting to bring this information to the affected neighborhoods. The District now has a comprehensive assessment of flood and erosion hazards. The strategies in the plan should reduce damages to property or loss of life from drainage issues and stormwater flooding.

Need Statement:

The El Vado Watershed was included in the AWSBMS in 2014. The project revised the hydrology and hydraulics of the El Vado Watershed with a FLO-2D model utilizing a 10 foot grid. The resulting discharges are significantly lower than the Approved TSMS FEMA discharges within this watershed.

Review of the updated mapping and the existing FEMA floodplain indicates that the flow is contained within the reach that TSMS recommended improvements. An analysis of existing flood hazards and recommendations for improvements within the watershed was completed. The sixth ranked project for the AWSBMS was addition of a basin at the Northwest corner of Calle Medina and Santa Clara Avenue, addition of a storm drain from basin to channel underneath Calle Sevilla, a channel from storm drain to I-19 and improvements to the inverted crown on Calle Medina from Santa Clara Avenue to I-19. The addition of a culvert across Santa Clara Avenue between Calle Medina and Calle Aragon will provide 100-year access to Santa Clara across El Vado Wash. A similar project was identified as the 31st project ranking in the TSMS study. The estimated cost of design and construction based on the Basin Management Study is approximately \$1,970,000.

Scope Statement:

This project, identified on the list priority capital improvement projects from the Airport Wash South Basin Management Study (AWSBMS) will be designed and constructed. The project will update the AWSBMS El Vado Wash FLO-2D hydrologic and hydraulic analysis to submit a Letter of Map Revision (LOMR) to the Federal Emergency Management Agency (FEMA) to decrease the design discharges and re-delineate the flood hazard areas within the El Vado Watershed.

A CLOMR will be prepared for the proposed improvements. The proposed basin, stormdrain, channel and roadway design will utilize the lower discharges from the LOMR. The project will include construction of a detention basin, outletting via a new storm drain and channel with additional road reconstruction of an inverted crown roadway increasing street conveyance capacity. The project limits are Santa Clara Avenue on the east, Calle Medina to the north, I-19 to the west and Calle Sevilla to the south. The project will tie into the existing El Vado Wash culvert beneath I-19.

Justification:

This project will remap the FEMA flood hazard zones within the watershed, reducing overall costs to homeowners. In addition, the project should reduce damages to property or loss of life from drainage issues and stormwater flooding within the area near the Hope Methodist Church along Calle Santa Clara and Calle Medina.

BUDGET MANAGEMENT

[Cost Model attached as Appendix B]

Cost Model Summary and Financial Schedule for Requested Budget

Soft costs for this project are higher than typical as the scope includes a LOMR submittal to FEMA to decrease the design discharges and subsequent construction costs.

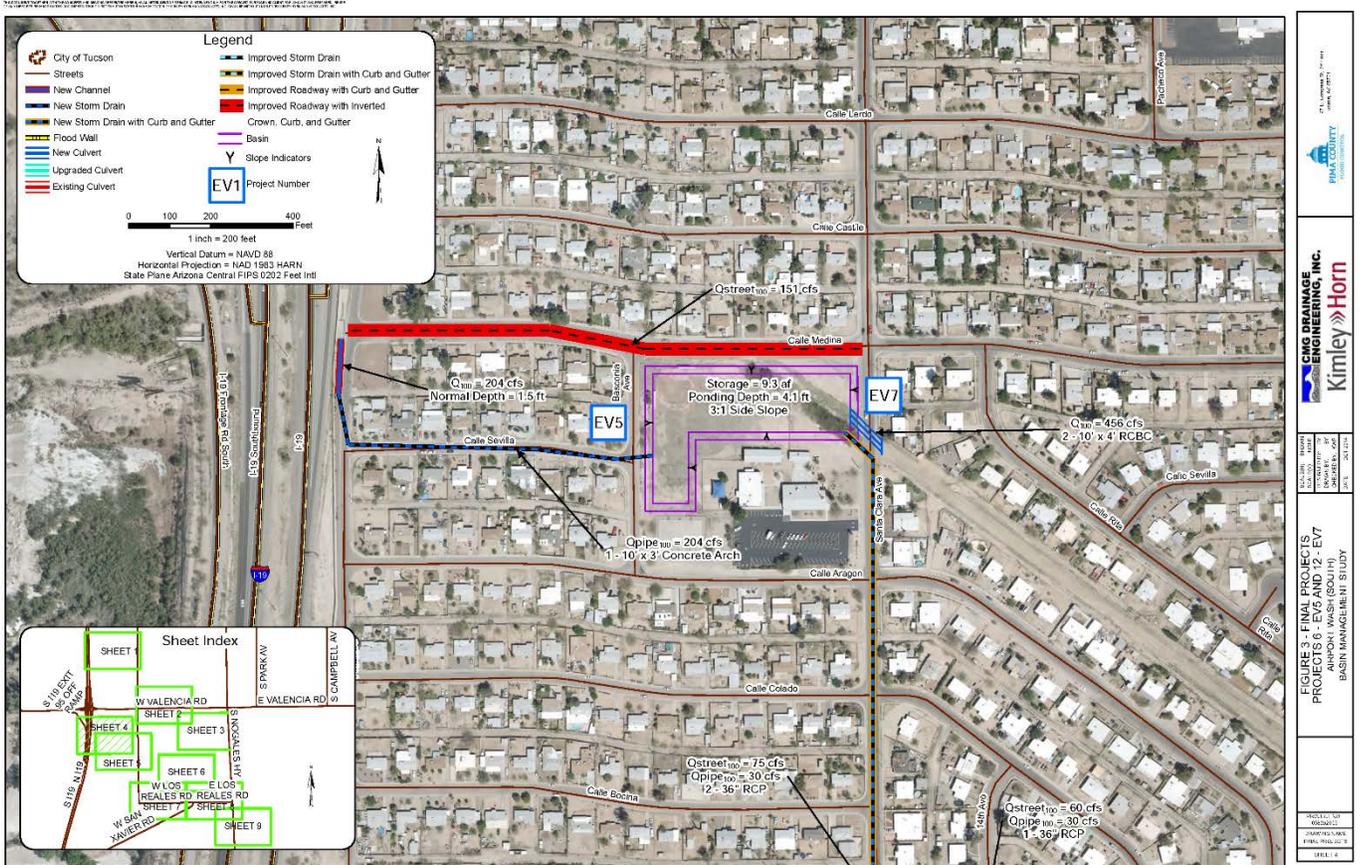
Phase	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	TOTAL	Soft Cost %
Land Acquisition	0	230,000	0	0	0	230,000	2.4%
Project Development	100,000	20,000	0	0	0	120,000	9.7%
Design	100,000	40,000	0	0	0	140,000	11.3%
Construction	0	1,270,000	0	0	0	1,270,000	13.7%
Utility Relocation	0	20,000	0	0	0	20,000	1.6%
Public Art	0	20,000	0	0	0	20,000	1.6%
Contingency	0	200,000	0	0	0	200,000	4.8%
TOTAL PROJECT BUDGET	200,000	1,800,000	0	0	0	2,000,000	45.2%

Requested Funding Sources

Fund Source Description	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	TOTAL
A. RFCD Tax Levy	200,000	1,300,000	0	0	0	1,500,000
B. COT 25% Match	0	500,000	0	0	0	500,000
C.	0	0	0	0	0	0
D.	0	0	0	0	0	0
TOTAL FUNDING	200,000	1,800,000	0	0	0	2,000,000

Map of Project Area with Polygon

On the next page or attached as Appendix is a map of the area associated with this project. To meet certain Pima County requirements, any project that anticipates ground disturbance must show on this map a polygon of the limits of potential ground disturbance.



Red Outline is project disturbance limits



ESTIMATED BENEFITS OF THIS PROJECT

Benefit	Estimated Level of Benefit			
	High	Med	Low	None
Protects Health, Safety & Property	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increases Capacity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meets Regulatory/Mandated Requirement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Promotes Economic Development	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Makes Use of Non-County Funding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduces Long-Term Costs to the County	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rehabilitates/Preserves/Enhances Existing Asset	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Enhances Environment and/or Cultural Resource	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Improves System Continuity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meets Master/Long-Range Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is Regionally Significant	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SCHEDULE MANAGEMENT

[Microsoft Project Schedule attached as Appendix C]

Critical Path Tasks and Anticipated Completion Dates

	Critical Path Task Description	Anticipated Completion Date
1	COT and FEMA Approval	September 2018
2	Utility Clearance	September 2018
3	Public Relations Coordination	September 2018
4	Secure ROW – Church Drainage Easement	September 2018
5		

QUALITY MANAGEMENT

Constraining Factor

For this project, the following one factor is understood by the project team and senior management to be the least flexible to change:

Scope Schedule Budget Quality

Provide a brief explanation regarding criticality of chosen constraining factor:

Project benefits will be realized by keeping within the scope.

ALTERNATIVES ANALYSIS

- Viable alternatives have been identified and are described below.
OR
- Alternatives need to be developed and/or further evaluated. Alternative Summary and Recommendation to be presented at a 2.1 Gate.
OR
- No alternatives are anticipated for this project due to limit of right-of-way and previous study

Alternative 1:

Alternative 2:

Assumption & Constraint Analysis

1. <input type="checkbox"/> Constraint (Known) or <input checked="" type="checkbox"/> Assumption (Unknown)	Alternative(s) 1 <input type="checkbox"/> 2 <input type="checkbox"/>
Description: Right of Way Acquisition, by City of Tucson Impact Discussion: Cost assumes \$200,000 as part of project matching funds from City of Tucson, Pima County to provide legal and provide internal coordination	
2. <input type="checkbox"/> Constraint (Known) or <input checked="" type="checkbox"/> Assumption (Unknown)	Alternative(s) 1 <input type="checkbox"/> 2 <input type="checkbox"/>
Description: Permit Acquisition, by City or County? Impact Discussion: A decision needs to be made early in the project design, who will lead the permitting, Construction Administration, Operations & Maintenance COT or PC. This could be part of the in kind match from the COT.	
3. <input checked="" type="checkbox"/> Constraint (Known) or <input type="checkbox"/> Assumption (Unknown)	Alternative(s) 1 <input type="checkbox"/> 2 <input type="checkbox"/>
Description: Local Traffic Impacts Impact Discussion: Design needs to be phases such that local traffic impacts are minimized.	
4. <input type="checkbox"/> Constraint (Known) or <input checked="" type="checkbox"/> Assumption (Unknown)	Alternative(s) 1 <input type="checkbox"/> 2 <input type="checkbox"/>
Description: Limited Utility Impacts, Limited Cultural and Environmental Impacts Impact Discussion: Existing Utilities locations need to be identified and evaluated for minimizing costs and impacts. Cultural and environmental are assumed to be minimal due to current urbanized state of the watershed.	

TEAM MEMBER MANAGEMENT

Roles and Responsibilities

Member's Name: Janice Hughes	Affiliation: Pima County RFCD - Engineering
Role: Project Manager	
Responsibility: Coordinate project scope, schedule and budget. Coordinate agency input including COT DOT; Public Relations coordination with residents and Ward 1 Office	

Member's Name: Fred Felix or COT DOT Liaison	Affiliation: COT DOT, City Engineer, Floodplain Administrator
Role: City of Tucson Representative	
Responsibility: Coordination with City of Tucson staff for review, agreements and approval, COT Real Property coordination, IGA Coordination	

Member's Name: Roger Anyon	Affiliation: PC Cultural Resources
Role: Cultural Clearance Coordination	
Responsibility:	

Member's Name: Bill Satterly	Affiliation: PC Real Property
Role: Right of Way Coordination with City of Tucson	
Responsibility:	

Member's Name: Carla Danforth	Affiliation: Environmental
Role: Environmental Habitat Coordination	
Responsibility:	

Member's Name: Karla Reeve-Wise	Affiliation: PC DEQ
Role: Environmental Hazard/Risk Coordination	
Responsibility:	

Member's Name: Mike Cabrera	Affiliation: PC RFCD
Role: 404 Coordination	
Responsibility:	

Member's Name: Andrew Flagg	Affiliation: PCAO
Role: IGA Coordination with City of Tucson	
Responsibility:	

Summary of Team Member Meeting

- Meeting Minutes are attached as Appendix.
OR
 A summary of the Team Member meeting is as follows:

Date of Team Member Meeting:
May 22, 2014

Invitees:
City of Tucson DSD and DOT, Pima County DSD and DOT, PAG, Ward 1,

Attendees:
Dean Papajohn (PCDOT), Jim Vogelsberg (COT/PDSD), Laith Alshami (COT/PDSD), Emily Dawson (ADOT), Steve Tineo (COT Engineering), Fred Felix (COT Engineering), Jim DeGrood (PAG/RTA), Mead Mier (PAG/RTA), Laura Dent (COT Ward 1), Project Team

Summary of Meeting Minutes:
Airport Wash South Basin Management Study, stakeholder meetings, project presented, reports reviewed and approved by City of Tucson.

Critical Issues and Action Items:
Funding source for completion of projects to be identified.

RISK MANAGEMENT

Assessment of Risks to Achieving Scope, Schedule, Budget and/or Quality

Risk Tables

1. Risk Name: Unknown Utilities							
Probability:	High <input type="checkbox"/>	Med <input checked="" type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input checked="" type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input type="checkbox"/>		Absorb <input type="checkbox"/>		Avoid <input checked="" type="checkbox"/>		Deflect <input type="checkbox"/>
Mitigation Strategy: existing RWRD line (8" VCP), Avoidance where possible and relocation as necessary to minimize project costs, utility and access impacts to residents.							

2. Risk Name: Traffic Control							
Probability:	High <input checked="" type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input checked="" type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input checked="" type="checkbox"/>		Absorb <input type="checkbox"/>		Avoid <input type="checkbox"/>		Deflect <input type="checkbox"/>
Mitigation Strategy: Minimize disturbance to residents, Minimize timeline for open trenches/driveway access. Trash, school buses, mail and church activities will need to be maintained.							

3. Risk Name: Community Relations							
Probability:	High <input checked="" type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>	Impact:	High <input checked="" type="checkbox"/>	Med <input type="checkbox"/>	Low <input type="checkbox"/>
Action:	Control <input checked="" type="checkbox"/>		Absorb <input type="checkbox"/>		Avoid <input type="checkbox"/>		Deflect <input type="checkbox"/>
Mitigation Strategy: Public Relations needed on project team to serve as outreach and coordination with Community and Ward 1, need bilingual staff							

COMMUNICATION MANAGEMENT

Proposed Gate Meetings

For this project, the following gate meetings are proposed:

	Proposed Date
<input checked="" type="checkbox"/> Gate 1-1 Entry Gate	June 2017
<input type="checkbox"/> Gate 2-1 Project Development	
<input type="checkbox"/> Gate 3-1 Preliminary Design	
<input checked="" type="checkbox"/> Gate 3-2 Construction Documents Ready for Contractor Selection	June 2018
<input type="checkbox"/> Gate 4-1 Ready to Issue Letter of Construction Acceptance	
<input checked="" type="checkbox"/> Gate 5-1 Close Out.....	June 2019

PROCUREMENT MANAGEMENT

Proposed Project Delivery Method

The proposed project delivery method for this project is:

- Design-Bid-Build
- Construction Management at Risk
- Design-Build
- Design-Build-Own-Operate
- Job Order Contract
- Managed/Delivered by Others
- To be Determined

APPENDICES

APPENDIX B – Cost Model

A	B	C	D	E	F	G	H	L
1	Cost Model							
2	Project Line Items							
3	<i>El Vado Wash Drainage Improvements</i>	Original Budget	Current Budgeted/ Contracted	Paid Inception to Date	Remaining Balance	Soft Cost % of Hard Cost	Soft Cost Value	Notes
4	Land Acquisition (RWY)							City of Tucson to secure Right of Way if needed
5	Contracted RWY Services (RWY)		\$0		\$0	0.0%		
6	Property Purchase (RWY)	\$200,000	\$200,000		\$200,000			*considered hard cost; but not in the % calculations
7	Temporary Easements/Agreements (RWY)		\$0		\$0			*considered hard cost; but not in the % calculations
8	Other (RWY)		\$0		\$0	0.0%		
9	Internal Labor Rollup (RWY)	\$30,000	\$30,000	\$0	\$30,000	2.4%		
10	Real Prop (RWY)	\$20,000	\$20,000		\$20,000			
11	HP (RWY)		\$0		\$0			
12	DOT (RWY)	\$10,000	\$10,000		\$10,000			
13	FM (RWY)		\$0		\$0			
14	NRPR (RWY)		\$0		\$0			
15	RFCD (RWY)		\$0		\$0			
16	RWRD (RWY)		\$0		\$0			
17	Other Depts (RWY)		\$0		\$0			
18	Subtotal RWY	\$230,000	\$230,000	\$0	\$230,000	2.4%	\$30,000	
19								
20	Project Development (PLN)		\$0					
21	Procurement (PLN)		\$0		\$0	0.0%		
22	A/E Services (PLN)	\$100,000	\$100,000		\$100,000	8.1%		Includes Community Relations
23	Site Studies (PLN)		\$0		\$0	0.0%		
24	Mapping/Survey (PLN)		\$0		\$0	0.0%		
25	IGA or agreements (PLN)		\$0		\$0	0.0%		
26	Other (PLN)		\$0		\$0	0.0%		
27	Internal Labor Rollup (PLN)	\$20,000	\$20,000	\$0	\$20,000	1.6%		
28	HP (PLN)		\$0		\$0			
29	DOT (PLN)		\$0		\$0			
30	FM (PLN)		\$0		\$0			
31	NRPR (PLN)		\$0		\$0			
32	RFCD (PLN)	\$20,000	\$20,000		\$20,000			
33	RWRD (PLN)		\$0		\$0			
34	Other Depts (PLN)		\$0		\$0			
35	Subtotal PLN	\$120,000	\$120,000	\$0	\$120,000	9.7%	\$0	
36								
37	Design (DES)		\$0					
38	Procurement (DES)		\$0		\$0	0.0%		
39	A/E Services (DES)	\$100,000	\$100,000		\$100,000	8.1%		Includes Community Relations
40	Geotechnical Services (DES)		\$0		\$0	0.0%		
41	Site Mitigation Studies (DES)		\$0		\$0	0.0%		
42	Community Relations (DES)		\$0		\$0	0.0%		
43	PM Services (Contracted) (DES)		\$0		\$0	0.0%		
44	CM Services (Contracted) (DES)		\$0		\$0	0.0%		
45	Permits (DES)	\$20,000	\$20,000		\$20,000	1.6%		
46	Procurement Bids, Advert & Printing (DES)		\$0		\$0	0.0%		*Construction Contract
47	Commissioning Agent (DES)		\$0		\$0	0.0%		*Construction Contract
48	Other (DES)		\$0		\$0	0.0%		
49	Internal Labor Rollup (DES)	\$20,000	\$20,000	\$0	\$20,000	1.6%		
50	HP (DES)		\$0		\$0			
51	DOT (DES)	\$10,000	\$10,000		\$10,000			Survey and Legal Descriptions
52	FM (DES)		\$0		\$0			
53	NRPR (DES)		\$0		\$0			
54	RFCD (DES)	\$10,000	\$10,000		\$10,000			
55	RWRD (DES)		\$0		\$0			
56	Other Depts (DES)		\$0		\$0			
57	Subtotal DES	\$140,000	\$140,000	\$0	\$140,000	11.3%	\$140,000	
58								
59	Construction (CON)		\$0					
60	CM Services (CON)	\$140,000	\$140,000		\$140,000	11.3%		RFCD inhouse/COT
61	A/E Services (CON)	\$20,000	\$20,000		\$20,000	1.6%		
62	Construction Rollup Costs (CON)	\$1,100,000	\$1,100,000	\$0	\$1,100,000			Designated CONSTRUCTION COST for soft cost calc's (varies by project)
63	Construction (CON)	\$1,100,000	\$1,100,000		\$1,100,000			
64	Substantial Completion Milestone (CON)		\$0		\$0			
65	Closeout Activities (CON)		\$0		\$0			
66	Demolition (CON)		\$0		\$0			
67	Construction Survey/Staking (CON)		\$0		\$0			
68	Equipment / Technology (CON)		\$0		\$0			
69	Furnishings (CON)		\$0		\$0			
70	Moving/Startup/Commissioning (CON)		\$0		\$0			
71	Establishment costs (post occupancy) (CON)		\$0		\$0			
72	Capital Equipment (CON)		\$0		\$0			
73	Materials Testing /Special Insp. (CON)		\$0		\$0	0.0%		*only use if not within the contractors bid
74	Site Monitoring (CON)		\$0		\$0	0.0%		Includes Cultural, Environmental
75	Project Commissioning (3rd Party) (CON)		\$0		\$0	0.0%		
76	Post Design/As-Built (CON)	\$10,000	\$10,000		\$10,000	0.8%		
77	Other (CON)		\$0		\$0	0.0%		
78	Internal Labor Rollup (CON)	\$0	\$0	\$0	\$0	0.0%		
79	HP (CON)		\$0		\$0			
80	DOT (CON)		\$0		\$0			
81	FM (CON)		\$0		\$0			
82	NRPR (CON)		\$0		\$0			
83	RFCD (CON)		\$0		\$0			
84	RWRD (CON)		\$0		\$0			
85	Other Depts (CON)		\$0		\$0			
86	Subtotal CON	\$1,270,000	\$1,270,000	\$0	\$1,270,000	13.7%	\$170,000	
87								
88	Utility Relocation (UTL)		\$0					
89	Electric (TEP, Trico)		\$0		\$0			*hard costs, included in calculation
90	Water (Tucson Water, Others)		\$0		\$0			*hard costs, included in calculation
91	Sewer (RWRD)		\$0		\$0			*hard costs, included in calculation
92	Gas (SW Gas, others)		\$0		\$0			*hard costs, included in calculation
93	Communications (UTL)		\$0		\$0			*hard costs, included in calculation
94	A/E Services (UTL)		\$0		\$0	0.0%		
95	Other (UTL)		\$0		\$0	0.0%		
96	Internal Labor Rollup (UTL)	\$20,000	\$20,000	\$0	\$20,000	1.6%		
97	HP (UTL)		\$0		\$0			
98	DOT (UTL)		\$0		\$0			
99	FM (UTL)		\$0		\$0			
100	NRPR (UTL)		\$0		\$0			
101	RFCD (UTL)	\$20,000	\$20,000		\$20,000			
102	RWRD (UTL)		\$0		\$0			
103	Other Depts (UTL)		\$0		\$0			
104	Subtotal UTL	\$20,000	\$20,000	\$0	\$20,000	1.6%	\$20,000	
105								
106	Public Art (PRT)		\$0					
107	Artist Contract (PRT)	\$16,000	\$16,000		\$16,000	1.3%		
108	Internal Labor (PRT) - By Division	\$4,000	\$4,000		\$4,000	0.3%		
109	Other (PRT)		\$0		\$0	0.0%		
110	Subtotal PRT	\$20,000	\$20,000	\$0	\$20,000	1.6%	\$20,000	
111								
112	Contingency (CTG)		\$0					
113	Design Contingency (CTG)	\$60,000	\$60,000		\$60,000	4.8%		
114	Construction Contingency (CTG)	\$140,000	\$140,000		\$140,000			*hard costs, included in calculation
115	Subtotal CTG	\$200,000	\$200,000	\$0	\$200,000	4.8%	\$60,000	
116								
117								
118	Grand Total	\$2,000,000	\$2,000,000	\$0	\$2,000,000	45.2%	\$440,000	
119								
120	Authorized Funding Sources							
121	Flood Control Tax Levy	\$1,500,000	\$1,500,000					
122	City of Tucson 25% Match	\$500,000	\$500,000					
123	source 3		\$0					
124	source 4		\$0					
125	source 5		\$0					
126								
127								
128	Subtotal Funding	\$2,000,000	\$2,000,000					
129	Project budget	\$2,000,000	\$2,000,000					
130								
131	Balance	\$0	\$0					

APPENDIX C – Microsoft Project Schedule

ID	Notes	Task Name	Duration	Start	Finish	Precedes	% Complete	Copy % Comp	Cost	2018												2019		
										Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3					
1		SELVDO El Vado Wash Drainage Improvements	516 days	Mon 7/3/17	Mon 6/24/19		0%	0%	\$2,000,000.00	[Gantt Bar]														
2		Land Acquisition	310 days	Mon 7/3/17	Fri 9/7/18		0%	0%	\$230,000.00	[Gantt Bar]														
3		Contracted RWY Services (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
4		Property Purchase (RWY)	300 days	Mon 7/17/17	Fri 9/7/18 17		0%	0%	\$200,000.00	[Gantt Bar]														
5		Temporary Easement / Agreement (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
6		Other (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
7		Internal Labor Rollup (RWY)	300 days	Mon 7/3/17	Fri 8/24/18		0%	0%	\$30,000.00	[Gantt Bar]														
8		Real Property (RWY)	300 days	Mon 7/3/17	Fri 8/24/18		0%	0%	\$20,000.00	[Gantt Bar]														
9		HP (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
10		DOT (RWY)	300 days	Mon 7/3/17	Fri 8/24/18		0%	0%	\$10,000.00	[Gantt Bar]														
11		FM (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
12		NRPR (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
13		RFCO (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
14		RWRD (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
15		Other Depts (RWY)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
16		Project Development (PLN)	310 days	Mon 7/3/17	Fri 9/7/18		0%	0%	\$123,000.00	[Gantt Bar]														
17		Procurement (PLN)	10 days	Mon 7/3/17	Fri 7/14/17		0%	0%	\$0.00	[Gantt Bar]														
18		A/E Services (PLN)	300 days	Mon 7/17/17	Fri 9/7/18 17		0%	0%	\$100,000.00	[Gantt Bar]														
19		Site Studies (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
20		Mapping Survey (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
21		IGA or other agreement (PLN)	300 days	Mon 7/17/17	Fri 9/7/18 17		0%	0%	\$0.00	[Gantt Bar]														
22		Other (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
23		Internal Labor Rollup (PLN)	300 days	Mon 7/3/17	Fri 8/24/18		0%	0%	\$23,000.00	[Gantt Bar]														
24		HP (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
25		DOT (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
26		FM (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
27		NRPR (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
28		RFCO (PLN)	300 days	Mon 7/3/17	Fri 8/24/18		0%	0%	\$23,000.00	[Gantt Bar]														
29		RWRD (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
30		Other Depts (PLN)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
31		Design (DES)	311 days	Mon 7/3/17	Mon 9/10/18		0%	0%	\$140,000.00	[Gantt Bar]														
32		Procurement (DES)	10 days	Mon 1/15/18	Mon 1/29/18 33SF-10		0%	0%	\$0.00	[Gantt Bar]														
33		A/E Services (DES)	150 days	Mon 2/12/18	Fri 9/7/18 18FS-15C		0%	0%	\$100,000.00	[Gantt Bar]														
34		Geotechnical Services (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
35		Site Mitigation Services (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
36		Community Relations (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
37		PM Services (Contracted) (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
38		CM Services (Contracted) (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
39		Permits (DES)	100 days	Mon 4/23/18	Fri 9/7/18 33FF		0%	0%	\$20,000.00	[Gantt Bar]														
40		Procurement Bids / Advert & Printing (DES)	1 day	Mon 9/10/18	Mon 9/10/18 4,33,21		0%	0%	\$0.00	[Gantt Bar]														
41		Commissioning Agent (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
42		Other (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
43		Internal Labor Rollup (DES)	310 days	Mon 7/3/17	Fri 9/7/18		0%	0%	\$20,000.00	[Gantt Bar]														
44		HP (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
45		DOT (DES)	150 days	Mon 2/12/18	Fri 9/7/18 33FF		0%	0%	\$10,000.00	[Gantt Bar]														
46		FM (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
47		NRPR (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
48		RFCO (DES)	150 days	Mon 2/12/18	Fri 9/7/18 33FF		0%	0%	\$10,000.00	[Gantt Bar]														
49		RWRD (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
50		Other Depts (DES)	1 day	Mon 7/3/17	Mon 7/3/17		0%	0%	\$0.00	[Gantt Bar]														
51		Construction (CON)	205 days	Tue 9/11/18	Mon 6/24/19		0%	0%	\$1,270,000.00	[Gantt Bar]														
52		CM Services (CON)	175 days	Tue 9/11/18	Mon 5/13/19 40		0%	0%	\$140,000.00	[Gantt Bar]														
53		A/E Services (CON)	175 days	Tue 9/11/18	Mon 5/13/19 40		0%	0%	\$20,000.00	[Gantt Bar]														
54		Construction Rollup costs (CON)	176 days	Tue 9/11/18	Tue 9/14/19		0%	0%	\$1,100,000.00	[Gantt Bar]														
55		Construction (CON)	175 days	Tue 9/11/18	Mon 5/13/19 40		0%	0%	\$1,100,000.00	[Gantt Bar]														
56		Substantial Completion Milestone (CC)	0 days	Mon 5/13/19	Mon 5/13/19 55		0%	0%	\$0.00	[Gantt Bar]														
57		Construction Closeout (CON)	1 day	Tue 5/14/19	Tue 5/14/19 56		0%	0%	\$0.00	[Gantt Bar]														
58		Demolition (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
59		Construction Survey/Staking (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
60		Equipment/Technology (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
61		Furnishings (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
62		Moving/Startup (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
63		Establishment Costs (post occupancy) (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
64		Capital Equipment (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
65		Materials Testing/Special Inspections (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
66		Site Monitoring (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
67		Project Commissioning (3rd Party) (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
68		Post Design/As-Builts (CON)	30 days	Tue 5/14/19	Mon 6/24/19 55		0%	0%	\$10,000.00	[Gantt Bar]														
69		Other (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
70		Internal Labor Rollup (CON)	1 day	Tue 9/11/18	Tue 9/11/18		0%	0%	\$0.00	[Gantt Bar]														
71		HP (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
72		DOT (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
73		FM (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
74		NRPR (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
75		RFCO (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
76		RWRD (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
77		Other Depts (CON)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
78		Utility Relocation (UTL)	90 days	Tue 9/11/18	Mon 1/14/19		0%	0%	\$20,000.00	[Gantt Bar]														
79		Electric (TEP, Trico)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
80		Water (Tucson Water, Others)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
81		Sewer (RWRD)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
82		Gas (SW Gas, Others)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
83		Communications (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
84		A/E Services (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
85		Other (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
86		Internal Labor Rollup (UTL)	90 days	Tue 9/11/18	Mon 1/14/19		0%	0%	\$20,000.00	[Gantt Bar]														
87		HP (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
88		DOT (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
89		FM (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
90		NRPR (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
91		RFCO (UTL)	90 days	Tue 9/11/18	Mon 1/14/19 40		0%	0%	\$20,000.00	[Gantt Bar]														
92		RWRD (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
93		Other Depts (UTL)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
94		Public Art (PRT)	180 days	Tue 9/11/18	Mon 5/20/19		0%	0%	\$17,000.00	[Gantt Bar]														
95		Artist Contract (PRT)	180 days	Tue 9/11/18	Mon 5/20/19 40		0%	0%	\$15,000.00	[Gantt Bar]														
96		Internal Labor (PRT)	180 days	Tue 9/11/18	Mon 5/20/19 40		0%	0%	\$2,000.00	[Gantt Bar]														
97		Other (PRT)	1 day	Tue 9/11/18	Tue 9/11/18 40		0%	0%	\$0.00	[Gantt Bar]														
98		Contingency (CTG)	180 days	Tue 9/11/18	Mon 5/20/19		0%	0%	\$200,000.00	[Gantt Bar]														
99		Design Contingency (CTG)	180 days	Tue 9/11/18	Mon 5/20/19 40		0%	0%	\$60,000.00	[Gantt Bar]														
100		Construction Contingency (CTG)	175 days	Tue 9/11/18	Mon 5/13/19 55FF		0%	0%	\$140,000.00	[Gantt Bar]														



APPENDIX E - CIP Program/Phase Maintenance Request Form

CIP - Program Phase Maintenance

This form is required with the Program Charter & is used to set-up a new project or change one within the CIP program.
Data should match what is in the Program Charter. Please complete ALL blanks on this form.

Program ID = CFC.5ELVDO

Item	Description	Value
1	Bond Number / Non-Bond	Non-Bond
2	Program ID #	CFC.5ELVDO
3	Program Name	El Vado Wash Drainage Improvements
4	Major Program Code + (Type)	c011/2014
5	Major Program Name	Flood Control Drainage Improvements
6	USE BELOW for Budget, Funding Source, Gates & Notes	
7	Budget 001 - RIGHT OF WAY	\$230,000
8	Budget 002 - PLANNING	\$123,000
9	Budget 003 - DESIGN	\$140,000
10	Budget 004 - CONSTRUCTION	\$1,270,000
11	Budget 005 - UTILITY	\$20,000
12	Budget 006 - PUBLIC ART	\$17,000
13	Budget 007 - CONTINGENCY	\$200,000
14	Budget (Software) 051 - INITIATION	
15	Budget (Software) 052 - PLANNING	
16	Budget (Software) 053 - EXECUTION	
17	Budget (Software) 054 - MONITORING	
18	Budget (Software) 055 - CLOSURE	
19	TOTAL PROGRAM BUDGET	\$2,000,000
20	Project Manager Assigned	Janice Hughes
21	Project Location (Mapping & GIS)	El Vado Wash - 1-19 to the Tucson Airport
22	Supervisor District(s) (District #(s) only)	5
23	Jurisdiction Location (Tucson, Marana, etc.)	Tucson
24	Any other Jurisdiction to Manage Project? Yes / No	YES
25	What % Pima County Owned?	0%
26	Is this a Capital Asset or Non-Capital?	Non-Capital
27	1st Fund Source & Amount	Flood Control Tax Levy - \$1,500,000
28	2nd Fund Source & Amount	City of Tucson 25% Match - \$500,000
29	3rd Fund Source & Amount	Source / Amount
30	4th Fund Source & Amount	Source / Amount
31	Planned Program Start Date	Jul-17
32	Planned Construction Start Date	Sep-18
33	Planned Substantial Completion Date	Jun-19
34	Gate 1-1 Entry Date	06/01/17
35	Gate 2-1 Preliminary Design	N/A
36	Gate 3-1 Design 30	N/A
37	Gate 3-2 Design 100	06/01/18
38	Gate 4-1 Construction Acceptance	06/01/19
39	Gate 5-1 Beneficial Occupancy	06/01/19
40	Gate 6-1 Closeout	06/01/19

NOTE 1: Scope & Benefit: (Required)

This project, identified on the list priority capital improvement projects from the Airport Wash South Basin Management Study (AWSBMS) will be designed and constructed. The project will update the AWSBMS El Vado Wash FLO-2D hydrologic and hydraulic analysis to submit a Letter of Map Revision (LOMR) to the Federal Emergency Management Agency (FEMA) to decrease the design discharges and re-delineate the flood hazard areas within the El Vado Watershed. A CLOMR will be prepared for the proposed improvements. The proposed basin, stormdrain, channel and roadway design will utilize the lower discharges from the LOMR. The project will include construction of a detention basin, outletting via a new storm drain and channel with additional road reconstruction of an inverted crown roadway increasing street conveyance capacity. The project limits are Santa Clara Avenue on the east, Calle Medina to the north, I-19 to the west and Calle Sevilla to the south. The project will tie into the existing El Vado Wash culvert beneath I-19. Homes will be removed from flood hazard areas through both new modeling and infrastructure.

NOTE 2: Project Manager will be informed when project is established in database by CIP so budget/projections and project schedule can be entered



1. Update – Risk: Utility Conflicts

Mitigation Strategy:

Avoidance where possible and relocation as necessary to minimize project costs and utility impacts to residents.

Discussion/Action:

2. Update – Risk: Traffic Control

Mitigation Strategy:

Minimize disturbance to residents, Minimize timeline for open trenches/driveway access. Trash, school buses, mail and church activities will need to be maintained.

Discussion/Action:

3. Update – Risk: Community Relations

Mitigation Strategy:

Public Relations needed on project team to serve as outreach and coordination with Community and Ward 1, need bilingual staff

Discussion/Action:



Lessons Learned to Date

Meeting Minutes of Discussion on Lessons Learned:

Review Project Schedule (Use Microsoft Project Schedule)

Meeting Minutes of Discussion on Schedule:

Review Project Cost Model (Use Cost Model)

Meeting Minutes of Discussion on Cost Model:

Additional Gate Minutes/Action Items

Meeting Minutes of Discussion on Additional Items:



GATE APPROVAL FORM

Project Name: El Vado Wash Drainage Improvements
Project ID: CFC.5ELVDO
Project Manager: Janice Hughes
Meeting Date: June 5, 2017
Gate Number: 1-1 Entry/Project Charter

Gate Decision:

Project unconditionally approved - proceed to next Gate

Project conditionally proceeds and must address open items.

Describe Conditions, using additional pages if necessary:

-Update schedule with more refined data for project

Project is delayed, cancelled or denied. Explain:

Comments (Use additional pages if necessary):

-Need to coordinate with church on improvement to basin as not to overlap efforts
-Need a IGA with the City of Tucson that defines responsibilities and cost sharing
-Basin will become a amenity to the community, so community outreach will be required

NEXT GATE: 3-2

ESTIMATED DATE: June 2018

**PIMA COUNTY PROJECT MANAGEMENT & GATE PROCESS MANUAL
GATE AGENDA/MINUTES**



Team Member Recommendation: (A – Approve, D – Deny, C – Conditional)

Name (Print)	Signature	Date	A/D/C
Heather Ruder		6-5-17	A
Rogelio Flores II		6-5-17	A
Larry Robison		5/5/17	A
Andy Dinauer		6/5/17	A
Anthony CARMON		6-5-17	A
ROGER ANYON		6/5/17	A
Tony Schiavone		6/5/17	A
Nancy Cole		6-5-17	A

Gate Approval Signatures:

Name (Print)	Signature	Date	A/D/C
Project Manager: Janice Hughes, PE		5/25/17	
Department Management: Eric Shepp, PE		5/25/17	
Public Works Administration: NANETTE SWISSER		6/5/17	A