



Agenda Item Executive Summary

Title:

Stormwater Monthly Summary Report

Presenter:

Blaise Gravois, Director of Operations/St. James Parish

Agenda Date: 06/13/2018

Ordinance Resolution Bid Authorization/Award Policy Direction Informational Only

Consent: YES NO

Item History:

Monthly Report

Executive Summary:

The St. James Parish Council has placed a standing agenda item in its regular meeting agenda for updates on the parish's progress toward implementation of the East Bank Stormwater Master Plan. This monthly report brings together status, cost and schedule information for the various goals and action plans in one place.

The report includes a summary Agenda Report, which provides a brief outline and summary of progress on all active action plans within the Master Plan.

Recommendation:

BKI has reviewed the results of the East Bank Hydrology Model with members of the Parish Administration, District 1 and 2 Councilmen and the mayors of Lusher and Gramercy. All seem to be in agreement that the parish should proceed with plans for securing funding for this project that includes gated structures at Blind River, East St. James M2 Canal and Bayou la Trainasse. A pumping station is included at the Blind River Structure. Total cost is estimated at \$24.4MM which includes a 25% contingency. Details are provided in the Agenda Report.

It is recommended that the Parish Council seriously consider a bond election. A "Tentative Schedule of Events for a December 8, 2018 Election" is provided on the following page as Attachment 1. It is further recommended that the following funding needs be included:

- Funding for increased maintenance of drainage systems throughout the parish
- Funding for additional and/or replacement culverts as identified in the BKI Master Drainage Report
 - o Damaged/undersized culverts on the East Bank
 - o Lateral culverts at Highway 3125
 - o Railroad culverts on the East Bank
- Funding for additional West Bank flood protection facilities

Attachments:

1. Agenda Report

ATTACHMENT 1

**TENTATIVE
SCHEDULE OF EVENTS
FOR
DECEMBER 8, 2018 ELECTION
PARISH OF ST. JAMES, STATE OF LOUISIANA**

06/27/18	6:30 p.m.	Parish Council announces and notifies State Senators and Representatives of intent to call election
07/05/18		Publish notice in official journal of intent to call election <i>(Deadline to submit publication to the official journal - Fri. 06/29 by Noon)</i>
08/08/18	6:30 p.m.	Parish Council calls election
08/21/18		Foley & Judell file application with the State Bond Commission and notify election officials
09/20/18		State Bond Commission approves election
10/15/18		Secretary of State deadline
09/20/18		Publish Notice of Special Election in official journal
09/27/18		Publish Notice of Special Election in official journal
10/04/18		Publish Notice of Special Election in official journal
10/11/18		Publish Notice of Special Election in official journal <i>(Deadline to submit publication to the official journal - Fri. 09/14 by Noon)</i>
12/08/18		Election
12/27/18	6:30 p.m.	Parish Council canvasses returns of election and promulgate results with Post-Election filings being made by Foley & Judell

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STORMWATER SYSTEM IMPROVEMENTS

Objective C: Greatly improve stormwater drainage on the East Bank of St. James Parish so there is no flooding during a 10-year storm.

Goal 1: To replace all damaged/crushed and/or undersized culverts as recommended in BKI's Master Drainage Report.

Action Plan 1: Replace the 6 undersized Hwy 3125 culverts as identified by BKI within the next 3 years at an estimated cost of \$1.5MM. (Revision: 7 culverts and detailed cost estimate now at \$0.9MM)

Status: The Parish is working to solicit funding from the Department of Transportation.

Highway 3125 Lateral Culvert Replacement Summary

Lateral Culvert Replacement – East Side	
Lateral at	Replaced
Ferrero Canal	
David Canal	
School Side Canal	
Woods Canal	

Lateral Culvert Replacement – West Side	
Lateral at	Replaced
Humble	
Grand Point	
Longview	

Action Plan 2: Replace the roughly 1178 damaged/crushed or undersized culverts identified by BKI within the next 10 years at an estimated cost of roughly \$4.6MM.

Recommendation: It has been recommended that the parish seek taxpayer approval for the sale of bonds to cover the cost to be repaid by millage assessments.

Status: The parish drainage crew has initiated this effort beginning at Humble Street, North and South Angelle Streets, and Kenmore Street. Prioritization efforts will be completed when funding to complete this project becomes available. Progress will be tracked via the individual district tables below.

District 1 Culvert Replacement Summary

Street	Crushed	Broken	Undersized	No Data* Good	No Data* Replace	Total No Data*	Total Culverts	Culverts Replaced
Pecan		1	1				2	
Cherry			3				3	
Plum	1		5			1	7	
Millet	1		5				6	
Hickory			7				7	
Railroad			3				3	
Fir		1					1	
Mulberry		1	1				2	
Airline	2	4	40			53	99	
David	1	1	4			4	10	
Lawrence			2				2	
E-W 2 nd		2	4			7	13	
N-S 2 nd			12				12	
E 14 th								
Golden Grove	1						1	
Rose	2		3				5	
Tulip	1	2					3	
Colonial		1	10			9	20	
E-W 6 th						1	1	
Magnolia			1				1	
Pine			10			1	11	
Brandy	1						1	
N Airline	2	2	65			7	76	
Magnolia N3125)		3	9				12	
Manhattan			10				10	
Total Dist 1	12	18	195			83	308	

*Will be videoed to determine need for cleaning/replacement.

District 2 Culvert Replacement Summary

Street	Crushed	Broken	Undersized	No Data* Good	No Data* Replace	Total No Data*	Total Culverts	Culverts Replaced
Lutcher Ave			1				1	
Albert	1	2				1	4	
Brookes Apt								
King		1	1				2	
Exchange			4				4	
Central		2	9				11	
Nicholas		1					1	
Levy Gaudet			19				19	
Couresault	2	2	27			2	33	
Alexander	2						2	
E-W 5 th		1	1				2	
N-S 3 rd			1				1	
Louisiana		2					2	
Texas			6				6	
St. Louis		1					1	
E Lebray		2					2	
W Lebray	2		17				19	
Dey Say			20				20	
Total Dist 2	7	14	106			3	130	

*Will be videoed to determine need for cleaning/replacement.

District 3 Culvert Replacement Summary

Street	Crushed	Broken	Undersized	No Data* Good	No Data* Replace	Total No Data*	Total Culverts	Culverts Replaced
Rome	2		7				9	
Morgan		1	5			4	10	
Nobile	3	3	10			3	19	
LeBoukin			8				8	
T Poche	3		4				7	
Bellevue	1		6			2	9	
Martin	1		2			3	6	
Antioch	3	1	24			1	29	
St. Joseph		1	4			14	19	
Geismar	1	1	1			13	16	
Tupelo	2	1				4	7	
Cypress	1	1	6			7	15	
Plantation		2	6			4	12	
Elmwood	2						2	
Kenmore			6				6	
Belle Rose	1	1					2	
Redwood	2	1	9				12	
Oak Grove			3				3	
Perique	1		5				6	
Sugar House			2			2	4	
Maura	4	5					9	
Wendy	2	10	2				14	
Amy	5	2					7	
Riley	2		11				13	
Lena		1	8				9	
Nicole	3		27			1	31	
S Angelle		3	5			1	9	
Angelle		1				1	2	
N Angelle	3	3	6				12	
St. James	2	2	4			1	9	
Longview	13	1	16			8	38	
Carly	3					2	5	
Carolyn			5			8	13	
Humble	1		3			1	5	
Industrial	2	3	2				7	
642 (N3125)	1	7				2	10	
A Louque	1	1					2	
Gravois		2	19			1	22	
Winsley			9				9	
Hwy 642	5	3	18			30	56	
Total Dist 3	68	59	243			113	483	

*Will be videoed to determine need for cleaning/replacement.

District 4 Culvert Replacement Summary

Street	Crushed	Broken	Undersized	No Data* Good	No Data* Replace	Total No Data*	Total Culverts	Culverts Replaced
Hwy 44	9		34			2	45	
Belmont	3		9			8	20	
Denise			6			13	19	
Effie			7				7	
Roseann	1		8				9	
Hester	1		19			1	21	
Louque			2				2	
Honeysuckle		1					1	
Elmo			5			1	6	
Sharon						2	2	
Trudeau	1		18			2	21	
Hotard			1				1	
Ester			1				1	
Sugar Hill	29						29	
Schexnaydre	3	5	40				48	
Carrot			9				9	
Ricky			5				5	
Elaine						1	1	
Snyder		1	1				2	
Stella			7				7	
A&G						1	1	
Total Dist 4	47	7	172			31	257	

*Will be videoed to determine need for cleaning/replacement.

Action Plan 3: Replace the 37 undersized Railroad culverts as identified by BKI within the next 5-10 years at a cost of \$1.1MM. Revision: 50 culverts identified.

Status: In 4th quarter 2017 a second culvert (48") was added in Belle Rue Subdivision in Lutcher at a cost of \$89,000. The parish is actively pursuing additional funding for the remaining culverts. In most, if not all cases, a second culvert will be added rather than replacing the existing undersized culvert.

CN Railroad Culvert Installation Summary

Mile Marker	Culvert Installed								
397.30		400.28		403.96		406.46		413.05	
397.65		401.01		404.60		406.67		413.19	
397.73		401.28		404.95		407.94		413.89	
397.88		402.13		405.09		410.48		413.97	
398.65		402.40		405.28		411.03		415.01	
398.96		402.99		405.61		411.20		415.17	
399.69		403.04		409.67		411.29		416.33	
399.73		403.28		405.83		411.30		416.77	
400.13		403.71		406.08		411.40		417.08	
400.24		403.78		406.27		412.90		417.42	

STORM SURGE PROTECTION

Objective D: Improve storm surge protection on the East Bank

Goal 1: To implement a short-term solution for storm surge protection and continue efforts to identify a feasible and cost-effective long-term solution.

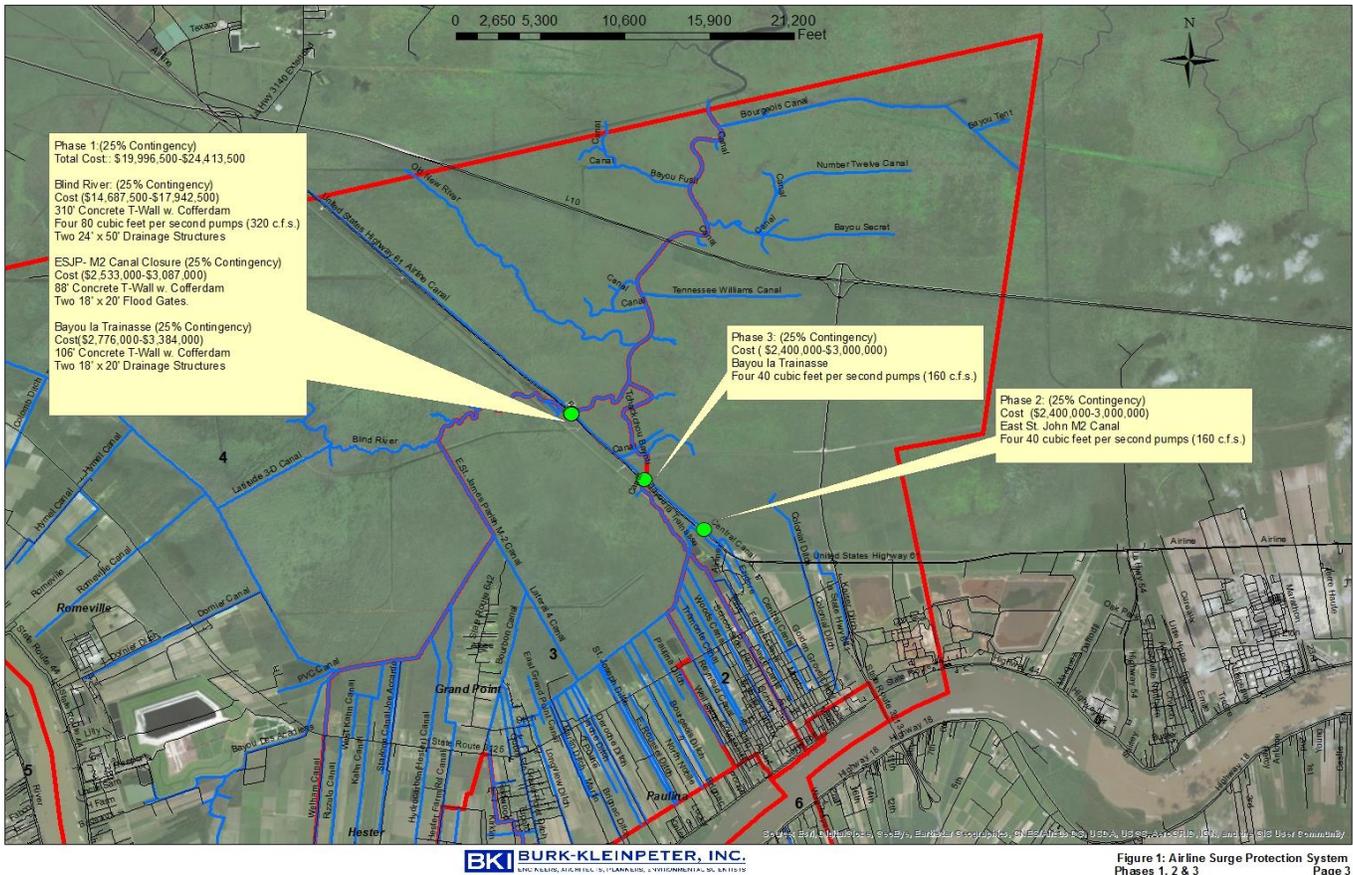
Action Plan 1: Implement the short-term solution (Aquadam with sheet pile structures with gates/pumping stations to block backflow from Blind River) at an estimated cost of \$30MM.

Status: BKI has completed the East Bank Hydrology Model and a detailed report has been issued. The report describes a more cost-effective solution at an estimated cost of roughly \$24.4MM which includes a 25% contingency (\$4.4MM). Recommended facilities, identified as Phase 1, would include gates and a pump station at Blind River and gates only at Bayou la Trainasse and East St. James M2 Canal. A pump station at M2 Canal, identified as Phase 2, is estimated \$3.0MM including a 25% contingency (\$0.6MM). A similar pump station at Bayou la Trainasse, identified as Phase 3, would also cost \$3.0MM including a 25% contingency. The purchase of an Aquadam is not warranted at this time.

This Airline Highway Surge Protection project has the added benefit of protecting the East Bank from flooding during a 10-year storm. This protection is provided by the pump station included at Blind River Structure. Similar pump stations can be added at M2 Canal (Phase 2) and Bayou la Trainasse (Phase 3) at a later date to provide additional flood protection.

FIGURE 1

Airline Highway Surge Protection Project



Recommendation: It has been recommended that the parish seek taxpayer approval for the sale of bonds to cover the cost to be repaid by millage assessments. Pumps at M2 Canal and Bayou la Trainasse should be deferred to a later time when/if it is demonstrated that they are needed. The same holds true for the Aquadam.

Detailed cost estimates for this project are shown in the following 3 Tables.

TABLE 1

Phase 1: Airline Highway Surge Protection Project Cost

Description	Estimated Quantity (Q)	Units	Unit Cost (UC)	Cost (Q*UC)	Contingency (25%)	Total Cost
<u>East St. James M2 Canal Structure</u>						
Concrete T-Wall including Cofferdam	88	L. F.	\$12,000	\$1,056,000	\$264,000	\$1,320,000
Flood Gate (18' Height)	40	L. F.	\$29,000	\$1,160,000	\$290,000	\$1,450,000
Pump Station (160 cfs)	0	C.F.S.	\$15,000	\$0	\$0	\$0
Engineering/Permits	1	EACH	\$277,000	\$277,000	\$0	\$277,000
Survey	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Geotechnical Report	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Testing	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Construction Administration	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Resident Inspection	1	EACH	\$20,000	\$20,000	\$0	\$20,000
				\$2,533,000	\$554,000	\$3,087,000
<u>Bayou la Trainasse Structure</u>						
Concrete T-Wall including Cofferdam	106	L. F.	\$12,000	\$1,272,000	\$318,000	\$1,590,000
Flood Gate (18' Height)	40	L. F.	\$29,000	\$1,160,000	\$290,000	\$1,450,000
Pump Station (160 cfs)	0	C.F.S.	\$15,000	\$0	\$0	\$0
Engineering/Permits	1	EACH	\$304,000	\$304,000	\$0	\$304,000
Survey	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Geotechnical Report	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Testing	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Construction Administration	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Resident Inspection	1	EACH	\$20,000	\$20,000	\$0	\$20,000
				\$2,776,000	\$608,000	\$3,384,000
<u>Blind River Structure</u>						
Concrete T-Wall including Cofferdam	310	L. F.	\$12,000	\$3,720,000	\$930,000	\$4,650,000
Flood Gate (25'-29' Height)	100	L. F.	\$45,000	\$4,500,000	\$1,125,000	\$5,625,000
Pump Station (320 cfs)	320	C.F.S.	\$15,000	\$4,800,000	\$1,200,000	\$6,000,000
Engineering/Permits	1	EACH	\$1,627,500	\$1,627,500	\$0	\$1,627,500
Survey	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Geotechnical Report	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Testing	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Construction Administration	1	EACH	\$5,000	\$5,000	\$0	\$5,000
Resident Inspection	1	EACH	\$20,000	\$20,000	\$0	\$20,000
				\$14,687,500	\$3,255,000	\$17,942,500
				w Contingency	Total Summary	\$24,413,500
				w/o Contingency	Total Summary	\$19,996,500

TABLE 2						
Phase 2: East St. James M2 Canal Structure Pump Station Project Cost						
Description	Estimated Quantity (Q)	Units	Unit Cost (UC)	Cost (Q*UC)	Contingency (25%)	Total Cost
Pump Station (160 cfs)	160	C.F.S.	\$15,000	\$2,400,000	\$600,000	\$3,000,000
				w Contingency	Total Summary	\$3,000,000
				w/o Contingency	Total Summary	\$2,400,000

TABLE 3						
Phase 3: Bayou la Trainasse Structure Pump Station Project Cost						
Description	Estimated Quantity (Q)	Units	Unit Cost (UC)	Cost (Q*UC)	Contingency (25%)	Total Cost
Pump Station (160 cfs)	160	C.F.S.	\$15,000	\$2,400,000	\$600,000	\$3,000,000
				w Contingency	Total Summary	\$3,000,000
				w/o Contingency	Total Summary	\$2,400,000

Action Plan 2: Continue efforts to identify a long-term solution to storm surge protection.

Status: In January 2018, the parish received word that GOMESA funding in the amount of \$500,000 has been approved for 2018 and again in 2019 to be used to fund the 30% Design Phases 1-3 of the Inner Levee Alignment proposal defined in the Master Plan.

FLOOD WARNING AND RESPONSE PLAN

Objective E: Enhance the early warning and response systems needed in the event of potential flooding whether from stormwater or storm surge.

Action Plan 1: Purchase and install level gauges at strategic locations.

Status: The Department of Emergency Preparedness has purchased 3 ruler-type level gauges and will be installing them in the near future. Work Order 1469-2017 was issued to place a staff gauge on Woods Canal.

Completed Action Plans

PARISH GOVERNMENT

Objective A: Make drainage and flood protection a parish priority

Goal 1: To review and promote progress on the East Bank Stormwater Master Plan monthly.

Action Plan 1: Approve the East Bank Stormwater Master Plan as presented by the East Bank Drainage and Flood Protection Task Force. - Approved on February 7, 2018.

Action Plan 2: Once approved, add East Bank Stormwater Master Plan Review as a standing agenda item at one of the regularly scheduled council monthly meetings. – Initiated beginning March 2018.

Action Plan 4: Require preparation of quarterly reports for publication. – Monthly status reports will be prepared until most Stormwater Master Plan action plans are completed.

Action Plan 5: Post progress reports on parish website. – Monthly status reports will be posted on the website.

OPERATIONS and MAINTENANCE

Objective B: Schedule and fund regular maintenance of all drainage systems.

Goal 1: To maintain drainage systems on a priority basis so that they remain in good condition.

Action Plan 5: Post quarterly reports on the parish website. – Monthly status reports will be posted.

STORMWATER SYSTEM IMPROVEMENTS

Objective C: Greatly improve stormwater drainage on the East Bank of St. James Parish so there is no flooding during a 10-year storm.

Goal 1: To replace all damaged/crushed and/or undersized culverts as recommended by BKI's Master Drainage Plan.

Action Plan 5: Post updated quarterly reports on the parish website each January, April July and October. – Monthly status reports will be posted.

STORM SURGE PROTECTION

Objective D: Improve storm surge protection on the East Bank.

Goal 1: To implement a short-term solution for storm surge protection and continue efforts to identify a feasible and cost-effective long-term solution.

Action Plan 1: Implement the short-term solution (AquaDam with sheet pile structures with gates/pumping stations to block backflow from Blind River) at an estimated cost of roughly \$30MM.

- Develop a model of the area to determine the benefits of implementing the project in phases as funding becomes available. – Funding for the model was approved in March and development is underway.

Action Plan 3: Prepare quarterly progress reports. – Monthly status reports are being prepared.

Action Plan 4: Post updated quarterly reports on the parish website each January, April, July and October. – Monthly status reports are being posted.

FLOOD WARNING and RESPONSE PLAN

Objective E: Enhance the early warning and response systems needed in the event of potential flooding whether from stormwater or storm surge.

Goal 1: To provide level monitoring at strategic locations to develop historical data to enhance response plan actions by mid-year 2018.

Action Plan 1: Purchase and install level gauges at strategic locations. – Three ruler-type level gauges have been purchased.

Action Plan 5: Prepare quarterly progress reports when new information is available. – New information will be included in the Monthly Status Reports.

Action Plan 6: Post quarterly progress reports on the parish website. – Monthly Status Reports will be posted.

FLOODPLAIN MANAGEMENT

Objective F: Maintain participation and good standing in the National Flood Insurance Program (NFIP) and improve floodplain management practices to minimize flood damages and reduce flood insurance premiums for property owners.

Goal 1: Identify actions needed to improve the Community Rating System (CRS) score to reduce flood insurance premiums and work to implement cost-effective actions.

Action Plan 4: Post quarterly progress reports, if any, on the parish website. – Progress will be included in the Monthly Status Reports posted on the parish website.

Objective G: Reduce flood losses and better protect the natural resources, improving the function of the parish's floodplains.

Goal 1: To implement projects that will restore a significant area of forested wetlands along the Maurepas Basin.

Action Plan 3: Post updated quarterly reports, if any, on the parish website. – Any progress will be included in the Monthly Status Reports posted on the parish website.

STORMWATER BEST MANAGEMENT PRACTICES

Objective H: Encourage the use of stormwater Best Management Practices (BMPs) throughout the parish to reduce stormwater runoff volume.

Goal 1: To establish development regulations for the parish that are state-of-the-art with regard to stormwater management.

Action Plan 4: Advise the public via the parish website. – Progress will be included in the Monthly Status Reports posted on the parish website.

FINANCIAL PLAN

Objective I: Fund stormwater management initiatives through sustainable and equitable sources of revenue.

Goal 1: To search for all potential funding sources and work to solicit those funds on an on-going basis.

Action Plan 1: Estimate the cost of all system improvements to identify funding needs. – Preliminary estimates are available for all identified system improvements.

Action Plan 2: Identify potential funding sources. – The following funding sources have been identified:

Tax millage, PLD (Pontchartrain Levee District), State Capital Outlay, GOHSEP (Governor's Office of Homeland Security and Emergency Preparedness), CPRA (Coastal Protection and Restoration Authority), FEMA (Federal Emergency Management Agency) and GOMESA (Gulf of Mexico Energy Security Act).

Action Plan 4: Prepare quarterly progress reports. – Progress will be included in the Monthly Status Reports.

Action Plan 5: Post quarterly progress reports, if any, of the parish website. – Progress will be included in the Monthly Status Reports being posted on the parish website.

IMPLEMENTATION PLAN

Objective J: Develop an aggressive implementation plan and project tracking system to promote community awareness of progress.

Goal 1: To prioritize project implementation basis greatest impact on reducing flooding and develop a timeline for informing the public, noting that availability of funding will be the greatest obstacle to implementation.

Action Plan 2: Present Implementation Timeline to the Parish Council for approval – Individual project timelines will be prepared when funding becomes available.

Action Plan 3: Prepare quarterly updates on progress. – Progress will be included in the Monthly Status Reports.

Action Plan 5: Post quarterly updates, if any, on the parish website. – Progress will be included in the Monthly Status Reports being posted on the parish website.