

PLANNING COMMISSION

October 17, 2018

AGENDA

The Isle of Palms Planning Commission will hold its regular meeting on Wednesday, October 17, 2018 at 4:30 p.m. in the City Hall Conference Room, second floor, 1207 Palm Boulevard.

A. Call to order and acknowledgment that the press and the public were duly notified in accordance with state law

B. Public comments

C. Approval of minutes: September 19, 2018

D. Old business: 4:35PM- discuss outfall RFP response with Thomas and Hutton

5:00PM- discuss outfall RFP response with Weston and Sampson

5:25PM- discuss making a recommendation regarding outfall RFP

Update on sewer expansion MOU

E. New business

F. Miscellaneous business

G. Adjourn

**MINUTES OF THE ISLE OF PALMS
PLANNING COMMISSION MEETING
September 19, 2018**

The Isle of Palms Planning Commission met in the City Hall conference room, 1207 Palm Boulevard on September 19, 2018 at 4:30 p.m. Members attending included Ron Denton, Richard Ferencz, Bill Mills, Phillip Pounds and Lisa Safford; the Director of Planning Douglas Kerr was present as well. Vince DiGangi and Lewis Gregory were absent. Mr. Ferencz acknowledged that the press had been notified of the meeting and the agenda for the meeting was posted in City Hall and the Building Department to comply with the Freedom of Information Act.

PUBLIC COMMENTS

Mr. Mark Yodice of Thomas and Hutton Engineering explained that he was present to answer questions about the response Thomas and Hutton submitted regarding the drainage outfalls.

APPROVAL OF MINUTES

Mr. Ferencz explained that the next item on the agenda was the approval of the August 15, 2018 minutes and Mr. Pounds made a motion to approve the minutes as submitted and Ms. Safford seconded the motion. The vote was unanimous in favor of the motion.

DISCUSSION OF MEMORANDUM OF UNDERSTANDING REGARDING FUTURE SEWER EXPANSION

Mr. Ferencz explained that the next item on the agenda was the discussion of the development of a Memorandum of Understanding (MOU) between the City and the Isle of Palms Water and Sewer Commission (IOPWSC) regarding the future expansion of the public sewer system to all parts of the island.

City Administrator Emerita Tucker explained that she had distributed revisions to the draft MOU, but that this draft did not include comments from the Water and Sewer Commission, so it would need to be further amended. She explained that she has been meeting regularly with the IOPWSC staff and the engineering firm updating the master plan, Thomas and Hutton.

Mr. Ferencz asked if she had been the only representative from the City in these meetings with the IOPWSC, and when she thought a final product would come from the meetings. Ms. Tucker answered that she has been the only representative from the City attending the meetings, but that the City staff had been providing information for the project. She explained that currently the work had been carried about as far as it could, without additional feedback from the IOPWSC and without the work from Thomas and Hutton being finalized.

Mr. Ferencz asked if she could estimate when the MOU projects would be complete. She answered that it was out of her hands, but asked Mr. Yodice if he had a timeframe. Mr. Yodice answered that he thought that their work would extend several more weeks. Mr. Ferencz asked if they could make a request of the IOPWSC to provide their comments to help in getting the MOU complete. Ms. Tucker answered that she could make the request, but she knew that they did not like providing information prematurely, without being fully vetted, and she did not know what the likelihood of them responding soon would be.

Ms. Tucker explained that she had also distributed a list of potential funding sources for sewer expansion projects. She added that the IOPWSC had requested information from the Charleston County Assessor's Office regarding the percentage of houses that were receiving the homestead exemption as well as the number of properties that had not changed hands for many years. She explained that the group was aware that concern has been expressed about older property owners that may be on a fixed retirement income and burdening them with sewer fees. She added that it would be useful to know how big that group might be.

She explained that the IOPWSC had applied for another Rural Infrastructure Grant, but this time they applied for the area of 31st Avenue. Additionally, she explained that there were Federal, State, County and private funding sources. She detailed grant funding programs from the Economic Development Administration (USEDA), FEMA Pre-Disaster Mitigation Program (FEMA-PDM), US Housing and Urban Development Urban Entitlement Grant (HUD), the SC Rural Infrastructure Authority (RIA) and private foundations.

Mr. Kerr stated that the Planning Commission already had a special meeting scheduled for September 28th at 10am to discuss the drainage RFPs and asked that Ms. Tucker let him know if she had additional information to be reviewed at that meeting and she said that she would.

DISCUSSION OF STORMWATER REQUEST FOR PROPOSALS

Mr. Kerr explained that the City received two responses to the RFP and they were from Thomas and Hutton Engineering and Weston and Sampson Engineering. He stated that he suspected that some firms did not respond because the design threshold the City included in the RFP was Hurricane Joaquin, which was considered a 1,000-year storm and he felt this may have discouraged some firms from submitting. He stated that he believed the first order of business was to decide whether to proceed with only two respondents or to alter the RFP and request more proposals.

Mr. Mills asked if Mr. Kerr had any concerns about the two firms that responded being able to do the work and Mr. Kerr answered no. Mr. Mills asked what would be gained if the City were to go back out for more proposals. Mr. Kerr answered that generally the City tries to get more than two proposals, but it may not change anything in the end.

Mr. Ferencz stated that one of the proposals was two times the cost of the other and this made him worry that either one respondent did not include everything or that one respondent is providing a high cost for the work.

Mr. Denton explained that twice the cost does not always indicate twice the product and that going back out to bid may not change any of the responses.

Mr. Ferencz asked if there was a motion on whether to close the bidding and proceed with the two firms that have responded. Mr. Mills made a motion to close the bidding and Mr. Denton seconded the motion and the vote was unanimous was in favor of closing the bidding.

Mr. Kerr stated that if the group was agreeable, he would try to arrange both firms coming to the Commission special meeting on September 28th starting at 10am to interview for one hour each. The group agreed, and Mr. Ferencz asked if Mr. Kerr would request a Gantt chart from each firm identifying the schedule and tasks associated with their proposal. Mr. Kerr answered yes, he would request this information.

ADJOURNMENT

With there being no further business, the meeting was adjourned at 5:45 p.m.
Respectfully submitted, Richard Ferencz, Chairman

City of Isle of Palms Phase 3 Drainage Outfall Design & Permitting



Project Team



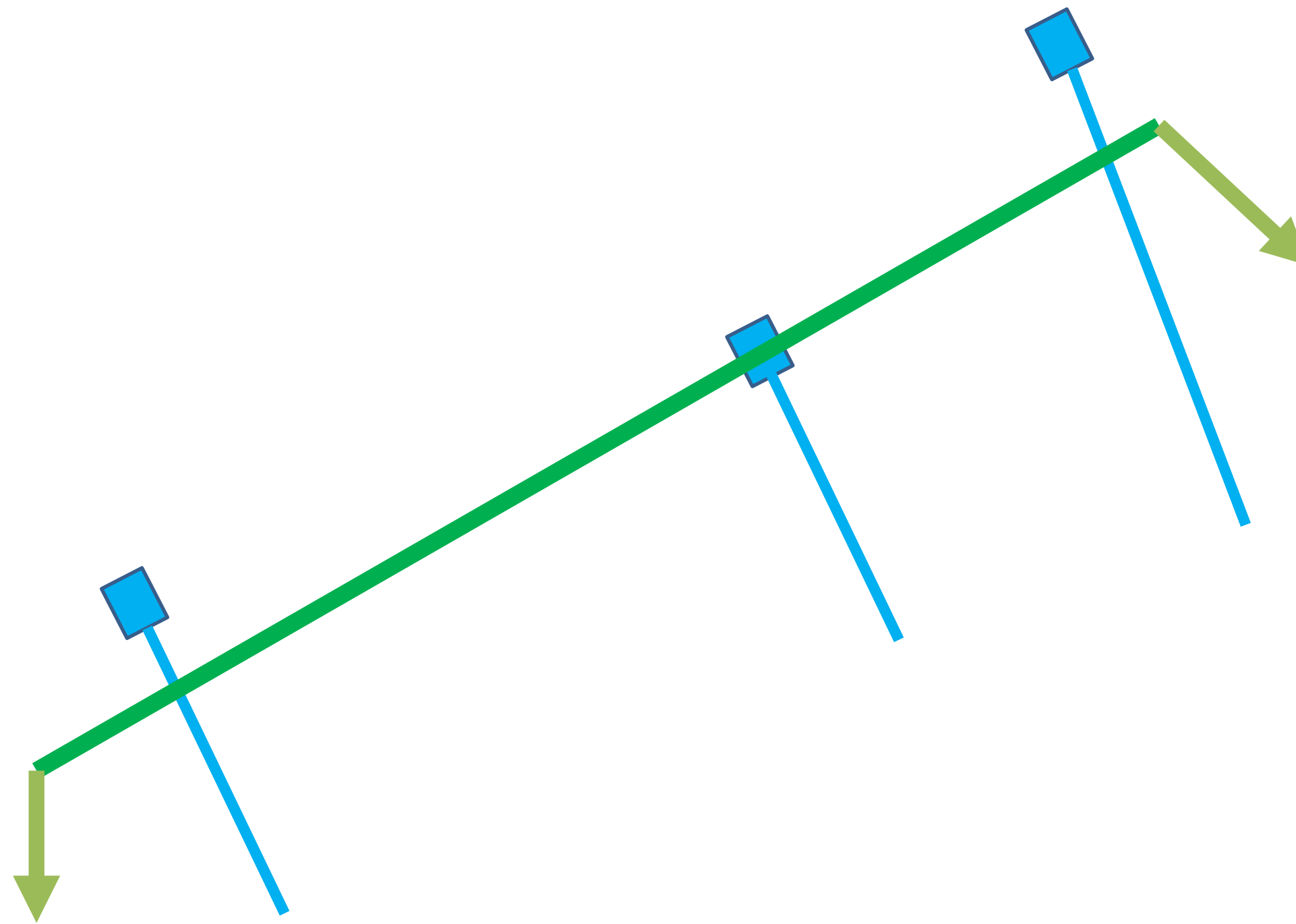
- ✓ Expertise: Multi-discipline Engineering
- ✓ Local & Regional, Vested in area
- ✓ 650 Professionals

- ✓ Expertise: Urban Water Modeling
- ✓ Global Perspective
- ✓ Expertise: Resilience & Climate Change



MAP
Showing
Outfall Locations





Approach

- **What do we propose ?**
 - **Review** previous efforts
 - Develop a plan for an improved drainage system that is Simple, Robust and Reliable
 - Match Recommendations with a Collaborative, Reasonable Budget
 - Develop an O&M Plan to Keep System Optimized, Functioning Properly

How ?

- Site visit to each key trunk system asset approaching outfalls
- Review inventory
- ID flow constrictors, understand actual system performance
- Understand basin behavior under stress
- Understand significant tidal impacts
- Develop/Update model to represent actual field cond.

How ?

- Run Model using forecasted boundary conditions & real events (actual & NOAA)
- Review Model impacts with adaptive resilience standards (new design storms, tides, system improvements)
- Develop capital plan, schedule, O&M plan, monitoring plan

Our Approach...

- Determine flow requirements for design Storm & boundary Conditions (Sea Level)
- Extend & enlarge outfall channels to improve storage & enable readiness
- Study topo & develop perimeter surge protection
- Properly size main conveyance assets & provide surge protection
- Increase storage volume with Stormwater Pumping
- Make recommendations on Upstream Stormwater collection system

Goals

- ID tidal barrier protection areas
- Design & Permit outfalls to seal out tidal surge
- Anticipate Sea Level Rise
- Anticipate build out conditions
- Anticipate saturated Soil conditions
- Provide protection to Hurricane Joaquin Conditions

Adaptation Strategies



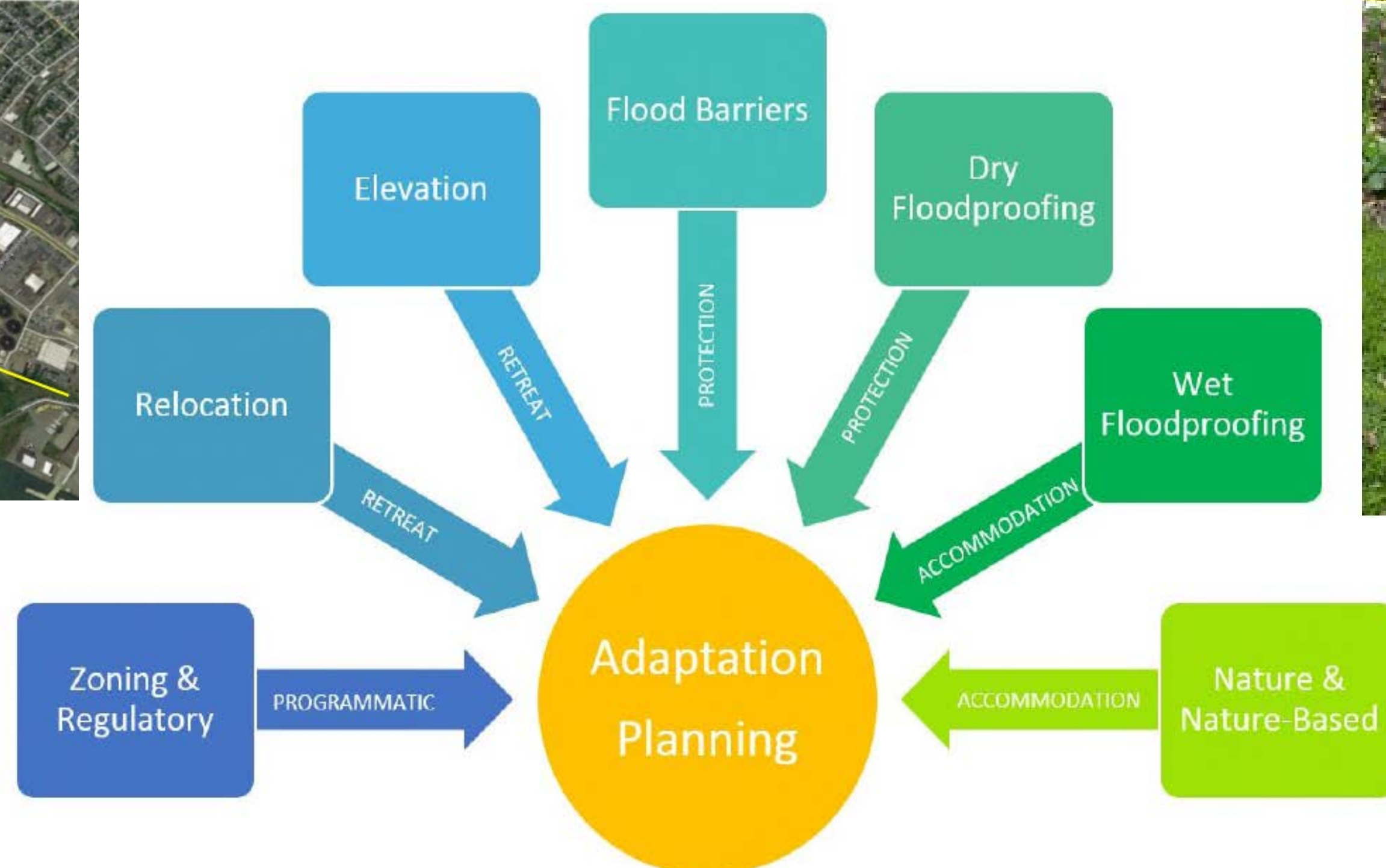
Source: FEMA.



Source: Spill-barrier.info



Source: Resilientdesign.org



Proven Performance

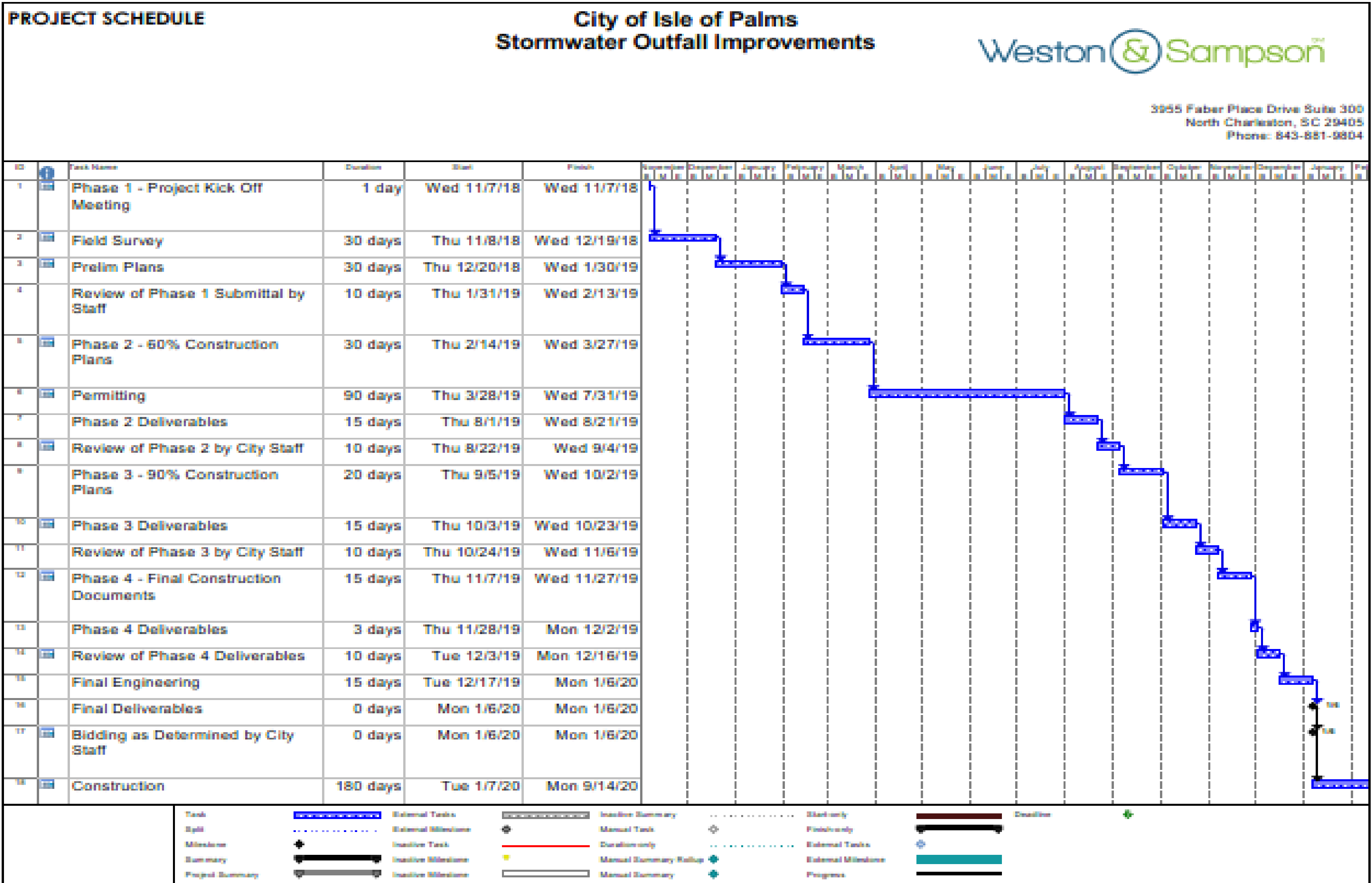
- **History working with municipalities on similar projects**
 - W&S over 115 Years, 90% municipal projects
 - Large & small projects, basins, capital plans, construction, large water program- keeping water where it is supposed to be and out of where it's not.
 - Permitting, trust and relationships, reputations, repeat clients

Proven Performance

- **Qualifications of Key Personnel**
 - Well over 100 years of combined experience
 - World class expertise
 - Local knowledge, many local staff members
 - Trained, depth of staff, stability, motivated
- **Availability**
 - Workload mgmt.....We will incorporate collaborative schedule into our workload
- **Budget History**
 - We plan our work & work the plan, scope additions are Owner-driven

Unique Approach & Intangible Factors

- Field intense & realistic operations influence
- Multi-Level Team, Local/Regional/Global
- Staff living near Basin
- Emphasis on the ability to provide O&M
- Emphasis on simple, robust, monitoring, trending, model/system calibration & response
- Passion for water resources projects & success
- Determination/Innovative approach
- Ability of Team to collaborate & communicate with community & council



Local Engineering Services & Other Communities

- MPWW
- ReWa
- Spartanburg Water
- NCSD
- CWS
- BCWS
- JIPSD
- BJWSA
- DCWS
- JMWSC
- Summerville CPW



- City of Columbia
- City of Bishopville
- City of Hanahan
- Town of McColl
- Town of Summerville
- Town of Ridgeland
- Town of Ridgeville
- Berkeley County
- Dillon County
- SCDOT
- SCE&G
- SCANA
- BCD COG

Public Involvement

- Graphics & materials
- Public meetings & hearings
- Media information / press releases
- Website content
- Mailers
- Videos



Why Choose the Weston & Sampson Team

- Passion for water projects
- Depth of resources & talent
- National/East Coast perspective/experience, local history
- Highly motivated, determined Team members
- Proven performance



www.westonandsampson.com

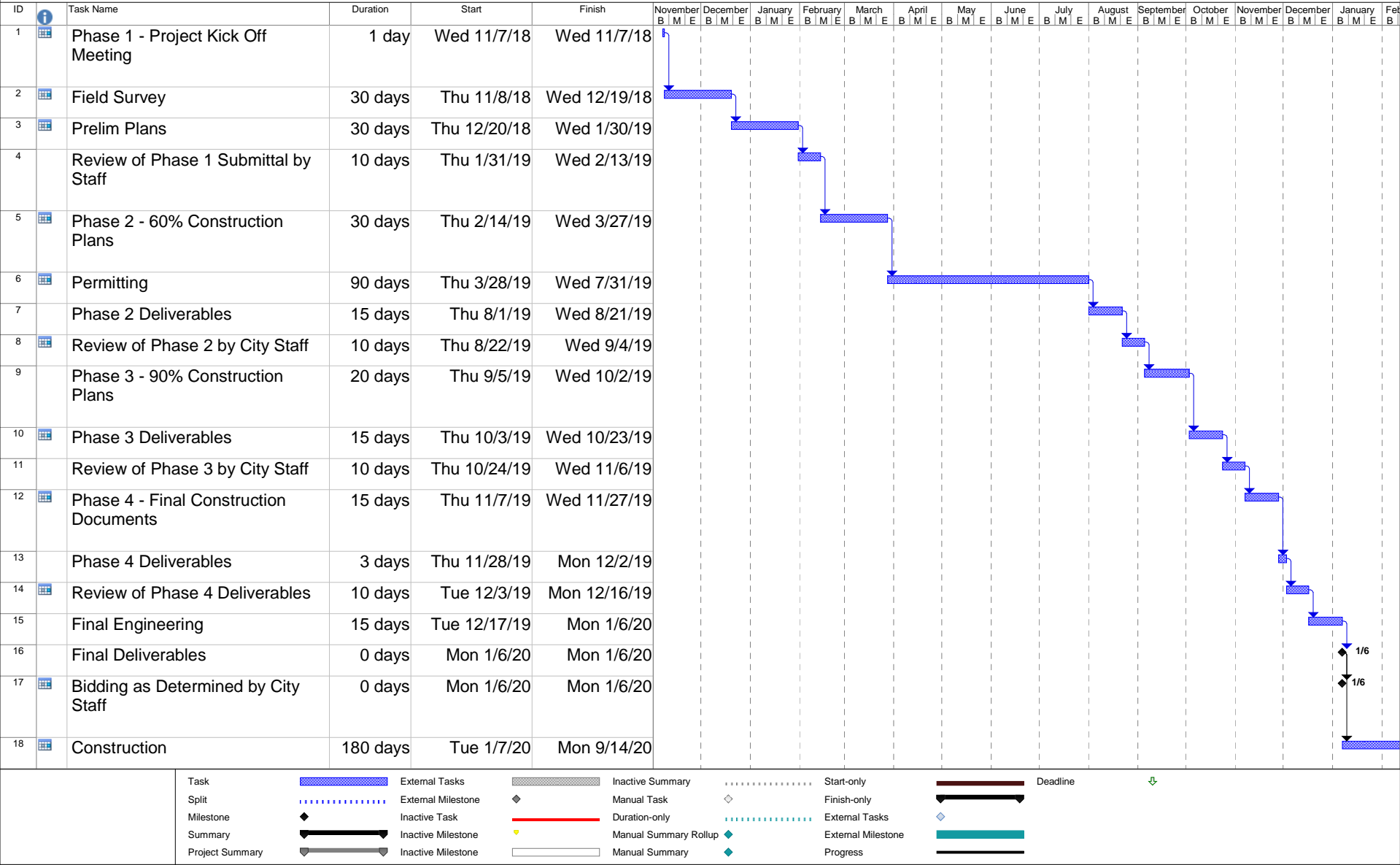


PROJECT SCHEDULE

City of Isle of Palms
Stormwater Outfall Improvements



3955 Faber Place Drive Suite 300
North Charleston, SC 29405
Phone: 843-881-9804





CITY OF ISLE OF PALMS, SC

PHASE 3 DRAINAGE OUTFALL
DESIGN & PERMITTING

September 28, 2018

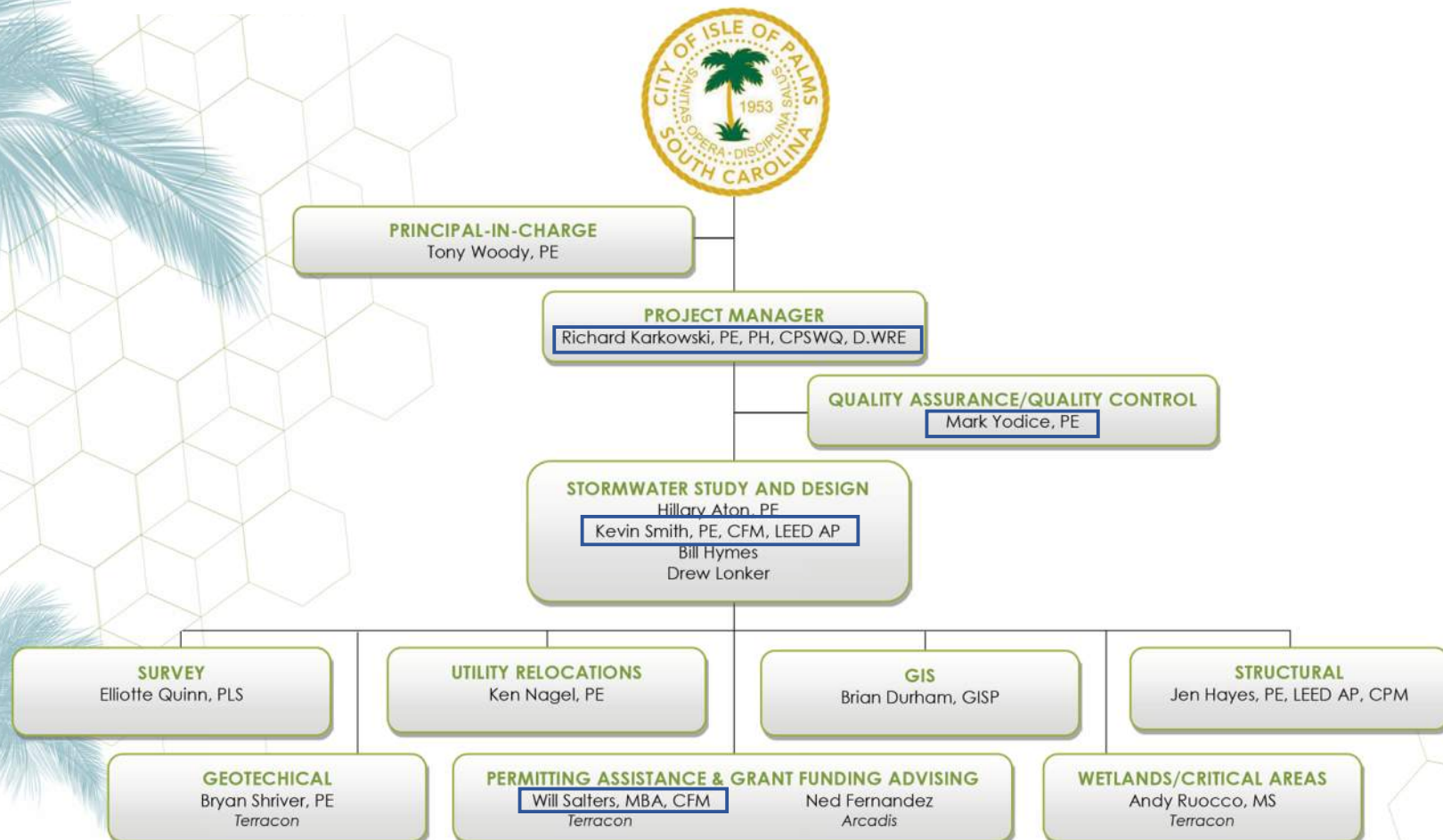


Presentation Outline



- Project Team
- Qualifications
- Project Understanding
- Project Approach
- Project Schedule
- Project Fee

Project Team



Project Team



■ Prime Consultant

- Project Management & Administration
- Data Collection / Analysis
- Survey
- Study, Alternatives, and Recommendations
- Engineering (Civil, Structural, Utilities)
- Permitting
- Bidding
- Construction Administration

■ Sub-consultant

- Geotechnical Investigations / Design
- Wetlands / Critical Area Permitting
- Funding

■ Sub-consultant

- Funding

West Locating, LLC

- Minor Sub-consultant
 - Utility Locating / SUE

Qualifications – Stormwater Management Areas of Expertise



• MUNICIPAL/COUNTY STORMWATER SERVICES

- Stormwater Capital Improvement Projects
- Stormwater Inventory/GIS Database Preparation
- Regional Stormwater BMP Design
- Canal/Riverine Improvements
- Storm Drainage System Remediation Rehabilitation
- Storm Drainage System Maintenance Planning
- Stormwater Master Plans
- MS4 Consulting

• STUDIES/MODELING

- Feasibility Studies
- Watershed Management Planning
- Hydrologic, Hydraulic, and Water Quality Modeling
- Water Quality Studies and Sampling
- Site Specific Stormwater Studies
- Sour Analysis
- Riverine and Coastal Studies

• DESIGN

- Geotechnical, Groundwater, and Infiltration Evaluation
- Stormwater Master Plans
- Stormwater Capital Improvement Construction Plans

- Structural Design
- Roadway Design
- Traditional Pavement/Pervious Pavement
- Regional Best Management Practices
- Canal/Riverine Improvements
- Stormwater System Remediation/Rehabilitation
- Storm Drainage System Maintenance Planning
- Permitting Assistance

• CONSTRUCTION

- Bid Assistance
- Construction Observation
- SWPPP Book Preparation
- Project Closeout

• FEMA RELATED SERVICES

- Base Flood Elevation Determination
- Hydrologic & Hydraulic Analysis
- Community Consulting
- GIS Integrated FEMA Analysis and Mapping
- Letter of Map Revision/Letter of Map Amendments
- Public Assistance/HMGP/Other Funding Assistance

Qualifications - Active Drainage CIP Clients



- City of Charleston, SC
- Charleston County, SC
- Town of Mount Pleasant, SC
- Town of Sullivan's Island, SC
- Town of Summerville, SC
- City of Columbia, SC
- Horry County, SC
- City of Lake City, SC
- Town of Surfside Beach, SC
- City of Savannah, GA
- Chatham County, GA
- City of Garden City, GA
- City of Port Wentworth, GA
- City of St. Mary's, GA
- City of Tybee Island, GA
- Multiple Private Development Clients

Qualifications - Applicable Past Projects



■ Canals and/or Tide Control Structures

- City of Charleston – Forest Acres
- City of Savannah – Bilbo Canal
- City of Savannah – Wilshire Canal
- City of Hilton Head Island – Sandfiddler Outfall
- City of Hilton Head Island – Baynard Cove Outfall
- Town of Summerville – Arbor Oaks (Flood Control)
- Charleston County – NRCS Canals
- City of Tybee Island – Backflow Prevention
- Private Client – Kiawah River
- Private Client – WestEdge

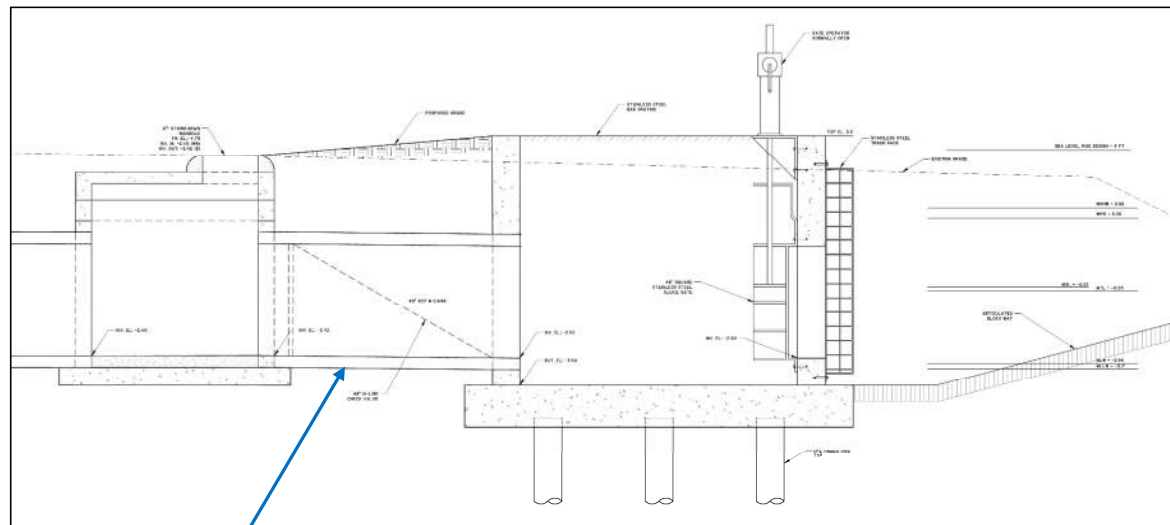
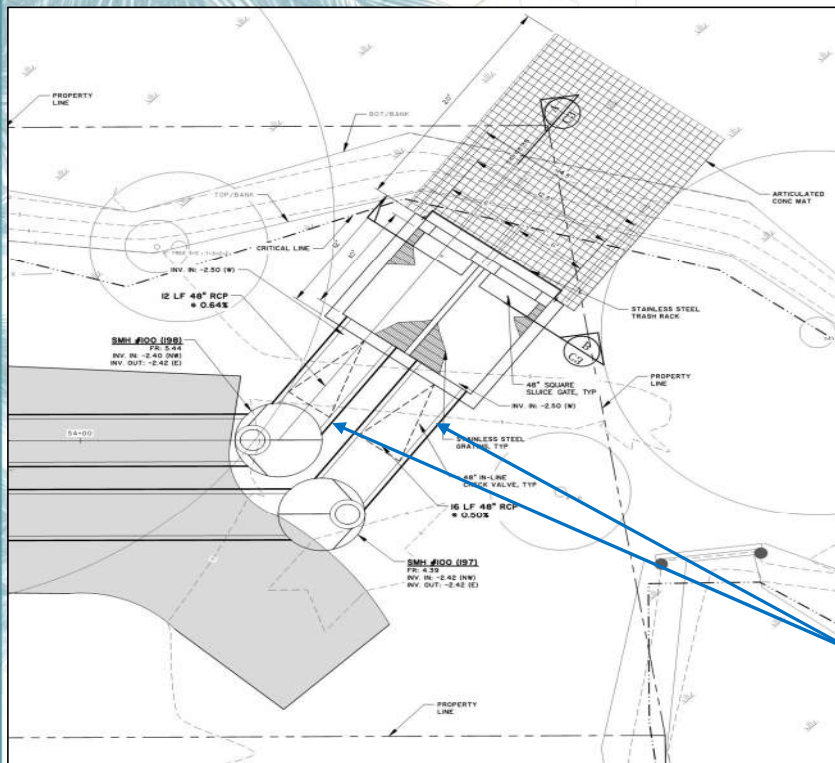
■ Stormwater Pump Stations

- Sullivan's Island – Sta. 18 at Atlantic Avenue
- Town of Mount Pleasant - Edwards Park
- City of Charleston – Forest Acres
- City of Hilton Head Island – Jarvis Creek
- City of Hilton Head Island – Lawton Canal
- City of Savannah – Springfield Canal

Project Understanding

- City Goal(s)

- Identify the appropriate area where the back of the island should be sealed from the intrusion of tidal waters from backing into the system
- Design and permit drainage system outfall systems that will seal the tidal water out, while allowing stormwater to exit



Project Understanding

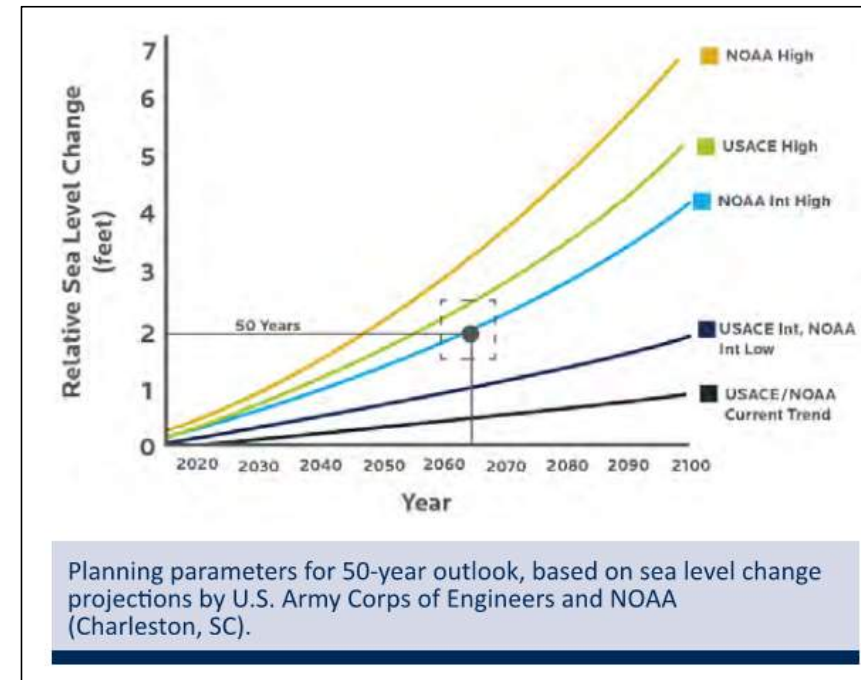
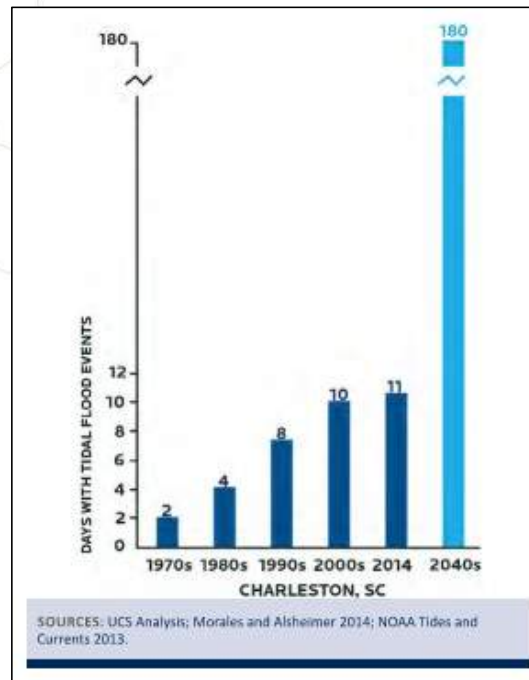
- City Goal(s)

- Be designed and sized appropriately to provide for future drainage improvements within the basins associated with each of the three outfalls



Project Understanding

- City Goal(s)
 - Be designed to anticipate a reasonable expectation of sea level rise



Project Understanding

• City Goal(s)

- Be designed to anticipate a reasonable expectation of increase in impervious surfacing on the island
- Be designed to anticipate a high level of soil saturation before storms

Increase in Impervious Area



Saturated Soils

Outdated Science (NRCS, 1986)

CN (AMC II)	Adjusted CN	
	CN (AMC I)	CN (AMC III)
"Normal"	"Dry"	"Wet"
50	31	70
51	31	70
52	32	71
53	33	72
54	34	73
55	35	74
56	36	75
57	37	75
58	38	76
59	39	77
60	40	78
61	41	78
62	42	79
63	43	80
64	44	81
65	45	82
66	46	82

Current Science (Kannan, et al, 2007)

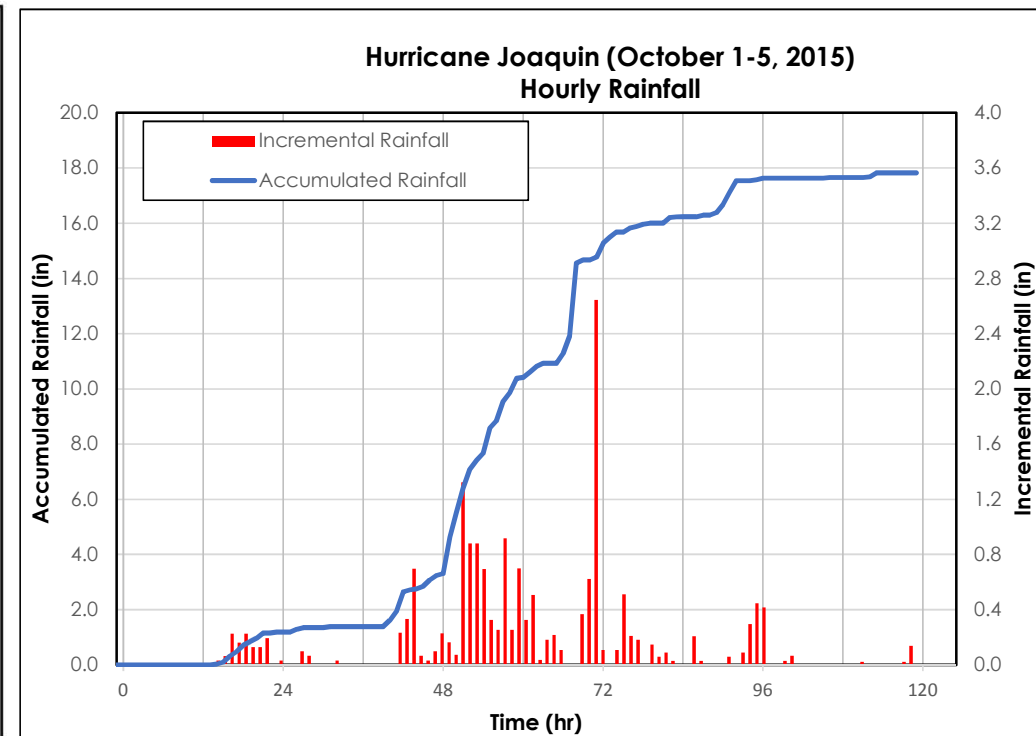
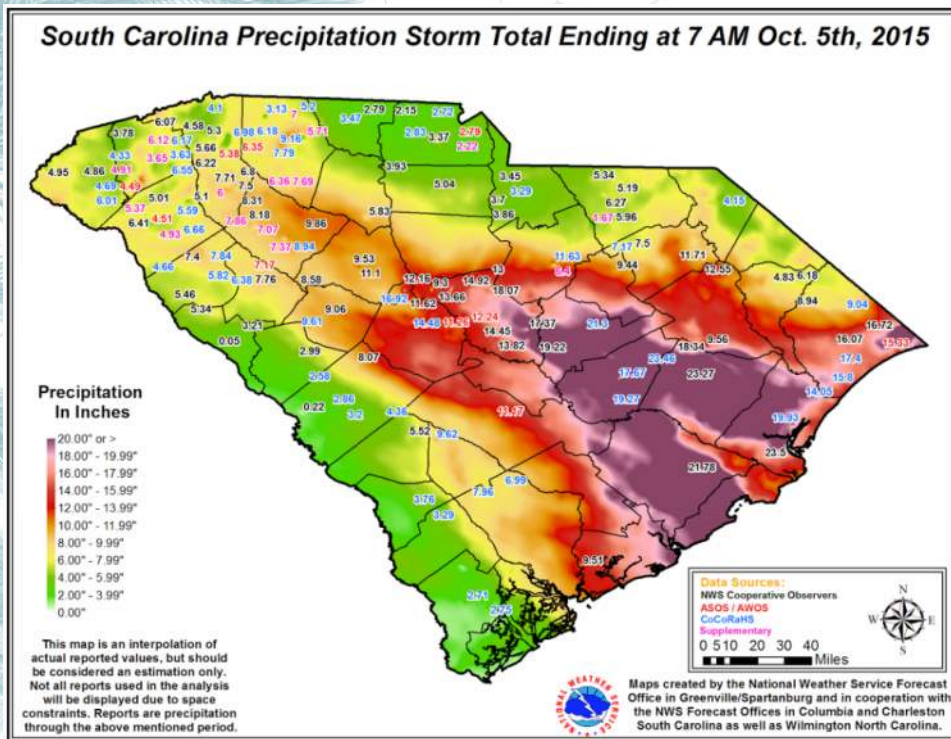
$$CN_t = \frac{1200}{\left(\frac{1200}{CN_{t-1}}\right) + [ET - (P - Q)]_t}$$

Where:

Q = runoff (in)
P = rainfall (in)
CN = curve number
ET = is evapotranspiration

Project Understanding

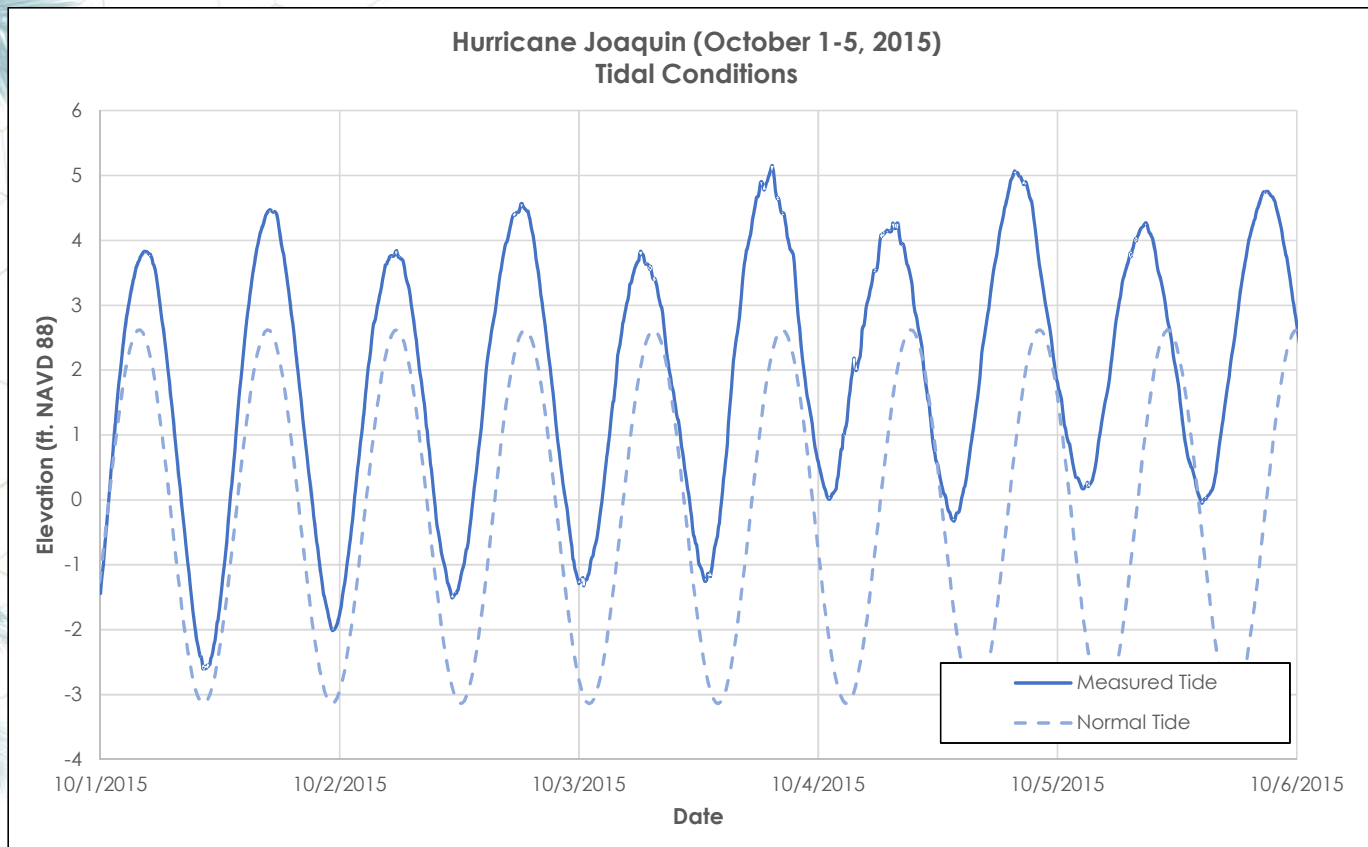
- City Goal(s)
 - The design should be to a level that would have kept flood waters associated with Hurricane Joaquin from damaging houses



Project Understanding

- City Goal(s)

- The design should be to a level that would have kept flood waters associated with Hurricane Joaquin from damaging houses (Cont'd)



Project Approach



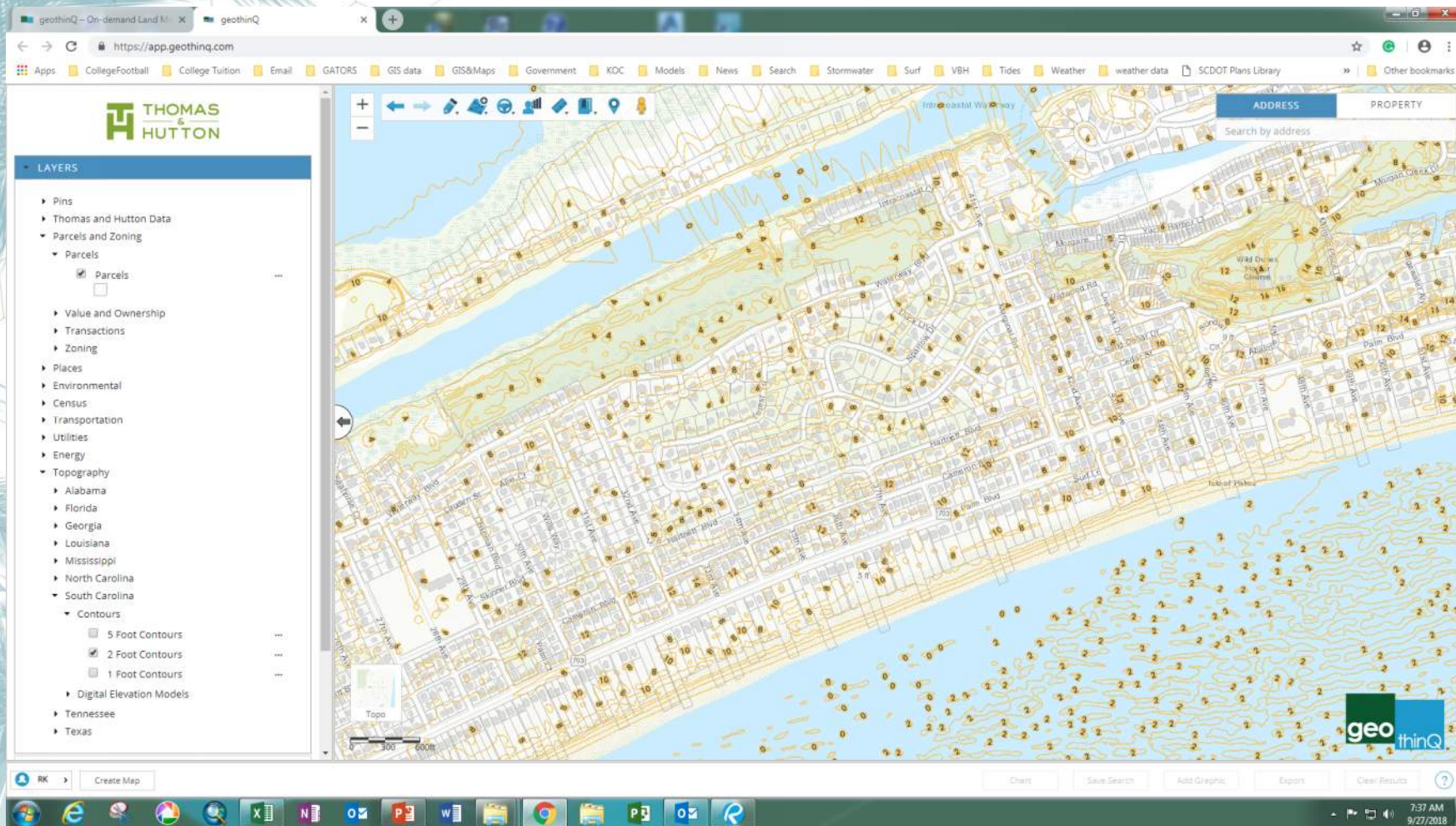
■ Design & Permitting

- Existing Data Collection and Analysis
- Survey and Wetlands/Critical Area Delineations
- Study, Alternatives Analysis, and Recommended Outfall Improvement
- Engineering Design and Plans Preparation
- Permitting
- Opinion of Probable Construction Cost
- Funding Assistance
- Project Phasing Plan
- Project Schedule Development

■ Bidding & Construction

- Bid Phase Services
- Construction Phase Services

Project Approach – Existing Data Collection and Analysis



Project Approach – Survey and Wetlands/Critical Area Delineations



■ Survey

■ Public Outreach

- Flyer
- City Website
- Social Media

■ Property Access Coordination

■ Utility Locating and Marking

■ Field Surveys

- Uplands
- Limited Bathymetric

■ Wetlands / Critical Area Delineations

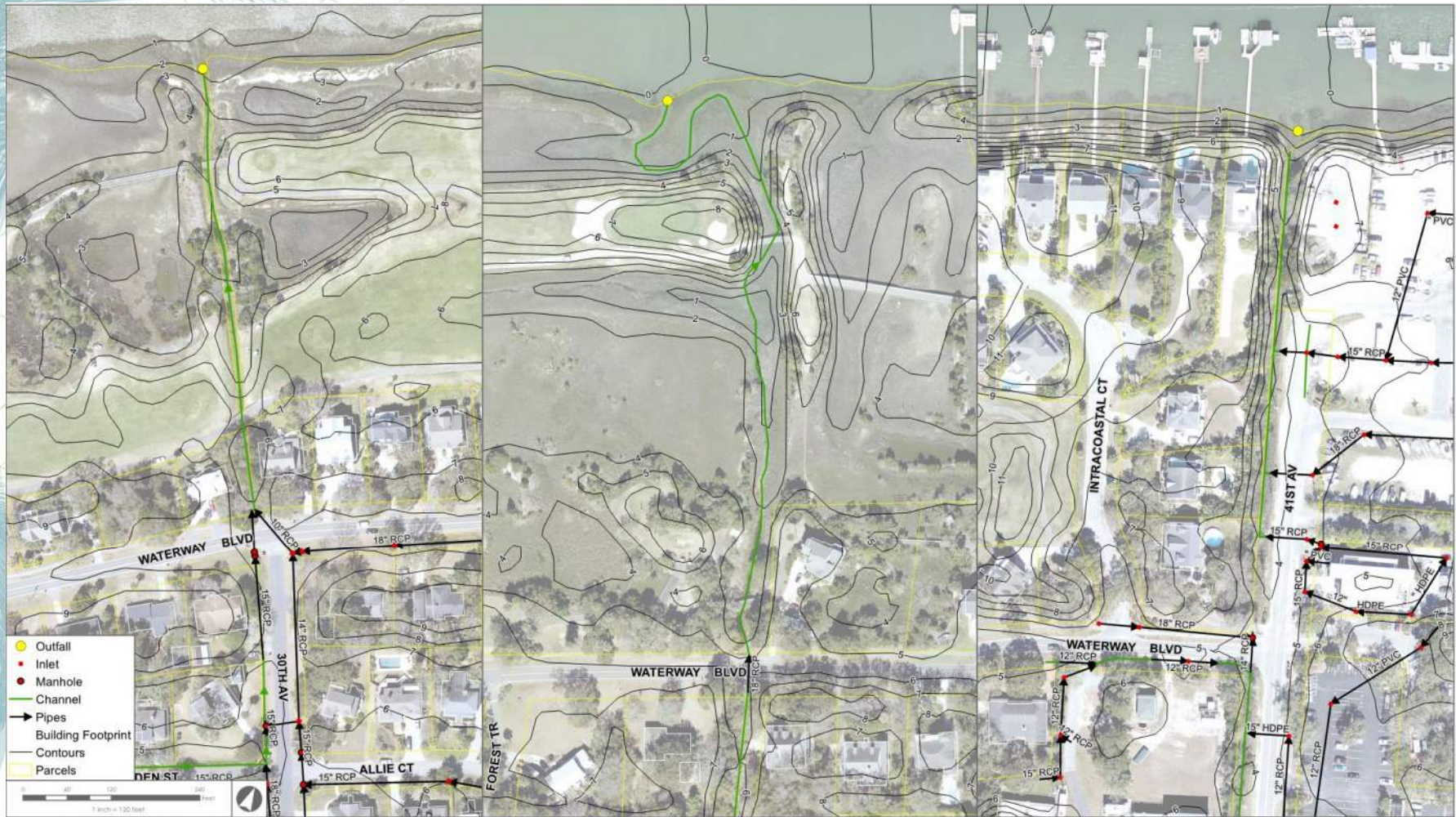
■ Field Work

■ USACOE / SCDHEC-OCRM Coordination

■ Plat (Survey) – Permanent Record of Wetland/Critical Area Limits



Project Approach – Study, Alts. Analysis, and Recommendations



Project Approach – Study, Alts. Analysis, and Recommendations



■ Existing/Design Conditions Study

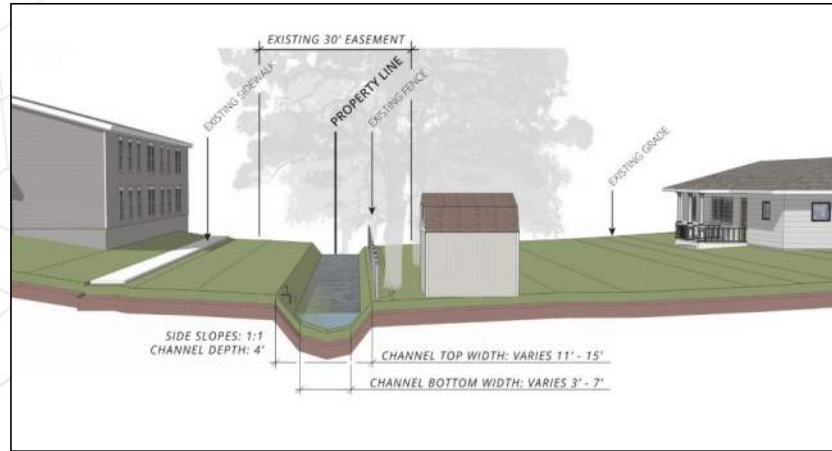
- Field Reconnaissance
- System Identification and Understanding
- Basin/Sub-basin Delineation
- Design Conditions
 - Impervious
 - Saturated Soils
- Hydrologic & Hydraulic Modeling
- Multiple Events / Boundary Conditions
 - 2-, 10-, 25-, 50-, 100-, 500-year; H. Joaquin
 - Normal tide, King tide, Sea Level Rise, etc.

■ Alternative Analysis

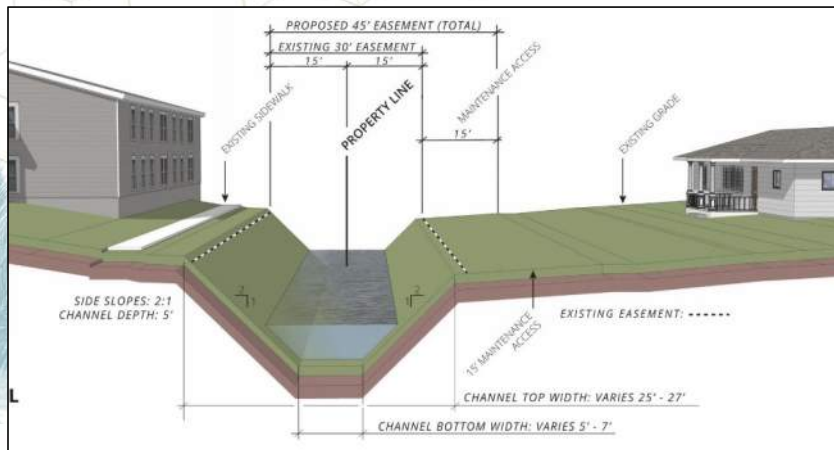
- Basins / Outfalls
- Locations
- Alignment
- Type
 - Open Channel
 - Closed (Pipes, Box Culvert, Bottomless, etc.)
 - Pumping
- Environmental, Property, and Aesthetic Impacts

■ Recommendations

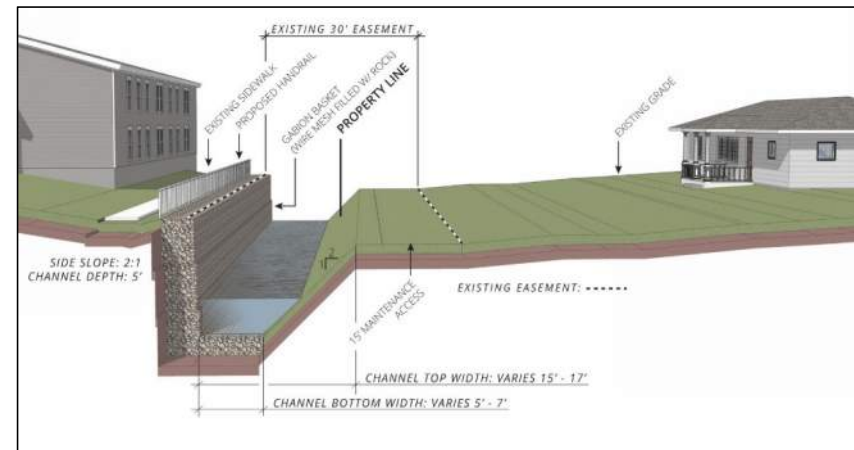
Project Approach – Study, Alts. Analysis, and Recommendations



Existing Conditions



Proposed Alternative 1 – Additional Easement Required



Proposed Alternative 2 – No Additional Easement Required

Project Approach – Engineering Design & Plans Preparation



- Preliminary Design (30%)
- Geotechnical Investigations & Design
- Structural Design
- Final Design (60% and 100%)
 - SWPPP
 - Utility Relocation
 - Traffic Control (detours)



Project Approach – Permitting



- City of IOP MS4 Approval (administered by Charleston County)
- SCDHEC-OCRM – Coastal Zone Consistency Certification
- SCDHEC BOW – NPDES NOI Construction General Permit
- SCDOT Encroachment Permit
- Miscellaneous Encroachment Permits/Approvals/Coordination
 - IOPWSC
 - SCE&G – Power/Gas
 - Miscellaneous “Dry” Utilities – AT&T, Cable, etc.

Project Approach – Permitting

- **USACE Wetland Permit**
 - Nation Wide Permit (NWP) - 2 to 4 months
 - Individual Permit (IP) - 6 to 8 months (sometimes longer)
 - Sampling Analysis Plan may be required
- **SCDHEC-OCRM Critical Area Permit – 3 to 6 months**
- **Mitigation**
 - Only one third-party salt water mitigation bank (\$60K/credit)
 - Approximately 13.5 credits/acre required for critical area impacts
 - Mitigation may not be required for impacts less than 0.1 acre



Project Approach – Opinions of Probable Construction Costs



- **Conceptual - Study / Alternatives Analysis**
- **Preliminary – 30% Engineering Design**
- **Final – 60% and 100 % Engineering Designs**



Project Approach – Funding Assistance



■ FEMA Mitigation Grant Opportunities

■ Hazard Mitigation Grant Program (HMGP)

- Funding available, when authorized under a Presidential major disaster declaration
- Minor Localized Flood Reduction Projects
- 75/25 match (cash or in-kind)

■ Pre-Disaster Mitigation Grant (PDM) Program

- Funding contingent on Congressional appropriations and distributed on a competitive basis
- Minor Localized Flood Reduction Projects
- 75/25 match (cash or in-kind)
- Current Cycle Application Period: October 1, 2018 – January 31, 2019

■ Flood Mitigation Assistance (FMA) Program

- Funding available through NFIP Fund and appropriated by Congress
- Minor Localized Flood Reduction Projects
- 75/25 match
- Current Cycle Application Period: October 1, 2018 – January 31, 2019

■ Economic Development Administration (EDA) Grant Opportunities

■ EDA Disaster Supplemental Funding

- Subject to the availability of funds, EDA has approximately \$587 million in FY18 supplemental appropriations available for disaster recovery grants
- Resiliency projects & construction activities, including infrastructure enhancement, building new infrastructure including high performance and resilient infrastructure.

■ Integration with other Planning Efforts

- Charleston County Regional Hazard Mitigation Plan
- IOP Comprehensive (Comp) Plan
- IOP Local Comprehensive Beach Management Plan
- FEMA's Community Ratings System (CRS)

■ Successful Past HMGP Grants

- Charleston County, SC – Main Road Drainage Improvements
- Town of Sullivan's Island, SC – Drainage Improvements
- Isle of Palms WSC – Forest Trails WWTP Floodproofing and Consolidation of Service

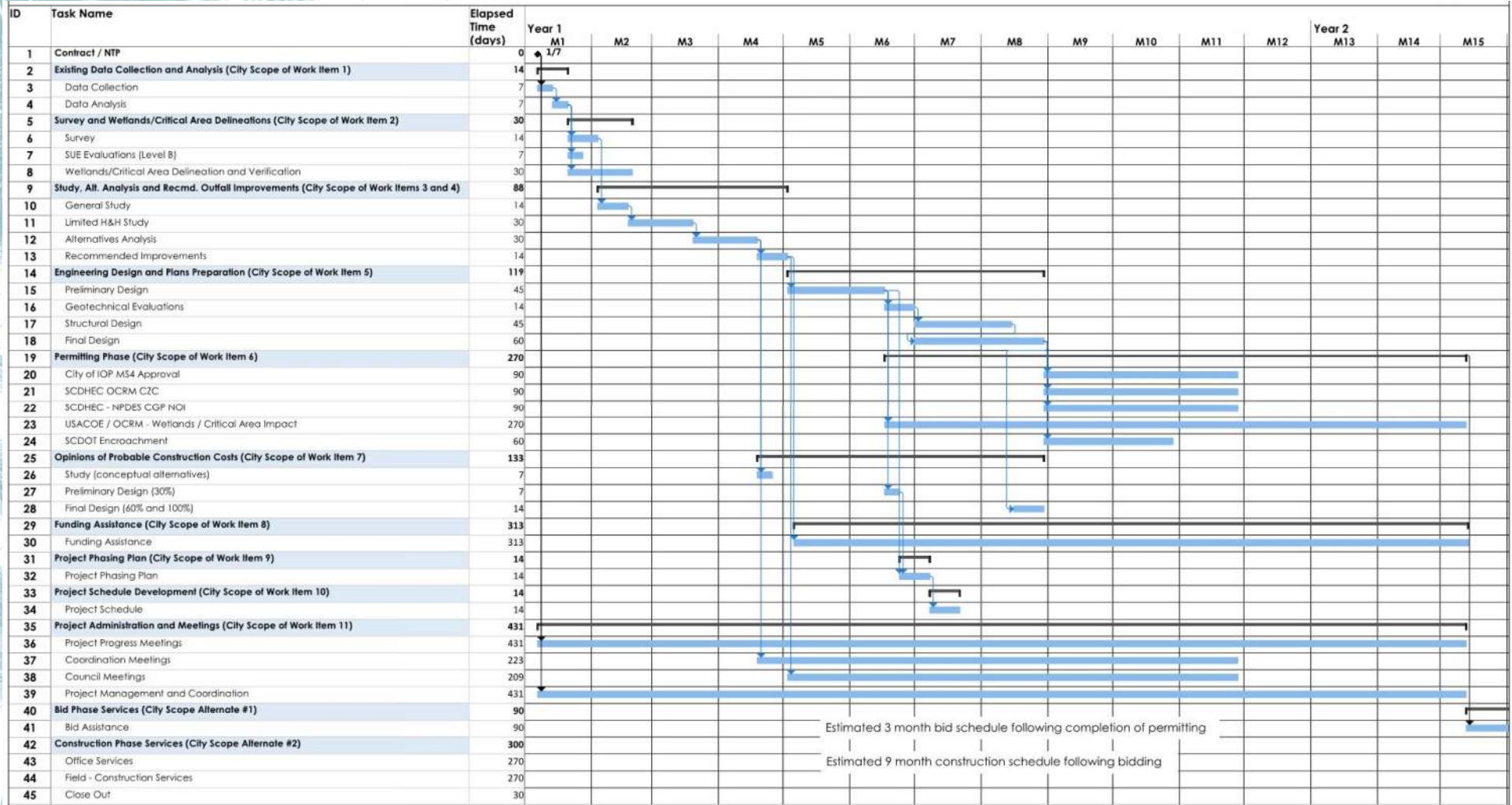
Project Approach – Phasing, Schedule, Project Administration & Meetings



- **Project Phasing**
 - “Low Hanging Fruit”
 - Budgetary Constraints
- **Project Schedule**
 - Design & Permitting – Updated Monthly
 - Construction
 - Conceptual (Study/Alternatives)
 - Preliminary (30% Engineering Design)
 - Final (60% and 100% Engineering Design)
- **Project Administration & Meetings**
 - Project Progress Meetings - Monthly
 - Coordination Meetings – As Needed
 - Utilities
 - Property Owners
 - Environmental Agencies and/or Advocacy Groups
 - Three (3) Council Presentations
 - Project Management & Coordination
 - Project Management Plan
 - Monthly Project Status Reports
 - Sub-consultant Coordination



Project Schedule



Project Fee



Phase/Task	Thomas & Hutton Labor														Sub-consultants					TOTAL TASK	TOTAL TASK (Rounded for Proposal)		
	Project Manager / Technical Lead (PM/PE IV)	Senior Engineer (PE III / IV)	Project Engineer (PE I / II)	Senior Designer (D II / III)	Project Designer (D I)	Lead Structural Eng.	Structural Eng. I / IV	Survey Manager (SM I)	Survey Party (2- men)	Survey Tech III	GIS Analyst II	Field Rep. IV	Admin Clerical II	TOTAL LABOR	Wetlands (Terracon)	Geotechnical (Terracon)	SUE (West)	Funding (Terracon /Arcadis)	Reimbursables				
Base Project																							
Existing Data Collection and Analysis (City Scope of Work Item 1)																							
Data Collection	8		16								4			\$4,200					\$150	\$4,350			
Data Analysis	8		40								8			\$8,120						\$8,120			
Survey and Wetlands/Critical Area Delineations (City Scope of Work Item 2)																							
Survey	2			4				16	60	24				\$13,140					\$3,500	\$16,640			
SUE Evaluations (Level B)	2							2						\$640			\$3,500			\$4,140			
Wetlands/Critical Area Delineation and Verification	2							2						\$640	\$5,405					\$6,045			
Study, Alternatives Analysis and Recommended Outfall Improvements (City Scope of Work Items 3 and 4)																							
General Study	20		20		8					8				\$8,100					\$100	\$8,200			
Limited H&H Study	18		80		18					8				\$17,490					\$200	\$17,690			
Alternatives Analysis	40		40		18	18	18							\$19,930						\$19,930			
Recommended Improvements	20		20			9	9						8	\$9,700					\$100	\$9,800			
Engineering Design and Plans Preparation (City Scope of Work Item 5)																							
Preliminary Design	8		16	16	90									\$15,050						\$15,050			
Geotechnical Evaluations	8					8								\$2,720		\$8,970				\$11,690			
Structural Design	2				8	40	80							\$17,200						\$17,200			
Final Design	16	40	40	40	180									\$38,980						\$38,980			
Permitting Phase (City Scope of Work Item 6)																							
City of IOP MS4 Approval	2		16		16									\$4,360						\$4,360			
SCDHEC OCRM CZC	4		8		20									\$3,980					\$150	\$4,130			
SCDHEC - NPDES CGP NOI	8		40		40									\$11,440					\$150	\$11,590			
USACOE / OCRM - Wetlands / Critical Area Impact	2		4		18									\$2,830	\$34,500				\$150	\$37,480			
SCDOT Encroachment	4		40		18									\$8,410					\$150	\$8,560			
Opinions of Probable Construction Costs (City Scope of Work Item 7)																							
Study (conceptual alternatives)	8		12		24									\$5,700						\$5,700			
Preliminary Design (30%)	2		8		16									\$3,200						\$3,200			
Final Design (60% and 100%)	4		16		32									\$6,400						\$6,400			
Funding Assistance (City Scope of Work Item 8)																							
Funding Assistance	18		18											\$5,850	\$3,500.00			\$3,500		\$12,850			
Project Phasing Plan (City Scope of Work Item 9)																							
Project Phasing Plan	8	8	20		20									\$7,800						\$7,800			
Project Schedule Development (City Scope of Work Item 10)																							
Project Schedule	8	8	20											\$5,700						\$5,700			
Project Administration and Meetings (City Scope of Work Item 11)																							
Project Progress Meetings	24		40											\$10,120					\$500	\$10,620			
Coordination Meetings	12		12											\$3,900					\$100	\$4,000			
Council Meetings	12	8	24											\$7,000					\$200	\$7,200			
Project Management and Coordination	80													\$14,400					\$1,000	\$15,400			
Total Hours	350	64	550	60	526	75	107	20	60	40	12	0	8										
TOTAL	\$63,000	\$10,880	\$79,750	\$6,900	\$55,230	\$12,000	\$12,840	\$2,800	\$7,800	\$3,800	\$1,320	\$0	\$680	\$257,000	\$43,405	\$8,970	\$3,500	\$3,500	\$6,450	\$322,825	\$323,300		
Alternates																							
Bid Phase Services (City Scope Alternate #1)																							
Bid Assistance	18		40			9							18	\$12,010						\$12,010			
Construction Phase Services (City Scope Alternate #2)																							
Office Services	54		96											\$23,640					\$500	\$24,140			
Field - Construction Services												192		\$23,040					\$2,500	\$25,540			
Close Out	4		4		20							40		\$8,200					\$100	\$8,300			
Total Hours	76		140		20	9						232	18										
TOTAL	\$13,680	\$0	\$20,300	\$0	\$2,100	\$1,440	\$0	\$0	\$0	\$0	\$0	\$27,840	\$1,530	\$66,890	\$0	\$0	\$0	\$0	\$3,100	\$69,990	\$70,100		



Stormwater Management Expertise

Local and Integrated Experience

Depth of Resources