

FLORIDA GULF OF MEXICO RESTORATION PROJECT SUBMITTAL FORM

Project Name: Gaberonne Swamp Stormwater - Pensacola Bay Watershed Improvements

Contact Information *(Include at least one name, phone number, email address, and organization name if applicable):*

Name: L. Derrik Owens, PE; Phone: (850) 435-1755; E-mail: dowens@cityofpensacola.com; Organization: City of Pensacola

Project Location *(Include a map, if possible, and the city, county, longitude/latitude, and watershed):* City- Pensacola; County- Escambia; Longitude: -87.1631; Latitude: 30.4808; Watershed: Pensacola Bay Watershed. A site map is attached.

Project Description: Gaberonne Swamp stormwater enhancements have been identified for funding during the next five years through revenue generated by the City's stormwater utility fee. The first phase has been completed, and included the expansion of a stormwater pond located on Spanish Trail. Improvements to the water quality for the adjacent residential subdivision are also currently in design that will include the addition of a treatment vault to the existing storm drain system for the Gaberonne subdivision and a "roadway diet" to reduce pollutant loads by eliminating excessive roadway widths.

The Scenic Heights area in Northeast Pensacola has been identified as an area of concern regarding pollutant loadings as it is a large single family residential development that directly discharges untreated runoff from an approximately 630-acre drainage basin to Pensacola Bay. This area was developed prior to water quality regulations and consists of a main trunk line that runs down Langley Avenue to the east and discharges directly to the bay. This project proposes to install a SMART Box near the intersection of Langley Road and Old Spanish Trail to divert runoff from the densely populated adjacent neighborhoods to a new retention pond that will be built on City property just east of the Montage subdivision. A second opportunity to enhance treatment efficiencies is located at the existing stormwater pond at US 90 (Scenic Highway) and Langley Road. Runoff from the residential subdivisions to the north is conveyed to the pond at a location adjacent to the existing outfall structure. To eliminate the "short circuiting" effect of what has now become the primary source of pollutant loads to the pond, these improvements will relocate the outfall of the pond to discharge to the south into Gaberonne Swamp instead of into Pensacola Bay, which will increase residence time in the wet detention pond and improve water quality. Both proposed BMPs are designed to flow through the Gaberonne Swamp system to provide a "treatment train" effect for additional stormwater treatment. In order to allow discharge to flow through Gaberonne Swamp, the existing access road to the ECUA lift station will be returned to previous grade. The presence of this existing access road has severed the natural hydrology of the swamp, and has caused progressive degradation to the northern portion of the wetland.

In addition, an educational kiosk explaining the importance of stormwater management to enhance bay water quality will be placed at the Pensacola Bay Bluffs Park, a popular destination for city residents of all ages.

Estimated Project Costs *(Describe the estimated costs of the project, including any assumptions for contingency and ongoing operations/maintenance. Identify other secured funding sources such as matching funds, in-kind contributions or state/federal dollars. In addition, if possible, complete and submit the Cost Appendix Sheet associated with this Form):*

This project is estimated to cost \$3,344,549.13. The City of Pensacola and the Emerald Coast Utilities Authority have committed monies and in-kind funding totaling \$1,246,381.04. An FDEP 319(h) grant has been awarded that will fund an additional \$200,000.00 for the project. This project request is for funding the \$1,898,168.90 remaining to complete the project in its entirety.

Other Funding *(Indicate if the project is submitted for any potential funding or if it may be used to leverage additional funding, if so please describe the funding source [e.g. State/Federal Grants]):* An FDEP 319h grant for \$200,000.00 has been approved. No other funding opportunities are pending.

Technical Feasibility *(Describe the technologies involved and any relevant past experience or proven success with similar projects):* This project requires typical drainage engineering, planning, and design elements that the City of Pensacola has instituted at other sites, including the Gaberonne stormwater pond system associated with Pensacola International Airport and the Admiral Mason Pond stormwater facility, which was awarded the 2012 Florida Stormwater Association Project Excellence Award. Both these projects successfully handled the extreme two-day rain event in that occurred in northwest Florida in June 2012, which exceeded the 100-year FDOT storm event and created serious flooding in many parts of Pensacola.

Environmental Benefits *(Describe the nature, magnitude, and timing of any environmental benefits attributable to the project. If possible, describe potential environmental performance measures [e.g. pollutant reduction]. Please address any potential environmental impacts associated with implementing or maintaining the project [e.g. loss of a habitat or conversion of habitat from one type to another during implementation]):* Many areas of this urbanized watershed were developed before implementation of the 1982 State surface-water rule (Chapter 17-25 FAC) and lack any means of formal treatment addressing water quality. This project will continue to reduce the quantity of non-point source pollutants discharging to Pensacola Bay. Not only will wetland impacts will be minimized to the greatest extent possible, but this proposed project will also restore the wetlands of the northern portion of Gaberonne Swamp, which has had its hydrologic connectivity severed by a maintenance access road for a sanitary sewer lift station.

Economic and Social Benefits *(Describe the economic and social benefits including those related to the project's improved ecosystem services and any estimates on jobs created or preserved):* Watershed improvement benefits include reducing sediment and pollutant loading, improving aquatic and riparian habitats, recovering fish and wildlife species and/or habitat, and creating educational and recreational opportunities, critical in a waterfront community that is building a reputation as a tourist destination.

Community Resilience *(Describe if the project assists Florida's ability to anticipate, withstand, or recover from hazards or threats [e.g. hurricane preparedness, establishing living shorelines]):* Restoring Gaberonne Swamp and improving the water quality of Pensacola Bay will result in a healthier living shoreline, which will provide increased protection to the uplands from flooding surges created by hurricanes and tropical storms.

Conflicts or Complements to Existing Efforts *(Describe any ongoing activities in the project implementation area, if the project is part of another plan, and why the project does or does not interfere with that work. Please consider how the project may complement existing local, regional, and state efforts/plans/objectives):* The Northwest Florida Water Management District, in cooperation with the Florida Department of Environmental Protection, developed the Pensacola Bay System Surface Water Improvement and Management Plan in 1997. In 2005, the Bay Area Resources Council, under the auspices of the West Florida Regional Planning Council developed the Pensacola Bay Area Watershed Management Plan, which includes components that identify causes and sources that need to be controlled, action plans for measures to achieve load reductions, information, education and monitoring components. The City of Pensacola also has a stormwater management plan to aid water quality. This project complements existing efforts to improve the water quality of Pensacola Bay as outlined in those plans.

Complies with Federal, State, Local, and Tribal Laws/Regulations *(Describe any concerns or potential conflicts):* Pensacola Bay is included on the 2002 update of the Section 303(d) list for Group One Watersheds and is listed by FDEP for fecal coliforms. The TMDL for fecal coliforms was established by EPA on March 31, 2008. The TMDL End Point for fecal coliform has been established as follows: The MPN per 100 ml shall not exceed a median value of 14, with not more than 10 percent of the samples exceeding 43, nor 800 on any one day. A 55 percent reduction in fecal coliform concentrations is required for WBIDs 548 A and B, and an 18 percent reduction in fecal coliform concentrations is required for WBID 548C. This project not only complies with Federal, State and Local regulations, it is one more step in bringing Pensacola Bay into compliance with Federal and State TMDL goals.

Readiness for Implementation *(Describe if the project has had any design or permitting work started or completed [attach permits or design work]. Please address any issues that may delay start or finish of the project):* Gaberonne Swamp stormwater enhancements have been identified for funding during the next five years through revenue generated by the City's stormwater utility fee. The first phase has been completed, and included the expansion of an existing Spanish Trail stormwater pond. Improvements to water quality for the Gaberonne subdivision are also currently in design and will include the addition of a treatment vault to the existing storm drain system for the Gaberonne subdivision and a "roadway diet" to reduce pollutant loads by eliminating excessive roadway widths. Funding is the only issue that may delay the finish of the project. RESTORE funding through FDEP will allow the project to be completed in its entirety as one project. If funded only through the City stormwater utility fee it will continue to be completed in phases as funds become available.

Public Acceptance *(Describe any known or potential public approval or opposition to the project):* There is no known opposition to this project or to improving the water quality of Pensacola Bay. This project involves City of Pensacola property and right-of-way, interferes with no private property, and improves drainage and reduces flooding in the area.

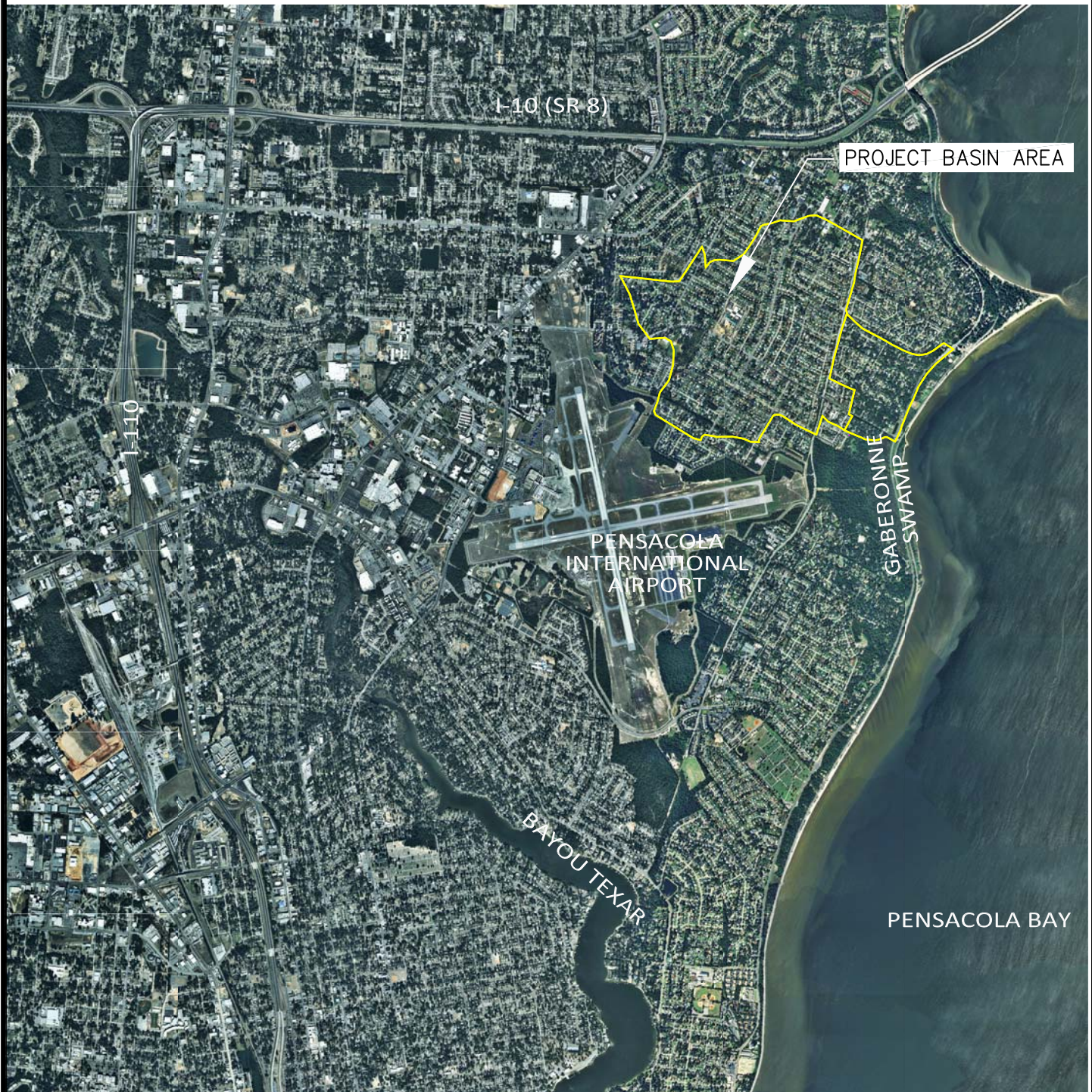
Additional Information you wish to provide *(Please include any maps, designs, drawings, photos, or background resources that may assist in completely and accurately understanding the project):*

Cost Appendix Sheet	
Cost Item	Cost Estimate
Planning	
Planning Subtotal:	
Construction	
Construction Subtotal:	
Monitoring Water quality already monitored - no additional costs incurred.	
Monitoring Subtotal:	
Project Cost	
Subtotal:	
TOTAL:	

Estimated Costs by Year	
Year 1	
Year 2	
Year 3	
Year 4	
Year 5	
Year 6	

SITE LOCATION

0 2,000' 4,000' 8,000'



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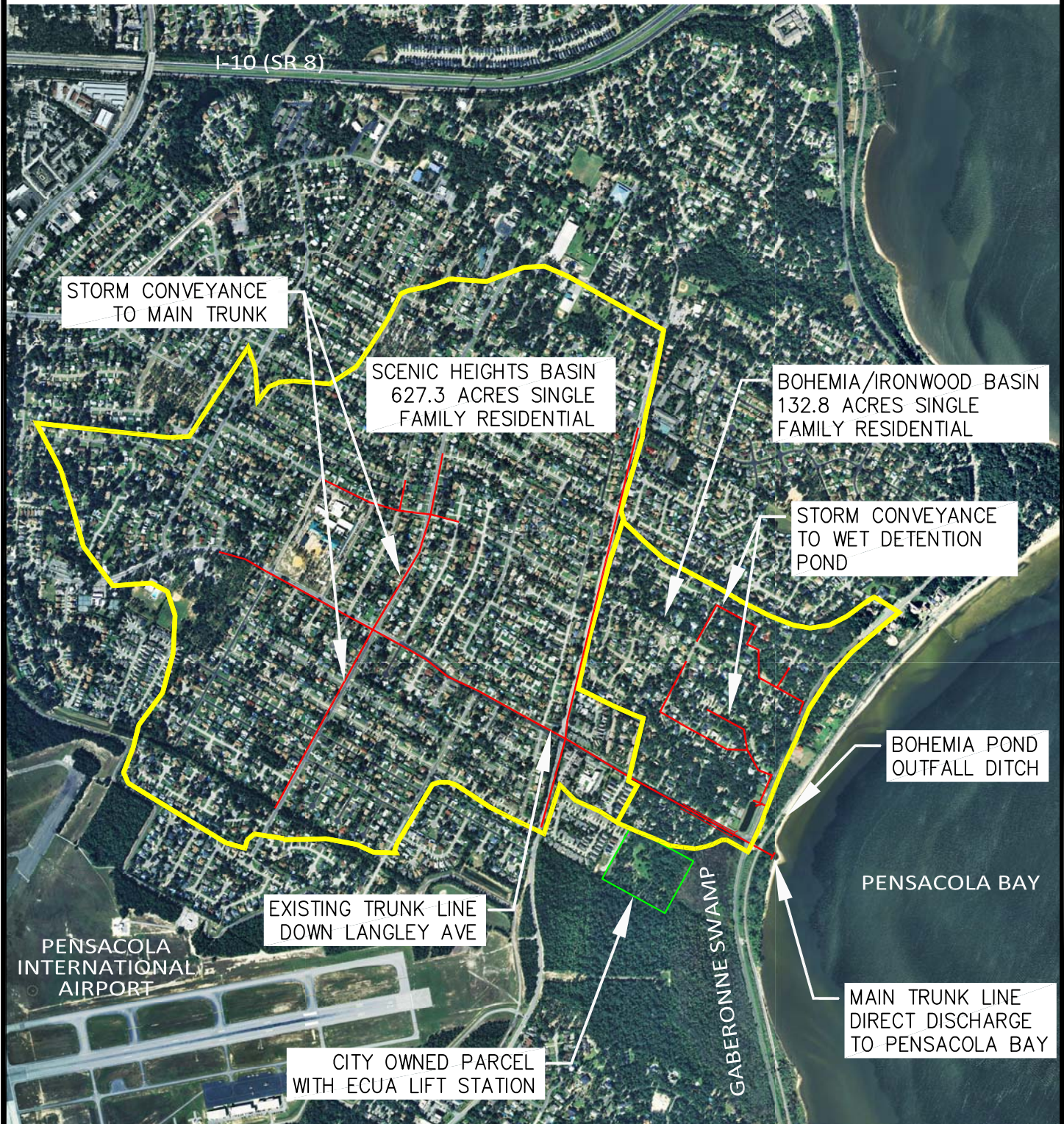
GABERONNE SWAMP PENSACOLA BAY WATERSHED STORMWATER IMPROVEMENTS

MAY 2012

TREATMENT AREA



0 750' 1,500' 3,000'



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GABERONNE SWAMP
PENSACOLA BAY WATERSHED
STORMWATER IMPROVEMENTS

MAY 2012

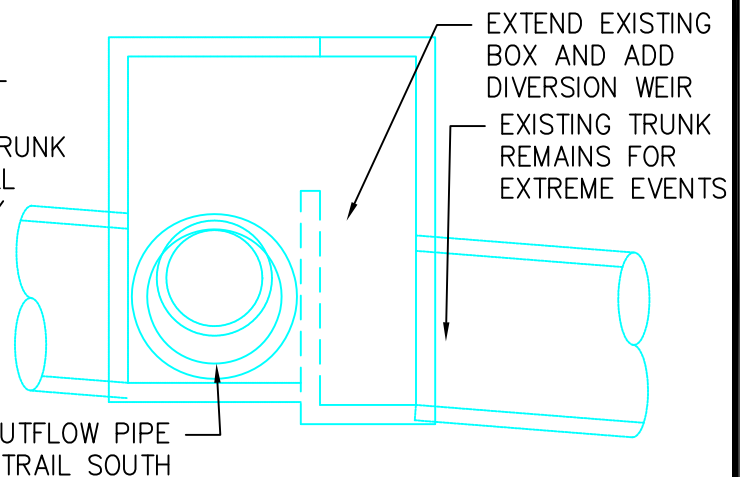
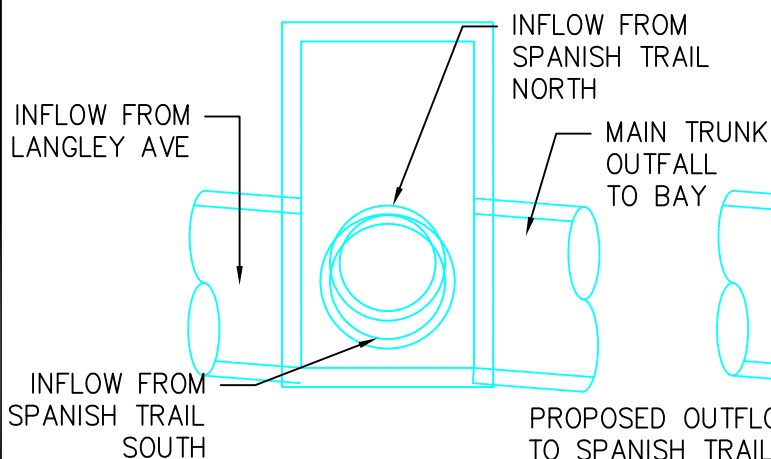
0 150' 300' 600'

MAIN TRUNK DIVERSION TO BMP #1



EXISTING STRUCTURE

PROPOSED MODIFICATIONS



* NOTE: ALL EXISTING INVERTS APPROX. 17 FT BELOW EXISTING GRADE

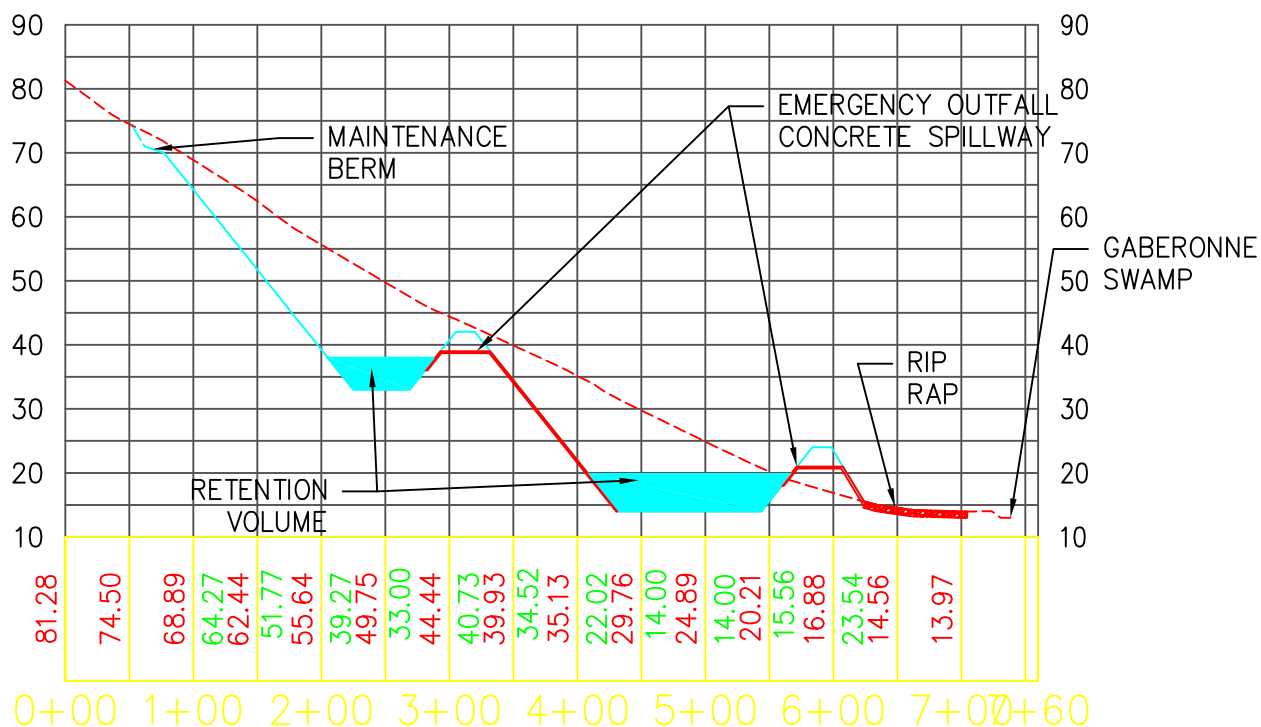
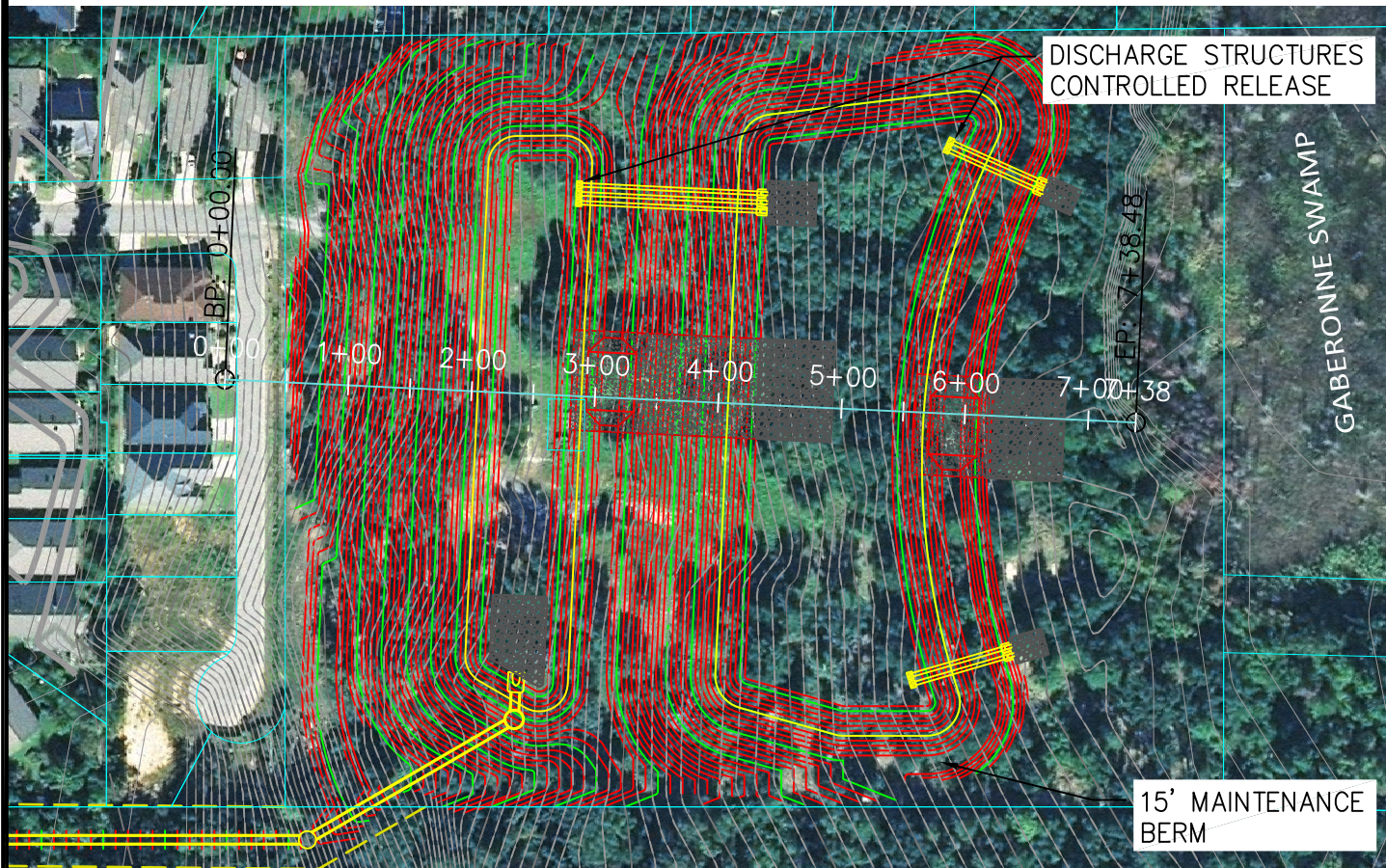
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GABERONNE SWAMP PENSACOLA BAY WATERSHED STORMWATER IMPROVEMENTS

MAY 2012

0 75' 150' 300'

BMP #1 - INFILTRATION BASIN



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GABERONNE SWAMP
PENSACOLA BAY WATERSHED
STORMWATER IMPROVEMENTS

MAY 2012

**BMP #2 - WET DETENTION POND
MODIFICATIONS**



0 30' 60' 120'



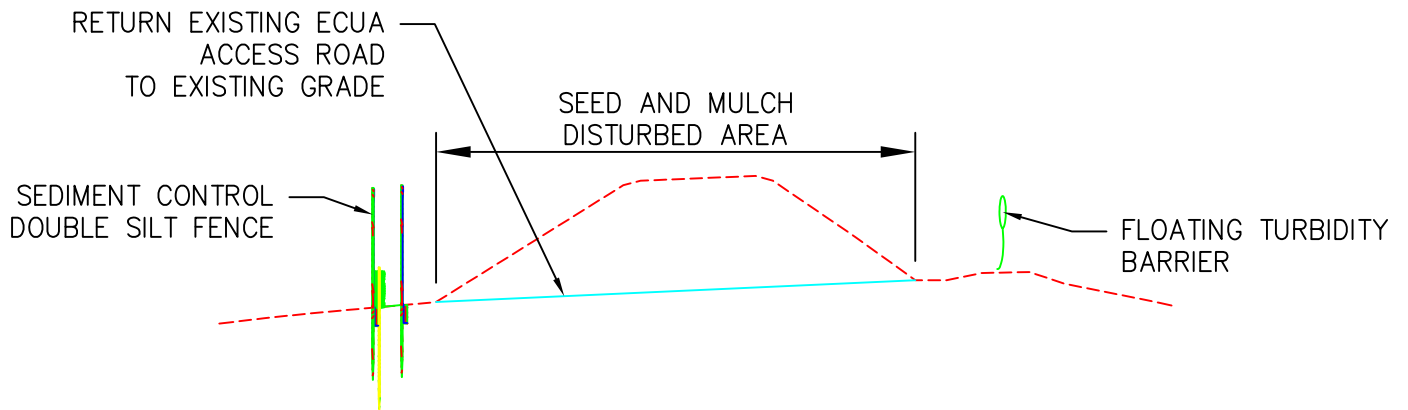
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**GABERONNE SWAMP
PENSACOLA BAY WATERSHED
STORMWATER IMPROVEMENTS**

MAY 2012

0 250' 500' 1000'

TREATMENT TRAIN WETLAND DETENTION



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GABERONNE SWAMP PENSACOLA BAY WATERSHED STORMWATER IMPROVEMENTS

MAY 2012

OTHER RELEVANT INFORMATION



Retention pond at the corner of US 90 (Scenic Highway) and Langley Road.



Outfall of the retention pond at the corner of US 90 (Scenic Highway) and Langley Road.



Sediment buildup at the Scenic Highway/Langley Road stormwater pond outfall.



Langley Road (top of the hill) looking east towards the bay.



The base of Langley hill, and the intersection of US 90 (Scenic Highway) and Langley Road. The retention pond is within the chain-link fence on the north (left) side of the intersection. Gaberonne Swamp begins on the south (right) side of the intersection.



The intersection of Langley Road and Old Spanish Trail. Near this intersection a diversion box will be installed to divert stormwater runoff into a new pond to be constructed on City of Pensacola property east of the Montage subdivision.



Pensacola Bay Bluffs Park. A kiosk will be erected at the popular park, located directly on Pensacola Bay, to educate visitors about stormwater runoff and the steps each one can take to help protect the environment.



Sample educational kiosk.