

RFQ: 17-C-00003
Cypress Street Outfall Regional Stormwater Improvements
Design Criteria Package



RFQ: 17-C-00003 DESIGN-BUILD SERVICES
FOR THE
Cypress Street Outfall Regional Stormwater Improvements

DESIGN CRITERIA PACKAGE



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CITY OF TAMPA
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DESIGN CRITERIA:

The City of Tampa in conjunction with Interflow Engineering, LLC has prepared the Design Criteria Package for RFQ: 17-C-00003 Design-Build Services related to the Cypress Street Outfall Regional Stormwater Improvements along Cass Street from North Boulevard to Rome Avenue and in Rome Avenue from Cass Street to Kennedy Boulevard, and Gray Street from Rome Avenue to Tampania Avenue within this corridor, approximately 7,500 LF of Box Culvert will be installed.

A 36 inch water transmission main in Cass Street from North Boulevard and in Rome Avenue from Cass Street to Gray Street and in Gray Street from Rome Avenue to Tampania Avenue is also included.

Transportation improvements in Cass Street from Rome Avenue to North Boulevard; and Rome Avenue from Kennedy Boulevard to Cass Street; and signalization upgrades at the intersection of Cass Street and Willow Avenue.

The scope shall include, but not be limited to the following:

- Design services will include:
 - Assessment and identification of economical treatment alternatives for stormwater quality improvements
 - Assessment of all trees in or immediately adjacent to the right-of-way
 - Geotechnical investigation to assess soils for stability and unsuitable materials
 - Completion of a hydrologic/hydraulic analysis for capacity in the proposed stormwater structures
 - Analysis of roadway, signalization and signing & pavement markings for proposed cycle tracks/lanes, sidewalks and ramps
 - Development of plans for roadway, signalization and signing & pavement markings
 - Performance of subsurface utility excavation (SUE) and utility coordination
 - Performance of topographical surveying
 - Development of base drawings and proceed with formal design resulting in construction documents
- Comprehensive design services of selected improvements
- Detour route planning
- Coordinating, applying for and obtaining regulatory permits

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- Preconstruction Services with Development of Guaranteed Maximum Price (GMP) for construction
- Construction of selected improvements, including any demolition and rehabilitation of existing stormwater structures and pipes, as well as water and transportation facilities
- Public Relation activities to maintain a positive response to the project from affected residents
- Estimated Construction Budget: \$30,000,000

In addition, the following pages contain the project overview and description of requirements.

1. Purpose

1.1 This document provides the criteria for the design and construction of approximately 7,500 linear feet (LF) of box culvert; approximately 8,700 LF of variously sized water distribution mains; approximately 5,400 LF of 36" water transmission main; associated utility construction and/or relocation; in addition to the construction of sidewalks, cycle tracks and a parking aisle for multimodal traffic. Pedestrian features are to be designed in accordance with Americans with Disabilities Act (ADA) requirements. The intent of this document is to list the minimum design-build criteria necessary for achieving the installation of the new stormwater and water infrastructure and transportation improvements.

1.2 This package is not a specification or prescriptive checklist and is not intended to replace the professional judgment by a competent licensed professional engineer after coordination with the end-user and stakeholders of the City of Tampa.

2. Design Criteria

2.1 The design is based on providing facilities that will meet the needs of the Transportation & Stormwater Services Department (TSS) to effectively mitigate flooding and accommodate pedestrian and bicycle traffic in the area, as well as for the installation of a transmission main for the Water Department.

Construction of drainage improvement features will reduce flooding depth and duration on Cass Street, Rome Avenue, Gray Street, and the surrounding areas. The design should consider existing conditions and the current and future demands on the stormwater conveyance system. It is imperative that the final designer and preparer of construction documents fully understand the system requirements (model results), permitting, site logistics (residential impacts) and all related requirements to design the stormwater facilities accordingly.

The design should also consider and include transportation improvements along Rome Avenue, Willow Avenue and Cass Street to enhance pedestrian safety and mobility to be accomplished by proposed two-cycle tracks, travel lanes (bicycle/pedestrian), sidewalks, replacement of strain pole and span wires with mast arm and upgrade to signalization equipment. Full pavement and curb restoration along the route will be required.

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The design team should include fire hydrant assemblies, meter sets and valves for a complete and functioning potable water system.

2.2 The feasibility study as prepared by Interflow and referenced herein is attached for consideration.

The surrounding area is highly urbanized; therefore the impacts during construction would consist of: transportation, access to residences, trees in or near the right-of-way, and utility service relocations and/or adjustments. There is little or no vacant land in the region; however, the Design Build effort should consider the incorporation – to a practical extent – green solutions as part of the proposed stormwater infrastructure. All proposed design features will be within the right-of-way.

2.3 The construction of proposed drainage features consist of two phases:

- Phase 1, a Reinforced Concrete Box (RCB) culvert along Cass Street from N Boulevard to Rome Avenue, and along Rome Avenue from Cass Street to Gray Street; and Rome Avenue from Gray Street to Kennedy Boulevard.
- Phase 2, an RCB culvert along Gray Street from Tampania Avenue to Howard Avenue; and along Gray Street from Howard Avenue to Rome Avenue.

The proposed water features will parallel the proposed culverts along the majority of the project corridor.

Construction of transportation features will be for the following locations (see Project Development Criteria):

- In Cass Street from Rome Avenue to North Boulevard, pedestrian ramp improvements, on-street separated two-way cycle track on Cass Street along south side of roadway, as well as sidewalks on both sides of the street where gaps currently exist.
- In Rome Avenue from Kennedy Boulevard to Cass Street, sidewalk and pedestrian ramps on both sides of the street as well as restriping of the existing typical section to provide for either two (2) travel lanes and two (2) buffered bicycle lanes or two (2) travel lanes, two (2) bicycle lanes and one (1) parking aisle.
- The intersection of Cass Street and Willow Avenue, replacement of the existing strain pole and span wire mast arm, and upgrade signalization equipment as well as associated pedestrian signalization and ADA upgrades.

2.4 Design build services shall include, but not be limited to, demolition, replacement of aging infrastructure, pavement, traffic analysis, maintenance of traffic, coordination with regulatory agencies, utility coordination, topographic survey, tree assessment, geotechnical

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investigation, hydrologic/hydraulic analysis, public relations, design plans and cost estimating.

It shall be the responsibility of the design team to perform topographic survey and create new base drawings for their design, which shall include the design of the local drainage systems, water mains and traffic features.

- 2.5 Existing drainage problems on Rome Avenue are frequent and severe. Cass Street has no existing stormwater collection system, while Rome Avenue has an antiquated and undersized one which causes major flooding issues. Additional analysis may be necessary to ensure any local drainage connected to the proposed RCB culvert will function properly. It will be necessary to evaluate the proposed hydraulic grade line within the box culvert, to ensure it will be sufficient depth below the level of connecting inlets for the design storm of interest.
- 2.6 The Study Area has an approved Conceptual Environmental Resource Permit (ERP) (see ERP 43041855.000, Spanish Town Creek Stormwater Improvements and Cypress Street Outfall Upgrade) from which the proposed conditions are based.
- 2.7 Transportation impacts for the stormwater improvements are mainly focused on Cass Street and the crossing of Rome Avenue at Cass Street. Street parking along the south side of Cass Street is common and would be affected during construction. The Transportation impacts for Phase 2 are focused at Howard Avenue and Armenia Avenue. Detours should be planned by the Design Build team based on traffic count and type information. Additionally, minor detours, may reflect the Contractor's haul routes, staging areas, and construction methods.

3. Project Development Criteria (The purpose of the conceptual drawings was to attain feasibility for the construction of the box culverts. They do not include the design for the upgrade of the local drainage, water facilities and the Green Spine segment and Rome Avenue Complete Street within the limit of construction. The drawings were not prepared based on topographic survey, and the existing utilities were shown based on the best information available.)

The region considered for this project is west of the Hillsborough River, bounded by N Tampania Avenue to the west, W Cypress Street to the north, and W Kennedy Boulevard, to the south in Tampa, Florida. Transportation and water features will be incorporated in so far as they fall within the boundaries of the stormwater improvements.

This stormwater project is in conjunction with an outfall currently being constructed on Cypress Street.

This project is not a route study; however, the Design Build Team is to provide a topographic survey of the proposed route for the respective stormwater conduits and provide alignment for the sidewalks, paths and ramps. Conduct preliminary design services that will include the following:

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- Utility coordination with the City and other utility owners to determine the existing facilities, which may include subsurface utility excavation (SUE).
- A tree assessment by a certified arborist for impacts to large diameter and protected trees within the public right-of-way.
- Traffic assessment for maintenance of traffic and detour route planning.
- Geotechnical assessment of soils within the impacted areas.
- Design of transportation facilities which will include:
 - Roadway Analysis;
 - Signalization Analysis;
 - Signing & Pavement Marking Analysis.
- Environmental and right-of-way permitting.

The upstream connections and any conceivable route for the stormwater runoff to the downstream receiving waters will impact existing developed areas. The City will review the proposed design for constructability and to ensure a complete working system. The final design for the stormwater, water and transportation improvements will be during construction.

Create final plans to be provided in Auto CAD (.dwg) and PDF formats and provide pricing proposals developed into a Guaranteed Maximum Price (GMP) document with all associated exhibits (scope, pricing, qualifications, schedule, etc.).

Present final design; site plan, site preparation, build schedule, material purchases and placement, utility agreements, building permits and all required approvals from regulatory agencies and local authorities.

4. Environmental Criteria

The Design Build effort shall incorporate, to a practical extent, green solutions as part of the proposed stormwater infrastructure. Solutions include, but are not limited to, treatment systems appropriate for an urban area such as rain gardens, vortex separators, filters, baffle boxes, screens and skimmers, pocket ponds and wetlands to reduce pollutant loading on Tampa Bay.

Using typical approaches (for example, stormwater ponds) for treatment are not economical as enough vacant land is not available. Many of the existing treatment systems are to be used to retrofit existing systems or can be constructed with new features.

The Design Build team will be responsible for all required environmental testing and permitting needed to complete the project. The scope of these requirements will be determined by the Design Build team based on the selected improvements and construction requirements.

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5. Construction Management & Oversight

The Design Build team will be responsible for primary construction management activities and general project oversight with consistent coordination with the City during the design and construction portions of the project. Construction management activities will include, but not be limited to:

- Identification of the designated staging location(s) with respect to project need. The Design Build Firm shall prepare an aerial map with the project boundaries and staging site(s) clearly delineated. The map shall include, at a minimum, distances (from property lines) of the staging lot(s) to adjacent residential parcels, in addition to the duration of occupancy of the location. Accompanying the aerial maps shall be a plan of the respective staging site(s) showing fencing, screening, and if necessary the location of trailers, parking areas and the driveway apron(s) for access.
- Preparation of a general Quality-Control Plan to be submitted in format(s) acceptable to the City, in which personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out the Design Build Firm's quality-assurance and quality-control responsibilities will be identified. Coordinate with Contractor's construction schedule.
- Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for project.
- Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- Include a comprehensive schedule of work requiring testing or inspection, including the following:
 - Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 - Owner-required tests include soil density, concrete for all structural or structurally related work and asphalt.
 - Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- Maintain testing and inspection reports including log of approved and rejected results, including work the City has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

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The Design Build team shall provide AutoCAD as-built drawings accurately depicting the as-built conditions of the proposed underground conveyance systems (stormwater and water); in addition to any pertinent design data (geotechnical reports, survey, hydraulic analysis). Hard copies of the as-built drawings will also be required as will be determined during the design phase.

6. Public Relations

Mandatory public involvement meetings prior to and during construction are necessary to minimize impacts and reduce uncertainty for the residence, particularly with regards to transportation/traffic impacts. Public The Design Build firm, at a minimum: (1) should notice impacted residences; (2) provide as much access as safely possible; and (3) plan for short duration, high intensity construction for impact to more than four (4) residences.

Construction requirements may be imposed, with public involvement, to reduce the severity of the impacts. Inquiries and questions about design and construction will be handled by the Design Build Firm, after coordination of the responses with the City of Tampa.