

**TOWN OF ST. LUCIE VILLAGE
PROFESSIONAL ENGINEERING SERVICES**

**Low-Pressure Sewer System Improvements – Phase 1, 1A and 2
Scope of Services**

INTRODUCTION

Kimley-Horn and Associates (CONSULTANT) will perform design services to the Town of St. Lucie Village (VILLAGE) for the project referred to as the Low-Pressure Sewer System Improvements – Phases 1, 1A and 2. The proposed improvements will provide a low-pressure force main system network, isolation valves and a service box at each property for the three (3) distinct phases noted below. The low-pressure force main will connect to an existing Fort Pierce Utilities Authority (FPUA) force main within the US1 right-of-way (ROW).

The Phase 1 area is generally described as the area between Chamberlin Boulevard and St. Lucie Lane including Lightlewood Lane, Mathew Quay Way, North Indian River Drive (the segment south of St. Lucie Lane) and Yachtview Lane. The connection to the FPUA forcemain along US1 will be made via a FEC railroad crossing and Old Dixie Highway at Chamberlin Boulevard and at the extension of St. Lucie Lane to the US1 point of connection. The two (2) proposed railroad crossing will include the proposed force main within a casing, and a crossing for a future water main extension in a casing. The water main crossing will be capped at both ends for future use by the Village. Phase 1 includes approximately 9,130 LF of piping. Note that it is anticipated that midway between Yacht View Place and Chamberlin along North Indian River Drive, the wastewater flow will be split, directing flow north and south to the respective points of connections within US1.

The Phase 1A area is located along North Indian River Drive, north from Chamberlin to the end. As noted in the Phase 1 description, this flow will be directed south to the Chamberlin point of connection along US1. Oaks Way. Phase 1A includes approximately 1,900 LF of piping.

The Phase 2 area is located along Milton Road, including River Woods Drive, North Milton Road, Anchor Way, Spinnaker Court, and Outrigger Drive. The connection to the FPUA forcemain along US1 will be made via a FEC railroad crossing at Milton Road, with a segment of pipe being within Old Dixie Highway, then west through the Milton Road easement to US1. Boulevard and at the extension of St. Lucie Lane to the US1 point of connection. The proposed railroad crossing will include the proposed force main within a casing, and a crossing for a future water main extension in a casing. The water main crossing will be capped at both ends for future use by the Village. Phase 2 includes approximately 5,500 LF of piping.

The total length of low-pressure forcemain included in this Scope of Services is approximately 16,530 LF. This will also include three (3) water main crossings (casing pipe only) of the FEC Railroad for future connections and consideration for alignment of a future water main in each of the three (3) Phases, but no water main design is included in this Scope of Services, except for the three (3) railroad crossings.

The CONSULTANT will be tasked with the design and permitting of the low-pressure sewer system improvements for the areas noted above, along with the development of Technical Specifications. Bidding services and Engineering services during construction are anticipated and will be completed under a separate authorization to be developed upon completion of the design phase. This Scope of Services will also include preparation of the required American Rescue Plan Act (ARPA) reports associated with the funding to be used for this effort.

SCOPE OF SERVICES

Task 1 Preliminary Design Services (30%)

The CONSULTANT will conduct a kick-off meeting with the VILLAGE and their representatives (including FPUA staff as well) to discuss the overall project within 14 days of receipt of Notice to Proceed. Prior to this meeting, the CONSULTANT will “walk” the proposed route to confirm constructability issues to be discussed at the kick-off meeting. The topographic services (Task 2 below) will be authorized after the kick-off meeting. The preliminary design (30%) shall address the requirements of the project and shall include the base survey in the background and will commence upon completion of the topographic survey. The intent of the preliminary design (30%) is for the CONSULTANT to acquire VILLAGE acceptance of the new low-pressure force main alignment within the ROWs that will be noted on the base sheets (plan view only), and provisions for alignment of a future water main. Existing utilities will be identified along with possible conflicts. Locations of soft dig locations will be noted.

The CONSULTANT will submit the preliminary design (30%) plans to the VILLAGE for review and will meet to discuss prior to commencing with the design services noted in Task 4 below.

Deliverables:

- Preliminary Design (30%) plans in a PDF format.

Task 2 Topographic Survey Services

The CONSULTANT will utilize a subconsultant, Engineering Design & Construction, Inc. (EDC) to perform a Route Survey within the project corridor described above. The survey will include establishing the horizontal location of the rights of way, topographical survey consisting of cross sections every 100 ft and at defined highs and lows (cross sections will extend 15 ft outside of ROW limits, locations of existing above grade features and locations of swales, ditches, and drainage structures within the rights of way.

Deliverables:

- Topographic Survey (AutoCAD/PDF format).

Task 3 Soft Dig Services

The CONSULTANT will utilize a subconsultant, EDC, perform up to eight (8) soft dig utility test holes, mainly within the US1 corridor, at locations determined by the CONSULTANT. The utility test holes will be coordinated with the survey services to capture locations and depths of the existing utility identified. Soft Digs will be ordered when the design has progressed to a 60 % level.

Deliverables:

- Soft Dig Report.

Task 4 Design Services (90% and Final)

Upon acceptance of the preliminary design (30%), the CONSULTANT shall prepare and submit 90% and Final design plans and technical specifications depicting the construction of the new low-pressure force main in accordance with the project schedule.

The CONSULTANT will prepare a simple hydraulic model of the proposed low-pressure force main system to confirm pipe sizes and system operating pressures.

The 90% design shall include call outs, identify utility conflicts, utility test hole data, connection details for VILLAGE review and discussion at the 90% review meeting. The CONSULTANT will also provide an opinion of probable construction cost and draft technical specifications with this submittal.

Upon acceptance of the 90% design by the VILLAGE, the CONSULTANT will finalize the plans and technical specifications for a complete set of documents to be used for bidding and construction.

The drawings will be based on the AutoCad Civil 3D base files developed by the CONSULTANT. The drawings will depict the proposed low-pressure force main upgrades in plan view only at a 1" = 20' scale. Plan and profiles of the railroad and Old Dixie Highway crossings will be provided. Design details and Technical specifications will be developed based on FPUA Design Standards. It is estimated that the plan set to be developed by CONSULTANT will consist of approximately forty-eight (48) plan sheets to include the following:

- G-1 Cover Sheet
- G-2 General Notes Sheet
- G-3 Key Sheet
- C-1 – C-40 Plan Sheets
- C-41 - C-42 Plan and Profile of FEC RR/US1 Crossings
- C-43 Connection Details @ US1
- D-1 Special Details/Conflict Details
- D-2 Standard Wastewater Details (Low Pressure Systems)

Deliverables:

- Design plans (90% and Final) in PDF format, with Final plans in PDF and AutoCAD Version 2020 will be submitted.
- Technical specifications at 90% and Final.
- Engineer's Opinion of Probable Construction Cost with the 90% and Final Design documents.

Task 5 Permitting Services

The CONSULTANT shall prepare applications for permits to construct the low-pressure force main improvements for submittal to the following agencies. Note that the permit application for the FEC Railroad will be submitted at 60% plan development due to their long review and approval process, all other permit applications will be submitted after the at 90% plan review.

- Florida Department of Transportation (FDOT) Utility Right-of-Way Permit for the work performed within the US1 right-of-way. The permit and supporting documentation will be submitted via the FDOT's electronic "One Stop Permitting" process that will require the Village Project Manager to acknowledge the project within the FDOT "One Stop Permitting" site. Note that one (1) permit application will be submitted for the three (3) tie-in locations.
- St. Lucie County R/W Permit for the work performed within Old Dixie Highway. Note that three (3) permit applications will be submitted for each roadway crossing of the force main.
- Florida Department of Environmental Protection (FDEP) "Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System", FDEP Form 62-604.300(8)(a).
- Florida East Coast Railway Utility Crossing License Application. The permit and supporting documentation will be submitted electronically. Note that three (3) permit applications will be submitted for the three (3) crossings, each will include the proposed force main and a casing for a future watermain.

The CONSULTANT shall respond to one (1) Requests for Additional Information (RAIs) from each of the permitting agencies noted above.

It is assumed that all improvements will be constructed in public rights-of-way or existing utility easements and no wetland or environmental permitting will be required.

Deliverables:

- Copies of Permit Applications and RAI responses, along with the actual approved permits.

Task 6 Project Management

Under this task, CONSULTANT will be responsible for overall coordination and oversight of the project execution. The task includes monthly invoicing, project financials, schedule management and subcontract management. This task will also include preparation of the required ARPA reporting to be submitted by the monthly/quarterly deadlines for the duration of the design phase. The Village will provide support in preparing these reports with respect to the financial distributions for each reporting period.

Task 7 Permit Fees

Under this task, the CONSULTANT will be responsible for paying for the FDEP Wastewater permit fee (\$500) and the FEC Railroad application fee (\$7,500 for each crossing) and the engineering fee (\$1,500 for each crossing). The FDOT and St. Lucie County does not have a permit fee. Note that these fees do not include the annual FEC license fee that will be established by FEC after approval of the crossings.

ASSUMPTIONS

The CONSULTANT has made the following assumptions in the development of this scope of services:

1. The Village will obtain any necessary easements (not included in this Scope of Services.
2. The proposed casing under the railroad will be an empty casing for future water main extension and is only being permitted through FEC Railroad, and no other agency.

COMPENSATION

The services included in Tasks 1 through 7 of this Scope of Services are based on a lump sum value of \$317,375 as outlined in the table below.

COMPENSATION FOR PROFESSIONAL SERVICES

TASK	TOTAL COST
Task 1 – Preliminary Design Services (30%)	\$ 40,700
Task 2 – Topographic Survey Services	\$ 66,400
Task 3 – Soft Dig Services	\$ 8,000
Task 4 – Design Services (90% and Final)	\$ 129,900
Task 5 – Permitting Services	\$ 27,200
Task 6 – Project Management	\$ 16,300
Task 7 – Permit Fees	\$ 28,875
TOTAL	\$ 317,375

SCHEDULE OF DELIVERY

Total project duration through final design and receipt of permits is anticipated to be approximately one year from notice to proceed. Time periods to perform the professional services are estimated as follows:

SCHEDULE FOR PROFESSIONAL SERVICES

Task Name	Duration
Task 1 – Preliminary Design Services (30%)	75 Days from Topo Completion
Task 2 – Topographic Survey Services	60 Days from Kickoff Meeting
Task 3 – Soft Dig Services	45 Days after Task 1
Task 4 – Final Design Services	
90% Design Submittal	120 Days after 30%
Final Design Submittal	45 Days after 90%
Task 5 – Permitting Services	160 Days from 60% plans
Task 6 – Project Management	Project Duration
Task 7 – Permit Fees	N/A

**This schedule assumes a 10-day review time by VILLAGE of all deliverables*