

SECTION 33 32 13.13

PRE-PACKAGED STORMWATER PUMP STATION

PART 1: GENERAL

1.01 DESCRIPTION

The work shall include designing and supplying pumping equipment, piping, controls and appurtenances within and adjacent to the wet well as a complete, pre-designed, packaged pump station as shown on drawings and as specified herein. (See Appendix)

1.02 SCOPE

- A. Package pump station with all listed components designed and supplied by a single company (who is not the contractor) which will provide all civil, mechanical, electrical, and communication design and supply, hereafter designated as the Package Pump Station Supplier. The Package Pump Station Supplier shall be solely responsible for proper integration, design, supply, performance, and warranty of all package pump station components delineated in this Specification and on the Drawings, which shall be used as a guide of the minimum product specifications that shall be met.
- B. Package Pump Station Supplier to have a minimum of five (5) years experience in complete package pump station design and supply and have a proven record of design, supply, and warranty for said packages.
- C. Alternate Package Pump Station Suppliers shall demonstrate that they have designed, produced, and delivered at minimum ten (10) other functioning pump station packages of similar type. The alternate Package Pump Station Supplier must also meet all of the requirements of this section and provide reference to the Project Manager with any submittals provided.
- D. Alternate Package Pump Station Suppliers wanting to bid or quote contractors who are bidding this project, must be pre-approved by Sisul Engineering ten (10) calendar days prior to bid close.

- E. All work performed under this section shall be in accordance with all approved trade practices and manufacturers' recommendations.
- F. Complete submittal documentation to be provided by the Package Pump Station Supplier after receipt of order from the awarded contractor.
- G. Complete Operation & Maintenance manuals to be provided by the Package Pump Station Supplier after receipt of order from the awarded contractor.
- H. A representative of the Package Pump Station Supplier must be present the day the lift station is installed to provide technical advice to the contractor.
- I. Start-up to include two (2) days of on-site field service supplied by the Package Pump Station Supplier.
- J. Package Pump Station Supplier services shall include, but not be limited to, inspection of the completed package pump station installation to ensure that it has been performed in accordance with the manufacturer's instructions and recommendations, including supervision of all field-testing, electrical, communication, and activation of the warranty.

1.03 SUBMITTAL DOCUMENTATION

With receipt of the contract award and receipt of purchase order from the awarded contractor, the Package Pump Station Supplier shall immediately prepare the Scope of Supply and Design Submittal, including drawings and specifications for the prepackaged stormwater pump station described in this section. The Contractor shall then submit one (1) copy of the drawings and specifications for the prepackaged stormwater pump station to the Engineer to review for conformity to the contract. All drawings shall include elevations on the same datum point as in the contract plans.

The following sections shall be included in the package pump station supplier's submittal. Incomplete submittals will be rejected and returned to the bidder.

- A. INTRODUCTION
 - i. About this document
 - ii. How to use this document
 - iii. Typical process

- iv. Submittal approval form & notice to proceed form
- B. SCOPE OF SUPPLY – PRODUCTS & SERVICES
 - i. Scope of supply products (to be supplied by the package pump station supplier)
 - ii. Scope of supply services (to be supplied by the package pump station supplier)
 - iii. Start-up, testing, and training outline
 - iv. Start-up preparation checklist
- C. PRODUCTS AND SERVICES NOT SUPPLIED BY THE PUMP STATION SUPPLIER
 - i. Products and materials (not supplied by package pump station supplier)
 - ii. Services (not supplied by package pump station supplier)
- D. DESIGN CRITERIA
 - i. Introduction to design criteria
 - ii. Lift station design criteria form
- E. PROJECT SITE
 - i. Site drawing with suggested pump station layout (if site drawing is provided by customer)
 - ii. Site specific conduit and wire layout
- F. WARRANTY AND LIMITATIONS ON WARRANTY
 - i. Package pump station proposed warranty documentation
 - ii. Explanations of any limitations of package pump station supplier's responsibilities
- G. OPERATION & MAINTENANCE (O&M) MANUAL
 - i. One (1) hard copy and one (1) CD ROM to be provided at start-up of the system
- H. WET WELL AND RELATED EQUIPMENT
 - i. Wet well component drawings
 - ii. Wet well production drawing
 - iii. Wet well base slab drawing
 - iv. Wet well barrel drawing
 - v. Wet well top slab drawing
 - vi. Wet well hatch drawing
 - vii. Wet well weights and lifting devices

- viii. Wet well testing procedure for water ingress or egress
- ix. Wet well related data sheets
- I. PUMPS
 - i. Pump specifications
 - ii. Pump dimensional drawing
 - iii. Pump performance curves
 - iv. Pump related data sheets
- J. LIQUID LEVEL SENSOR
 - i. Primary level sensor data sheets and specifications
- K. ELECTRICAL INTERCONNECTIONS/ELECTRICAL CORED HOLES
 - i. Typical field wiring plan
 - ii. Electrical installation recommendations
- L. CONTROL PANEL/ELECTRICAL & COMMUNICATIONS
 - i. Standard temperature specifications
 - ii. Power quality disclaimer
 - iii. Electrical system design voltage
 - iv. Specifications - Control panel scope of supply
 - v. One-line drawing
- M. PUMP ELECTRICAL CONNECTION ENCLOSURE/PANEL
 - i. Pump electrical connection enclosure/panel drawings
- N. PRE-INSTALLATION
 - i. Installation checklist
 - ii. Installation data sheets
- O. FIELD START-UP REPORT
 - i. Field start-up report

PART 2: PRODUCTS

2.01 PUMP STATION

- A. The pump station shall be manufactured and supplied as a fully integrated and functional station produced by a single company. All applicable components of the station shall be UL listed.

2.02 WET WELL

- A. The single-source manufacturer shall be responsible for all mechanical, structural, electrical and communication/output components, as well as on-site supervision of the start-up, training, submittals, operation and maintenance manuals, and all warranties related to the materials, equipment, and the entire pump station system.
- B. The precast concrete wet well to be provided shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.

2.03 ACCESS HATCH

- A. The provided access hatch, rated for the site conditions, shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.

2.04 PUMPS

- A. The pumps to be provided shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.
- B. Pumps, mechanical seals and motor units provided shall be from the same pump manufacturer in order to achieve standardization of operation, maintenance, spare parts, service and warranty.
- C. Pumping equipment shall be furnished with all components as specified or required for complete installation and for satisfactory operation.

2.05 PUMP ACCESSORIES

- A. The pump accessories to be provided shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.

2.06 LEVEL CONTROL SYSTEM

- A. The level control system to be provided shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.

2.07 PUMP DISCHARGE PIPING

- A. The pump discharge piping control system to be provided shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.

2.08 VALVE ASSEMBLY

- A. The valve assembly to be provided shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.

2.09 PUMP CONTROL PANEL

- A. The pump control panel to be provided shall be proposed by the Package Pump Station Supplier and approved by the owner or their representative.

PART 3: EXECUTION

3.01 APPROVED PACKAGE PUMP STATION SUPPLIERS

- A. Romtec Utilities (or pre-approved equal)
18240 North Bank Road
Roseburg, Oregon, 97470
541-496-9678
romtec3@romtecutilities.com

3.02 WARRANTY

- A. Package Pump Station Supplier shall provide complete system warranty for one (1) year.
- B. Manufacturer warranties outside of one (1) year to be provided by component manufacturer.

3.03 PACKAGE PUMP STATION SUPPLIER'S SERVICES

- A. After installation, a package pump station start-up shall be performed by the installing contractor under the supervision of the Package Pump Station Supplier's authorized representative.
- B. Start-up to include two (2) days of on-site field service.
- C. Services shall include, but not be limited to, inspection of the completed package pump station installation to ensure that it has been performed in accordance with the manufacturer's instructions and recommendations, supervision of all field-testing and activation of the warranty.
- D. The Contractor shall be responsible for coordinating the required field services with the Package Pump Station Supplier.
- E. Provide one (1) hard copy and one (1) CD ROM Operation & Maintenance manual.

3.04 O&M MANUAL

- A. The contractor is to supply one (1) hard copy and one (1) CD ROM of the O&M manual for all components in this prepackaged stormwater pump station. Separate sections include, but not limited to the following:
 - 1. Pumps
 - 2. Controls
 - 3. Valves
- B. O&M manuals to include all submittal documentation modified, if required, to reflect the as-built condition along with the parts lists, maintenance manuals, and electrical schematics.