

BSDD – C3P 2017 Infrastructure Improvements Project

Construction Plan 2017

Components Outline

Beaver Slough Drainage District (BSDD) faces significant risk of failure of its CMP/Tide Gate system and the North Dike protective berm. The Board of Supervisors has deemed it necessary to move forward with the replacement and reconstruction of this vital infrastructure during the 2017 construction season (May 15, 2017 to September 30, 2017).

BSDD intends to use a Construction Manager/General Contractor (CM/GC) form of contracting and the Board of Supervisors intends to have a CM/GC selected early in the first quarter of 2017. This contracting method necessitates a team approach with the BSDD, CM/GC, Nehalem Marine, sub-contractors, and other stakeholders working together to develop the SoW, meet timelines, and contain costs. Although change orders will be possible to deal with unexpected issues, great care must be taken to define the project in the SoW and the Gross Maximum Price (GMP) process. BSDD reserves the right to waive all formalities as it deems necessary for the successful completion of the project.

The C3P components and their associated segments, tasks, and [lead] are as follows:

1. Pre-Construction – [BSDD]
 - a. Design
 - b. Engineering
 - c. Administration
 - d. Contracting
 - e. Project Management [BSDD & CM/GC]
 - i. Design & Engineering Completion
 - ii. Schedule Development & Maintenance
 - iii. Permitting & Engineering Compliance
 - iv. Post Construction “As built” Documentation

- v. Materials Procurement

- 2. Site Preparation & Post Construction [BSDD]

- a. Pre-Construction

- i. Access road from Highway 42N
 - ii. Waterman Corral
 - iii. Staging Area
 - iv. Fence Removal
 - v. Temporary Electrical Power

- b. Project Completion 2017 – [BSDD]

- i. Permanent Electrical Power
 - ii. Control House
 - iii. Fencing
 - iv. Operations & Monitoring Implementation

- 3. Concrete Box Culverts [CM/GC]

- a. Pre Structure Construction [CM/GC or Sub-Contractor]

- i. Cofferd Dam
 - 1. Berm Removal
 - 2. Sheet Pile Plan
 - a. Sheet Pile
 - b. Tie Rods & Walers
 - 3. Road Prep & Surface
 - ii. Excavation
 - 1. Vegetation

- a. Scalping
 - b. Disposal
 - 2. Dewatering Plan
 - 3. Excavation Sequence
 - 4. Elevation, Heaving, Settlement
 - 5. Material Disposal
 - a. Sorting
 - b. Treatment Protocol, Grooming
- iii. Site Access
 - 1. River Side Road
 - 2. Field Side Roads
 - 3. Equipment Work Stations
- iv. SMPF – Units 1, 2, & 3
 - 1. Structural Sheet Pile
 - a. Front Splash Pad
 - b. Field Side Wing Walls
 - c. Nehalem Diaphragm (See Detail Page)
 - i. Sealing Material
 - ii. Forming
 - 2. Geo-Textile Fabric Placement (See Detail Page)
 - 3. Rock Placement/Compaction (See Detail Page)
 - 4. Field Side Channel Foundation Support/Rip Rap
- v. Other

b. Concrete Culvert Structure [CM/GC or Sub-Contractor]

i. Concrete Box Culverts Units 1, 2, & 3 – Sub-Contractor

1. Construction Sequence

2. Forming Plan

3. Rebar

a. Detailing

ii. Concrete

1. Mix Specifications

iii. Special Items

iv. Other

v.

c. Post Structure Construction Units 1, 2, & 3 [CM/GC or Sub-Contractor]

i. Backfill, CD/Sheet Pile Removal, & Compaction

1. Pull Sheet Pile

2. Excavate River Side

ii. New Channel Excavation

1. Unit 1

2. Unit 2

3. Unit 3

iii. Excavated Material Destination

iv. Plug and/or Removal of CMP/Tide Gates

1. Remove Bulkheads, CMP's, Tide Gates

2. Disposal of Materials

- v. Build River Berm & Control House Pad
 - 1. Fill East and North Channels
 - 2. Build River Berm & Access Roads
 - 3. Build Control House Pad - 2017
- vi. Placement of Excess Material
 - 1. Fill old borrow pits on East & North Berms
- vii. Place Protective Rock & Erosion Control
 - 1. Unit 1
 - 2. Unit 2
 - 3. Unit 3
 - 4. River Side
 - 5. Road Surfaces
 - 6. Slope Blankets & Seeding
- viii. Other
- 4. Water Control/Tide Gates Units 1, 2, & 3 [Nehalem Marine, Inc.]
 - a. Side Hinged Tide Gates with MTR Technology
 - b. Vertical Slide Frames
 - c. Control Technology
 - d. Side Hinge Tide Gates (Interior)
- 5. Bridges #1, #3, #4, #5 Installation [CM/GC or Sub-Contractor]
 - a. Excavation
 - b. Bridge SMPF
 - c. Set & Connect Steel Beams

- d. Set & Connect Precast Deck Sections
 - e. Backfill & Complete Approaches
 - f. Grade and Compact Rock Cap
6. North Dike Reconstruction [CM/GC or Sub-Contractor]
- a. Grub & Clear Vegetation
 - i. Vegetation Disposal
 - b. Grade and Compact Existing Material
 - c. Grade and Compact Imported Material
 - d. Grade and Compact Rock Cap
7. Other