FOR BID PURPOSES ONLY – NOT FOR CONSTRUCTION

TECHNICAL SPECIFICATIONS

DUNE WALKOVER CONSTRUCTION

JB-3, 570 OCEAN DRIVE

PALM BEACH COUNTY, FLORIDA

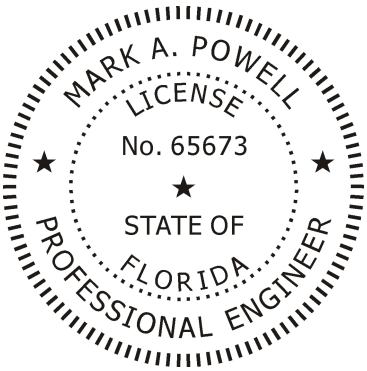
Client:
TOWN OF JUNO BEACH

November 2019

Prepared by

ISIMINGER & STUBBS ENGINEERING, INC.
Coastal - Environmental - Marine
Registry Number 8114

649 U.S. Highway 1, Suite 9
Post Office Box 14702
North Palm Beach, Florida 33408
(561) 881-0003



Mark A. Powell, P.E.
License #65673

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19123.TECHSPEC.01

This item has been electronically signed and sealed by Mark A. Powell, P.E. on November 15, 2019 using a Digital Signature.
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SECTION 1A
GENERAL REQUIREMENTS

1.01 SCOPE OF WORK: The Contractor shall furnish all labor, materials, tools, supplies, plant, equipment, and machinery necessary to complete the work in accordance with the contract documents. Materials or work described in words which have a well-known technical trade meaning shall be held to refer to such recognized standards. All materials and supplies shall be new unless otherwise specified. The specific work which is included is shown on the drawings and specified herein.

1.02 EXISTING UTILITIES AND STRUCTURES: The Contractor shall assure himself of any utilities, structures or facilities prior to performing any work. At least two business days prior to start of digging work, the Contractor shall call 811 to provide notification and request each utility agency to advise him of the location of their facilities in the vicinity. The Town of Juno Beach and the Engineer will assume no liability for damages sustained or costs incurred because of Contractor's operations in the vicinity of existing utilities or structures.

A. Buried Materials - Buried concrete, steel and debris may exist at any location.

B. Overhead Power Lines - Overhead power lines may exist on or near the site. Contractor is responsible for taking any necessary precautions if working in the vicinity.

C. Underground Facilities – Power lines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water, may exist at the site. The Contractor shall take all necessary steps to locate and protect these facilities. In the event there are facilities that cannot be protected the Contractor shall flag these areas and bring them to the attention of the Engineer prior to the disturbance of these areas.

1.03 LAYOUT OF WORK-SURVEY LINES AND GRADES: The Town will indicate alignment markers for horizontal control, if available. The number and extent of such markers or marks will be designated to the Contractor by the Town prior to construction, upon request.

A. Layout: At the expense of the Town, a Florida Registered Land Surveyor shall layout the structure with markers prior to construction.

B. Alignment Markers: The markers for alignment and location information may consist of railroad spikes, iron pins, concrete monuments and other types in customary use in the area, or will be established upon request. The Contractor shall lay out his work from these markers and shall be responsible for all measurements in connection therewith. The Contractor shall preserve all alignment and right-of-way markers and shall reset or replace

at his own expense any and all which are removed, destroyed, or covered up by his work. In the event that additional markers, stakes or monuments are required, or in the event that previously established markers must be replaced, the Contractor shall employ a Florida Registered Land Surveyor to reset or replace them.

C. Bench Marks: The Contractor shall lay out his work from bench marks or reference elevations, which shall be supplied by the Town. They will be shown and explained to the Contractor; thereafter, these bench marks and elevations become the sole responsibility of the Contractor and, if replacement is required, either at the request of the Contractor or in the judgment of the Engineer, the Contractor shall pay for the cost of replacement.

1.04 TESTS: The Engineer will have the right to require certain materials, as noted, to be submitted for testing prior to incorporation in the work. If the Engineer is not satisfied with test results, he may have additional tests made at cost to others, and the Engineer shall be the sole judge as to which tests shall be accepted as proof of contract performance. The Contractor shall not obligate the Town for tests without the Engineer's approval.

1.05 OBSERVATION: The work will be conducted under the general observation of the Engineer for the Town and is subject to observation by his appointed representative to assess compliance with the plans and specifications. The representative is not authorized to change any provision of the specifications without written authorization of the Engineer nor shall the presence or absence of a representative relieve the Contractor from any requirements.

1.06 SHOP DRAWINGS AND SAMPLES: As soon as practicable and within ten (10) days after the date of the execution of the contract, the Contractor shall submit to the Engineer for approval, an electronic copy (mpowell@coastal-engineers.com) of the shop drawings and/or documents listed below (Product Data Sheet and Manufacturer's Verification):

Product Data Sheets

A. Evergrain Composite Lumber specification with list of available colors.
B. Lumberock Composite Lumber specification with list of available colors.
C. Tenino Copper Naphthenate (or approved equal).

Shop Drawings:

A. Aluminum Handrailing – including connection details, extensions, and hardware specifications.

Samples:

A. Decking sample for selected decking (either SYP "Tropical" Decking, EverGrain Composite Lumber, or Ipe) at no additional cost to Client.

1.07 WORK SITE TIME AND AREA RESTRICTIONS: Contractor may completely restrict access only to the immediate construction area. The Contractor is responsible for compliance with all applicable Town of Juno Beach work site restrictions.

1.08 PERMITS AND FEES: The Contractor shall procure the required Town of Juno Beach permits and arrange for inspections. The Town will pay such government fees as are thereby

incurred.

The Engineer or Client has procured or will procure the required authorization from the Florida Department of Environmental Protection. The Contractor is fully responsible for compliance with this authorization. A copy of this authorization will be available from the Engineer.

1.09 SUBCONTRACTORS: All subcontractors are subject to approval by the Engineer and the Town.

1.10 COORDINATION: Contractor will be required to participate in any coordination meetings as may be required. Contractor is required to coordinate scheduling, access, staging, storage, and safety with any other contractors working at the project site.

1.11 PROJECT CONDITIONS:

A. The work consists of construction of a dune walkover and related construction.

B. The work is to construct a facility for exposure to salt-laden atmosphere. At all times the Contractor shall exercise caution to utilize construction procedures and materials to minimize the effects of long term corrosion.

C. The project is located adjacent to multi-family residential properties. The Contractor may not block access to any onsite systems, buildings, roads, or adjacent properties.

D. In coordination with the Town, the Contractor shall block off access to the construction area with barricades.

E. The Contractor shall utilize the existing area landward of the walkover and Coastal Construction Control Line for equipment, material, and personnel access. All reasonable precautions shall be taken to prevent damage to any existing structures on the property. The Contractor shall take precautions to minimize damage to existing vegetation other than in these designated areas. In the event of any damage, the Contractor is responsible for restoring the area to the pre-project condition.

1.12 PROSECUTION OF THE WORK:

A. The Contractor shall submit his construction schedule prior to beginning the work.

B. The Contractor shall give the Engineer 24 hours notice prior to beginning any new phase of construction.

SECTION 2A
WALKOVER CONSTRUCTION

PART 1 - GENERAL

1.01 SCOPE: Work covered by this section of the specifications consists of furnishing all plant, labor, equipment, appliances, and materials in performing all operations in connection with the construction of the walkover, including miscellaneous metal and hardware.

1.02 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS: The construction of the walkover under this contract shall be in strict accordance with the applicable provisions of the following codes, standards and specifications:

A. American Forest and Paper Association (AF&PA) NDS for Wood Construction, 2015.
B. American Wood Preservers Association (AWPA), various standards.
C. American Society for Testing and Materials (ASTM).
D. Florida Building Code – Accessibility, 2017

PART 2 - PRODUCTS

2.01 TIMBER SUPPORT PILES:

A. SIZE AND TAPER: All piles shall be of the diameter specified measured at the butt and have the diameter shall taper no more than 0.1 in. per ft. of pile length.
B. PRESSURE TREATMENT: All timber piles be pressure treated ("Saltwater Exposure – South of Georgia", AWPA Category UC5C minimum equivalent) in accordance with Section 955, of the FDOT SSRBC.

2.02 STRUCTURAL WOOD:

A. Material: All structural wood shall be pressure treated ("ground contact", AWPA Category UC4B minimum equivalent) no. 1 Southern Pine or better. This includes the stringers, bents, posts, top rail, bench supports, and splices.

2.03 WOOD PRESERVATIVE FIELD TREATMENT: Where specified, cut ends of wood shall be treated with Tenino Copper Naphthenate (or approved equal).

2.04 FLASHING: The tops of all stringers, posts, and horizontal bench members shall be sealed with Grade Vycor Deck Protector self-adhesive flashing (or approved equal).

2.05 DECKING AND STAIR TREADS:

A. BASE BID - Material: All decking and bench surface members shall consist of 2x6 Sunbelt Forest Products SYP "Tropical Preserve Plus" Decking.
B. BID ALT 1 Material: All decking and bench surface members shall be EverGrain

2x6 composite decking which conforms to ASTM D7032. For inspection purposes, the boards must include the following labeling: "ASTM D7032 compliant."

C. BID ALT 2 Material: All decking and bench surface members shall be 5/4x6 Ipe.

2.06 STAIR RISER KICKPLATE:

A. BASE BID – Material: All kickplate members 2x6 pressure treated ("ground contact", AWPA Category UC4B minimum equivalent) no. 1 (or better) Southern Pine. Stair dimensions may have to be altered slightly at no additional cost to Client.
B. BID ALT 1 – Material: All kickplate members 2x6 pressure treated ("ground contact", AWPA Category UC4B minimum equivalent) no. 1 (or better) Southern Pine. Stair dimensions may have to be altered slightly at no additional cost to Client.
C. BID ALT 2 - Material: All kickplate members shall consist 5/4x6 Ipe.

2.07 RAIL MEMBERS:

A. CAP RAIL:
   a. BASE BID - Material: The cap rail shall consist of Lumberock Composite lumber (color selection by Client).
   b. BID ALT 1: 2x6 Ipe.

B. TOP AND INTERMEDIATE RAIL MEMBERS:
   a. BASE BID - The top rail (under the cap rail) and intermediate rail members shall be 2x6 pressure treated ("ground contact", AWPA Category UC4B minimum equivalent) no. 1 (or better) Southern Pine.
   b. BID ALT 1 – The top rail (under the cap rail) and intermediate rail members shall be shall be 5/4x6 Ipe.

C. GRAB RAIL: The handrail/grab rod for the stairs shall consist of 1-1/2" O.D. (1/8" wall thickness) aluminum tubing (Alloy 6061 – mill finish). Contractor to provide shop drawings with connection and extension details to Engineer for approval

2.08 STRUCTURAL METALS:

A. Unless otherwise specified, all structural metals shall be salt corrosion resistant 316 stainless steel.

B. Materials shall be handled, shipped and stored in a manner that will prevent distortion or other damage. Material shall be stored in a clean, properly drained location out of contact with the ground. All damaged material shall be replaced or repaired in an approved manner by and at the expense of the Contractor.

2.09 HARDWARE: All bolts, washers, nuts, screws, nails, straps, ties, and other hardware items shall be 316 stainless steel. All bolts shall have a polished finish.

PART 3 - EXECUTION

3.01 WOOD SUPPORT PILES:

A. Piles shall be carefully located as shown on the drawings and installed in a plumb position. The bottom of piles holes should be tamped level with bottom of pile prior to installation. Tops of

piles shall be positioned laterally within 1/2 inch of position except that the outside to outside dimension (north-south) of the piles cannot exceed the dimension shown on the plans. The tops of piles shall be be within 1/2" (sawing permitted). All piles shall be installed with a variation of not more than 1/8 inch per foot of pile length from the vertical. The Contractor shall provide suitable templates or guide structures to ensure that the pile are installed in correct alignment and location.

B. Pile holes should be dug to depth necessary to achieve full penetration of the 6 ft. pile. A motorized or conventional post hole digger may be used. Once pile is set in place, hole should be carefully backfilled without displacing or shifting the pile. Backfill shall consists of native beach sand and shall be placed, moistened, and tamped in 8" lifts. Care shall be taken not to damage the piles during the installation. Any pile damaged during installation shall be removed and replaced at the expense of the Contractor.

3.02 PILE AND POST TOPS: The cut tops of the piles (including existing piles) and rail posts shall be field coated with a preservative treatment such as Tenino Copper Naphthenate (or approved equal).

3.03 WALKOVER CONSTRUCTION: Stringers and bents shall be installed with the "crown" side up and bolt holes shall pre-drilled at the spacing specified on the plans. All deck boards shall be screwed using two #10 x 3 ½" screws per deck board at each stringer crossing. Decking shall be spaced with a 1/8" gap side to side and between the boards and any horizontally abutting surface. All screws into composite or ipe decking shall be pre-drilled and countersunk. All other manufacturers' installation instructions must be followed. Stringers shall be spaced as shown on the plans within ½" of position.

3.04 STAIR CONSTRUCTION: All vertical riser height dimensions shall be within ¼" of each other and all horizontal tread length dimensions (measured from nosing to nosing) shall also be within ¼" of each other.

3.05 SYP DECKING, STRINGER AND BENT SAW CUTS: The end grains of saw cut SYP decking, stringers, and bents shall be field treated with Tenino Copper Naphthenate (or approved equal) in accordance with the manufacturer's specifications. The top grain of bents that have been chamfered for stair stringers shall also be field treated with Tenino Copper Naphthenate (or approved equal).

3.06 BENCH AND RAIL CONSTRUCTION: Exposed edges on bottom of bench seat members shall be relieved to match top relieved edge. Top, bottom, and exposed side edges of end cut rail and bench seat members shall also be relieved to match relieved edge of decking. Hand/Grab railing shall include extensions in accordance with 2017 Florida Building Code – Accessibility, Sections 505.10.2 and 505.1.03 at no additional cost to Client.