TECHNICAL SPECIFICATIONS
Caloosahatchee Creek Preserve
East Park Trail Improvements
June 2024

TS-1.0 Mobilization and Demobilization

TS-1.1 Mobilization will include all activities and costs for transportation of personnel, equipment, and supplies/materials to the site, establishment of offices, signage for closing of the work area to the public, and other necessary facilities for the CONTRACTOR's operations at the site. Mobilization alone will not be considered as work in fulfilling the contract requirement for commencement of work.

TS-1.2 Demobilization will include all activities and costs for transportation of personnel, equipment, and supplies/materials not used in the Contract, including the disassembly, removal, site restoration, and site cleanup of any offices or other facilities assembled on the site for the construction. Upon demobilization, the CONTRACTOR will restore all access areas to the same condition as prior to mobilization.

TS-1.3 Line item 1 includes mobilization and demobilization required by the project at the time of award. If additional mobilization and demobilization is required during the performance of the work due to changed, deleted, or added items of work, the OWNER will award compensation for such costs to the CONTRACTOR. Additional mobilization and demobilization resulting from an error on the CONTRACTOR'S part will be solely the responsibility of the CONTRACTOR.

TS-1.4 All equipment and materials will be mobilized and demobilized in accordance with all local, state, and federal laws related to transportation and safety.

TS-2.0 Vegetation Trimming, Removal, and Disposal

TS-2.1 The work includes the complete removal of all conflicting vegetation within the boardwalk alignments such as trees and shrubs, that will be coordinated with the ENGINEER and park staff prior to the clearing of the alignments.

TS-2.2 The vegetation removal limits begin at the point of connection to the existing boardwalk and extend the length of the alignment. Vegetation requiring removal to facilitate access to the alignment is to be minimized and is to be included as part of this work. Trimming of grass type vegetation is allowed if so desired by the CONTRACTOR and will be considered as part of the work.

TS-2.3 All vegetation cut in execution of the work will be removed from the project area and disposed of properly in an offsite facility. The CONTRACTOR will dispose of all vegetation removed as part of the work in a fully authorized horticultural waste disposal location.

TS-3.0 Erosion Controls and Monitoring

TS-3.1 Silt fencing will be used to enclose the boardwalk alignments, the seating enclave and the berm backfill during all phases of construction.

TS-3.2 The seating enclave and boardwalk access are to be encircled from the point of connection to the existing boardwalks out to and around the observation platform / seating enclave perimeter.

TS-3.3 The berm cut boardwalks will have silt fencing installed parallel to the trail such that the travel path of the trail is enclosed along with the boardwalk. The silt fencing will terminate into the elevated end of the existing trail berms. The berm cut locations where the boardwalks are proposed discharge continuously, year around and may require additional staking or reinforcement to withstand the pressure of the water flow. Care is to be exercised to assure adequate trenching of the filter fabric to assure it remains in place.

TS-3.4 The berm cut backfill locations will have silt fencing installed parallel to the trail such that the travel path of the trail is enclosed along with the backfill, the RCP's and the mitered ends. The silt fencing shall be located such that it will remain in place during construction of the mitered ends.

TS-3.5 The absence of silt fencing during any phase of the construction will not be allowed. The silt fencing shall remain in place and be maintained until the authorized work has been completed and all erodible materials have been

stabilized. On the berm cut backfills the silt fencing is to remain until the sod has become established.

TS-3.6 All silt fencing is to be installed per the manufacturer's specifications. All controls shall be inspected daily, and after each rainfall event, and repairs made immediately prior to construction continuing.

TS-3.7 The CONTRACTOR will be responsible for daily review and compliance with the best management practices for erosion control in accordance with General Condition 3 of the SFWMD permit. Visual inspections will be done on a continual basis while construction personnel are on site.

TS-4.0 Boardwalks at Berm Cuts #1 & #2

Design Load	**100 psf**
Piling	**Minimum 8" butt diameter, minimum 3' embedment, 2.5pcf CCA treated**
Cap Boards	**Double 3" x 12", #2 Dense Southern Yellow Pine, 0.6pcf CCA treated**
Stringers	**3" x 10" #2 Dense Southern Yellow Pine, 0.6 pcf CCA treated, maximum 14" o.c.**
Decking	**2" x 6" Wear Deck™, color Saddle**

TS-4.1 Boardwalk Piling - All wood pilings will be of Southern Yellow Pine meeting ASTM D25 specifications. All wood pilings will be treated with Chromated Copper Arsenate (CCA) with a minimum retention of 2.5 pcf. All piling will be clearly and permanently marked with a brand, or a manufacturer's certification which contains the following information; suppliers brand, plant designation, month and year of treatment, species of timber, length and class of pile, type and retention of preservative used for treatment. All pilings will be driven or jetted into the bottom. If driven, care must be taken not to damage the piles. All piling will have a minimum pile tip penetration of 40% of the overall pile length, or to refusal (minimum penetration of 3'). The top of all piles will be driven, jetted, or cut off at grade in such a manner that all finished pile head surfaces will be a minimum of 2" below the bottom of the decking. The CONTRACTOR will provide evidence, such as a report or other documentation from a geotechnical/engineering testing firm, that the pilings meet the required bearing capacity of 2 tons per piling. CONTRACTOR will provide hammer weight, stroke distance, and blow counts for ENGINEER to determine if pilings meet the required bearing capacity of 2 tons per piling. During piling installation care is to be exercised so as to preserve the integrity of the existing stone filled open cell

containment system that underlies the directly adjacent trail. Piling are to be located to the south of the trail so as to not be driven into the open cell containment system.

TS-4.1.1 HDPE Pile Wrap - The Contractor will install High Density Polyethylene (HDPE) pile wrap on all CCA treated piling from 1' below the mud line to the top of pile. The pile wrap will be commercial grade, minimum 30-mil thickness with a minimum of a 8" overlap. Before installing wrap, each pile will be cleaned, removing all foreign matter for the entire length to be protected. This includes all existing surface projections (i.e. nails, bolts, large splinters) and any other surface condition that would penetrate or damage the wrap. The pile wrap will be secured with stainless steel ring-shanked nails or stainless steel 1-1/4” roofing nails on 2” centers along the seam and around the upper and lower rims.

TS-4.2 Cap Boards- Cap Boards will be #2 dense Southern Yellow Pine treated with Chromium Copper Arsenate (CCA) with a minimum retention of 0.6 pcf. Cap Boards will be double bolted with 5/8” diameter through bolts, washers, and nuts. Lumber may be rough-cut to actual dimensions or finished dimensional lumber.

TS-4.3 Stringers - Stringers will be #2 dense Southern Yellow Pine treated with Chromium Copper Arsenate (CCA) with a minimum retention of 0.6 pcf. Lumber will be finished dimensional lumber. The outboard stringers will be scabbed not less than 18" per stringer end. The scab will be nailed to the stringer, with not less than (4) 30d stainless steel ringshanked nails per stringer end. The scab and stringer will be bolted with 5/8” diameter through bolts, washers, and nuts to proximate piles. The intermediate stringers may be lapped not less than 18", or may be scabbed not less than 18" per stringer end. Lapped stringers will be attached with not less than (4) 30d stainless steel ringshanked nails. One 90 degree stainless steel twist strap will be installed on each stringer, one per pile bent.

TS-4.4 Decking – material will be 2”x6” WearDeck™, the color selection of Saddle to be confirmed by the owner in advance of order being placed. All decking will be installed with no greater than ½” gap between boards, fastened with 3” torx drive stainless steel decking screws (2) per stringer per board.

TS-4.5 Toe Rail - The boardwalk, with a deck elevation not greater than 30” above grade, will require toe railing. Toe rail will be 2”x 4” treated dimensional lumber set on top of 4” x 4” x 12”l spacer blocks on 4’ centers, and fastened to the deck with 5/8” diameter carriage bolts, washers, and nuts, 1 per board per spacer block. The toe rail must be same material as the decking. Bolts will be of an appropriate length for the application. Toe rails will be installed using butt joints positioned such that they occur at spacer locations.

TS-4.6 Hardware - All bolts, nuts, washers, lag screws, screws, trim nails, straps, brackets and miscellaneous hardware will be stainless steel. All deck and handrailing fasteners will be stainless steel, without exception. All through bolts will have washers on both sides of the lumber, bearing evenly on all surfaces. All bolts will be tightened to recommended torque values. All exterior bolts that may protrude into the navigational channel will be counter sunk. All bolts will meet ASTM A-325 standards for bolt type, nuts and washers. They will conform to the requirements of ASTM A-320 (stainless steel).

TS-5.0 Backfill at Berm Cuts #3 through #12

TS-5.1 Berm Cuts #3 through #12 will be backfilled to an elevation 18" above the low point of each berm cut directly onto the existing trail alignment. The approximate location of each low point is shown on the individual plan views for each berm cut and will be located in the field by the ENGINEER in coordination with the contractor. Backfill to be stabilized fill material placed and compacted in maximum lifts of 9". Confirmation of compaction will be done using proof rolling conducted by the CONTRACTOR and observed by the ENGINEER. Proof Rolling is to be performed using a fully loaded tandem axel dump truck or a piece of equipment with an equal number of tires with a minimum weight of 30 tons.

TS-5.2 RCP cross pipe are to be installed at each berm cut low point, with the pipe invert being determined by placement of the pipe on the existing stone filled open cell containment system. During pipe installation care is to be exercised to preserve the integrity of the existing stone filled open cell containment system that underlies the trail.

TS-5.3 Backfill compaction at the RCP locations is to be done using rapid strike vibratory compaction equipment with backfill placed in 6" lifts. Spacing between the pipes will be sufficient to accommodate the CONTRACTOR's compaction equipment. Attention will be given to material placement in the haunch between the pipes as well as the outer side of each pipe.

TS-5.4 Final grade on the backfill will be 18" over the pipe locations, extending 1 pipe diameter past the outer side of the pipes. Grade will then slope down at 20' horizontal to 1' vertical to the elevation of 18" above the low point. Grade will then run flat until it meets the end of the depression. The approximate limits of each backfill location is shown on the individual plan views for each berm cut.

TS-5.5 Stabilization of each berm cut backfill will be done with Bahia sod to be laid on side slopes the full length of each side of the berm cut backfill from the toe to the top of the created side slope. Side slopes to receive sod will be graded smooth and raked free of organic debris, rocks and trash.

TS-5.6 All sod shall be full, intact pieces of Bahia, laid green side up, edge to edge, no gaps, no overlaps, in a continuous pattern, from the bottom of the backfill slope to the top, with the long side of the sod parallel to the trail with the short side seam oriented vertically, staggered row to row. While it is acknowledged that minor deviations from this specification will occur, continuous deviation without reason will result in the sod being picked up and re-laid at the discretion of the ENGINEER.

TS-5.7 Once laid all sod should be rolled to assure that the bottom of the soil matrix is in contact with the graded side slopes. Growth of the roots into the side slopes sufficient to create resistance to picking up the sod is an essential metric for consideration that the sod has established.

TS-5.8 The CONTRACTOR will make accommodations for the sod to be watered until it has been sufficiently established or until the project has reached final completion, which ever occurs last. The occurrence of rainfall sufficient to assure survival and establishment of the sod is acceptable, however the absence of rain does not relieve the CONTRACTOR of the obligation to assure the sod is established and able to survive with further watering.

TS-6.0 RCP with Mitered Ends

TS-6.1 Each berm cut backfill location with have a pair of 18” RCP placed at the low point. Berm cut #3 is an exception as it will have a triple 18” RCP. All locations whether a double or triple installation will consist of two full 8’ sections of 18” diameter concrete pipe meeting the specifications of Section 430 of FDOT design standards, for a total of six sections of pipe on #3 and four sections of pipe on # through #12.

TS-6.2 Pipe are to be set on the existing grade at the low point in the berm cut. The location will be identified by the ENGINEER. Pipe will set level from end to end centered on the exiting trail.

TS-6.3 The distance between pipes in a set will be at least equal to one diameter (18”) or more where required to allow for the contractor’s vibratory compaction equipment.

TS-6.3 Each set of pipe are to have custom mitered ends built with 1’ horizontal to 1’ vertical sloped faces. The mitered ends will incorporate the design parameters from FDOT Index No 272 for single and multiple round concrete pipe.

TS-7.0 Observation Tower Deck, Roof, and Access Ramp

Design Load 100 psf

Tower Piling	**Minimum 12” butt diameter, minimum 12’ embedment, 2.5pcf CCA treated**
Access Piling	**Minimum 8” butt diameter, minimum of whichever is greater 3’ or 40% embedment, 2.5pcf CCA treated**
Cap Boards	**Double 3” x 12”, #2 Dense Southern Yellow Pine, 0.6pcf CCA treated**
Stringers	**3” x 10” #2 Dense Southern Yellow Pine, 0.6 pcf CCA treated, maximum 14” o.c.**
Decking	**2” x 6” Wear Deck™, color Saddle**

Access 5’ x 125’ with 15’ x 2 (30’ total) Toerail, 110’ x 2 (220’ total) Railing, 105’ x 2 (210; total) Handrailing

Observation Deck 10’ x 15’, with 45 lf of Railing, and 45 lf of Handrailing

TS-7.1 Observation Tower and Access Piling - All wood pilings will be of Southern Yellow Pine meeting ASTM D25 specifications. All wood pilings will be treated with Chromated Copper Arsenate (CCA) with a minimum retention of 2.5 pcf. All piling will be clearly and permanently marked with a brand, or a manufacturer’s certification which contains the following information; suppliers brand, plant designation, month and year of treatment, species of timber, length and class of pile, type and retention of preservative used for treatment. All pilings will be driven or jetted into the bottom. If driven, care must be taken not to damage the piles. All piling will have a minimum pile tip penetration of 40% of the overall pile length, or to refusal. The top of all piles will be driven, jetted, or cut off at grade in such a manner that all finished pile head surfaces are the same elevation. The CONTRACTOR will provide evidence, such as a report or other documentation from a geotechnical/engineering testing firm, that the pilings meet the required bearing capacity of 2 tons per piling. CONTRACTOR will provide hammer weight, stroke distance, and blow counts for ENGINEER to determine if pilings meet the required bearing capacity of 2 tons per piling.

TS-7.1.1 Observation Tower Piling – Piling to be 12” butt diameter, with minimum pile tip penetration of 12’. Top of piling to be cut to accept the perimeter bean as required.

TS-7.1.2 Access Boardwalk Piling – Piling to be 8” butt diameter, with minimum penetration of 40% or 3’, which will increase as the access progresses up slope. The top of all piles will be driven, jetted, or cut off at grade in such a manner that all finished pile head surfaces will be a minimum of 2” below the bottom of the decking.

TS-7.2 Cross Bracing - Cross bracing will be2” x 10” treated southern yellow pine. Cross bracing will be installed starting at the top of the second 30’ ramp and on every other bent of the marginal dock where shown. Cross bracing will be

fastened at the top and bottom with single 5/8" diameter through bolts, washers and nuts. Cross bracing will be blocked where braces cross and through bolted with single 5/8" diameter through bolts, washers and nuts. Blocks to be installed between the cross bracing will be the same material as the cross bracing and be of sufficient number so that the cross bracing is not deflected when the through bolt is torqued per manufacturers specifications.

TS-7.3 HDPE Pile Wrap - The Contractor will install High Density Polyethylene (HDPE) pile wrap on all CCA treated piling from 1' below the mud line to 3’ above the existing grade. The pile wrap will be commercial grade, minimum 30-mil thickness with a minimum of 8" overlap. Before installing wrap, each pile will be cleaned, removing all foreign matter for the entire length to be protected. This includes all existing surface projections (i.e. nails, bolts, large splinters) and any other surface condition that would penetrate or damage the wrap. The pile wrap will be secured with stainless steel ring-shanked nails or stainless steel 1-1/4” roofing nails on 2” centers along the seam and around the upper and lower rims.

TS-7.4 Cap Boards- Cap Boards will be #2 dense Southern Yellow Pine treated with Chromium Copper Arsenate (CCA) with a minimum retention of 0.6 pcf. Cap Boards will be double bolted with 5/8” diameter through bolts, washers, and nuts. Lumber may be rough-cut to actual dimensions or finished dimensional lumber.

TS-7.5 Stringers - Stringers will be #2 dense Southern Yellow Pine treated with Chromium Copper Arsenate (CCA) with a minimum retention of 0.6 pcf. Lumber will be finished dimensional lumber. The outboard stringers will be scabbed not less than 18" per stringer end. The scab will be nailed to the stringer, with not less than (4) 30d stainless steel ringshanked nails per stringer end. The scab and stringer will be bolted with 5/8” diameter through bolts, washers, and nuts to proximate piles. The intermediate stringers may be lapped not less than 18", or may be scabbed not less than 18" per stringer end. Lapped stringers will be attached with not less than (4) 30d stainless steel ringshanked nails. One 90 degree stainless steel twist strap will be installed on each stringer, one per pile bent.

TS-7.6 Decking – material will be 2”x6” WearDeck™, the color selection of Saddle to be confirmed by the owner in advance of order being placed. All decking will be installed with no greater than ½” gap between boards, fastened with 3” torx drive stainless steel decking screws (2) per stringer per board.

TS-7.7 Roof – the Observation Tower will be roofed with bare Galvalume® Sheet Steel with a coating weight of AZ 60. The roof will measure 13’8” by 18’8” at the fascia. Galvalume® to be installed in accordance with manufacturers specifications. The roof framing will treated Southern Yellow Pine and constructed as detailed on sheet 4 of the plan set.

TS-7.8 Railing - All railing components with exception of the cap rail will be constructed of #1 dense Southern Yellow Pine, treated with a non-CCA treatment with a minimum retention of 0.4 pcf. The cap rail will be a 2”x8” composite board as produced by Wear Deck™ colored to match the decking. The railing will be 3' high to the top of the top side rail. The posts will be 4"x4" and will be on 5' centers. The 2"x6" side rails will be single bolted to the posts with 3/8" carriage bolts, washers, and nuts. The 2"x8" top rail will be fastened, at a 22° angle, to the top side rail using 3" square drive stainless steel decking screws at 12" O.C. minimum. Cap rails and side rails will be installed using lap joints positioned such that they occur at rail posts only. All bolts will be of an appropriate length for the application.

TS-7.9 Handrail – There is to be a 1-1/2” diameter ADA compliant handrail installed along both sides of the access ramp starting at the bottom of the lower ramp to the top of the upper ramp. Handrail to be galvanized aluminum mounted on galvanized brackets connected to the top side rail per the manufacturer’s specifications.

TS-7.10 Toe Rail - The boardwalk, with a deck elevation not greater than 30” above grade, will require toe railing. Toe rail will be 2”x 4” treated dimensional lumber set on top of 4” x 4” x 12”l spacer blocks on 4’ centers, and fastened to the deck with 5/8” diameter carriage bolts, washers, and nuts, 1 per board per spacer block. Bolts will be of an appropriate length for the application. Toe rails will be installed using butt joints positioned such that they occur at spacer locations.

TS-7.11 Hardware - All bolts, nuts, washers, lag screws, screws, trim nails, straps, brackets and miscellaneous hardware will be stainless steel unless otherwise specified. All deck, railing, and handrailing fasteners will be stainless steel, without exception. All through bolts will have washers on both sides of the lumber, bearing evenly on all surfaces. All bolts will be tightened to recommended torque values. All exterior bolts that may protrude into the navigational channel will be counter sunk. All bolts will meet ASTM A-325 standards for bolt type, nuts and washers. They will conform to the requirements of ASTM A-320 (stainless steel).

TS-7.12 The Access connection location will be marked by the ENGINEER along with the limits of existing toe rail to be removed. The stringers will be set such that the proposed access deck surface will match the existing deck height.

TS-8.0 Seating Enclave

Design Load	**100 psf**
Piling	**Minimum 8” butt diameter, minimum of whichever is greater 3’ or 40% embedment, 2.5pcf CCA treated**
Cap Boards	**Double 3” x 12”, #2 Dense Southern Yellow Pine, 0.6pcf CCA treated**
Stringers	**3” x 10” #2 Dense Southern Yellow Pine, 0.6 pcf CCA treated, maximum 15” o.c.**
Decking	**2” x 6” Wear Deck™, color Saddle**

TS-8.1 Piling - All wood pilings will be of Southern Yellow Pine meeting ASTM D25 specifications. All wood pilings will be treated with Chromated Copper Arsenate (CCA) with a minimum retention of 2.5 pcf. All piling will be clearly and permanently marked with a brand, or a manufacturer’s certification which contains the following information; suppliers brand, plant designation, month and year of treatment, species of timber, length and class of pile, type and retention of preservative used for treatment. All pilings will be driven or jetted into the bottom. If driven, care must be taken not to damage the piles. All piling will have a minimum pile tip penetration of 6’, or be driven to refusal. The top of all piles will be driven, jetted, or cut off at grade in such a manner that all finished pile head surfaces are the same elevation. The CONTRACTOR will provide evidence, such as a report or other documentation from a geotechnical/engineering testing firm, that the pilings meet the required bearing capacity of 2 tons per piling. CONTRACTOR will provide hammer weight, stroke distance, and blow counts for ENGINEER to determine if pilings meet the required bearing capacity of 2 tons per piling.

TS-8.2 HDPE Pile Wrap - The Contractor will install High Density Polyethylene (HDPE) pile wrap on all CCA treated piling from 1' below the mud line to 3’ above the existing grade. The pile wrap will be commercial grade, minimum 30-mil thickness with a minimum of 8" overlap. Before installing wrap, each pile will be cleaned, removing all foreign matter for the entire length to be protected. This includes all existing surface projections (i.e. nails, bolts, large splinters) and any other surface condition that would penetrate or damage the wrap. The pile wrap will be secured with stainless steel ring-shanked nails or stainless steel 1-1/4” roofing nails on 2” centers along the seam and around the upper and lower rims.

TS-8.3 Cap Boards- Cap Boards will be #2 dense Southern Yellow Pine treated with Chromium Copper Arsenate (CCA) with a minimum retention of 0.6 pcf. Cap Boards will be double bolted with 5/8” diameter through bolts, washers, and nuts. Lumber may be rough-cut to actual dimensions or finished dimensional lumber.

TS-8.4 Stringers - Stringers will be #2 dense Southern Yellow Pine treated with Chromium Copper Arsenate (CCA) with a minimum retention of 0.6 pcf. Lumber will be finished dimensional lumber. The outboard stringers will be scabbed not less than 18" per stringer end. The scab will be nailed to the stringer, with not less than (4) 30d stainless steel ringshanked nails per stringer end. The scab and stringer will be bolted with 5/8” diameter through bolts, washers, and nuts to proximate piles. The intermediate stringers may be lapped not less than 18", or may be scabbed not less than 18" per stringer end. Lapped stringers will be attached with not less than (4) 30d stainless steel ringshanked nails. One 90 degree stainless steel twist strap will be installed on each stringer, one per pile bent.

TS-8.5 Decking – material will be 2”x6” WearDeck™, the color selection of Saddle to be confirmed by the owner in advance of order being placed. All decking will be installed with no greater than ½” gap between boards, fastened with 3” torx drive stainless steel decking screws (2) per stringer per board.

TS-8.6 Railing - All railing components with exception of the cap rail will be constructed of #1 dense Southern Yellow Pine, treated with a non-CCA treatment with a minimum retention of 0.4 pcf. The cap rail will be a 2”x8” composite board as produced by Wear Deck™ colored to match the decking. The railing will be 3' high to the top of the top side rail. The posts will be 4"x4" and will be on 5' centers. The 2"x6" side rails will be single bolted to the posts with 3/8" carriage bolts, washers, and nuts. The 2"x8" top rail will be fastened, at a 22° angle, to the top side rail using 3" square drive stainless steel decking screws at 12" O.C. minimum. Cap rails and side rails will be installed using lap joints positioned such that they occur at rail posts only. All bolts will be of an appropriate length for the application.

TS-8.7 Hardware - All bolts, nuts, washers, lag screws, screws, trim nails, straps, brackets and miscellaneous hardware will be stainless steel unless otherwise specified. All deck, and railing fasteners will be stainless steel, without exception. All through bolts will have washers on both sides of the lumber, bearing evenly on all surfaces. All bolts will be tightened to recommended torque values. All exterior bolts that may protrude into the navigational channel will be counter sunk. All bolts will meet ASTM A-325 standards for bolt type, nuts and washers. They will conform to the requirements of ASTM A-320 (stainless steel).

TS-8.8 The Seating Enclave location will be marked by the ENGINEER along with the limits of existing toe rail to be removed. The stringers will be set such that the proposed Enclave deck surface will match the existing deck height. There will be a stringer set adjacent to the existing boardwalk and it will be connected to the existing boardwalk using (2) reinforced plastic deck ledger spacers of minimum ½” thickness between the new and existing stringers.

TS-9.0 Permits and Authorizations

TS-7.1 The CONTRACTOR will comply will all conditions of the State, the County, and all necessary Local Construction Permit authorizations.

TS-7.2 The permits and authorizations relating to the proposed work include the following. It is the responsibility of the CONTRACTOR to make sure they have all necessary copies.

- SFWMD Environmental Resource Permit No. 36-108890-P, Application No. 220819-35635
- Lee County Development Order #LDO2024-00062
- All necessary local authorizations from Lee County
    - Applied for by CONTRACTOR
    - Cost of Dock and Shore Permit to be paid by Lee County

TS-10.0 Confirmation of Work

TS-8.1 The ENGINEER will make occasional site visits during the course of construction to observe progress and confirm compliance with the permits, plans, and specifications.

TS-11.0 Berm Cuts Quantified

Berm Cut #1 6’ wide by 190’ long boardwalk of 1,050 square feet with 354 linear feet of toe rail

Berm Cut #2 6’ wide by 147’ long boardwalk of 795 square feet with 266 linear feet of toe rail

Berm Cut #3 150’ long depression requiring approximately 130 cubic yards of backfill to be placed and compacted with a triple culvert installation of 48 linear feet of 18’ RCP with (2) cast in place triple culvert mitered ends. Stabilization of side slopes may require up to 900 square feet of sod.

Berm Cut #4 290’ long depression requiring approximately 120 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 700 square feet of sod.

Berm Cut #5 90’ long depression requiring approximately 90 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place

double culvert mitered ends. Stabilization of side slopes may require up to 600 square feet of sod.

Berm Cut #6 90’ long depression requiring approximately 90 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 600 square feet of sod.

Berm Cut #7 260’ long depression requiring approximately 230 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 600 square feet of sod.

Berm Cut #8 290’ long depression requiring approximately 230 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 1,500 square feet of sod.

Berm Cut #9 105’ long depression requiring approximately 100 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 600 square feet of sod.

Berm Cut #10 90’ long depression requiring approximately 80 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 500 square feet of sod.

Berm Cut #11 150’ long depression requiring approximately 140 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 900 square feet of sod.

Berm Cut #12 290’ long depression requiring approximately 90 cubic yards of backfill to be placed and compacted with a double culvert installation of 32 linear feet of 18’ RCP with (2) cast in place double culvert mitered ends. Stabilization of side slopes may require up to 600 square feet of sod.