ADDENDUM NO. 1 Amelia River Waterfront Stabilization Parking Lots C & D City of Fernandina Beach Invitation to Bid # 21-06 Issued: May 25, 2021

The following items are clarifications, corrections or additions to the contract documents. THIS ADDENDUM TAKES PRECEDENCE OVER THE ORIGINAL PARTS OF THE CONTRACT DOCUMENTS.

All Project questions must be submitted in writing, via email, to the City of Fernandina Beach, <u>wweaks@fbfl.org</u> (Wanda Weaks).

All the parts of the contract documents, not specifically modified by this or other addenda, remain in full force and effect.

Bidders shall thoroughly familiarize themselves with the contents of this Addendum before submitting bid proposals. IT SHALL BE THE BIDDER'S RESPONSIBILITY TO INFORM THE SUBCONTRACTORS, SUPPLIERS, MANUFACTURERS AND OTHER PARTIES PARTICIPATING IN THE WORK OF APPLICABLE REQUIREMENTS IN THIS ADDENDUM.

Bidders shall acknowledge receipt of this addendum, identified by number and date, on the Addenda Receipt form included in the Proposal Section of the Contract Documents and submitted as part of their Proposal. Failure to acknowledge receipt of Addendum may be grounds for rejection of the bid proposal.

I. <u>Changes within the "Front End" of the Contract Requirements:</u>

- 1) **Note** On page 1; near bottom of page revise "Attachment AB" to read "Attachment B".
- Note On page 9; 1. <u>PREPARATION OF BID</u>; under (a.) include in the sentence after, "Exhibit A" *Add:* (and "Exhibit A-1",) shall be used when submitting your INVITATION TO BID.
- Note On page 15; 14. <u>PAYMENT</u>; after, "Exhibit A" replace "Bid Form" with "Contact Sheet".
- Note On page 17; include EXHIBIT "J" Addendum Receipt, (See Exhibit "J" Attached) – <u>Important!</u> – "This form must be included with Bid/Proposal".
- 5) Replace EXHIBIT "A-1" <u>BID FORM</u> Pages 19 thru 23, (With Exhibit "A-1" Bid Form Attached 10 pages total) <u>Important!</u> "This form must be included with Bid/Proposal".

II. <u>Changes to Specifications:</u> (See attached)

- 1) **Revised** Specifications Section 26 50 00 Lighting (Adjusted for I-Wall realignment, spacing and quantities change)
- 2) **Revised** Specifications Section 524 Articulating Concrete Block (ACB) System Hand-Placed (Changed from Item 524 to Section 524 "Only").
- 3) Added Specifications Section 530 Revetment Systems. (Bid Alternate 1)

III. <u>Changes to Drawings:</u> (See attached)

- 1) Sheet G1-2 Revised Estimate of Quantities.
- 2) Sheet G2-1 Revised I-Wall & Boardwalk alignment; Wetland Planting Areas and Zones; Petanque Area restore date, Bid Alternate 1.
- 3) Sheet C1-1 Revised Alignment; Survey correction Wetland Flags and Bid Form Section Tags.
- 4) Sheet C1-2 Revised Alignment; Survey correction Wetland Flags; Tree Locations; Boardwalk Areas and Bid Form Section Tags.
- 5) Sheet C1-3 Revised Alignment; Survey correction Wetland Flags; Tree Locations; Boardwalk Areas and Bid Form Section Tags.
- 6) Sheet C1-4 Revised Alignment; Boardwalk Areas and Bid Form Section Tags.
- Sheet C2-1 Revised I-Wall & Boardwalk Alignment; Wetland Planting Areas and Zones; Survey correction Wetland Flags; Boardwalk transition to Parking Area and Bid Form Section Tags.
- 8) Sheet C2-2 Revised I-Wall & Boardwalk Alignment; Wetland Planting Areas and Zones; Survey correction Wetland Flags; Tree Locations and Bid Form Section Tags.
- Sheet C2-3 Revised I-Wall & Boardwalk Alignment; Wetland Planting Areas and Zones; Survey correction Wetland Flags; Tree Locations and Bid Form Section Tags.
- 10) Sheet C2-4 Revised I-Wall & Boardwalk Alignment; Wetland Planting Areas and Zones and Bid Form Section Tags.
- 11) Sheet C2-5 Revised I-Wall & Boardwalk Alignment; Wetland Planting Areas and Zones; Survey correction Wetland Flags; Tree Locations and Bid Form Section Tags.
- 12) Sheet C3-1 Revised Wetland Planting Areas and Bid Form Section Tags.
- 13) Sheet C3-2 Revised existing P.T. Dead Man dimension and Bid Form Section Tags.

- 14) Sheet C3-3 Revised existing P.T. Dead Man dimension and Bid Form Section Tags.
- Sheet C3-4 Revised Wetland Planting Areas, Plant Species, Planting Zones and Bid Form Section Tags.
- 16) Sheet C3-5 Revised Bid Section Number.
- 17) Sheet C3-6 Revised Section Number.
- 18) Sheet C3-6 Revised Item to Section Number.
- 19) Sheet C5-1 Revised I-Wall & Boardwalk Alignment and Profile.
- 20) Sheet C6-1 Revised I-Wall & Boardwalk Alignment and Cross Sections Adjusted.
- 21) Sheet C6-2 Revised I-Wall & Boardwalk Alignment and Cross Sections Adjusted.
- 22) Sheet C6-3 Revised I-Wall & Boardwalk Alignment and Cross Sections Adjusted.
- 23) Sheet C6-4 Revised I-Wall & Boardwalk Alignment and Cross Sections Adjusted.
- 24) Sheet C6-5 Revised I-Wall & Boardwalk Alignment and Cross Sections Adjusted.
- 25) Sheet C6-6 Revised I-Wall & Boardwalk Alignment and Cross Sections Adjusted.
- IV. <u>Mandatory Pre-Bid Meeting on May 18, 2021 Notes and Attendance Log:</u> See attached attendance log including mandatory pre-bid meeting.

V. <u>Questions from Bidders & Responses</u>:

Questions and answers contained herein additionally modify the contract documents and are hereby incorporated by being made part of this addendum. The following are responses to questions received since the mandatory pre-bid meeting:

Question 1: None.

Response: Currently to date no written questions received.

VI. Other Items:

None.

End of Addendum No. 1

CITY OF FERNANDINA BEACH ITB 21-06 AMELIA RIVER WATERFRONT STABILIZATION PARKING LOTS C & D

EXHIBIT "J" ADDENDUM RECEIPT

Addendum No.	Dated
NAME OF BIDDER	
BY:NAME	
TITLE	
Business Address:	
Telephone Number:	
Manufacturer's or Contractor's I.D. No.	

AMELIA RIVER WATERFRONT STABILIZATION: PARKING LOTS C & D						
	EXHIBIT A-1 – BID FORM					
SECTION	DESCRIPTION	QNTY	UNIT	UNIT PRICE	HANDWRITTEN TOTAL COST	TOTAL COST
				BASE BID		
101	MOBILIZATION	1	LS	\$	DOLLARS	\$
102	MAINTENANCE OF TRAFFIC	1	LS	\$		\$
110	CLEARING AND GRUBBING: ALONG BOARDWALK	0.275	AC	\$	DOLLARS	\$
107-1	TRASH AND DEBRIS REMOVAL: ALONG RIVERBANK	1	LS	\$	DOLLARS	\$
107-2	TRASH AND DEBRIS REMOVAL: ALONG WETLANDS (SOUTH BOUNDARY AND PETANQUE AREA	1	LS	\$	DOLLARS	\$
104	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	1	LS	\$	DOLLARS	\$
105	CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS	1	LS	\$	DOLLARS	\$
107-3	ADDITIONAL LITTER REMOVAL AND MOWING	1	LS	\$	DOLLARS	\$

	AMELIA RIVER WATERFRONT STABILIZATION: PARKING LOTS C & D						
	EXHIBIT A-1 – BID FORM						
SHEET G2-1	RESTORE, LEVEL AND CLEAN THE PETANQUE AREA	1056	SY	\$	DOLLARS	\$	
120	EXCAVATION AND EMBANKMENT	800	СҮ	\$	DOLLARS	\$	
204	GRADED AGGREGATE BASE	215	СҮ	\$	 	\$	
515-1	METAL PEDESTRIAN/BICYCLE RAILINGS, GUIDERAILS, AND HANDRAILS	230	LF	\$	DOLLARS	\$	
515-2	METAL PEDESTRIAN/BICYCLE RAILINGS, GUIDERAILS, AND HANDRAILS	12	LF	\$	DOLLARS	\$	
02-41-00	SELECTIVE DEMOLITION OF MINOR STRUCTURES - TIMBER BOARDWALK	1	LS	\$	DOLLARS	\$	
524	ARTICULATING CONCRETE BLOCK (ACB) REVETMENT SYSTEMS, OPEN-CELL (INCLUDING ANCHORED ENDS)	800	SY	\$	 	\$	
SHEET G1-5.1	"I"-WALL WITH COQUINA MIX CONCRETE MONOLITH, INCLUDING REINFORCEMENT AND JOINTS	780	LF	\$	DOLLARS	\$	

AMELIA RIVER WATERFRONT STABILIZATION: PARKING LOTS C & D							
	EXHIBIT A-1 – BID FORM						
SHEET G1-5.2	8'-0" WIDE COQUINA MIX CONCRETE BOARDWALK ON GRADE, INCLUDING REINFORCEMENT AND JOINTS	500	LF	\$	DOLLARS	\$	
SHEET G1-5.3	12'-0" WIDE COQUINA MIX CONCRETE BOARDWALK ON GRADE, INCLUDING REINFORCEMENT AND JOINTS	280	LF	\$	DOLLARS	\$	
SHEET G1-5.4	NEW TIMBER PILE BULKHEAD TO MATCH EXISTING TIMBER PILE BULKHEAD	25	LF	\$	DOLLARS	\$	
02-41-00	SELECTIVE DEMOLITION OF (2) EXISTING TIMBER DOCK CONNECTORS	1	LS	\$	DOLLARS	\$	
SHEET G1-5.5	(2) NEW TIMBER DOCK CONNECTORS FROM NEW BOARDWALK TO EXISTING TIMBER DOCK	1	LS	\$	DOLLARS	\$	
08-42-39	PRESSURE-RESISTANT SINGLE FLOOD PLANKBARRIER SYSTEM AT (4) OPENINGS	1	LS	\$	DOLLARS	\$	
26-50-00	EXTERIOR WATERPROOF RECESSED LED PATHWAY LIGHTING INCLUDING CONDUITS, WIRING AND PHOTOCELL	1	LS	\$	DOLLARS	\$	

AMELIA RIVER WATERFRONT STABILIZATION: PARKING LOTS C & D						
		E	хнівіт	A-1 – BID FOR	M	
S-126-5.1	PROJECT SURVEY & STAKEOUT	1	LS	\$	DOLLARS	\$
S-126-5.2	AS-BUILT SURVEY & FINAL CROSS SECTIONS	1	LS	\$	DOLLARS	\$
T-904	BERMUDA SOD WITH RYE OVERSEEDING	1,350	SY	\$	DOLLARS	\$
T-905	3" MINIMUM TOPSOILING	1,350	SY	\$	DOLLARS	\$
T-910.A	PLANTING ZONE A: SMOOTH CORDGRASS; Spartina alterniflora Loisel (SPAL); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS W/ 1-YEAR-OLD TRANSPLANTS FROM NEARBY AREAS	11,000	SF	\$	DOLLARS	\$
T-910.B	PLANTING ZONE B: SALTMEADOW CORDGRASS; Spartina patens (Ait.) Muhl (SPPA); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS	3,000	SF	\$	DOLLARS	\$

AMELIA RIVER WATERFRONT STABILIZATION: PARKING LOTS C & D						
		EX	кнівіт	A-1 – BID FOR	Μ	
T-910.C	PLANTING ZONE C: SALTMEADOW CORDGRASS; Spartina patens (Ait.) Muhl (SPPA); PLANTING DENSITY OF 1 PLANT/FOOT; 4" LINERS	1,400	SF	\$	DOLLARS	\$
T-910.D	PLANTING ZONE D: SAND CORDGRASS; Spartina Bakeri Gramineae (SPBA); PLANTING DENSITY OF 1 PLANT/FOOT; 4" LINERS	2,700	SF	\$	DOLLARS	\$
T-910.E	PLANTING ZONE E: SAND CORDGRASS; Spartina Bakeri Gramineae (SPBA); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS	1,700	SF	\$	DOLLARS	\$
T-910.F	PLANTING ZONE F: SAND CORDGRASS; Spartina Bakeri Gramineae (SPBA); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS	1,150	SF	\$	DOLLARS	\$
SHEET C3-4.4	OYSTER BAG REEF	672	LF	\$	DOLLARS	\$
T-912	EXOTIC PLANT CONTROL	1	LS	\$	DOLLARS	\$

	AMELIA RIVER WATERFRONT STABILIZATION: PARKING LOTS C & D						
		EX	HIBIT	A-1 – BID FORM	Л		
T-914-1	MAINTENANCE EVENTS	8	EA	\$	DOLLARS	\$	
T-914-2	MONITORING EVENTS	1	EA	\$	DOLLARS	\$	
	BASE BID TOTAL						
					\$		
					DOLLARS		
			BID A	ADDITIVE NO.1			
02-41-00	COMPLETE DEMOLITION OF EXISTING MARINA BATH-HOUSE AND RESTROOM BUILDING, INCLUDING SITE RESTORATION	1	LS	\$	DOLLARS	\$	
			BID A	DDITIVE TOTAL			
					DOLLARS	Ş	

BID ADDITIVE "1" DESCRIPTION

The Contractor will include all miscellaneous material, tools, equipment, supervision, labor and equipment required for complete demolition of existing Marina Bathhouse and Restroom building including site restoration that meets all required current codes including but not limited to the following:

- Complete building demolition and removal of debris of the existing approximately 31' x 50', single story structure on grade, adjacent to the existing public boat ramp on Front Street.
- Demolition to include the complete removal of structure constructed of a combination of timber, concrete, and steel framing and metal roofing, the complete removal of concrete foundations and supports.
- Removal and disposal of all fixtures, architectural finishes, electrical equipment, mechanical systems, and the proper termination of all utilities serving the existing building including but not limited to, water, sanitary sewer and electrical.
- All demolished material is to be removed and disposed of off-site.
- Upon completion of the demolition the building site is to be clean to a smooth and level grade.
- Water line will be capped back at water meter and back flow preventor since they are both to remain.
- Electrical wiring and conduit to be removed all the way back to the electrical transformer.

• Contractor to provide acceptable clean fill as required to infill site for grade to have positive drainage off site including providing sod and seed as required to stabilize site.

THIS FORM MUST BE INCLUDED WITH BID/PROPOSAL

PASSERO ASSOCIATES AMELIA RIVER WATERFRONT STABILIZATION

AMELIA RIVER WATERFRONT STABILIZATION: PARKING LOTS C & D					
	EX	кнівіт	A-1 – BID FORI	М	
		BID A	LTERNATE NO.1		
REVETMENT SYSTEMS (IN LIEU OF ARTICULATING OPEN CELL BLOCK, INSTALL BLENDED CLASS 3 GRANITE STONE RIP-RAP REVETMENT; NO MORE 530 THAN 10% OF STONE GREATER THAN 22" DIA., NO MORE THAN 20% GREATER THAN 16" DIA., AND NO MORE THAN 10% LESS THAN 8" DIA. AND MIN. 22" UNIFORM THICKNESS LAYER)	1	LS	\$	DOLLARS	\$
		BID ALT	FERNATE TOTAL		
			DOLLARS	\$	
			TOTAL		
				DOLLARS	۶

BID ALTERNATE "1" DESCRIPTION

In lieu of the Articulating Open Cell Concrete Block (ABC) Revetment System, install 800 SY of Blended Class 3 Granite Stone Rip Rap Revetment (no more than 10% of stone greater than 22" dia., no more than 50% greater than 16" dia., and no more than 10% less than 8" dia., & minimum 22 inches uniform thickness layer.) **Important**! – Make sure to indicate in writing whether it is an **ADD or DEDUCT** to the Total Base Bid above.

CITY OF FERANDINA BEACH ITB 21-06 AMELIA RIVER WATERFRONT STABILIZATION PARKING LOTS C AND D

UNIT PRICES

Additions to or deductions from Base Bid quantities will be computed in accordance with the following fixed unit prices which include all direct and indirect construction costs, overhead, profit, and taxes. The undersigned agrees that such unit prices represent the total cost to the City for additions to or deductions from the Contract Sum.

DESCRIPTION	UNIT PRICE
 6" thick Concrete (Coquina Mix) Reinforced Boardwalk Installation Articulating Concrete Block (ABC) Revetment sloped Protection System Sheet Pile I-Wall and Concrete (Coquina Mix) Monolith Cap Wetland Plantings and Installation Per each Planting Zones A thru F 	\$/ SY \$/ SY \$/ LF \$/ SY

This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed):

Зу:	
	(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name:

By:

(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name:

(SEAL)

CITY OF FERANDINA BEACH ITB 21-06 AMELIA RIVER WATERFRONT STABILIZATION PARKING LOTS C AND D

State of Incorporation:	
Type (General Business, Professional, Service, Limited Liability):	
By:	
(Signature attach evidence of authority to sign)	
Name (typed or printed):	
Title:	
(CORPORATE SEAL)	
Attest	
Date of Qualification to do business in Florida is//	
<u>A Joint Venture</u>	
Name of Joint Venture:	
First Joint Venturer Name:(SEAL)	
By:	
(Signature of first joint venture partner attach evidence of authority to sign)	
Name (typed or printed):	
Second Joint Venturer Name:	
By:	
(Signature of second joint venture partner attach evidence of authority to sign THIS FORM MUST BE INCLUDED WITH BID/PROP	1) OSAL

CITY OF FERANDINA BEACH ITB 21-06 AMELIA RIVER WATERFRONT STABILIZATION PARKING LOTS C AND D

Name (typed or printed): _____

Title: _____

(Each joint venture entity must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)Bidder's

Business Address			
Phone No		Fax No	
E-mail			
SUBMITTED on	20		
State	Contractor License No	•	

Section 26 50 00 - Lighting

May 25, 2021

Addendum #1

ELECTRICAL NOTES PART 1 — GENERAL A. <u>REQUIREMENTS OF REGULATORY AGENCIES AND STANDARDS</u> 1. ALL EQUIPMENT, MATERIAL AND INSTALLATION SHALL MEET THE REQUIREMENTS OF ONE OR MORE OF THE FOLLOWING: a. NATIONAL ELECTRICAL CODE (NEC), NFPA-70 b. INTERNATIONAL ENERGY CONSERVATION CODE (IECC) C. FLORIDA BUILDING CODE d. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) e. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) G. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE) G. ILLUMINATING ENGINEERING SOCIETY (IES) h. UNDERWRITERS LABORATORIES (UL) STANDARD FOR THE INSTALLATION, MAINTENANCE AND USE OF LOCAL PROTECTIVE SIGNALING SYSTEMS i. (NFPA-72) INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA) INSULATED FOREN GALLE LINEARCHIE ADDITIONAL AND VENDOR DRAWINGS FOR SCOPE OF WORK
 THE CONTRACTOR SHALL VISIT THE JOB SITE AND REVIEW CONSTRUCTION AND VENDOR DRAWINGS FOR ALL TRADES PRIOR TO BID TO BECOME FAMILIAR WITH THE PROJECT AND INTENT OF THE DRAWINGS.
 THE CONTRACTOR SHALL OBTAIN A PERMIT FOR WORK TO BE COMPLETED AND INCLUDE COST FOR ALL PERMIT FEES, PERMITS, INSPECTIONS AND TESTING IN THE BID.
 THE CONTRACTOR SHALL PROVIDE ALL NEW MATERIAL IN ACCORDANCE WITH THESE DOCUMENTS AND ADDI INABILE SPECIFICATIONS. APPLICABLE SPECIFICATIONS. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND THOSE OF 4. OTHER DISCIPLINES TO THE ARCHITECT/ENGINEER FOR WRITTEN DIRECTION/INSTRUCTIONS FOR CHANGES NECESSARY IN THE WORK. NECESSARY IN THE WORK. THE CONTRACTOR SHALL NOT SCALE THE ELECTRICAL DRAWINGS, REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS. THE CONTRACTOR IS EXPECTED TO PROVIDE ALL MATERIAL NECESSARY FOR A COMPLETE OPERATING SYSTEM. IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. 5. 6. THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL WORK WITH OTHER TRADES AND MAKE PROPER PROVISIONS IN RELATION TO THEIR WORK. ANY CHANGES REQUIRED DUE TO LACK OF COORDINATION, SHALL BE MADE AT THE CONTRACTORS' EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF THEIR WORK. THE ELECTRICAL INSTALLATION SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER BY A 7. THE ELECTRICAL CONTRACTOR.
 INCLUENSED ELECTRICAL CONTRACTOR.
 THE CONTRACTOR SHALL PROVIDE INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR DURATION OF THE PROJECT.
 NO COMBUSTIBLE MATERIALS, IE: PVC CONDUIT, NON-PLENUM RATED CABLING, ETC., ARE ALLOWED ABOVE ANY CEILINGS C. <u>TERMS</u> 1. "PROVIDE", AS USED IN THE DOCUMENTS AND APPLICABLE SPECIFICATIONS MEANS TO FURNISH AND "PROVIDE", AS USED IN THE DOCUMENTS AND APPLICABLE SPECIFICATIONS MEANS TO FURNISH AND INSTALL COMPLETE. "WRING", AS USED IN THE DOCUMENTS MEANS CONDUIT AND WIRES WITHIN THE CONDUIT SYSTEM. "CONCEALED", AS USED IN THE DOCUMENTS AND APPLICABLE SPECIFICATIONS MEANS EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, BEHIND WALLS, INSIDE CABINETRY OR ABOVE SUSPENDED CEILINGS. "NEMA 1", INDICATES THE ENCLOSURE SHALL BE LISTED FOR INDOOR USE ONLY. "NEMA 3R", INDICATES THE ENCLOSURE SHALL BE LISTED FOR EXTERIOR USE. "SETS", AS USED FOR SERVICES, FEEDERS AND BRANCH CIRCUITS MEANS PARALLELED AND EACH SET SHALL BE INSTALLED IN SEPARATE CONDUITS. RRANTY 2. 3. 5 6. D. WARRANTY ALL MATERIAL AND WORK PERFORMED SHALL BE GUARANTEED FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE. ANY CORRECTIONS FOR DEFECTIVE MATERIALS AND/OR INSTALLATION SHALL BE MADE AT THE 1. 2. CONTRACTORS EXPENSE DURING THE WARRANTY PERIOD. PART 2 - PRODUCTS
A. CONDUCTORS
1. MINIMUM SIZE SHALL BE #12 AWG, EXCEPT FOR CONTROL/LOW VOLTAGE WIRING.
2. INSULATION TYPE SHALL BE DUAL RATED THHN/THWN.
3. ALL CONDUCTORS SHALL BE COPPER, UNLESS NOTED OTHERWISE.
4. ALL CONDUCTORS 100 AMPS OR LESS ARE BASED ON LISTED TERMINALS OF 75'. PROVIDE CONDUCTORS SIZED IN ACCORDANCE TO TABLE 310.15(B)(16) 60' COLUMN WHEN LISTING IS UNKNOWN.
B. WINCTON POYCE B. <u>JUNCTION BOXES</u>
1. INTERIOR LOCATIONS SHALL BE PRESSED STEEL.
2. EXTERIOR LOCATIONS SHALL BE HEAVY DUTY CAST ALUMINUM WITH THREADED HUBS. C. CONDUIT 1. INTERIOR - EMT SHALL BE GALVANIZED STEEL. 2. EXTERIOR - PVC SHALL BE SCHEDULE 40 WHERE NOT SUBJECT TO PHYSICAL DAMAGE. D. EQUIPMENT TERMINAL RATING 1. ALL EQUIPMENT SHALL BE PROVIDED WITH 60/75° RATED TERMINALS. PART 3 - EXECUTION A. WRING METHODS CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) UNLESS NOTED OTHERWISE. CONNECTORS AND FITTINGS SHALL BE STEEL SET SCREW OR COMPRESSION TYPE.
 PVC, AS INDICATED IN PART 2-PRODUCTS (F) SHALL BE INSTALLED BELOW SLAB, UNDERGROUND AND EXPOSED WHERE LISTED FOR SUCH USE. B. MISCELLANEOUS CELLANEOUS CONDUCTORS FOR BRANCH CIRCUITS SHALL BE INCREASED FROM SIZES INDICATED IN THE PANEL SCHEDULES TO PREVENT VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST DEVICE. LOADS FOR DETERMINING CONDUCTOR SIZE SHALL BE BASED ON ACTUAL CONNECTED LOAD OR 80% OF CIRCUIT BREAKER SIZE, WHICH EVER IS GREATER. CONTACT ENGINEER OF RECORD FOR ALL CIRCUIT RUNS IN EXCESS OF 100 FT. FOR CALCULATION OF WIRE SIZE. FOR BID PURPOSES, INCREASE WIRE SIZE BY ONE FOR CIRCUIT RUNS BETWEEN 100 FT. AND 200 FT. AND TWO WIRE SIZES FOR CIRCUIT RUNS GREATER THAN 200 FT. D. <u>GROUNDING</u> 1. THE ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED PER THE LATEST EDITION OF THE NEC AND LOCAL CODES. ALL GROUNDING ELECTRODE CONDUCTORS SHALL BE COPPER.

Passero Associates

Amelia River Waterfront Stabilization (Lots C & D)

KEY NOTES

(1)EXTEND NEW WIRING, 2#10 AND 1#10 IN 3/4" TO NEAREST 120V LIGHTING BRANCH CIRCUIT (AS BUILT CIRCUIT) IN THIS AREA. FIELD VERIFY EXACT LOCATION AND CONNECT FOR OPERATION. Section 26 50 00 - Lighting Page 1 of 25

Project No. 99000047.0095 Lígman May 25, 2021 Addendum #1 LIGHTING Section 26 50 00 - Lighting



17w LED 620 Lumens

IP65 • Suitable For Wet Locations IK09 • Impact Resistant (Vandal Resistant) Weight 2.6 lbs





Passero Associates

Construction

Aluminum Casting

Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation

Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket

Memory Retentive -Silcon casket Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression Standard 10kv surge suppressor provided with all fixtures.

BUG Rating B0 - U2 - G1

Finishing

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Inspired by Nature Finishes The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

The Coating Process After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains.

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

Added Benefits

 Resistance to salt-acid room, accelerated aging
 Boiling water, lime and condensed water resistant
 Anti-Graffitt, Anti-Siip, Anti-Microbial, Anti-Scratch
 Super durable (UV resistant) TGIC free (non-toxic)

Hardware

Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes

Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED

Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life

L80 /B10 at 50.000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Sturdy classic wall-recessed pathway and stair luminaire. Simple pleasing aesthetic and sturdy construction, perfect for retrofit applications with its multiple sizes offered.

USA

A range of rectangular and square wall recessed luminaires, with an indirect optical system, offering high vandal resistance. Suitable for indoor or outdoor applications. The recessed LED eliminates all discomfort glare as light is directed to the ground providing illumination where it is needed and minimizing light spill. This luminaire is provided with a powdercoated high pressure die-cast aluminum back box and can be pre shipped to the jobsite for concrete pour or masonry applications.

This fixture is suitable for lighting footpaths, stairs, squares and entrances.

The Rado range has a matching bollard offering to complement the recessed product. See bollard section on the Ligman website.

All Ligman fixtures can be manufactured using a special pre-treatment and coating process that ensures the fixture can be installed in natatoriums as well as environments with high concentrations of chlorine or salt and still maintain the 5 year warranty. For this natatorium rated process please specify NAT in options.

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT



Narrow-Spectrum Amber LEDs

Peak wavelength between 585 & 595 nanometers and a full width of 50% power no greater than 15 nanometers.

> Section 26 50 00 - Lighting Page 2 of 25

URA-40542

Rado 2 Recessed

Addendum #1 May 25, 2021 LIGHTING





ORDERING EXAMPLE || URA-40542 - 17w - W30 - 02 - 120/277V





NAT - Natatorium Rated

AMB - Turtle Friendly Amber LED DIM - 0-10v Dimming

More Custom Finishes Available Upon Request

Consult factory for pricing and lead times





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Example: Inspired by Nature Finish



LIGHTING USA



LMUS_21040042_Amelia River Waterfront Stabilization -Parking Lots C & D_Rev.2

DISCLAIMER

Calculations have been performed according to IES and IEC standard and good practice. Some differences between measured values and calculated values may occur due to tolerances in calculation parameters, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectance's, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data, differences will occur between measured and calculated values.



Luminaire list

Φ _{total} 17640 lm	P _{total} 718.2 W	Luminous efficacy 24.6 lm/W				
Ligmar		1				
pcs.	42		Р		17.1 W	
Manufacturer	LIGMAN	LIGMAN			420 lm	
Article No.	U RA-40542	URA-40542- AMB		fficacy	24.6 lm/W	
Article name	ticle name Rado 2 Recessed Wall		ССТ		2200 K	
		luminaires			84	
Fitting	1x URA-40542-AMB					

LMUS_21040042_Amelia River Waterfront Stabilization - Parking Lots C & LIGMAN D_Rev.2 LIGHTING USA Images Dimensions may vary but at no time shall the dimension Top of Wall be less than 6" minimum from top of fixture to top of wall. 10 Top of Boardwalk و" Dimensions shall be maintain at 6" maximum from top of boardwalk to bottom of fixture through-out, only when the wall height is less than 1'- 6" shall this dimension diminish 6" to 0". Note minimum wall height shall be 1-0" for this project.

LIGHTING USA

LMUS_21040042_Amelia River Waterfront Stabilization - Parking Lots C & D_Rev.2

Images





Images



*Wall height of this area 1'

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Images





Images

0.01



1.85 3.86 5.56 1500 [fc] 0.03 0.05 0.07 0.10 0.14 0.21 0.30 0.43 0.62 0.89 1.28 2.68 8.02 117 274 641 0.02 12 17 24 35 50

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Images



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LIGHTING USA

LMUS_21040042_Amelia River Waterfront Stabilization - Parking Lots C & D_Rev.2

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Images

0.01

0.02



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0.01



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1500 [fc]



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0.01

0.02



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1500 [fc]



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0.01

0.02



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Images



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0.01

0.02



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Site 1 Calculation objects



LMUS_21040042_Amelia River Waterfront Stabilization - Parking Lots C & D_Rev.2



Site 1 Calculation objects

Calculation surfaces

Properties	Ē	E _{min}	E _{max}	g 1	g ₂	Index
Floor surface Perpendicular illuminance Height: 0.600 ft	2.06 fc	0.000 fc	359 fc	0.00	0.00	S1

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

LIGHTING USA

LMUS_21040042_Amelia River Waterfront Stabilization - Parking Lots C & D_Rev.2

Site 1 Floor surface





0.01	0.02	0.03	0.05	0.07	0.10	0.14	0.21	0.30	0.43	0.62	0.89	1.28	1.85	2.68	3.86	5.56
8.02	12	17	24	35	50	117	274	641 [fc]								
Proper	ties						Ē	Emir	n	E _{max}		g 1	g	2	Inde	ex
Floor si Perpen Height:	urface idicular : 0.600	illumina ft	ince				2.06 fc	0.0	00 fc	359 fi	с	0.00	0	.00	S1	

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

SECTION 524 ARTICULATING CONCRETE BLOCK (ACB) SYSTEM HAND-PLACED

524-1 DESCRIPTION

524-1.1 Scope of Work

The contractor shall furnish all labor, materials, equipment, and incidentals required for, and perform all operations in connection with, the installation of the Articulating Concrete Block (ACB) system hand placed in accordance with the lines, grades, design and dimensions shown on the Contract Drawings and as specified herein.

524-1.2 Submittal

The Contractor shall submit to the Engineer of Record (EOR) evidence of full-scale hydraulic testing in accordance with ASTM D-7277, from Colorado State University. The Contractor shall also submit to the EOR an appropriate geotextile, selected for the site being protected on the basis of the gradation and permeability of the surface soils, which information shall have been provided by the EOR or the designated geotechnical engineer.

The Contractor shall furnish manufacturer's certificates of compliance for the ACB, geotextile, and any other components that are required. The Contractor shall also furnish the manufacturer's specifications, literature, installation instructions, and any recommendations, if applicable, that are specifically related to the project. If a color has been specified for the block, the Contractor shall submit a color chart indicating the specified standard color.

Alternative materials from qualified suppliers may be considered; to qualify, proposed alternative suppliers must own and operate their own manufacturing facility, and shall directly employ a minimum of five (5) registered Professional Engineers. Full documentation consistent with the foregoing must be submitted in writing to the EOR a minimum of twenty (20) business days prior to bid date, and must be pre-approved in writing as an addendum to the bid documents and drawings by the EOR at least ten (10) business days prior to bid date. Submittal packages must also include, as a minimum, the following:

- 1. Evidence of satisfactory full-scale laboratory testing in accordance with *ASTM D 7277*, *Standard Test Method for Performance Testing of Articulating Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow*, performed on behalf the submitting manufacturer on a qualifying test flume of sufficient length for the test flows to achieve normal depth in all cases, and associated engineered calculations quantifying the FoS of the proposed ACB system under the design conditions of the specific project, stamped and signed by a registered Professional Engineer residing in and licensed to practice in the state where the project is located;
- 2. A list of 5 comparable projects, in terms of size and applications, in the United States.

3. The analysis shall be performed based upon the stability of the ACB's due to gravity forces alone, neglecting conservative forces added by cabling, mechanical anchorage, contact with adjacent blocks, or other restraints not attributable to gravity-based forces. The analysis must account for a 0.5-inch block projection, in accordance with ASTM D 6884, Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems, Section 6.3.3. Site grading requirements may not be used to omit this requirement for standard (non-tapered) block.

524-2.2 Articulating Concrete Blocks

1. Scope: This specification covers articulating concrete blocks used in revetments for soil stabilization. Concrete units covered by this specification are made from lightweight or normal weight aggregates, or both. The values stated in U.S. customary units are to be regarded as the standard.

2. Materials: Cementitious Materials shall conform to the following applicable ASTM specifications:

- a) Portland Cements Specification C 150, for Portland Cement.
- b) Blended Cements Specification C 595, for Blended Hydraulic Cements.
- c) Hydrated Lime Types Specification C 207, for Hydrated Lime Types.
- d) Pozzolans Specification C 618, for Fly Ash and Raw or Calcined Natural Pozzolans for use in Portland Cement Concrete.
- e) Aggregates Specification C 33, for Concrete Aggregates, except that grading requirements shall not necessarily apply.

3. Casting: The ACB units shall be produced by a dry cast method. Dry cast units obtain strength more quickly than wet cast blocks, and will also achieve a greater uniformity of quality and greater durability.

4. Physical Requirements: At the time of delivery to the work site, the units shall conform to the physical requirements prescribed in Table 1 below.

TABLET. I HI SICAL REQUIREMENTS					
Compressive St	rength Net Area	Water Absorption Max. lb/ft ³ (kg/m ³)			
Min. p.s	s.i (mPa)				
Avg. of 3 units	Individual Unit	Avg. of 3 units	Individual Unit		
4,000 (27.6)	3,500 (24.1)	9.1 (160)	11.7 (192)		

TABLE1. PHYSICAL REQUIREMENTS

Units will be sampled and tested in accordance with ASTM D 6684-04, *Standard Specification for Materials and Manufacture of Articulating Concrete Block (ACB) Revetment Systems.*

5. Visual Inspection: All units shall be sound and free of defects that would interfere with either the proper placement of the unit or impair the performance of the system. Surface cracks incidental to the usual methods of manufacture, or surface chipping resulting from customary methods of handling in shipment and delivery, shall not be deemed grounds for rejection.

Cracks exceeding 0.25 inches (.635 cm) in width and/or 1.0 inch (2.54 cm) in depth shall be deemed grounds for rejection. Chipping resulting in a weight loss exceeding 10% of the average weight of a concrete unit shall be deemed grounds for rejection.

Blocks rejected prior to delivery from the point of manufacture shall be replaced at the manufacturer's expense. Blocks rejected at the job site shall be repaired with structural grout or replaced at the expense of the contractor.

6. Sampling and Testing: The purchaser (or their authorized representative) shall be accorded access to the relevant manufacturing facility or facilities, if desired, in order to inspect and/or sample the ACB units from lots ready for delivery prior to release for delivery to the job site. Such inspections are at the sole expense of the requesting entity.

Field installation shall be consistent with the way the system was installed in preparation for hydraulic testing pursuant to ASTM D 7277, *Standard Test Method for Performance Testing of Articulating Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow.* Any external restraints, anchors, or other ancillary components (such as synthetic drainage mediums) shall be employed as they were during testing; e.g., if the hydraulic testing installation utilized a drainage layer, then the field installation must also utilize a drainage layer. This does not preclude the use of other section components for other purposes, e.g., a geogrid for strengthening the subgrade for vehicular loading, or an intermediate filter layer of sand to protect very fine-grained native soils.

Purchaser may request additional testing other than that provided by the manufacturer as needed. Such requested testing will extend any stated lead times for manufacturing and delivery, if the results of such testing are a prerequisite to approval (i.e., approval for release to manufacturing). Costs associated with such testing shall be borne by the purchaser.

7. Manufacturer: Basis of Design for (ACB) System shall be ArmorFlex[®] as manufactured and sold by:

Contech Engineered Solutions, LLC Phone: 813-294-5913

URL: http://www.conteches.com/Products/Erosion-Control/Hard-Armor/ArmorFlex

The selected ARMORFLEX[®] blocks shall have the following nominal characteristics:

STAND SHEES OF MANOR LEAR DECOMP						
		MIN.	BI	LOCK SI	ODEN ADEA	
CLASS	TYPE	WEIGHT	Length	Width	Height*	OFEN AREA 0/
		(lbs)	(in)	(in)	(in)	70
30S	Open	32	13.0	11.6	4.75	20
50S	Open	42	13.0	11.6	6.0	20
45S	Closed	39	13.0	11.6	4.75	10
55S	Closed	50	13.0	11.6	6.0	10
40	Open	59	17.4	15.5	4.75	20
50	Open	76	17.4	15.5	6.0	20

STANDARD SIZES OF ARMORFLEX® BLOCKS

60	Open	93	17.4	15.5	7.5	20	
70	Open	113	17.4	15.5	8.5	20	
45	Closed	71	17.4	15.5	4.75	10	
55	Closed	91	17.4	15.5	6.0	10	
75	Closed	112	17.4	15.5	7.5	10	
85	Closed	135	17.4	15.5	8.5	10	
40L	Open	97	17.4	23.6	4.75	20	
50L	Open	115	17.4	23.6	6.0	20	
70L	Open	174	17.4	23.6	8.5	20	
45L	Closed	109	17.4	23.6	4.75	10	
55L	Closed	138	17.4	23.6	6.0	10	
85L	Closed	207	17.4	23.6	8.5	10	
*Block h	*Block height may vary based on local manufacture's capabilities.						

524-2.3 Filter Fabric

The geotextile filter shall meet the minimum physical requirements listed in Table No. 3 of these Specifications. Consultation with the manufacturer is recommended; the standard for sizing geotextile for these applications is AASHTO M-288, Permanent Erosion Control. Only **non-woven** geotextile is acceptable, as long as they meet the other project requirements.

The geotextile fiber shall consist of a long-chain synthetic polymer composed of at least 85 percent by weight of propylene, ethylene, ester, or amide, and shall contain stabilizers and/or inhibitors added to the base plastic, if necessary, to make the filaments resistant to deterioration due to ultraviolet and heat exposure. The edges of the geotextile shall be finished to prevent the outer fiber from pulling away from the geotextile.

The Contractor shall furnish manufacturer's certified test results to the EOR, showing actual test values obtained when the physical properties are tested for compliance with the specifications.

During all periods of shipment and storage, the filter fabric shall be protected from direct sunlight, UV radiation, and temperatures greater than 140°F. To the extent possible, the fabric shall be maintained wrapped in its protective covering. The geotextile shall not be exposed to sunlight or UV radiation until the installation process begins.

						
Physical Property	Test Procedure	Minimum Value				
Grab Tensile Strength	ASTM D4622	IAW AASHTO M288 Class 2				
(Unaged Geotextile)	ASTM D4032	IAW AASHI O M288 Class 2				
Breaking Elongation	ASTM D4632	50% max.				
(Unaged Geotextile)	ASTM D4032	(in any principal direction)				
Burst Strength	ASTM D3786	IAW AASHTO M288 Class 2				
Puncture Strength	ASTM D4833	IAW AASHTO M288 Class 2				
A.O.S., U.S. Std. Sieve	ASTM D4751	See Design Manual				
Permittivity	ASTM D4491	See Design Manual				

TABLE 2. PHYSICAL REQUIREMENTS

Final acceptance of the filtration geotextile must be made by the EOR based on project specific soil information and shall be dependent upon the geotextile performance when tested in accordance with ASTM D5101, Standard Test Method for Measuring the Soil-Geotextile System Clogging by the Gradient Ratio Test or the Hydraulic Conductivity Ratio Test. Soil characteristics such as grain size distribution, permeability, and plasticity shall be determined for every 200,000 square feet of geotextile installed or for each source of borrow material used during construction. Significant differences in soil characteristics may require the performance of further sieve and possible hydrometer testing at the discretion of the EOR. The locations for which the material to be tested is extracted shall be approved by the EOR. The Contractor shall provide the site-specific soil and modified proctor curves for the site soil, at his own expense, to the manufacturer. Also, the contractor shall be responsible for the performance of the test by a certified independent laboratory experienced in performing such test. The test shall be performed under the actual field soil conditions or as otherwise required by the EOR.

At the time of installation, the filter fabric shall be rejected if it has been removed from its protective cover for over 72 hours or has defects, tears, punctures, flow deterioration, or damage incurred during manufacture, transportation or storage. With the acceptance of the Engineer, placing a filter fabric patch over the damaged area prior to placing the mats shall repair a torn or punctured section of fabric. The patch shall be large enough to overlap a minimum of three (3) feet in all directions.

524-3 FOUNDATION PREPARATION, GEOTEXTILE AND PLACEMENT

524-3.1 Subgrade Preparation

General: Areas on which filter fabric and articulating concrete blocks are to be placed shall be constructed to the lines and grades shown on the Contract Drawings and to the tolerances specified in the Contract Documents and approved by the Engineer. All subgrade preparation shall be performed in accordance with *ASTM D 6884*, *Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems*, as updated and amended.

Grading: The slope shall be graded to a smooth plane surface to ensure that intimate contact is achieved between the slope face and the geotextile (filter fabric), and between the geotextile and the entire bottom surface of the articulating concrete blocks. All slope deformities, roots, grade stakes, and stones which project normal to the local slope face must be re-graded or removed. No holes, "pockmarks", slope board teeth marks, footprints, or other voids greater than 1.0 inch in depth normal to the local slope face shall be permitted. No grooves or depressions greater than 0.5 inches in depth normal to the local slope face with a dimension exceeding 1.0 foot in any direction shall be permitted. Where such areas are evident, they shall be brought to grade by placing compacted homogeneous material. The slope and slope face shall be uniformly compacted, and the depth of layers, homogeneity of soil, and amount of compaction shall be as required by the Engineer.

Excavation and preparation for anchor trenches, side trenches, and toe trenches or aprons shall be done in accordance to the lines, grades and dimensions shown in the Contract Drawings. The anchor trench hinge-point at the top of the slope shall be uniformly graded so that no dips

or bumps greater than 0.5 inches over or under the local grade occur. The width of the anchor trench hinge-point shall also be graded uniformly to assure intimate contact between all articulating concrete blocks and the underlying grade at the hinge-point.

Inspection: Immediately prior to placing the filter fabric and articulating concrete blocks, the prepared subgrade shall be inspected by the Engineer as well as the owner's representative and by the manufacturer's representative. No fabric or blocks shall be placed thereon until that area has been approved by each of these parties.

524-3.2 Placement of Geotextile Filter Fabric

General: All placement and preparation should be performed in accordance with *ASTM D* 6884, *Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems*, as updated and amended. Filter Fabric, or filtration geotextile, as specified elsewhere, will be placed within the limits of ACBs shown on the Contract Drawings.

Placement: The filtration geotextile shall be placed directly on the prepared area, in intimate contact with the subgrade, and free of folds or wrinkles. The geotextile shall not be walked on or disturbed when the result is a loss of intimate contact between the articulating concrete block and the geotextile or between the geotextile and the subgrade. The geotextile filter fabric shall be placed so that the upstream strip of fabric overlaps the downstream strip. The longitudinal and transverse joints shall be overlapped at least three (3) feet. The geotextile shall extend at least one foot beyond the top and bottom revetment termination points. If articulating concrete blocks are assembled and placed as large mattresses, the top lap edge of the geotextile should not occur in the same location as a space between articulating concrete mats unless the space is concrete filled.

524-3.3 Placement of Articulating Concrete Blocks

General: ACB placement and preparation should be performed in accordance with *ASTM D* 6884, *Standard Practice for Installation of Articulating Concrete Block (ACB) Revetment Systems*, as amended and updated. Articulating concrete blocks, as specified in Part 2 of these Specifications, shall be constructed within the specified lines and grades shown on the Contract Drawings.

Placement: The articulating concrete blocks shall be placed on the filter fabric in such a manner as to produce a smooth plane surface in intimate contact with the filter fabric. No individual block within the plane of placed articulating concrete blocks shall protrude more than one-half inch or as otherwise specified by the Engineer. To ensure that the articulating concrete blocks are flush and develop intimate contact with the subgrade, the blocks shall be "seated" with a roller or other means as approved by the Engineer.

Anchor trenches and side trenches shall be backfilled and compacted flush with the top of the blocks. The integrity of a soil trench backfill must be maintained so as to ensure a surface that is flush with the top surface of the articulating concrete blocks for its entire service life. Toe trenches shall be backfilled as shown on the Contract Drawings. Backfilling and compaction

of trenches shall be completed in a timely fashion. No more than 500 linear feet of placed articulating concrete blocks with non-completed anchor and/or toe trenches shall be permitted at any time.

Finishing: The cells or openings in the articulating concrete blocks shall be backfilled and compacted immediately with suitable material to assure there are no voids and so that compacted material extends from the filter fabric to one-inch above the surface of the articulating concrete block. Backfilling and compaction shall be completed in a timely manner so that no more than 500 feet of exposed mats exist at any time.

Consultation: The manufacturer of the articulating concrete blocks shall provide design and construction advice during the design and initial installation phases of the project when required. The ACB supplier shall provide, at a minimum, one full day or two half-days of onsite project support upon request.

524-4 METHOD OF MEASUREMENT

524-4.1 Open cell articulating concrete block hand-placed shall be measured by the in place, complete. This price shall be full compensation for square yard, furnishing all materials and for all preparation, embedment, anchors, placing and grading of the draining stone, geotextile fabric, restoration, furnishing and installation of appurtenances and connections as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete structure. the Excavation and embankment to the final lines and grades required for installation of the open cell articulating concrete block shall be paid for under Item P-152, Excavation and Embankment.

524-5 BASIS OF PAYMENT

524-5.1 Payment will be made at the contract unit price per square yard of open cell articulating concrete block mat installed and accepted. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item 524.1 Open Cell Articulating Concrete Block Hand-Place - per square yard

SECTION 530 REVETMENT SYSTEMS

530-1 Description.

530-1.1 Riprap: Construct riprap composed of sand-cement or rubble (consisting of broken stone or broken concrete) as shown in the Standard Plans and in the Plans.

530-1.2 Articulating Concrete Block (ACB) Revetment Systems: Furnish and install an ACB revetment system in accordance with this Section and in conformance with the lines, grades, design, and dimensions shown in the Plans. Submit vendor drawings for review and approval by the Engineer. Submit signed and sealed calculations of the block and cable sizing design for approval. Comply with the National Concrete Masonry Association's Design Manual for Articulating Concrete Block Revetment Systems, Second Edition, or the National Highway Institute, Hydraulic Engineering Circular (HEC) No. 23, Publication No. FHWA NHI 09-110. Use a minimum Factor of Safety of 1.5 and 0.5 inch for the block projection.

Blocks must be open cell and non-tapered unless otherwise stated in the Plans. Revetment cabling must be bi-directional or, for mono-directional cabling, the block installation must include a permanent mechanism within the block matrix to prevent lateral displacement of the installed blocks. Cabling must be polyester and free to move within the block.

Use only ACB revetment systems currently listed on the Department's Approved Product List (APL). Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6, and include certified test reports from an independent test laboratory certifying the ACB revetment system meets the requirements of this Section.

If the ACB revetment system is intended for use as bridge abutment protection, include the following drawings with the APL submittal:

1. At the corner transition between the front and side slopes.

2. For anchorages, geotextile fabric, treatment of voids between adjacent blocks, limits on void size between adjacent blocks and other special details required to successfully install the ACB.

3. For areas adjacent to bridge abutments, detail mat placement around curves, connections, protection of mat ends, and splicing of mat.

530-1.3 Gabions: Furnish and install gabions, including gabion baskets and gabion mattresses, filled with rock in accordance with this Section and in conformance with the lines, grades, design, and dimensions shown in the Plans.

530-2 Materials.

530-2.1 Riprap:

530-2.1.1 General: Meet the following requirements:

*Use products listed on the Department's APL.

530-2.1.2 Prepackaged Sand-Cement Bags: Provide prepackaged sand-cement bags that meet the following requirements:

1. Evenly proportioned sand and cement in the ratio of five cubic feet of sand to 94 pounds of cement. Material proportioned by mass shall use a sand density of 85 pounds per cubic foot.

2. Sealed package of 80 pounds of sand-cement in a bag.

3. Bag made of scrim-reinforced paper capable of holding the sand-cement

without leakage.

- 4. Sand meets requirements of Section 902-3.3
- 5. Type I/II cement meets requirements of Section 921.

Prepackaged Sand-Cement Bags shall be one of the products listed on the Department's Approved Product List. Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6. Include with the submittal a product data sheet, safety data sheet, product label, and a self-certified statement the product meets the requirements of this Section.

530-2.1.3 Rubble:

530-2.1.3.1 Rubble (Bank and Shore Protection): Provide sound, hard, durable rubble, free of open or incipient cracks, soft seams, or other structural defects, consisting of broken stone with a bulk specific gravity of at least 2.20. Ensure that stones are rough and angular.

For this application, use broken stone meeting the following gradation and thickness requirements:

Weight Maximum	Weight 50%	Weight Minimum	Minimum Blanket	
Pounds	Pounds	Pounds	Thickness in Feet	
670	290	60	2.5	
Ensure that at least 97% of the material by weight is smaller than Weight Maximum pounds].				
Ensure that at least 50% of the material by weight is greater than Weight 50% pounds].				
Ensure that at least 85% of the material by weight is greater than Weight Minimum pounds.				

530-2.1.3.2 Rubble (Ditch Lining): Use sound, hard, durable rubble, free of open or incipient cracks, soft seams, or other structural defects, consisting of broken stone or broken concrete with a bulk specific gravity of at least 1.90. Ensure that stones or broken concrete are rough and angular.

Use broken stone or broken concrete meeting the following gradation and thickness requirements:

Weight Maximum	Weight 50%	Weight Minimum	Minimum Blanket		
Pounds	Pounds	Pounds	Thickness in Feet		
75	30	4	1.5		
Ensure that at least 97% of the material by weight is smaller than Weight Maximum pounds.					
Ensure that at least 50% of the material by weight is greater than Weight 50% pounds].					
Ensure that at least 90% of the material by weight is greater than Weight Minimum pounds].					

530-2.1.3.3 Physical Requirements of Broken Stone and Broken

Concrete: Use broken stone and broken concrete meeting the following physical requirements:

Absorption (FM 1-T85)	Maximum 5%
Los Angeles Abrasion (ASTM C535)	Maximum loss 45%*
Soundness (Sodium Sulphate) (AASHTO T104)	Maximum loss 12%** (after five cycles)
Flat and elongated pieces	Materials with least dimension less than one third of greatest dimension not exceeding 10% by weight.
Dirt and Fines	Materials less than 1/2 inch in maximum dimension accumulated from interledge layers, blasting or handling operations not exceeding 5% by weight.
Drop Test***(EM 1110-2-2302)	No new cracks developed, or no existing crack widened additional 0.1 inch, or final largest dimension greater than or equal to 90% original largest dimension of dropped piece.

* Ensure that granite does not have a loss greater than 55% and that broken concrete does not have a loss greater than 45%. ** The Engineer may accept rubble exceeding the soundness loss limitation if performance history shows that the material will be acceptable for the intended use. The Engineer will waive the soundness specification for rubble riprap (broken stone and broken concrete) when project documents indicate it will be placed in or adjacent to water or soil with a sulfate content less than 150 parts per million and a pH greater than 5.0.

*** The Engineer will waive the Drop Test unless required to ensure structural integrity. Provide all equipment, labor and testing at no expense to the Department. EM refers to the US Army Corps of Engineer's Specification Engineering Method.

530-2.1.3.4 Source Approval and Project Control: The Engineer will approve construction aggregate sources in accordance with 6-2.3.

1. The Engineer may perform Independent Verification tests on all materials placed on the project.

2. The Engineer will check the gradation of the riprap by visual inspection at the project site. Resolve any difference of opinion with the Engineer in accordance with the method provided in FM 5-538. Provide all equipment, labor, and the sorting site at no expense to the Department.

3. The Engineer may test components in a blend of rubble processed from different geologic formations, members, groups, units, layers or seams. The Engineer may select components based on like color, surface texture, porosity, or hardness. The Engineer will reject any blend if a component that makes up at least five percent by volume of the blend does not meet these specifications.

530-2.1.4 Bedding Stone: Use Bedding Stone of either a durable quality limestone or other quarry run stone, with a bulk specific gravity of not less than 1.90 and that is reasonably free from thin, flat and elongated pieces. Ensure that the bedding stone is also reasonably free from organic matter and soft, friable particles. Meet the following gradation limits:

Standard Sieve Sizes - Inches	Individual Percentage by Weight Passing
12 inches	100
10 inches	70 to 100
6 inches	60 to 80
3 inches	30 to 50
1 inch	0 to 15

The Engineer will conduct source approval and project control of bedding stone as specified in 530-2.1.3.4. In lieu of limestone or other quarry run stone, the Contractor may substitute non-reinforced concrete from existing pavement that is to be removed and which meets the above requirements for commercial bedding stone.

530-2.2 Articulating Concrete Block (ACB) Revetment Systems: Obtain all precast block, cabling, anchors, and necessary incidental materials from the same manufacturer. ACB revetment systems must meet the requirements of ASTM D6684, ASTM D7276 and ASTM D7277. Submit to the Engineer certification from the manufacturer that the ACB revetment system meets the requirements of this Section.

ACB system components must meet the following requirements:

Concrete	Section 347, ASTM D6684
Cables and Fittings	ASTM D6684
Type D-2 Geotextile Fabric *.	Section 985
Granular Underlay	Section 901
*Use products listed on the De	partment's APL.

Cables must maintain at least 85% of original tensile strength (ASTM D638) after 1000 hours exposure to a saturated solution of calcium hydroxide (pH greater than or equal to 11) at 73°F, plus or minus three degrees. Cables must not exceed a maximum of 0.5% moisture absorption at seven days, per ASTM D570. Cable crimps must be aluminum or stainless steel Type 304 or 316.

530-2.3 Gabions:

530-2.3.1 General: Provide gabions meeting the requirements of ASTM A974 and ASTM A975 as modified herein.

Allowable Gabion Wire and Connector Material	Substructure Environmental Classification	
Polymeric	Any	
Metallic	Slightly Aggressive	
Matallia Calvanized and DVC asstad	Slightly Aggressive	
Metallic – Galvallized and FVC coaled	Moderately Aggressive	
	Slightly Aggressive	
Metallic – Type 304 Stainless Steel, Size W1.4	Moderately Aggressive	
(MW10) or larger	Extremely Aggressive (< 2,000 ppm	
	Chlorides)	
Metallic – Type 316 Stainless Steel, Size W1.4	Any	
(MW10) or larger	Any	

530-2.3.2 Metallic Gabions: The components of metallic gabions must meet the

following requirements:

	Wire Mesh and Fabric [*]	ASTM A974 and A975
	Spiral Binders, Lacing Wire, Stiffer	iers and
	Ring Wire Fasteners	ASTM A974 and A975
	Stainless Steel Wire, Wire Fabric an	1d
	Lacing Wire	ASTM A1022
*Wire mesh must be \$	Style 1 or Style 3. Wire fabric must b	be Style 1 or Style 5.

530-2.3.3 Polymeric Gabions: Polymeric gabions must be constructed in general accordance with ASTM A974 using a single layer of structural geogrid instead of welded wire, and polymeric braid instead of ring wire fasteners. The structural geogrid must be Type R-1, 2, 3, 4, or 5 meeting the requirements of Section 985 and the following:

Tensile Strength @2% strain MD*	.575 lb/ft
Tensile Strength @ 2% strain XD**	.575 lb/ft
Junction Strength (% of Tensile Strength)	90%
Min UV Stability	85%
Min. Carbon Black Content (by Weight)	
*MD = machine direction	
**XD = cross direction	

Polymeric braid for seeming polymeric gabions or connecting metallic gabions must have a minimum tensile strength of 400 pounds for a 36 inch long specimen and contain at least 2% carbon black by weight.

530-2.3.4 Gabion Rock: Use rock meeting the requirements of ASTM D6711 to fill gabions. The rock must be reasonably free from thin, flat or elongated pieces. Rock size must be at least 1.25 times greater than the aperture size of the wire mesh or fabric. Each range of sizes may allow for a variation of 5% oversize rock by weight, 5% undersize rock by weight, or both.

Physical Property Requirements	Acceptable Range
Los Angeles Abrasion and ASTM C535	Maximum loss 40%
Bulk Specific Gravity	Minimum 2.20
Absorption, ASTM C127 and ASTM C128	Maximum 3%

530-2.3.5 Miscellaneous Components: Miscellaneous components for gabion installations must meet the following requirements:

Type D-2 Geotextile Fabric*Section 985 Granular UnderlaySection 901 AnchorsSection 451 or manufacturer's recommendations

*Use products listed on the Department's APL.

530-3 Construction and Installation.

530-3.1 Geotextile Fabric: Place geotextile fabric under all revetment in accordance with Section 514.

530-3.2 Sand-Cement Bags:

530-3.2.1 Placing: Place the bags with their ends all in the same direction. Lay the bags with broken joints, in a regular pattern. Ram or pack the bags against each other so as to

form a close and molded contact. Remove and replace bags ripped or torn in placing with sound, unbroken bags. Then, thoroughly saturate all bags with water.

530-3.2.2 Grouting: Immediately after watering, fill all openings between bags with dry grout composed of one-part Portland cement and five parts sand.

530-3.2.3 Toe Walls: Use sand-cement bags for the toe walls if required. Fill the entire trench excavated for the toe walls with sand-cement bags.

530-3.3 Rubble: Dump rubble in place forming a compact layer conforming to the neat lines and thickness specified in the Plans. Ensure that rubble does not segregate so that smaller pieces evenly fill the voids between the larger pieces.

530-3.4 Bedding Stone: Place a minimum one foot thick layer of bedding stone under all rubble riprap without puncturing or tearing the geotextile fabric. The Engineer will allow an in place thickness tolerance of plus or minus one inch.

Remove and replace geotextile fabric damaged as a result of operations at no expense to the Department.

530-3.5 Articulating Concrete Block (ACB) Revetment System: Install the ACB revetment system in accordance with ASTM D6884 and the manufacturer's recommendations, unless directed otherwise by the Engineer.

Prior to installation, construct the area to be stabilized to an elevation such that, upon completion of stabilizing operations, the completed stabilized subgrade will conform to the lines, grades and cross sections shown in the Plans. Bring the subgrade surface to a plane approximately parallel to the plane of the proposed finished surface, such that, upon placement of the mat, no individual block within the ACB mat will protrude more than one-half inch from any adjacent block. Uniformly compact each subgrade layer to achieve the density required in the Plans. If the Plans do not provide for stabilizing, compact the subgrade in both cuts and fills, to the density specified in ASTM D6884.

Embed anchors at least six feet into the subgrade at a 45 degree angle into the bank with a minimum pullout resistance of 875 pounds. In the presence of the Engineer, perform on-site anchor strength testing to verify the required pull out resistance is achieved. Anchor strength testing must be performed on the first two and final two installed anchors, and randomly throughout the installation operation such that 5% of all installed anchors are tested for pullout resistance. If any anchor fails to meet the pullout resistance requirement, test every subsequent installed anchor until a revised installation plan is proposed and approved by the Engineer. Anchor spacing cannot exceed four feet.

Immediately prior to placing the geotextile fabric and ACB system, inspect the prepared subgrade to ensure it is free of loose material and the surface is smoothly compacted. Place the geotextile fabric directly on the prepared area, in intimate contact with the subgrade and free of folds or wrinkles. Do not glue or physically bond the geotextile fabric to the ACB mat. Install a six inch thick layer of bedding stone under the geotextile fabric, when called for in the Plans.

When installing ACB systems around curves, the mats shall be matched up to the greatest extent possible. Gaps greater than one block size shall be filled with a block and grouted the depth of the block with non-structural grout.

Do not install blocks with chips that result in any block weighing less than 95% of the manufacture specified weight.

530-3.6 Gabions: Install double-twisted wire mesh gabions in accordance with ASTM D7014. Install welded wire fabric gabions and polymeric gabions in accordance with the manufacturer's recommendations.

Prior to installation, complete any required excavation and preparation of the foundation as shown in the Plans or as directed.

Install soil anchors as specified in the Plans.

All adjoining gabion units shall be connected along the perimeter of their contact surfaces to obtain a monolithic structure. If more than one tier, stagger the vertical joints of subsequent rows by one half cell length and adjoin the empty gabions to the top of the lower tier along the front and back edges of the contact surface.

Fill gabions in a manner that minimizes voids, protects against local deformation of the basket or mattress and prevents damage to PVC coating. At no point in the filling process may rock be mechanically placed from a height of over 36 inches from machine to fill area. Uniformly overfill gabions by 1 to 2 inches to compensate for future rock settlements.

Any damage to the basket, mattress, or coatings during assembly, placement, or filling shall be repaired promptly in accordance with the manufacturer's recommendations or replaced with undamaged gabion baskets.

530-4 Method of Measurement.

530-4.1 Sand-Cement Bags: The quantity to be paid for will be the volume, in cubic yards, calculated from the minimum dimensions shown in the Plans or Standard Plans, satisfactorily placed and accepted.

530-4.2 Rubble and Bedding Stone: The quantities to be paid for will be the weight, in tons, in surface dry natural state, by railroad scales, truck scales, or barge displacement. The Contractor shall determine the weights as follows:

1. Railroad Weights: The Contractor shall weigh railroad cars on railroad scales, before and after loading or before and after unloading. If weighed by other than the Engineer, a certified statement of weights will be required. Certificates of weight, furnished by the railroad company, will be acceptable without further certification.

2. Truck Weights: The Contractor shall weigh trucks on certified scales, loaded and empty, as prescribed above for railroad weights. The Contractor shall weigh trucks in the presence of the Engineer, or submit certificates of weights.

3. Barge Displacement: The Engineer will measure each barge. The Contractor shall fit each barge with gauges graduated in 0.10 foot increments. The Contractor shall locate a gauge at each corner of the barge near the lower end of the rake. The Contractor shall furnish additional gauges amidships if the Engineer deems necessary. The Engineer will compute all weights.

530-4.3 Articulating Concrete Block (ACB) Revetment System: The quantity to be paid for will be the plan quantity, in square yards, completed and accepted, subject to the provisions of 9-3.2. No allowance will be made for ACB placed outside the Plan dimensions, unless the additional placement is ordered by the Engineer.

530-4.4 Gabions: For mattress type applications, the quantity to be paid for will be the plan quantity, in square yards, placed in the final locations.

For stacked basket applications, the quantity to be paid for will be the plan quantity, in cubic yards, placed in the final locations.

530-5 Basis of Payment.

530-5.1 Sand-Cement: Price and payment will be full compensation for all work specified in this Section, including all materials, labor, hauling, excavation, and backfill.

Include the cost of dressing and shaping the existing fills (or subgrade) for placing riprap in the Contract unit price for riprap (sand-cement).

530-5.2 Rubble: Price and payment will be full compensation for all work specified in this Section, including all materials, hauling, excavation, and backfill.

Include the cost of dressing and shaping the existing fills (or subgrade) for placing riprap in the Contract unit price for riprap (rubble).

As an exception to the above, concrete that is shown to be removed from an existing structure and subsequently disposed of by being used in the embankment as riprap will not be paid for under this Section. Include the cost of such work under removal of existing structures.

530-5.3 Bedding Stone: Price and payment will be full compensation for all work specified in this Section, including all materials and hauling.

Include the cost of dressing and shaping the existing fills (or subgrade) for placing bedding stone in the Contract unit price for riprap (rubble).

530-5.4 Geotextile Fabric: Include the cost of materials and installation of the geotextile fabric in the Contract unit price for riprap or ACB revetment system.

530-5.5 Articulating Concrete Block (ACB) Revetment System: Price and payment will be full compensation for all work specified in this Section, including all materials, labor, hauling, excavation and backfill.

530-5.6 Gabions: Price and payment will be full compensation for all work specified in this Section, including all materials, labor, hauling, excavation and backfill.

530-5.7 Payment Items. Payment will be made under:

Item No. 530- 1-	Riprap Sand-Cement Bags - per cubic yard.
Item No. 530- 3-	Riprap (Rubble) - per ton.
Item No. 530- 4-	Articulating Concrete Block Revetment System - per square yard.
Item No. 530- 5-	Gabion
Item No. 530- 74-	Bedding Stone - per ton.

	ESTIMATE OF QUANITITIES - BASE	BID		
ITEM	DESCRIPTION	UNIT	TOTAL	AS-BUILT
BASE BID				1
101	MOBILIZATION	LS	1	_
102	MAINTENANCE OF TRAFFIC	LS	1	
110	CLEARING AND GRUBBING: ALONG BOARDWALK	AC	0.275	_
107-1	TRASH DEBRIS REMOVAL & DISPOSAL: ALONG RIVERBANK	LS	1	_
107-2	TRASH AND DEBRIS REMOVAL: ALONG WETLANDS (SOUTH BOUNDARY) AND PETANQUE AREA	LS	1	-
104	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	LS	1	-
105	CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS	LS	1	
107-3	ADDITIONAL LITTER REMOVAL AND MOWING	LS	1	
SHEET G2-1	RESTORE, LEVEL AND CLEAN PETANQUE AREA	SY	1056	
120	EXCAVATION AND EMBANKMENT	CY	800	_
204	GRADED AGGREGATE BASE	CY	215	
515 1			210	
515-1	METAL PEDESTRIAN/BICYCLE RAILINGS, GUIDERAILS, AND HANDRAILS		230	
515-2	METAL PEDESTRIAN/BICYCLE RAILINGS, GUIDERAILS, AND HANDRAILS		12	
02-41-00	SELECTIVE DEMOLITION OF MINOR STRUCTURES – TIMBER BOARDWALK	LS	1	-
524	OPEN CELL ARTICULATING CONCRETE BLOCK HAND-PLACED (INCLUDING ANCHORED ENDS)	SY	800	_
SHEET G1-5.1	"I" WALL WITH COQUINA MIX CONCRETE MONOLITH, INCLUDING REINFORCEMENT AND JOINTS	LF	780	_
SHEET G1-5.2	8'-0" WIDE COQUINA MIX CONCRETE BOARDWALK ON GRADE, INCLUDING REINFORCEMENT AND JOINTS	LF	500	-
SHEET G1-5.3	12'-0" WIDE COQUINA MIX BOARDWALK ON GRADE AT TIMBER BULKHEAD, INCLUDING REINFORCEMENT AND JOINTS	LF	280	_
SHEET G1-5.4	NEW TIMBER PILE BULKHEAD TO MATCH EXISTING TIMBER PILE BULKHEAD	LF	25	
02-41-00	SELECTIVE DEMOLITION OF (2) EXISTING TIMBER DOCK CONNECTORS	LS	1	_
SHEET G1-5.5	(2) NEW TIMBER DOCK CONNECTORS FROM NEW BOARDWALK TO EXISTING TIMBER DOCK	LS	1	-
08-42-39	PRESSURE-RESISTANT SINGLE FLOOD PLANKBARRIER SYSTEM AT (4) OPENINGS	LS	1	-
26-50-00	EXTERIOR WATERPROOF RECESSED LED PATHWAY LIGHTING INCLUDING CONDUITS, WIRING AND PHOTOCELL	LS	1	-
S-126-5.1	PROJECT SURVEY & STAKEOUT	LS	1	_
S-126-5.2	AS-BUILT SURVEY & FINAL CROSS SECTIONS	LS	1	_
T-904	BERMUDA SOD WITH RYE OVERSEEDING	SY	1,350	_
T-905	3" MINIMUM TOPSOILING	SY	1,350	_
T-910.A	PLANTING ZONE A: SMOOTH CORDGRASS; SPARTINA ALTERNIFLORA LOISEL (SPAL); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS W/ 1-YEAR-OLD TRANSPLANTS FROM NEARBY AREAS	SF	11,000	-
T-910.B	PLANTING ZONE B: SALTMEADOW CORDGRASS; SPARTINA PATENS (AIT.) MUHL (SPPA); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS	SF	3,000	-
T-910.C	PLANTING ZONE C: SALTMEADOW CORDGRASS; SPARTINA PATENS (AIT.) MUHL (SPPA): PLANTING DENSITY OF 1 PLANT/FOOT: 4" LINERS	SF	1,400	_
T-910.D	PLANTING ZONE D: SAND CORDGRASS; SPARTINA BAKERI GRAMINEAE (SPBA); PLANTING DENSITY OF 1 PLANT/FOOT; 4" LINERS	SF	2,700	-
T-910.E	PLANTING ZONE E: SAND CORDGRASS; SPARTINA BAKERI GRAMINEAE (SPBA); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS	SF	1,700	-
T-910.F	PLANTING ZONE F: SAND CORDGRASS; SPARTINA BAKERI GRAMINEAE (SPBA); PLANTING DENSITY OF 1 PLANT/FOOT; 1 GALLON POTS	SF	1,150	-
			670	
T_012	EXOTIC PLANT CONTROL		1	
T_014_1	MAINTENANCE VENTS	ES FA	8	
T-914-2	MONITORING EVENTS	FA	1	_
	/F "1"			
02-41-00	COMPLETE DEMOLITION OF EXISTING MARINA BATH-HOUSE AND RESTROOM BUILDING INCLUDING SITE RESTORATION	LS	1	-
BID ALTERN 02-41-00	REVETMENT SYSTEMS (IN LIEU OF ARTICULATING OPEN CELL BLOCK, INSTALL BLENDED CLASS 3 GRANITE STONE RIP-RAP REVETMENT; NO MORE THAN 10% OF STONE GREATER THAN 22" DIA., NO MORE THAN 50% GREATER THAN 16" DIA., AND NO MORE THAN 10% LESS THAN 8" DIA. AND MIN. 22" UNIFORM THICKNESS LAYER)	LS	1	_

UTILITY LEGEND

<u>LEGEND</u>

\bigcirc	STORM MANHOLE		CABLE TELEVISION PEDESTAL	G1-1
	STORM INLET	E	ELECTRICITY METER	G1-2
	YARD DRAIN	¢	ALUMINUM LIGHT POLE	
© □	CLEANOUT /LAMPHOLE	\boxtimes	COVERED AREA	G1 - 3
×		Γ	TELEPHONE PEDESTAL	G1-4 C1 5
\circ			WATER METER	G_{1-6}
~			IRRIGATION CONTROL VALVE	G2-1
	HEADWALL	₽ 3,0 1	BENCHMARK	C1-1
5	SANITARY SEWER	Â	WETLAND FLAG	C1-2
ж.	FIRE HYDRANT	Ę	CENTERLINE	C1-3
\bowtie	WATER VALVE	СВ	CHORD BEARING	C1-4
$\langle W \rangle$	WATER METER	CD	CHORD DISTANCE	C2-1
\bigotimes	WATER MANHOLE	СН	CHORD	C2-2
E	ELECTRICAL MANHOLE	RCP	REINFORCED CONCRETE PIPE	C2-3
Η	ELECTRICAL HANDHOLE		HIGH-DENSITY POLYETHYLENE	C2-4
\blacksquare	PULL BOX	NAVD	NORTH AMERICAN VERTICAL DATUM	C2-5
J	JUNCTION BOX	0.R.B.	OFFICIAL RECORDS BOOK	C2_6
EB	ELECTRICAL BOX	R	RADIUS	$C_{2}=0$
F	ELECTRICAL METER	R/W	RIGHT-OF-WAY	C_{3-2}
<u>ر</u>	TRANSFORMER			C3-3
Ē	FLECTRICAL PEDESTAL			C3-4
ل ا ا				C3-5
φ				C3-6
$\bigvee_{\mathbf{v}}$				C3-7
\forall	COMMUNICATIONS MANUALE	TREE L	EGEND	
	COMMUNICATIONS MANHOLE	CDR =	CEDAR TREE	C3-8
\bigtriangledown	CABLE MARKER	HB = PM =	HACKBERRY TREE PALM TRFF	$C_{3} = 10$
Ū	TELEPHONE PEDESTAL			C3-11
C	COMMUNICATIONS BOX			C4-1
	TELEPHONE BOOTH			C4-2
B A	TRAFFIC BOX			C4-3
$\langle G \rangle$	GAS MARKER			C4-4
\bowtie	GAS VALVE			C4-5
G	GAS METER			C4-6
G	GAS REGULATOR			C4-7
-	A/C UNIT			C4-8
- 	SIGN			C4-9
ශ	BOLLARD			C5-1
	STORM LINE			C6-1
<u> </u>	DITCH			C6-2
<u> </u>	SANITARY LINE			C6-3
WWW	WATER LINE			C6-4
	IPPICATION SLEEVE			C6-5
				C6-6
				(7-1)
				C7-3
	FIBER OP FIC LINE			C7-4
CCC	COMMUNICATION LINE			
GAS	NATURAL GAS LINE			
— F — F — F —	FUEL LINE			
x x	FENCE LINE			

 $\overbrace{}$ REVISED BID ITEMS AND QUANTITIES

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INDEX OF DRAWINGS

COVER SHEET INDEX OF DRAWINGS, ABBREVIATIONS, LEGEND & SUMMARY OF QUANTITIES HORIZONTAL AND VERTICAL CONTROL PLAN GENERAL NOTES STRUCTURAL NOTES WILDLIFE PROTECTION NOTES AND PLANTING NOTES OVERALL PLAN DEMOLITION PLAN DEMOLITION PLAN DEMOLITION PLAN DEMOLITION PLAN BOARDWALK AND STABILIZATION PLAN: ENLARGED AREA BUILDING DEMOLITION PLAN (BID ADDITIVE 1) TYPICAL SECTIONS TYPICAL SECTIONS TYPICAL SECTIONS TYPICAL SECTIONS AND DETAILS ARTICULATED BLOCK DETAILS "I"-WALL AND FLOOD BARRIER DETAILS FP-530 FLOOD PLANK SYSTEM BETWEEN JAMB MOUNT DETAILS FDOT EROSION AND SEDIMENT CONTROL DETAILS FDOT EROSION AND SEDIMENT CONTROL DETAILS EROSION CONTROL DETAILS BOARDWALK JOINT DETAILS FDOT ALUMINUM RAILING DETAILS FDOT PIPE GUIDERAIL (ALUMINUM) FDOT PIPE GUIDERAIL (ALUMINUM) FDOT PIPE GUIDERAIL (ALUMINUM) FDOT PIPE GUIDERAIL (ALUMINUM) BOARDWALK AND "I"-WALL PROFILE CROSS SECTIONS CROSS SECTIONS CROSS SECTIONS CROSS SECTIONS CROSS SECTIONS CROSS SECTIONS EXISTING UTILITY PLAN EXISTING UTILITY PLAN EXISTING UTILITY PLAN EXISTING UTILITY PLAN







NRKING	LEGEND. REMOVE EX. TIMBER BOARDWALK; DECK BOARDS & JOISTS; CONCRETE PADS & SUPPORTS; RAILINGS & POSTS; BENCHES; INCLUDING ELECTRICAL CONDUITS, JUNCTION BOXES, WIRES & LIGHT FIXTURES AS REQUIRED TO PREPARE FOR NEW WORK; ITEM 02-41-00	PASSERO ASSOCIATES engineering architecture www.passero.com
NK PANEL	REMOVE EXST. OBJECTS AS IDENTIFIED; (SECTION 107)	BID SET ADD. #1
ATTACHED EE SHEET PLAN FOR DF FENCE;	CITY TO REMOVE (N.I.C.)	J
	RIPARIAN RIGHTS BOUNDARY	
	WATER LOT BOUNDARY MHWL MEAN HIGH WATER LINE	- 02-
, / /	WETLANDS LIMITS EDGE OF MARSH TOP OF BANK	
	VEGETATION LINE DITCH	Stamp:
	EXISTING CONTOUR (1' INTERVALS)	
	NOTES: 1. CAUTION! PRIOR TO DEMOLITION OF BOARDWALK, VERIFY ALL ELECTRICAL POWER HAS BEEN SHUT OFF.	
MTER LOT 33 TER LOT 33	2. THE LOCATION OF EXISTING UNDERGROUND STRUCTURES, UTILITIES, CABLES AND FOUNDATIONS AS SHOWN ON THE DRAWINGS ARE TO BE CONSIDERED AS GENERAL LOCATION ONLY AND MAY NOT INCLUDE ALL UNDERGROUND ITEMS THAT MAY BE ENCOUNTERED. THE LOCATION OR DEPTH SHOWN FOR UNDERGROUND ITEMS SHOULD ONLY BE CONSIDERED AS A GUIDE TO THE GENERAL AREA IN WHICH AN ITEM IS LOCATED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ACCURATELY LOCATE UNDERGROUND ITEMS BEFORE ANY WORK IS PERFORMED IN THE AREA THAT COULD DAMAGE SAME. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER PRIOR TO EXCAVATING IN ANY AREA.	Client:
	3. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE BEFORE THE START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION. (SECTION 104).	City of Fernandina Beach
	4. MAINTENANCE AND PROTECTION OF TRAFFIC WORK ITEMS, INCLUDING CHAIN LINK PANEL FENCING WITH 2 FT. HIGH FILTER. (SECTION 102).	Fernandina Beach, Florida, 32034
	5. ALL EXISTING UTILITIES, INCLUDING, BUT NOT LIMITED TO, ELECTRIC, WATER LINES, VALVES, ETC. AND IRRIGATION SYSTEMS SHALL BE RELOCATED/MODIFIED AS REQUIRED (TYP.).	Passero Associates4730 Casa Cola Way, Suite 200(904) 757-6106St. Augustine, FL 32095Fax: (904) 757-6107Certificate of Authorization # 3428Principal-in-ChargeAndrew M. Holesko, C.M.Project ManagerChristopher Nardone, AIA
	6. REMOVE ALL TRASH AND DEBRIS ALONG EDGE OF PARKING LOT "D" AND WETLANDS AS REQUIRED (TYP.). (SECTION 107).	Designed by Emily Bredestege Revisions No. Date By Description 1 5 (20 (20 EVD A DDEND)) NA //11
	7. REMOVE EXISTING TIMBER POLES; RAILROAD TIES; TRASH DEBRIS; DEAD BRANCHES AND ROOTS; INVASIVE PLANT SPECIES; BRUSHES AND TREES WITH 2" DIA. OR LESS; WITHIN THE CONSTRUCTION WORK LIMITS. (SECTION 107).	1 3/22/21 EMB ADDENDOM #1
	8. PROTECT ALL DECIDUOUS, EVERGREEN AND PALM TREES AS REQUIRED FROM DAMAGE DURING CONSTRUCTION. (SECTION 110).	UNAUTHORIZED USE OF THESE DRAWING IS IN VIOLATION OF FLORIDA ADMINISTRATIVE CODE 61G15-27.001 AND FLORIDA STATUTES 471.033(1). THESE PLANS ARE COPYRIGHT PROTECTED ©
	9. SELECTIVE DEMOLITION OF EXISTING PRESSURE TREATED TIMBER DOCK AS REQUIRED TO INSTALL REMAINING TIMBER BULKHEAD PROVIDE SLOPE PER ADA AS REQUIRED FROM PROPOSED CONCRETE BOARDWALK AND EXISTING WOOD DOCK SURFACE; REPLACE IN KIND TO MATCH EXISTING INCLUDING GUARDRAIL. PROVIDE SHORING OF ELEMENTS TO REMAIN.	DEMOLITION PLAN
	10. REMOVE PORTION OF EXISTING TIMBER DOCK AS REQUIRED TO INSTALL REMAINING TIMBER BULKHEAD EXTENSION AND ARTICULATED CONCRETE BLOCK.	Amelia River Waterfront
F	11. CONTRACTOR TO RESTORE, LEVEL AND CLEAN LIME ROCK WITHIN THE PETANQUE AREA BY NOVEMBER 1, 2021 FOR TOURNAMENT IN NOVEMBER.	SLADIIIZATION Parking Lots C & D Town/City: Fernandina Beach
	12. CONTRACTOR TO RESTORE, LEVEL AND CLEAN ALL GRASS AREAS; LAWN SEED/SOD WITHIN STAGING AREA.	Project No. 99000047.0095
	13. CONTRACTOR TO RESTORE, LEVEL AND CLEAN ALL PARKING AREAS; LIME ROCK WITHIN STAGING AREA. 14. LIMITS OF WORK DEFINED BY TURBIDITY BARRIER, SILT FENCE AND PANEL FENCE.	Drawing No. C1-1
		^{Date} May 25, 2021







	LEGEND. REMOVE EX. TIM DECK BOARDS CONCRETE PAD RAILINGS & PO INCLUDING ELEC JUNCTION BOXE FIXTURES AS R PREPARE FOR 02-41-00	MBER BOARDWALK; & JOISTS; S & SUPPORTS; STS; BENCHES; CTRICAL CONDUITS, S, WIRES & LIGHT EQUIRED TO NEW WORK; ITEM	PASSERO ASSOCIATES engineering architecture www.passero.com
	REMOVE EXST. IDENTIFIED; (SE	OBJECTS AS CTION 107)	BID SET
	CITY TO REMOV	Æ (N.I.C.)	
	——————————————————————————————————————	FILTER FENCE TURBIDITY BARRIER CHAIN LINK PANEL FENCING; 2' HIGH FILTER FABRIC ATTACHED ALONG BOTTOM; INCLUDE RIPARIAN RIGHTS BOUNDARY	
		WATER LOT BOUNDARY	
	MHWL I	MEAN HIGH WATER LINE WETLANDS LIMITS	
	· · · ·	EDGE OF MARSH TOP OF BANK	
	· · · ·	VEGETATION LINE	Stamp:
	X X F		
	NOTES: 1 CAUTION! PRIOR TO DEMOLITION	(1' INTERVALS)	
	2. THE LOCATION OF EXISTING UN	AS BEEN SHUT OFF.	
	STRUCTURES, UTILITIES, CABLES A AS SHOWN ON THE DRAWINGS AR CONSIDERED AS GENERAL LOCATIO NOT INCLUDE ALL UNDERGROUND ENCOUNTERED. THE LOCATION OR UNDERGROUND ITEMS SHOULD ONL AS A GUIDE TO THE GENERAL AR ITEM IS LOCATED. IT IS THE RESP CONTRACTOR TO ACCURATELY LOC ITEMS BEFORE ANY WORK IS PERF AREA THAT COULD DAMAGE SAME SHALL COORDINATE WITH THE ENG EXCAVATING IN ANY AREA.	ND FOUNDATIONS E TO BE ON ONLY AND MAY ITEMS THAT MAY BE DEPTH SHOWN FOR Y BE CONSIDERED EA IN WHICH AN ONSIBILITY OF THE CATE UNDERGROUND FORMED IN THE . THE CONTRACTOR GINEER PRIOR TO	Client:
	3. ALL EROSION CONTROL MEASUF PLACE BEFORE THE START OF CO ACTIVITIES AND SHALL REMAIN IN THROUGHOUT CONSTRUCTION. (SEC	RES SHALL BE IN NSTRUCTION PLACE CTION 104).	City of Fernandina Beach
)FR	4. MAINTENANCE AND PROTECTION ITEMS, INCLUDING CHAIN LINK PAN	I OF TRAFFIC WORK IEL FENCING WITH 2	Fernandina Beach, Florida, 32034
BTAIN	5. ALL EXISTING UTILITIES, INCLUD LIMITED TO, ELECTRIC, WATER LINE AND IRRIGATION SYSTEMS SHALL I RELOCATED/MODIFIED AS REQUIRE	ING, BUT NOT ES, VALVES, ETC. BE D (TYP.).	Passero Associates4730 Casa Cola Way, Suite 200(904) 757-6106St. Augustine, FL 32095Fax: (904) 757-6107Certificate of Authorization # 3428Principal-in-ChargeAndrew M. Holesko, C.M.Project ManagerChristopher Nardone, AIA
	6. REMOVE ALL TRASH AND DEBR PARKING LOT "D" AND WETLANDS (TYP.). (SECTION 107).	IS ALONG EDGE OF AS REQUIRED	Designed by Emily Bredestege Revisions No. Date By
	7. REMOVE EXISTING TIMBER POLE TRASH DEBRIS; DEAD BRANCHES INVASIVE PLANT SPECIES; BRUSHE 2" DIA. OR LESS; WITHIN THE CON LIMITS. (SECTION 107).	S; RAILROAD TIES; AND ROOTS; ES AND TREES WITH INSTRUCTION WORK	1 5/22/21 EMB ADDENDUM #1
	8. PROTECT ALL DECIDUOUS, EVER TREES AS REQUIRED FROM DAMAGE CONSTRUCTION. (SECTION 110).	RGREEN AND PALM SE DURING	UNAUTHORIZED USE OF THESE DRAWING IS IN VIOLATION OF FLORIDA ADMINISTRATIVE CODE 61G15-27.001 AND FLORIDA STATUTES 471.033(1). THESE PLANS ARE COPYRIGHT PROTECTED ©
	9. SELECTIVE DEMOLITION OF EXIS TREATED TIMBER DOCK AS REQUIR REMAINING TIMBER BULKHEAD PRO ADA AS REQUIRED FROM PROPOSE BOARDWALK AND EXISTING WOOD REPLACE IN KIND TO MATCH EXIS GUARDRAIL. PROVIDE SHORING OF REMAIN.	TING PRESSURE RED TO INSTALL OVIDE SLOPE PER ED CONCRETE DOCK SURFACE; TING INCLUDING ELEMENTS TO	DEMOLITION PLAN
	10. REMOVE PORTION OF EXISTING REQUIRED TO INSTALL REMAINING EXTENSION AND ARTICULATED COM	TIMBER DOCK AS TIMBER BULKHEAD NCRETE BLOCK.	Amelia River Waterfront
	11. CONTRACTOR TO RESTORE, LE LIME ROCK WITHIN THE PETANQUE NOVEMBER 1, 2021 FOR TOURNAM	VEL AND CLEAN AREA BY ENT IN NOVEMBER.	SLADIIIZATION Parking Lots C & D Town/City: Fernandina Beach County: Nassau
	12. CONTRACTOR TO RESTORE, LE GRASS AREAS; LAWN SEED/SOD N AREA	VEL AND CLEAN ALL WITHIN STAGING	Project No. 99000047.0095
	13. CONTRACTOR TO RESTORE, LE PARKING AREAS; LIME ROCK WITH 14. LIMITS OF WORK DEFINED BY SILT FENCE AND PANEL FENCE	VEL AND CLEAN ALL IN STAGING AREA. TURBIDITY BARRIER,	Drawing No. C1-4
- C C - C C - F			^{Date} May 25, 2021





		PLANTING SCHE	DULE (ITEM T-S	910)	
TING NE	PLANT SPECIES	ELEVATION (FEET)	ZONE AREA (SF)	ZONE AREA (ACRES)	PERCENT COVER
ΕA	Spartina alterniflora	0 TO 2.0	11,000	0.253	100%
ΕB	Spartina patens	2.0 TO 3.0	3,000	0.069	100%
ЕC	Spartina patens	3.0 TO 4.0	1,400	0.032	100%
ЕD	Spartina bakeri	4.0+	2,700	0.062	100%
ΕE	Spartina bakeri	4.0+	1,700	0.039	100%
EF	Spartina bakeri	4.0+	1,150	0.026	100%

<u>PLAN</u>

1'-3 1/2"

<u>TOP</u>

<u>SIDE</u>

<u>END</u>

TO SECTION 524

 \dots

"I" WALL CONCRETE MONOLITH







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RASSERO ASSOCIATES engineering architecture www.passero.com BID SET ADD. #1
Stamp:
Client:
City of Fernandina Beach 204 Ash St.
4730 Case Cole Way, Suite 200 (904) 757-6106 St. Augustine, FL 32095 Fax: (904) 757-6107 Certificate of Authorization # 3428 Principal-in-Charge Andrew M. Holesko, C.M. Project Manager Christopher Nardone, AIA Designed by Emily Bredestege
No. Date By Description 1 5/22/21 EMB ADDENDUM #1 UNAUTHORIZED USE OF THESE DRAWING IS IN VIOLATION OF FLORIDA ADMINISTRATIVE CODE 61G15-27.001 AND FLORIDA STATUTES 471.033(1). THESE PLANS ARE COPYRIGHT PROTFECTED GO
CROSS SECTIONS
Amelia River Waterfront Stabilization Parking Lots C & D Town/City: Fernandina Beach County: Nassau State: Florida
Drawing No.
LO-Z Date May 20, 2021

20 15 10 5 0 -5 -10 -15+--80 -40 -30 -20 -10 -70 -60 -50 10 -90 0 5+00.00 20 -15 -10 5 H 0 -5 -10 -15+-80 -70 -60 -50 -40 -30 -20 -10 10 0 -90 4+00.00





20 15 10 5 -----0 -5 -10 -15+ -80 -40 -30 -20 -10 -90 -70 -60 -50 10 0 6+00.00 20 -15 -10 5 ____^{_} 0 -5 -10 -15+ 0 5+55.00 -80 -70 -60 -50 -40 -30 -20 -10 10 -90





20 15 10 5 0 -5 -10 -15+--80 -40 -30 -20 -10 -70 -60 -50 10 -90 0 8+00.00 20 -15 -10 5 0 -5 -10 -15+ 0 7+00.00 -80 -70 -60 -50 -40 -30 -20 -10 10 -90

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PASSERO ASSOCIATES engineering architecture www.passero.com

BID SET

ADD. #1

- 02-

SCALE

Stamp:

Client:

10'



City of Fernandina Beach Amelia River Waterfront Stabilization Parking Lots C & D Mandatory Pre-Bid Meeting Attendance Log

Name	Company	Address	Email	Phone
Josmun GoFF	THOMAS MAY Const.	310 COLLOGE DR. ORANGE PAILS, FL J2065	Jgoff Stmuy. Net	904-272-4808
Georgiana Pulak	P+G Construction	1401 SR 207 St. Augustine, FL 32006	georgiana@pgconstructioninc.10.	19 904-716-1978
Koit RWAR	Thomas MAIL.	310 College DR Onange Papel Fl	Kunnsetmay. not	(904)272-4808
DAN OWSLEY	SEARGAST	2374 Shannon Rd Fernanding Beh FL	dousley Osegroasting net	9126776350
ROBERT PULK	P: 6 Construction	1401 SR 207 ST. AUG FL 30086	ROBPPGBUSNOWIL	. 6M92151448
Robert Fourie	P+6	1401 SR 207	andyfapaconstructioning	(9011)449-6736
Cannon Gasten	CGC, Inc.	7036 W 12174 ST Jactoonulle, FL 32000	office ecoccivil com	(904)783-4119
CHIRISHARDOWE	MSARO		CAANDONE & PASSTRO CON	904624.4211
CHAINLIE GEORGE	CITY ENGINEER , COFB		cgeoige @fbfl.org	904-310-3421
WARDAS. WEAKS	CITY Purchasing		wweaks Abt, org	904-310-3331
LEN KREZED	Vice MAYON		1 kreger@Fbfl.org	909-4328389
Earl Bright	Coilo Controiti,		ebright O Coils contracting LLC	904.805-3715
· ·				



CONTRACT DRAWINGS FOR:

CITY OF FERNANDINA BEACH

FRONT STREET FERNANDINA BEACH, FL 32034



CITY OF FERNANDINA BEACH 204 ASH STREET FERNANDINA BEACH, FL 32034



AMELIA RIVER WATERFRONT STABILIZATION PARKING LOTS C & D

U.S. Army Corps of Engineers Nationwide Permits 13 and 54 Verification SAJ-2020-01718

Application for State of Florida Environmental Resource Permit (62-330, F.A.C.)



PASSERO ASSOCIATES PROJECT NUMBER 99000047.0095

May 10, 2021



MANDATORY PRE-BID MEETING MAY 18, 2021 11:00 A.M.

AGENDA

- INTRODUCTIONS
- PROJECT COMPONENTS & DESCRIPTIONS
- CONTRACT TIME & PROJECT SCHEDULE
- PROJECT SCHEDULE MILESTONE DATES
- MISCELLANEOUS CONTRACT REQUIREMENTS
- QUESTIONS, CLARIFICATIONS & INTERPRETATIONS
- QUESTIONS & COMMENTS AT THIS TIME
- SITE VISIT









<u>OWNER:</u> CITY OF FERNANDINA BEACH

CHARLES GEORGE, P.E. , CITY ENGINEER WANDA WEAKS, PURCHASING AGENT

<u>FUNDING ASSISTANCE:</u> FLORIDA INLAND NAVIGATION DISTRICT (FIND) GRANT WATERWAYS ASSISTANCE 2020 PROGRAM

ENGINEERING CONSULTANT:

PASSERO ASSOCIATES

CHRISTOPHER NARDONE, AIA, PROJECT ARCHITECT









PROJECT LOCATION



• PROJECT LOCATION: FERNANDINA BEACH MARINA
• SOUTH & WEST OF PARKING LOTS C & D ALONG S. FRONT STREET

PROJECT COMPONENTS – BASE BID



• BASE BID: SITE WORK, LIVING SHORELINE W/ OYSTER REEF & WETLAND

PLANTINGS (REVETMENT), TIMBER BULKHEAD, I-WALL & BOARDWALK

<u>BID ADDITIVE 1:</u> COMPLETE BUILDING DEMOLITION INCLUDING FOUNDATION OF THE EXISTING MARINA BATH HOUSE & RESTROOMS



PROJECT COMPONENTS – BID ADDITIVE 1

PROJECT COMPONENTS – BID ALTERNATE 1



BID ALTERNATE 1: IN LIEU OF ARTICULATING OPEN CELL CONCRETE BLOCK PROVIDE BLENDED CLASS 3 GRANITE STONE RIP-RAP REVETMENT

PROJECT SCHEDULE

Invitation to Bid Advertisement	Plans Available	<u>Mandatory</u> Pre-Bid Meeting	Addenda 1 Issued	Deadline for Submission of Questions	Final Addendum Issued	Deadline for Submission of Bids
Friday May 7, 2021	Monday May 10, 2021	Tuesday May 18, 2021 (11:00am EST)	Tuesday May 25, 2021 (by 3:00pm EST)	Tuesday June 8, 2021 (by 5:00pm EST)	Wednesday June 9, 2021 (by 3:00pm EST)	Friday June 18, 2021 (2:00pm EST)

<u>ADDENDA</u>

• ALL ADDENDA WILL BE POSTED TO THE CITY OF FERNANDINA BEACH WEBSITE AT <u>WWW.FBFL.US/BIDS</u> AND AT <u>WWW.DEMANDSTAR.COM</u> IT IS THE BIDDERS RESPONSIBILITY TO CHECK THE CITY'S WEBSITE PRIOR TO SUBMITTING THEIR BID.

BID PROPOSALS

 ALL BIDDERS ARE REQUIRED TO COMPLETE & RETURN A COPY OF THE BID SECTION OF THE CONTRACT DOCUMENTS TO <u>CITY HALL, 204 ASH STREET, FERNANDINA BEACH, FL,</u> <u>32034,</u> BY <u>2:00 PM (EST), FRIDAY, JUNE 18, 2021</u>.

CONTRACT AWARD

- THE OWNER INTENDS TO AWARD THE CONTRACT TO THE LOWEST BIDDER, BUT RESERVES THE RIGHT TO AWARD IN ANY MANNER DEEMED IN HIS SOLE DISCRETION TO BE IN THE OWNER'S BEST INTEREST
- THE OWNER RESERVES THE RIGHT TO WITHHOLD THE AWARD OF THE CONTRACT FOR A PERIOD NOT TO EXCEED 90 CALENDAR DAYS FROM BID OPENING.

CONTRACT TIME

• 300 CALENDAR DAYS FROM NOTICE TO PROCEED WITH LIQUID DAMAGES OF \$500 PER CALENDAR DAY FOR EACH CALENDAR DAY IN EXCESS OF THE CONTRACT TIME.

PROJECT SCHEDULE – MILESTONES DATES

- CONTRACTOR SHALL BEGIN NO LATER THAN TEN CALENDAR DAYS FROM ISSUANCE OF NOTICE TO PROCEED; ALL WORK MUST BE COMPLETED <u>WITHIN</u> <u>300 CALENDAR DAYS OF NOTICE TO PROCEED</u>.
- ADDITIONALLY, DUE TO GRANT FUNDING REQUIREMENTS, THE CONTRACTOR AGREES TO COMPLETE SPECIFIC PROJECT ITEMS IN ACCORDANCE WITH THE FOLLOWING MILESTONE DATES:
 - SLOPE PROTECTION SYSTEM INSTALLATION: DECEMBER 10, 2021
 - LIVING SHORELINE INSTALLATION:
 - BOARDWALK INSTALLATION:
 - SEAWALL INSTALLATION:
 - PETANQUE COURTS AREA CLEANUP:

MARCH 2, 2022 FEBRUARY 10, 2022 FEBRUARY 10, 2022 NOVEMBER 1, 2021







MISCELLANEOUS CONTRACT REQUIREMENTS

<u>CONTRACTOR PROJECT SCHEDULING & PROGRESS MEETINGS:</u> THE CONTRACTOR SHALL SUBMIT A CRITICAL PATH METHOD (CPM) SCHEDULE FOR ALL WORK ACTIVITIES, PRIOR TO COMMENCING WORK, AND PROVIDE UPDATES A MINIMUM OF TWICE PER MONTH. ON SITE WEEKLY PROGRESS MEETINGS SHALL BE REQUIRED FOR THE DURATION OF THE PROJECT; THE FREQUENCY MAY BE REDUCED IF APPROVED BY THE ENGINEER/ARCHITECT.

BIDDER QUALIFICATIONS (REQUIREMENT)

- ALL EXHIBITS, SHALL BE INCLUDED WITH THE BIDDER'S PROPOSAL FOR THIS PROJECT.
- BIDDERS MUST SUBMIT WITH THE BID SUBMITTAL EVIDENCE OF CAPABILITIES TO COMPLETE THE FERNANDINA BEACH AMELIA RIVER WATERFRONT STABILIZATION PARKING LOTS C & D PROJECT. THIS WILL INCLUDE A REFERENCE LIST OF SIMILAR PROJECTS (SCOPE & SIZE) SUCCESSFULLY COMPLETED IN THE PAST, A REFERENCE LIST, AND EQUIPMENT LIST, A LIST OF SUBCONTRACTORS, AND OTHER INFORMATION REQUESTED BY THE CITY OF FERNANDINA BEACH. FAILURE TO SUBMIT QUALIFICATION INFORMATION WITH THE BID SUBMITTAL MAY RESULT IN REJECTION OF A BID.







MISCELLANEOUS CONTRACT REQUIREMENTS

BUILDING PERMITTING & IMPACT/CONCONCURRENCY FEES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADMINISTERING ALL REQUIRED BUILDING & CONSTRUCTION PERMITTING APPLICATIONS WITH THE CITY.
- THE CONTRACTOR, WILL BE FINANCIALLY RESPONSIBLE FOR THE COST OF ALL REQUIRED PERMITS AND IMPACT/CONCURRENCY FEES WITH THE CITY.
 - THERFORE BIDDERS SHOULD INCLUDE THIS COST IN THEIR BID PROPOSAL.
- HOWEVER, THE OWNER (CITY), WILL BE RESPONSIBLE FOR ADMINISTERING INCLUDING BEING FINANCIALLY RESPONSIBLE FOR THE COST OF THE "ENVIROMENTAL RESOURCE PERMIT" AND "FEDERAL 404 PERMIT".







QUESTIONS, CLARIFICATIONS & INTERPRETATIONS

A BIDDER REQUIRING A CLARIFICATION OR INTERPRETATION OF THE PROJECT DOCUMENTS SHALL MAKE A WRITTEN REQUEST TO THE CITY OF FERNANDINA BEACH BY EMAIL AT THE FOLLOWING APPLICABLE ADDRESS:

EMAIL ADDRESS: <u>WWEAKS@FBFL.ORG</u>

PHONE INQUIRES CAN BE DIRECTED TO WANDA WEAKS AT 904-310-3331

QUESTIONS MUST RECEIVED BY TUESDAY, JUNE 8, 2021, BY 5:00 PM (EST).







QUESTIONS, CLARIFICATIONS & INTERPRETATIONS

ALL WRITTEN REQUESTS RECEIVED BY THE ABOVE LISTED DATE SHALL BE RESPONDED TO, & THE REPONSE SHALL BECOME PART OF THE CONTRACT DOCUMENTS.

PLEASE NOTE THAT ANY VERBAL RESPONSE TO QUESTIONS BY THE ARCHITECT/ENGINEER IS CONSIDERED UNOFFICIAL AND WILL NOT BECOME PART OF THE CONTRACT DOCUMENTS; THEREFORE, PLEASE SUBMIT ALL CONTRACT QUESTIONS IN WRITING REGARDLESS OF ANY VERBAL COMMUNICATION.

QUESTIONS/COMMENTS RECEIVED DURING THIS MEETING SHALL BE RECORDED AND OFFICIAL RESPONSES SHALL BE INCLUDED IN ADDENDUM NO. 1.







QUESTIONS, CLARIFICATIONS & INTERPRETATIONS

DURING THE BIDDERS' REVIEW OF THE CONTRACT DOCUMENTS, ANY PROBLEMS RELATED TO THE FOLLOWING QUESTIONS SHOULD BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.

•DID YOU IDENTIFY ANY DISCREPANCIES BETWEEN THE PLANS & SPECIFICATIONS?

•ARE ALL ITEMS OF WORK AND REQUIRED SUBMITTALS TO COMPLETE THE JOB DESCRIBED ADEQUATELY IN THE CONTRACT DOCUMENTS?

•ARE YOU AWARE OF ANY ITEM(S) REQUIRED TO COMPLETE THE JOB THAT WAS NOT IDENTIFIED IN THE BID FORMS?

PLEASE SUBMIT ANY SUCH ITEMS IN WRITING AS PREVIOUSLY DESCRIBED.







QUESTIONS & ANSWERS



SITE VISIT IMMEDIATELY FOLLOWING QUESTIONS/ANSWERS.





