

SARASOTA BRADENTON INTERNATIONAL AIRPORT
MASTER DRAINAGE IMPROVEMENTS
SMAA BID No. 03-2019-MDI

ADDENDUM NUMBER ONE

April 30, 2019

The following Addendum is hereby made a part of the Plans and Specifications and shall be included with all Contract Documents:

SPECIFICATION BOOK COVER

Change "Sarasota Bradenton International Airport Bid No. To be determined"

To: "Sarasota Manatee Airport Authority Bid 03-2019-MDI"

BID FORMS

Bid Forms Remove Pages 1A-4 through 1A-8. Replace with revised, new Pages 1A-4 through 1A-8 (attached):

- Added line item for D-701-5.1g
- Corrected quantities for D-752-5.2 and D-752-5.3
- Struck out line item for D-754-5.1, not used
- Added line item for D-757-7.3
- Corrected quantity and added "Alternate" language to D-757-7.4

SPECIFICATIONS

<u>Section No.</u>	<u>CHANGE</u>
Section 100	Page 100-20, last paragraph, change the referenced pages from A-24 to A-35 to 1A-28 to 1A-38.
CSPP	Revised Phase 4A-Nightwork (attached). Added Runway 4-22 RSA and ROFA clearances in Section 16 (attached). Added new Exhibit 1 (attached). Revised Sheet G-108 Phase 4A-Nightwork (attached).

- D-751 Page D-751-2. Modified paragraphs 751-3.1c and 3.1d to read:
 “c. The Contractor shall do all dewatering, bracing, sheathing, or shoring necessary...”
 “d. All dewatering, bracing, sheathing, or shoring involved in the construction of this item...”
 Page D-751-5. Strike out Pay Items D-751-5.1, 5.2 and 5.4. Not used.
- D-752 Page D-752-1. Modified paragraphs 752-3.1c and 3.1d to read:
 “c. The Contractor shall do all dewatering, bracing, sheathing, or shoring necessary to perform and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be incidental to D-752-5.2 ~~included in the unit price bid for excavation.~~”
 d. All dewatering, bracing, sheathing, or shoring shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage the finished concrete. The cost of removal shall be incidental to D-752-5.2 ~~included in the unit price bid for excavation.~~
- Page D-752-2. Strike out paragraph 4.2 under Method of Measurement and Pay Item D-752-5.1. Not used.
- D-754 Delete Item D-754 in its entirety. Not used.
- D-757 Page D-757-1. Added new paragraph 757-2.2 Natural Aggregate.
 Page D-757-2. Added new table. Renumbered paragraph numbers for Zones 1 thru 3.

PLANS

<u>SHEET No.</u>	<u>CHANGE</u>
C-201	Leveling course. Change note to read, “Optional leveling course, No. 57, 67, 89 or Zone 1 aggregate. Aggregate to meet requirements of new paragraphs D-757-1 or 2.2” (Plan sheet not reissued with this addendum)
C-202	Leveling course. Change note to read, “Optional leveling course, No. 57, 67, 89 or Zone 1 aggregate. Aggregate to meet requirements of new paragraphs D-757-1 or 2.2” (Plan sheet not reissued with this addendum)
C-503	Pipe Trench Detail. Change both notes to No. 57, 67, 89 or Zone 1 graded aggregate filter. Aggregate to meet requirements of new paragraphs D-757-2.1 or 2.2. If No. 57 gradation selected, wrap aggregate bedding in geotextile fabric. Bedding (and geotextile fabric, if used), is incidental to Item D-701-5.4 pipe per linear foot. (Plan sheet not reissued with this addendum)

- C-601 Dimensions for Structure A4 shall be 15' x 15' Type J Inlet. (Plan sheet not reissued with this addendum)
- G-102 Corrected Phase 1 and 2 Project geometrics. Remove and replace this sheet.
- G-108 Revised 4A-Nightwork. Remove and replace this sheet.

ADDITIONAL INFORMATION

Electronic format Bid Form - Addendum No. 1, is provided on the website, which will automatically insert item costs written in words.

Provided Cone Penetration Test Logs, for informational purposes only, per Section 20-06 of the specifications. (See attached)

QUESTIONS AND ANSWERS

All questions regarding the Project must be submitted to Elisa Traub, Project Coordinator, Sarasota Manatee Airport Authority via e-mail at Elisa.Traub@srq-airport.com by 4:00 p.m. EDT on Monday, May 6, 2019. Answers will be posted in Addendum No. 3 to be issued on Tuesday, May 7, 2019.

Questions and Answers from the Pre-Bid Conference will be furnished in Addendum No. 2. (See below.)

ADDENDUM No. 2

Addendum No. 2 will be issued on Thursday, May 2, 2019 and will include the DBE Participation Goal for the Project, Item D-755 Inflow and Bypass estimates, Pre-Bid Conference Meeting Minutes and Questions and Answers from the Pre-Bid Conference.

BID FORM
SARASOTA BRADENTON INTERNATIONAL AIRPORT
Master Drainage Improvements
SMAA Project 03-2019-MDI

Addendum No. 1
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Item No.	Estimated Quantity	Item With Unit or Lump Sum Prices Written In Words	Unit Prices	Extended
			In Figures	Total
			Dollar/Cent	Dollar/Cent
1	C-100 1 L.S.	Contractor Quality Control per lump sum.	\$ -	\$ -
2	C-102-5.1a 2,100 L.F.	Synthetic Bales per linear foot.	\$ -	\$ -
3	C-102-5.1e 7,000 L.F.	Installation and Removal of Silt Fence per linear foot.	\$ -	\$ -
4	C-102-5.1f 7 EA.	Check Dams per each.	\$ -	\$ -
5	C-102-5.1g 5 EA.	Inlet Protection per each.	\$ -	\$ -
6	C-105 1 L.S.	Mobilization per lump sum.	\$ -	\$ -
7	P-101-5.1 3,060 S.Y.	Pavement Removal per square yard.	\$ -	\$ -
8	P-101-5.2 1 L.S.	Removal of Pipe and other Buried Structures per lump sum.	\$ -	\$ -
9	P-151-4.1 44.0 Acre	Clearing per acre.	\$ -	\$ -
10	P-151-4.2 16.0 Acre	Clearing and Grubbing per acre.	\$ -	\$ -
11	P-152-4.1 113,810 C.Y.	Embankment in Place per cubic yard.	\$ -	\$ -
12	P-154-5.1 9,450 S.Y.	Subbase Course per square yard.	\$ -	\$ -
13	P-211-5.1a 6,390 S.Y.	Limerock Base Course (9-inch) per square yard.	\$ -	\$ -
14	P-211-5.1b 3,060 S.Y.	Limerock Base Course (14-inch) per square yard.	\$ -	\$ -
15	P-219-6.1a 6,390 S.Y.	BID ONLY P-211 OR P-219, NOT BOTH Recycled Concrete Aggregate Base Course (9-inch) per square yard.	\$ -	\$ -

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			In Figures	Total
			-----	-----
			Dollar/Cent	Dollar/Cent
16	P-219-6.1b 3,060 S.Y.	Recycled Concrete Aggregate Base Course (14-inch) per square yard.	\$ -	\$ -
17	P-401-8.1 860 TON	Asphalt Surface Course per ton.	\$ -	\$ -
18	P-403-8.1 1,100 TON	Asphalt Mixture Surface Course per ton.	\$ -	\$ -
19	P-602-5.1 1,890 GAL	Emulsified Asphalt Prime Coat No Dollars and No Cents per gallon.	\$ -	\$ -
20	P-603-5.2 190 GAL	Emulsified Asphalt Tack Coat per gallon.	\$ -	\$ -
21	P-620-5.1a 1 L.S.	Surface Preparation per lump sum.	\$ -	\$ -
22	P-620-5.1b 3,000 S.F.	Marking per square foot.	\$ -	\$ -
23	P-620-5.1c 90 LB.	Reflective Media per pound.	\$ -	\$ -
24	P-620-5.1d 900 S.F.	Temporary Runway and Taxiway Marking per square foot.	\$ -	\$ -
25	P-621-5.1 1,650 S.Y.	Grooving per square yard.	\$ -	\$ -
26	F-162-5.1 100 L.F.	Chain Link Fence per linear foot.	\$ -	\$ -
27	F-162-5.2 1 EA.	Vehicle Gate per linear foot.	\$ -	\$ -
28	D-701-5.1a 1,288 L.F.	24-inch RCP, Class V, Complete in-place per linear foot.	\$ -	\$ -
29	D-701-5.1b 1,632 L.F.	30-inch RCP, Class V, Complete in-place per linear foot.	\$ -	\$ -
30	D-701-5.1c 80	36-inch RCP, Class III, Complete in-place		

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			Dollar/Cent	Dollar/Cent
	L.F.	_____	\$ -	\$ -
		per linear foot.		
31	D-701-5.1d	56 36-inch RCP, Class V, Complete in-place		
	L.F.	_____	\$ -	\$ -
		per linear foot.		
32	D-701-5.1e	248 42-inch RCP, Class IV, Complete in-place		
	L.F.	_____	\$ -	\$ -
		per linear foot.		
33	D-701-5.1f	144 48-inch RCP, Class III, Complete in-place		
	L.F.	_____	\$ -	\$ -
		per linear foot.		
34	D-701-5.1g	64 48-inch RCP, Class V, Complete in-place		
	L.F.	_____	\$ -	\$ -
		per linear foot.		
34	D-701-5.1h	2,080 60-inch RCP, Class III, Complete in-place		
	L.F.	_____	\$ -	\$ -
		per linear foot.		
35	D-701-5.1i	2,456 60-inch RCP, Class V, Complete in-place		
	L.F.	_____	\$ -	\$ -
		per linear foot.		
36	D-705-5.1	340 8-inch Perforated Prewrapped PVC Pipe, Complete, Including Porous Bckfill and Filter Fabric		
	L.F.	_____	\$ -	\$ -
		per linear foot.		
37	D-751-5.3	17 Inlets		
	EA.	_____	\$ -	\$ -
		per each.		
38	D-752-5.2	56 Structural Concrete		
	C.Y.	_____	\$ -	\$ -
		per cubic yard.		
39	D-752-5.3	3,300 Reinforcing Steel		
	LB.	_____	\$ -	\$ -
		per pound.		
	D-754-5.1	42 Structural Concrete		
	C.Y.	_____	\$ -	\$ -
		per cubic yard.		
40	D-755-7.1	6 Pond Dewatering		
	EA.	_____	\$ -	\$ -
		per each.		
41	D-756-4.1	1,360 Gabion Baskets, Including Concrete Aggregate Fill, in-place		
	EA.	_____	\$ -	\$ -
		per each.		
42	D-757-7.1	2,490 Zone 1 Graded Aggregate Filter		
	TON	_____	\$ -	\$ -
		per ton.		

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			In Figures	Total	
			-----	-----	
			Dollar/Cent	Dollar/Cent	
43	D-757-7.2	3,130 TON	Zone 2 Graded Aggregate Filter		
			per ton.	\$ -	\$ -
44	D-757-7.3	3,440 TON	Zone 3 Graded Aggregate Filter		
			per ton.	\$ -	\$ -
45	D-757-7.4	6,300 S.Y.	Geotextile Fabric (Alternate to Graded Aggregate Filter, Zones 1,2 & 3)		
			per square yard.	\$ -	\$ -
46	T-901-5.1	50 AC	Seeding		
			per acre	\$ -	\$ -
47	T-904-5.1	97,444 S.Y.	Sodding		
			per square yard.	\$ -	\$ -
48	T-905-5.1	17,770 S.Y.	Topsoil (Obtained on site or removed from stockpile)		
			per square yard.	\$ -	\$ -
49	L-108-5.1	2,400 L.F.	Cable Trenching		
			per linear foot.	\$ -	\$ -
50	L-108-5.2	2,400 L.F.	Cable Trenching for Counterpoise Wire		
			per linear foot.	\$ -	\$ -
51	L-108-5.3	2,520 L.F.	#6 Bare Counterpoise wire, Installed in Trench or Duct		
			per linear foot.	\$ -	\$ -
52	L-108-5.4	800 L.F.	24-Strand Multimode Fiber Optic Cable, Installed in Duct Bank or Conduit		
			per linear foot.	\$ -	\$ -
53	L-108-5.6	2,470 L.F.	1/C No. 8, 5kV Type C Cable, Installed in Trench or Conduit		
			per linear foot.	\$ -	\$ -
54	L-110-5.1	2,400 L.F.	1-1/2 inch Dia. PVC Conduit, Type 1		
			per linear foot.	\$ -	\$ -
TOTAL BID:					\$ -

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Construction Safety and Phasing Plan

Note that the Phase 4A and Phase 4B work sequence may be reversed at the Owner's or RPR's direction or with their concurrence at Contractor request. Reasons may include but are not limited to airline flight schedules or the prevailing weather forecast at the time of construction.

Phase 4A.- Night Work.

Notify the Owner at least 48 hours prior to beginning work on Phase 4a. The Owner will issue a NOTAM closing the apron access connectors located between Taxiway Connectors A7 and A8, and closing Taxiway A from southeast of Taxiway A7 to southeast of Taxiway A9 each night. The Contractor will have at least 4 hours for work each night. Closure will begin with the arrival of the last scheduled airline each night and end 30 minutes before the first scheduled airline departure each morning.

Immediately after the effective date and time of the NOTAM each night, the contractor will place lighted barricades on the connectors and apron as shown on Sheet G – 107 for Phase 4A. Proceed with Phase 4A construction including erosion and sedimentation controls, embankment, pipe culvert and structure installations, seeding and sodding. No later than 30 minutes before scheduled reopening each morning inspect the worksite and the adjacent apron and taxiway pavements with SMAA Operations to verify no FOD, excessive drop-offs (greater than 3-inches), obstructions or any other condition will preclude safe aircraft operation. Immediately correct any issues identified. Immediately prior to the scheduled reopening, remove all lighted barricades and exit the airside pavement areas. Liquidated Damages of \$1,500 for each 15 minutes or fraction thereof that the apron and/or taxiway remains closed past the scheduled reopening time will be assessed.

When the work is substantially complete, notify the Owner and RPR, who will conduct a substantial completion review of the work. Complete punch list items during nightly closures and demobilize from the Phase 4 site. Note that temporary erosion controls may and shall remain in place until permanent erosion control is established. Contractor shall remove temporary erosion controls after permanent erosion control is established which may occur after demobilization from Phase 4 during the Phase 5 General Demobilization.

Phase 4B. - Day Work

Notify the Owner at least 24 hours prior to beginning work on Phase 4B. The Owner will issue a NOTAM closing the apron access connector located between Taxiway Connectors A8 and A9. Immediately after the effective date and time of the NOTAM, the contractor will place flagged and lighted barricades on the connectors and apron as shown on Sheet G – 107 for Phase 4B.

Proceed with Phase 4B construction including erosion and sedimentation controls, embankment, pipe culvert and structure installations, seeding and sodding. At least twice each day and more often if necessary, inspect the worksite and the adjacent apron and taxiway pavements with SMAA Operations to verify no FOD, excessive drop-offs (greater than 3-inches), obstructions or any other condition that will preclude safe aircraft operation exists. Immediately correct any issues or deficiencies identified.

When the work is substantially complete, notify the Owner and RPR, who will conduct a substantial completion review of the work. Complete punch list items while the Phase 4B closures are in effect and demobilize from the Phase 4B site. Note that temporary erosion controls may and shall remain in place until permanent erosion control is established. In this case, Contractor shall remove temporary erosion controls after permanent erosion control is established which may occur after demobilization from Phase 4 and during the Phase 5 General Demobilization.

Construction Safety and Phasing Plan

SECTION 15. HAZARD MARKING AND LIGHTING

Penetrations of the imaginary surfaces defined in Federal Aviation Regulations Part 77 (FAR Part 77) shall not be conducted nor permitted without the advance notification of, and approval by the Owner's Project Manager and the FAA. This includes any/all penetrations whatsoever by Contractor activities, including but not limited to vehicles, cranes, other construction equipment, structures, plant, stockpiled material, excavated earth, etc.

When such penetrations are unavoidable, they shall be brought to the Owner's attention at least 72 hours in advance to allow notification and issuance of an appropriate Notice to Airmen (NOTAM) by the nearest FAA Flight Service Station. The Contractor shall cooperate fully with the Owner, furnishing all detailed sketches necessary to identify precise locations, dimensions, and elevations of the obstructing objects' relationship to the imaginary FAR Part 77 surfaces.

Vehicles/equipment which penetrate the FAR Part 77 surfaces shall be marked and lighted in accordance with this CSPP. Operating equipment shall be equipped with radio equipment for communicating with ATCT even if landside of the security perimeter. Operations shall be continually coordinated with the Owner and FAA when Part 77 surfaces will be penetrated. The maximum equipment height allowed on the airport shall be as indicated on the Layout and/or Safety Plans. During times when the safety of flight/aircraft operations could be impaired, particularly during IFR weather or when equipment is idle, all crane booms, towers and other movable appendages shall be lowered to the maximum extent.

SECTION 16. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS

When any aircraft ground operations are underway within a runway or taxiway system, Contractor's work activities, materials, personnel, and equipment are prohibited within such areas, which are designated as the runway and taxiway, safety areas, object free areas or glide slope approaches. Active aircraft are assumed to have the right-of-way over vehicles, personnel, or other Contractor equipment.

The boundaries of the safety area and object free area for the runways and taxiways, respectively as shown on the plans shall be marked by the Contractor with 2-inch by 2-inch, 36-inch-high wooden stakes, located 100 feet (maximum spacing) apart and highlighted by 24" long strips or flagging of bright red or orange survey tape affixed to the top.

Required ground-measured clearances are as follows:

Operational Pavement	Separation Required
Runway 14-32 (RSA)	250 ^{feet} from centerline
Runway 14-32 (ROFA)	400 ^{feet} from centerline
Runway 4-22 (RSA)	75 ^{feet} from centerline
Runway 4-22 (ROFA)	250 ^{feet} from centerline
Taxiway A (TOFA)	130 ^{feet} from centerline
Taxiway C (TOFA)	93 ^{feet} from centerline

SECTION 17. OTHER LIMITATIONS

Trenching and excavation work in excess of five (5) feet depth is subject to the requirements of the Florida "Trench Safety Act" (CS/SB 2626), which became law on October 1, 1990 and officially adopted the

CONSTRUCTION METHODS

751-3.1 Unclassified excavation.

a. The Contractor shall excavate for structures and footings to the lines and grades or elevations, shown on the plans, or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximately only; and the RPR may direct, in writing, changes in dimensions or elevations of footings necessary for a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. Where concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing is placed.

c. The Contractor shall do all dewatering, bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for the structure.

d. All dewatering, bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage finished masonry. The cost of removal shall be included in the unit price bid for the structure.

e. After excavation is completed for each structure, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

751-3.2 Brick structures.

a. **Foundations.** A prepared foundation shall be placed for all brick structures after the foundation excavation is completed and accepted. Unless otherwise specified, the base shall consist of reinforced concrete mixed, prepared, and placed in accordance with the requirements of Item P-610.

b. **Laying brick.** All brick shall be clean and thoroughly wet before laying so that they will not absorb any appreciable amount of additional water at the time they are laid. All brick shall be laid in freshly made mortar. Mortar not used within 45 minutes after water has been added shall be discarded. Retempering of mortar shall not be permitted. An ample layer of mortar shall be spread on the beds and a shallow furrow shall be made in it that can be readily closed by the laying of the brick. All bed and head joints shall be filled solid with mortar. End joints of stretchers and side or cross joints of headers shall be fully buttered with mortar and a shoved joint made to squeeze out mortar at the top of the joint. Any bricks that may be loosened after the mortar has taken its set, shall be removed, cleaned, and re-laid with fresh mortar. No broken or chipped brick shall be used in the face, and no spalls or bats shall be used except where necessary to shape around irregular openings or edges; in which case, full bricks shall be placed at ends or corners where possible, and the bats shall be used in the interior of the course. In making closures, no piece of brick shorter than the width of a whole brick shall be used; and wherever practicable, whole brick shall be used and laid as headers.

c. **Joints.** All joints shall be filled with mortar at every course. Exterior faces shall be laid up in advance of backing. Exterior faces shall be plastered or parged with a coat of mortar not less than 3/8 inch (9 mm) thick before the backing is laid up. Prior to parging, all joints on the back of face courses shall be cut flush. Unless otherwise noted, joints shall be not less than 1/4 inch (6 mm) nor more than 1/2 inch (12 mm) wide and the selected joint width shall be maintained uniform throughout the work.

Item D-751 Manholes, Catch Basins, Inlets and Inspection Holes

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METHOD OF MEASUREMENT

751-4.1 Manholes, catch basins, inlets, and inspection holes shall be measured by the unit.

BASIS OF PAYMENT

751-5.1 The accepted quantities of manholes, catch basins, inlets, and inspection holes will be paid for at the contract unit price per each in place when completed. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown on the plans; and for all labor equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

- ~~Item D-751-5.1 Manholes - per each~~
- ~~Item D-751-5.2 Catch Basins - per each~~
- Item D-751-5.3 Inlets - per each
- ~~Item D-751-5.4 Inspection Holes - per each~~

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

- ASTM A27 Standard Specification for Steel Castings, Carbon, for General Application
- ASTM A47 Standard Specification for Ferritic Malleable Iron Castings
- ASTM A48 Standard Specification for Gray Iron Castings
- ASTM A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- ASTM A283 Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
- ASTM A536 Standard Specification for Ductile Iron Castings
- ASTM A897 Standard Specification for Austempered Ductile Iron Castings
- ASTM C32 Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)
- ASTM C144 Standard Specification for Aggregate for Masonry Mortar
- ASTM C150 Standard Specification for Portland Cement
- ASTM C443 Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
- ASTM C478 Standard Specification for Precast Reinforced Concrete Manhole Sections

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April 30, 2019

Item D-752

Concrete Culverts, Headwalls, and Miscellaneous Drainage Structures

DESCRIPTION

752-1.1 This item shall consist of plain and/or reinforced concrete culverts, headwalls, and miscellaneous drainage structures constructed in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

MATERIALS

752-2.1 Concrete. Plain and/or reinforced concrete shall meet the requirements of Item P-610.

CONSTRUCTION METHODS

752-3.1 Unclassified excavation.

a. Trenches and foundation pits for structures or structure footings shall be excavated to the lines and grades and elevations shown on the plans. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximate only; and the RPR may approve, in writing, changes in dimensions or elevations of footings necessary to secure a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. When concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing steel is placed.

c. The Contractor shall do all dewatering, bracing, sheathing, or shoring necessary to perform and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be incidental to D-752-5.2 ~~included in the unit price bid for excavation.~~

d. All dewatering, bracing, sheathing, or shoring shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage the finished concrete. The cost of removal shall be incidental to D-752-5.2 ~~included in the unit price bid for excavation.~~

e. After each excavation is completed, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

752-3.2 Backfilling.

a. After a structure has been completed, backfilling with approved material shall be accomplished by applying the fill in horizontal layers not to exceed 8 inches (200 mm) in loose depth, and compacted. The field density of the compacted material shall be at least 90% of the maximum density for cohesive soils and 95% of the maximum density for noncohesive soils. The maximum density shall be determined in accordance with ASTM D698. The field density shall be determined in accordance with ASTM D1556.

b. No backfilling shall be placed against any structure until approved by the RPR. For concrete, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that

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the concrete has attained sufficient strength to withstand any pressure created by the backfill or the placement methods.

c. Fill placed around concrete culverts shall be deposited on each side at the same time and to approximately the same elevation. All slopes bounding or within the areas to be backfilled shall be stepped or serrated to prevent wedge action against the structure.

d. Backfill will not be measured for direct payment. Performance of this work shall be considered as a subsidiary obligation of the Contractor, covered under the contract unit price for “unclassified excavation for structures.”

752-3.3 Weep holes. Weep holes shall be constructed as shown on the plans.

752-3.4 Cleaning and restoration of site. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankment, shoulders, or as approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

METHOD OF MEASUREMENT

~~752-4.1 The quantity of unclassified excavation for structures shall be the number of cubic yards (cubic meters), measured in original position, of material excavated in accordance with the plans, or as approved by the RPR; but in no case shall any yardage be included in the measurement for payment which is outside of a volume bounded by vertical planes 18 inches (0.5 m) outside of and parallel to the neat lines of the footings.~~

752-4.2 Concrete shall be measured by the number of cubic yards (cubic meters) of concrete, complete in place and accepted. In computing the yardage of concrete for payment, the dimensions used shall be those shown on the plans or approved by the RPR. No measurements or other allowances shall be made for forms, false work, cofferdams, pumping, bracing, expansion joints, or finishing of the concrete. No deductions in yardage shall be made for the volumes of reinforcing steel or embedded items.

752-4.3 The quantity of reinforcing steel shall be the calculated theoretical number of pounds (km) placed as shown on the plans, complete in place and accepted. The unit weight used for deformed bars shall be the weight of plain square or round bars, as the case may be, of equal nominal size.

BASIS OF PAYMENT

752-5.1 Payment will be made at the contract unit price per cubic yard (cubic meter) for unclassified excavation for structures.

752-5.2 Payment will be made at the contract unit price per cubic yard (cubic meter) for concrete for the structures.

752-5.3 Payment will be made at the contract unit price per pound (km) for reinforcing steel.

These prices shall be full compensation for furnishing all materials and for all preparation, excavation, and placing the materials, and for all labor, equipment, tools, and incidentals necessary to complete the structure.

Payment will be made under:

- ~~Item D-752-5.1~~ ~~Unclassified Excavation for Structures - per cubic yard (cubic meter)~~
- Item D-752-5.2 Structural Concrete - per cubic yard (cubic meter)
- Item D-752-5.3 Reinforcing Steel - per pound (km)

Item D-757
Graded Aggregate Filter

DESCRIPTION

757-1.1 This item consists of graded aggregate filter zones constructed following this specification in the locations and to the dimensions shown on the project plans. The graded aggregate filter serves multiple purposes. It restrains fines from migrating into the water management pond while allowing free flow of groundwater. It also supports pavement and may directly support aircraft within the safety area. It also assists in water quality improvement as part of the drainage system

MATERIALS

757-2.1 Reclaimed Portland Cement Concrete (RPCC). The reclaimed Portland Cement Concrete shall be crushed to provide a clean, hard, durable aggregate having a gradation conforming to the requirements of the specific Zone outlined in this specification. RPCC shall be stockpiled and exposed to weather a minimum of 30 days after crushing and sieving. It shall not leach excess phosphorus when subject to a soak test. It shall be free from adherent coatings and reasonably free from deleterious materials. The weight of deleterious substances shall not exceed the following percentages:

Deleterious Substance	Maximum Percentage by weight
Bituminous Concrete	1.0
Bricks	1.0
Wood and other organics	0.1
Reinforcing Steel and Welded Wire Fabric	0.1
Plaster and Gypsum Board	0.1
Joint Fillers	0.1

The sources of RPCC will be treated as a mine and shall qualify as facilities generating clean debris, defined in Rule 62-701.200(15) Florida Administrative Code (FAC) as uncontaminated concrete exempt from solid waste regulation in accordance with Rule 62-701.220(2)(f) FAC. If the concrete has been contaminated with petroleum product or lead based paint the concrete shall not be considered clean debris and the source shall be required to be permitted and to perform testing in accordance with Rule 62-701 FAC subject to any ensuing enforcement action by the Florida Department of Environmental Protection (FDEP). The concrete shall also be asbestos free.

Operators of the demolition recycling facilities shall demonstrate that they are in compliance with 40 Code of Federal Regulations (CFR) 61.141 and 61.145. Notification requirements from each owner or operator of a demolition, recycling or renovation activity supplying reclaimed concrete shall be available at the recycling facility.

757-2.2 Natural Aggregate. Natural aggregate shall be derived from crushing igneous or metamorphic parent rock – sedimentary rock such as limestone will not be used without specific testing to ascertain it will not contribute phosphorus load to the water column. The rock shall be reasonably free of clay lumps, soft and friable particles, salt, alkali, organic matter, adherent coatings and other substances that may possess undesirable characteristics. The weight of deleterious substances shall not exceed the following percentages:

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Deleterious Substance	Maximum Percentage By weight
Coal and lignite (AASHTO T113)	1.0
Soft and friable particles (AASHTO T112)	2.0
Clay lumps (AASHTO T112)	2.0
Plant root matter (visual inspection in AASHTO T27)	0.005
Wood and wood matter (visual inspection in AASHTO T27)	0.005
Cinders and clinkers	0.5
Free Shell	1.0
Material passing the No. 200 sieve (FM 1-T-011)	1.75
Fine grained organic matter	0.03

757-2.3 Zone 1. The Zone 1 aggregate shall meet the following gradation requirements:

U.S. Standard Sieve	Percent Passing
3/8 inch	100
No. 4	85 to 100
No. 8	10 to 40
No. 16	0 to 10
No. 50	0 to 5

757-2.4 Zone 2. The Zone 2 aggregate shall meet the following gradation requirements:

U.S. Standard Sieve	Percent Passing
2 inch	100
1½ inch	95 to 100
¾ inch	35 to 70
3/8 inch	10 to 30
No. 4	0 to 5

757-2.5 Zone 3. The Zone 3 aggregate shall meet the following gradation requirements.

U.S. Standard Sieve	Percent Passing
4 inch	100
3½ inch	90 to 100
2½ inch	25 to 60
1½ inch	0 to 15
¾ inch	0 to 5

757-2.6 Geotextile Fabric. Geotextile fabric used to separate the graded aggregate filter from excavation or embankment shall meet the requirements of FDOT Standard Specification Section 985. Either drainage or stabilization fabric may be used.

CONSTRUCTION REQUIREMENTS

757-3.1 Wet Placement and Compaction. Graded aggregate filter may be placed directly into areas beneath standing water with Engineer approval. The material shall be compacted by vibratory roller or in confined areas, plate to a firm and unyielding mass. Each area of the zone shall receive not less than 2 passes.