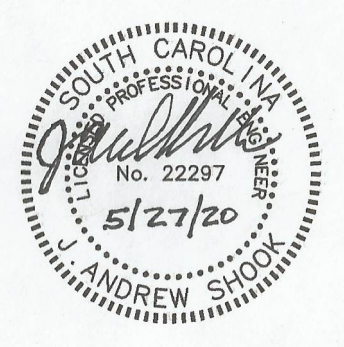
ADDENDUM NO. ONE (1)
TO
COMMERCIAL APRON EXPANSION
HILTON HEAD ISLAND AIRPORT
HILTON HEAD ISLAND, SOUTH CAROLINA
IFB # 060420HXD
TBE PROJECT NO. 2119-1906

May 27, 2020



From**:** Talbert, Bright & Ellington, Inc.
2000 Park Street, Suite 101
Columbia, SC 29201

To: **All Bidders of Record**

This Addendum is hereby made a part of the contract documents and specifications of the above referenced project. All other requirements of the original specification shall remain in effect in their respective order. Acknowledge receipt of this addendum by inserting its number and date in the proposal form.

GENERAL

1. See attached Pre-Bid Meeting Attendance Sheet attached to this Addendum.

SPECIFICATIONS

1. In the Advertisement for Bids, **REVISE** all references to the Bid Received Date to read as "**until 3:00 P.M., on Tuesday, June 9, 2020**".

2. In the Advertisement for Bids, in the third paragraph, **DELETE** the words "Please note: Richa Graphics is the official Plan Room provider. Bidders must be listed on the plan holder's list held by Richa Graphics in order to receive any Bid Documents.", and **INSERT** the revised words "Please note: Richa Graphics is the official Plan Room provider for bidders requesting a printed paper set of the bid documents."

3. In the Invitation for Bid, **REVISE** all references to the Bid Received Date to read as "**until 3:00 P.M., on Tuesday, June 9, 2020**".

4. **DELETE** the Bid Schedule on pages IFB-4 through IFB-10 and **INSERT** the revised Bid Schedule pages IFB-4 through IFB-10 attached to this Addendum.

5. In the Invitation for Bid section, on page IFB-14, **REMOVE AND REPLACE** the SCDOT website link for available DBE's and replace with the following revised link: https://www.dot.state.sc.us/business/bus-development-dbe-sbe-cert.aspx

6. On page IFB-26 **DELETE** words "less 10% retainage" and **INSERT** the revised words "less the retainage specified in General Contract Provisions section 90-06 a.".

7. On page IFB-26 **DELETE** all occurrences of the words "seven (7) calendar days" and **INSERT** the revised words "thirty (30) days".

8. On page 5 of Section 10 of the General Contract Provisions, in paragraph 10-37, **DELETE** the words "Lincolnton-Lincoln County Regional Airport Authority" and **INSERT** the revised words "Beaufort County".

9. **INSERT "**Appendix E – Construction, Safety, and Phasing Plan" attached to this Addendum after "Appendix D – Davis Bacon Wage Rates".

PLANS

1. **REMOVE AND REPLACE** the original plan sheet 101 with the revised plan sheet 101 attached to this Addendum.

2. **REMOVE AND REPLACE** the original plan sheet 201 with the revised plan sheet 201 attached to this Addendum.

3. **REMOVE AND REPLACE** the original plan sheet 400 with the revised plan sheet 400 attached to this Addendum.

4. **REMOVE AND REPLACE** the original plan sheet 401 with the revised plan sheet 401 attached to this Addendum.

5. **REMOVE AND REPLACE** the original plan sheet 402 with the revised plan sheet 402 attached to this Addendum.

6. **REMOVE AND REPLACE** the original plan sheet 450 with the revised plan sheet 450 attached to this Addendum. The 60 linear feet of temporary 36" RCP shown for the proposed temporary construction entrance will not be measured separately for payment and will be incidental to the "TEMPORARY CONSTRUCTION ENTRANCE" item of work.

7. **REMOVE AND REPLACE** the original plan sheet 451 with the revised plan sheet 451 attached to this Addendum.

8. **REMOVE AND REPLACE** the original plan sheet 452 with the revised plan sheet 452 attached to this Addendum.

9. **REMOVE AND REPLACE** the original plan sheet 470 with the revised plan sheet 470 attached to this Addendum.

10. **REMOVE AND REPLACE** the original plan sheet 471 with the revised plan sheet 471 attached to this Addendum.

11. **REMOVE AND REPLACE** the original plan sheet 600 with the revised plan sheet 600 attached to this Addendum.

12. **ADD** a new plan sheet 700 attached to this Addendum and update the list of drawings on the cover sheet to reflect this new sheet.

13. **ADD** a new plan sheet 701 attached to this Addendum and update the list of drawings on the cover sheet to reflect this new sheet.

QUESTIONS AND ANSWERS

1. Question: Would Item 306 Lean Concrete (6" depth) be an accepted or considered as an alternate in to the specified P-403 Bituminous Concrete Base Course (6" depth)?
   Answer: No, not for this project.

2. Question: Please provide details or clarification for the Type E joint, Type C joint, and Type A joints for the 8" thick concrete pavement.
   Answer: See revised plan sheet 600 attached to this Addendum.

3. Question: Please clarify the DBE forms to be provided in additional to the bid proposal forms. Is the DBE Letter of Intent required for each DBE? Will the forms be provided or is a generic form acceptable?
   Answer: Use the forms provided on pages IFB-15, IFB-17, and IFB-20 to document proposed DBE subcontracting. The form on IFB-20 needs to include DBE and non-DBE subcontractors. Make additional copies of these forms as needed.

4. Question: Would you consider using an alternate profile-type gasket option using a single offset joint for the reinforced concrete pipe in lieu of the specified confined O-ring joint reinforced concrete pipe?
   Answer: No, not for this project.

5. Question: On the ADV-1 page, 3rd paragraph, it states Richa Graphics is the official Plan holder. Are we required to purchase plans/bid documents from Richa and be listed as a Plan Holder at Richa to be eligible to bid on the project?
   Answer: The original advertisement states the following related to Richa Graphics: "Please note: Richa Graphics is the official Plan Room provider. Bidders must be listed on the plan holder's list held by Richa Graphics in order to receive any Bid Document." This is clarified in the "Specifications" section of this Addendum above.

6. Question: Can the excess soil excavation material from this project be wasted onsite?
   Answer: Yes, the only waste material accepted in this designated onsite waste area shown on the plans at 14 Hunter Road, Hilton Head Island, SC will be excess soil excavated from this project site that is not needed to construct this project. Any unsuitable soil excavated from this project site may also be wasted at 14 Hunter Road immediately adjacent to the primary suitable soil designated waste area at 14 Hunter Road. No specific compaction requirements

apply to soil wasted in the suitable soil stockpile area or in the unsuitable soil stockpile area, but the material shall be spread across the top of the stockpile and "walked" in with a dozer or similar equipment approved by the Engineer and left in a suitable and accessible condition with no standing/ponding water for later re-use by other projects under separate contract. The Contractor shall seed and mulch the disturbed areas on the suitable soil stockpile and the unsuitable soil stockpile at the end of the project, or as otherwise required by the Contract Documents. Payment for Seeding (Mulched) on these two stockpile areas will be approved by the Engineer in accordance with the Temporary Seeding (Mulched) or Permanent Seeding (Mulched) items of work.

7. Question: Will the bids be read publicly?
   Answer: Only if the Beaufort County Offices are officially open for business at the date and time of the bid opening. Dave Thomas will confirm the location of the bid opening in advance of the actual bid opening.

8. Question: How will testing be handled on this project?
   Answer: The Owner will pay for and arrange for all quality assurance testing. The Contractor will be pay for and arrange for all quality control testing, testing associated with job mix formulas, etc.

9. Question: Will a site visit be available?
   Answer: Airport staff will be contacted to determine if Airport staff is available to escort prospective bidders to the project site. If Airport staff is available to assist with a site visit, a notice of the date/time/meeting location for the site visit will be posted on the Beaufort County Vendor Registry website for this project.

10. Question: Please confirm that if we encounter pre-existing hazardous or regulated materials (i.e., materials that are regulated by federal, state, or local law) that such encounter will be treated as Extra Work under Section 40-04 (p. 15) with relief similar to that provided under Section 70-20, "Archaeological and historical findings" (p. 33). Please also confirm that the Owner will retain generator status for all pre-existing hazardous materials and sign any necessary manifests?
    Answer: Encounters of pre-existing hazardous or regulated materials within the project site will be addressed as provided in the Contract Documents.

11. Question: IFB General Provision 4.1, Termination for Convenience (p. IFB-37) includes limited descriptions of termination costs that do not necessarily align with the Termination for Convenience terms in the Required Federal Provisions (p. B-27 to 28). Please confirm that federal provision prevails?
    Answer: The controlling provision will be determined in accordance with the laws of the State of South Carolina relative to acceptance of Federal Grants.

12. Question: IFB General Provision 4.2, Termination for Cause (p. IFB-38) references a 10 day notice requirement that is waived. Section 80-09 of the General Contract Provisions requires 10-day notice of default with an opportunity to cure, consistent with Required Federal Provisions p. B-29, referencing Section 80-09 of FAA Advisory Circular 150/5370-10.

Please confirm that federal provision prevails?
Answer: The controlling provision will be determined in accordance with the laws of the State of South Carolina relative to acceptance of Federal Grants.

13. Question: The Advertisement for Bid (p. ADV-1) states bids cannot be withdrawn for 120 days. The Invitation for Bid states prices "must be firm for a minimum of 90 days with completion in 30 days. IFB-11 state 150 days for completion. Please resolve the discrepancy?
Answer: Bids cannot be withdrawn for 120 days in accordance with the terms of the Contract Documents.

14. Question: Instructions on IFB-35 (instruction no. 9) and General Conditions 20-11 require bids to be submitted in a sealed envelope. ADV-1 states bids will be received electronically. Please confirm no hard copy submission is required?
Answer: Bids will only be received electronically on the Beaufort County Vendor Registry website as provided in the Invitation for Bid.

15. Question: General Provision 6 (p. IFB-38) requires "manufacturer, brand, and catalog number bid and prices quoted for each item in the spaces provided on the Bid Schedule sheet. Please confirm that only prices are required?
Answer: Only unit prices and extended total prices are required for the items of work in the Bid Schedule for this project.

16. Question: Please confirm General Provision 16 is inapplicable to this solicitation?
Answer: A determination of applicability of this provision for this project is unable to be made at this time.

17. Question: General Conditions 30-06 requires return of the contract within 15 days of award. General Provision 24 requires return within 10 days. Please resolve the discrepancy.
Answer: The Contract originals executed by the Contractor must be returned within 15 days of award in accordance with General Contract Provisions section 30-06.

18. Question: Please confirm General Provision 28 does not apply.
Answer: A determination of applicability of this provision for this project is unable to be made at this time.

19. Question: General Conditions 50-06 requires the Contractor to "protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project." Please advise if delays caused by other Owner contractors will be compensable and whether other contractors will be working on the project site.
Answer: A determination of applicability of this provision for this project will be made at the time of any such occurrence on this project in accordance with the terms and conditions of the Contract Documents.

20. Question: Given the size and duration of this project, please confirm that a separate RPR or Inspector field office will be required (see Project Special Provisions pp. 3-4).
Answer: A field office shall be provided as required by the Project Special Provisions. This field office can be shared by the Contractor and the RPR for daily coordination meetings, progress meetings, etc. However, the field office shall include a separate office area for the RPR to perform his/her daily office duties for this project.

21. Question: Will post installation video inspection be required for all storm drain pipe, including 4" strip drain & 4" perforated pipe?
Answer: No, unless the Engineer has questions about the installed condition of the storm drain pipe, 4" strip drain and 4" perforated pipe that cannot be answered to the Engineer's satisfaction using other methods of inspection/observation.

22. Question: Plan sheets 551 & 650 have multiple references to P-610 3000psi concrete. The P-610 specification requires 4000 psi. Will 3000psi be allowed per the plan detail notes?
Answer: 4,000 psi compressive strength concrete is required for this project.

23. Question: Item P-605 Joint Sealing is shown on the joint details but no pay item is included…please add the pay item for P-605 or clarify if this is incidental to the items P-501 (8" and 12" depth).
Answer: Joint sealing will not be measured separately for payment and will be incidental to the 8" Portland Cement Concrete Pavement and to the 12" Portland Cement Concrete Pavement items of work.

24. Question: Please confirm that diamond grinding is required (Page P-501-21).
Answer: Diamond grinding as required by section "f. Diamond grinding of Concrete surfaces" on page 501-21 is not required for this project related to pavement grooving since there is no pavement grooving requirement for this project. However, diamond grinding will be used to address smoothness issues that are identified by the Engineer as not meeting the project requirements.

25. Question: Fixed form construction states that forms must be drilled. Can the Contractor drill and grout the bars after forms are removed as is common practice?
Answer: Yes, provided the drilled and grouted bars meet the requirements of the Contract Documents and no damage occurs to the concrete pavement during the drilling and grouting process.

26. Question: The specs state power must be provided to the RPR's field office and a generator will not suffice. Has a location for the field office been located so we can estimate the electrical service costs?
Answer: A specific location for the field office has not been identified by the Owner/Engineer. The Owner/Engineer will consider proposed locations on Airport property for the field office from the Contractor awarded the construction contract, provided the proposed locations do not interfere with/adversely affect airfield operations.

27. Question: Water and sewer to the RPR field office is required per the specs. Are these required to be tied into permanent water and sewer on the premises or can the Contractor use portable water bottles/service and sanitary service be used that are serviced on a weekly basis?
    Answer: Portable sealed water bottles/service and temporary sanitary service including, but not limited to, "porta-jons" that are serviced on a weekly basis will be acceptable.

28. Question: What is the engineers estimate for this project?
    Answer: This will be provided to Beaufort County for publication on the Beaufort County Vendor Registry website.

29. Question: What is included in bid item 5, Temporary Sediment Basin with Faircloth Skimmer, Complete? Where is the temporary sediment basin? Is this item just for the Faircloth Skimmer equipment and installation?
    Answer: This item of work includes the excavation/earthwork to construct basin, construction of the riser/skimmer/barrel, temporary seeding/mulching, maintenance, and removal of temporary items upon satisfactory stabilization of the site for the Temporary Sediment Basin depicted on plan sheet 470 and related details and notes plan sheets. Also included is all personnel, equipment, materials, and incidentals required for the installation, maintenance, and removal of temporary items upon satisfactory stabilization of the site.

30. Question: I wanted to ask about the asphalt mix designs for the P-401 and P-403 asphalt mixes as it appears that both mixes have the exact same design criteria. Just want to confirm that we can use the same mix design for both asphalt mixes.
    Answer: The same bituminous concrete mix design can be used for the P-401 and P-403 pavements, provided the mix design meets the individual requirements for P-401 and P-403 pavements.

31. Question: In P-501-4.1 Control Strip: The specification indicates the strip is 250 feet long ending at the next closest joint for each type of paving. The length of the lanes are approximately 405 feet. With the project being a small quantity, can the test strip be designated for the Slip-form Pilot Lane only? Can it be 1 full lane at 405 feet?
    Answer: Yes, provided all other applicable requirements for the test strip are met.

32. Question: Can P-501 concrete be used in lieu of P-610 concrete?
    Answer: We are unable to answer this question without more specifics of all locations of P-501 concrete substitution for P-610 concrete being identified.

33. Question: The Bid Schedule found in the specification package on sheets IFB-5, and IFB-6 list the quantity of 8" Portland Cement Concrete Pavement of 400 SY, and 12" Portland Cement Concrete Pavement of 14,000 SY. It appears from comparing takeoff quantities that the Bid Schedule quantities are overstated.
Due to the lead times involved to obtain the materials, if the contractor needs to purchase reinforcing materials for the full bid schedule quantity to have them available for use, and then they are not needed, this could be an unnecessary cost that will affect the price?
Answer: The quantities listed in the Bid Schedule are estimated quantities and are for comparison of bid proposals. The Contractor awarded the project will be paid for the actual installed, completed and accepted work in accordance with the terms and conditions of the Contract Documents.

ADDENDUM NO. ONE (1)

COMMERCIAL APRON EXPANSION
HILTON HEAD ISLAND AIRPORT

ATTACHMENTS

1. Pre-Bid Attendance List
2. Revised Bid Schedule pages IFB-4 through IFB-10
3. Appendix E – Construction, Safety, and Phasing Plan
4. Revised plan sheet 101
5. Revised plan sheet 201
6. Revised plan sheet 400
7. Revised plan sheet 401
8. Revised plan sheet 402
9. Revised plan sheet 450
10. Revised plan sheet 451
11. Revised plan sheet 452
12. Revised plan sheet 470
13. Revised plan sheet 471
14. Revised plan sheet 600
15. New plan sheet 700 “Subgrade And Pavement Edge Strip Drain And Collector Pipe Plan”
16. New plan sheet 701 “Subgrade And Pavement Edge Strip Drain And Collector Pipe Details”

END OF ADDENDUM NO. ONE (1)

ATTENDANCE LIST
PREBID MEETING (VIRTUAL MEETING)
COMMERCIAL APRON EXPANSION
HILTON HEAD ISLAND AIRPORT
MAY 15, 2020, 2:00 PM
TBI PROJECT NO. 2119-1906

NAME	COMPANY	PHONE	EMAIL
Pat Turney	TBE	704-426-6070	pturney@tbeclt.com
Dave Thomas	Beaufort County	843-255-2304	dthomas@bcgov.net
Josh Mayberry	Shoreline Construction	912-659-9926	jmayberry@shoreline-commercial.com
Rick Evans	Gulf Stream Constr. Co, Inc.	843-572-4363	revans@gulfstreamconstruction.com
Howard Murrell	Quality Enterprises USA Inc	239-571-5900	Hmurrell@QEUSA.com
John Krupilis	Kiewit Infrastructure South Co.	574-339-0004	john.krupilis@kiewit.com
Jeff Sullivan	Kiewit Infrastructure South Co.	301-740-4483	Jeff.sullivan@kiewit.com
Michael Boyle	McCarthy Improvement	864-918-6126	mboyle@mccarthyimprovement.com
Brad Mullis	Summers Concrete Contract, Inc	229-794-1023	brad@summersconcrete.com
Richard Jennings	Hi-Way Paving, Inc.	614-778-4305	rjennings@hiwaypaving.com
Gary Siegfried	SC Aeronautics Commission	803-896-6898	gsiegfried@aeronautics.sc.gov
Kevin Knuettel	Zachry Construction Corp.	919-592-8374	kevin.knuettel@zachrycorp.com
Jon Chism	Zachry Construction Corp.	704-763-7513	jon.chism@zachrycorp.com
John Romaine	Zachry Construction Corp.		john.romaine@zachrycorp.com
Connie Norton	Zachry Construction Corp.		Connie.norton@zachrycorp.com
Logan Crowther	Cleland Site Prep, Inc.		lcrowther@clelandsiteprep.com
Carlos Sanchez	Cleland Site Prep, Inc.	843-226-1175	csanchez@clelandsiteprep.com
Blair Charles	Tinifiber	214-632-2031	BCharles@tinifiber.com
William R. Evans III	APAC-Atlantic, Inc.	912-657-7338	william.evans@apacatlantic.com

BID SCHEDULE

BASE BID - COMMERCIAL APRON EXPANSION

ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
1	C-105	MOBILIZATION @ (Write Unit Price In Words)	1	LS		
2	C-100	CONTRACTOR QUALITY CONTROL PROGRAM @ (Write Unit Price In Words)	1	LS		
3	C-102	TEMPORARY CONSTRUCTION ENTRANCE @ (Write Unit Price In Words)	1	EA		
4	C-102	TEMPORARY SILT FENCE @ (Write Unit Price In Words)	1,100	LF		
5	C-102	TEMPORARY SEDIMENT BASIN WITH FAIRCLOTH SKIMMER, COMPLETE @ (Write Unit Price In Words)	1	EA		
6	C-102	OUTLET PROTECTION RIP RAP @ (Write Unit Price In Words)	15	CY		
7	C-102	TEMPORARY SEDIMENT TUBE @ (Write Unit Price In Words)	4	EA		
8	C-102	TEMPORARY CONCRETE WASHOUT STATION @ (Write Unit Price In Words)	1	EA		

BID SCHEDULE

BASE BID - COMMERCIAL APRON EXPANSION

ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
9	P-151	CLEARING AND GRUBBING @ (Write Unit Price In Words)	4	AC		
10	REP	REMOVE EXISTING BITUMINOUS PAVEMENT, ANY THICKNESS, FULL DEPTH (AIRFIELD) @ (Write Unit Price In Words)	650	SY		
11	REP	REMOVE EXISTING CONCRETE PAVEMENT, ANY THICKNESS, FULL DEPTH (AIRFIELD) @ (Write Unit Price In Words)	300	SY		
12	P-152	UNCLASSIFIED EXCAVATION @ (Write Unit Price In Words)	12,000	CY		
13	P-152	UNSUITABLE EXCAVATION @ (Write Unit Price In Words)	2,000	CY		
14	P-401	BITUMINOUS CONCRETE SURFACE COURSE @ (Write Unit Price In Words)	750	TON		
15	P-403	BITUMINOUS CONCRETE BASE COURSE @ (Write Unit Price In Words)	6,000	TON		
16	P-501	8" PORTLAND CEMENT CONCRETE PAVEMENT @ (Write Unit Price In Words)	400	SY		

BID SCHEDULE

ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
BASE BID - COMMERCIAL APRON EXPANSION						
17	P-501	12" PORTLAND CEMENT CONCRETE PAVEMENT @ (Write Unit Price In Words) _____	14,000	SY	_____	_____
18	P-603	EMULSIFIED ASPHALT TACK COAT @ (Write Unit Price In Words) _____	1,900	GAL	_____	_____
19	P-620	REMOVE EXISTING PAVEMENT MARKING @ (Write Unit Price In Words) _____	500	SF	_____	_____
20	P-620	AIRFIELD PAVEMENT MARKING (REFLECTORIZED AVIATION YELLOW) @ (Write Unit Price In Words) _____	1,000	SF	_____	_____
21	P-620	AIRFIELD PAVEMENT MARKING (NON-REFLECTORIZED BLACK) @ (Write Unit Price In Words) _____	2,500	SF	_____	_____
22	D-701	DRY DETENTION BASIN 4" DIAMETER PERFORATED PIPE WITH GEOTEXTILE FABRIC WRAP @ (Write Unit Price In Words) _____	160	LF	_____	_____
23	D-701	18" DOUBLE WALLED HDPE PIPE @ (Write Unit Price In Words) _____	5	LF	_____	_____
24	D-701	18" REINFORCED CONCRETE PIPE, CLASS IV @ (Write Unit Price In Words) _____	458	LF	_____	_____

BID SCHEDULE

ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
BASE BID - COMMERCIAL APRON EXPANSION						
25	D-701	24" REINFORCED CONCRETE PIPE, CLASS IV @ (Write Unit Price In Words) _____	248	LF	_____	_____
26	D-705	PAVEMENT EDGE STRIP DRAIN @ (Write Unit Price In Words) _____	485	LF	_____	_____
27	D-705	4-INCH PVC STRIP DRAIN COLLECTOR PIPE, SCHEDULE 80 @ (Write Unit Price In Words) _____	180	LF	_____	_____
28	D-705	4-INCH STRIP DRAIN CLEANOUT @ (Write Unit Price In Words) _____	5	EA	_____	_____
29	D-751	4' X 4' STORM DRAIN GRATE INLET @ (Write Unit Price In Words) _____	1	EA	_____	_____
30	D-751	DRY DETENTION BASIN RISER INFILTRATION STRUCTURE @ (Write Unit Price In Words) _____	1	EA	_____	_____
31	F-162	REMOVE EXISTING FENCE @ (Write Unit Price In Words) _____	1,200	LF	_____	_____
32	F-162	8-FOOT HIGH CHAIN LINK FENCE WITH 3 STRANDS BARBED WIRE @ (Write Unit Price In Words) _____	1,000	LF	_____	_____

BID SCHEDULE

ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
BASE BID - COMMERCIAL APRON EXPANSION						
33	F-162	24 FOOT WIDE DOUBLE SWING CHAIN LINK FENCE GATE @ (Write Unit Price In Words) _____	1	EA	_____	_____
34	L-105	REMOVE EXISTING GUIDANCE SIGN & BASE @ (Write Unit Price In Words) _____	2	EA	_____	_____
35	L-105	REMOVE EXISTING TAXIWAY EDGE LIGHT @ (Write Unit Price In Words) _____	12	EA	_____	_____
36	L-108	CABLE TRENCH @ (Write Unit Price In Words) _____	3,000	LF	_____	_____
37	L-108	L-824 1/C, #8, 5kV, TYPE "C" CABLE INSTALLED IN CONDUIT @ (Write Unit Price In Words) _____	4,200	LF	_____	_____
38	L-108	1/C, #6 BARE COPPER COUNTERPOISE, INCLUDING GROUND RODS AND GROUND CONNECTORS @ (Write Unit Price In Words) _____	3,000	LF	_____	_____
39	L-110	2-INCH, SCHEDULE 40 PVC CONDUIT IN GRASSED AREAS @ (Write Unit Price In Words) _____	3,000	LF	_____	_____
40	L-110	4-INCH, 4-WAY CONCRETE ENCASED UNDERGROUND DUCT @ (Write Unit Price In Words) _____	150	LF	_____	_____

BID SCHEDULE

ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
BASE BID - COMMERCIAL APRON EXPANSION						
41	L-115	ELECTRICAL MANHOLE @ (Write Unit Price In Words) _____	2	EA	_____	_____
42	L-125	L-861T BASE MOUNTED MEDIUM INTENSITY LED TAXIWAY EDGE LIGHT @ (Write Unit Price In Words) _____	35	EA	_____	_____
43	L-125	L-853 TAXIWAY RETROREFLECTIVE MARKER, SURFACE MOUNTED @ (Write Unit Price In Words) _____	12	EA	_____	_____
44	L-125	L-853 TAXIWAY RETROREFLECTIVE MARKER, SOIL MOUNTED @ (Write Unit Price In Words) _____	4	EA	_____	_____
45	L-125	L-858, SIZE 1, STYLE 2, CLASS 2, DOUBLE SIDED AIRFIELD GUIDANCE SIGN (5 - 6 CHARACTERS), LED @ (Write Unit Price In Words) _____	1	EA	_____	_____
46	L-125	L-858, SIZE 1, STYLE 2, CLASS 2, DOUBLE SIDED AIRFIELD GUIDANCE SIGN (7 - 8 CHARACTERS), LED @ (Write Unit Price In Words) _____	3	EA	_____	_____
47	T-901	TEMPORARY SEEDING (MULCHED) @ (Write Unit Price In Words) _____	3	AC	_____	_____
48	T-901	PERMANENT SEEDING (MULCHED) @ (Write Unit Price In Words) _____	3	AC	_____	_____

BID SCHEDULE

BASE BID - COMMERCIAL APRON EXPANSION ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
49	T-904	PERMANENT BAHIA SOD @ (Write Unit Price In Words) _____ _____ _____ _____	21,780	SF	_____	_____
50	R-651	SECURITY FENCE SIGN @ (Write Unit Price In Words) _____ _____ _____ _____	4	EA	_____	_____
51	M-103	CLOSED TAXIWAY MARKER @ (Write Unit Price In Words) _____ _____ _____ _____	5	EA	_____	_____
52	M-110	EXTRUDED BIAXIAL GEOGRID STABILIZATION FABRIC @ (Write Unit Price In Words) _____ _____ _____ _____	150	SY	_____	_____

APPENDIX “E” – CONSTRUCTION, SAFETY, AND PHASING PLAN

CONSTRUCTION, SAFETY, AND PHASING PLAN (CSPP)

FOR

COMMERCIAL APRON EXPANSION

FAA AIP NO. PENDING

Hilton Head Island Airport (HXD)
Hilton Head Island, South Carolina

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

PREPARED FOR:

Beaufort County

BY:

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205

APRIL 2020
TBE PROJECT NO. 2119-1906

Table of Contents

CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

This Construction Safety & Phasing Plan (CSPP) has been developed for the Hilton Head Island Airport, in accordance to FAA Advisory Circular (AC) 150/5370-2G, Section 2, Plan Requirements. The outline included in the AC has been followed and is referenced in the document below (see plan sheets for project location).

Project Description

This project includes the expansion of the commercial terminal aircraft parking apron, as well as a new connector taxiway from the parallel TW F into the proposed apron expansion.

1. (2.5) Coordination

As per AC 150/5300-9 the Airport will conduct pre-bid and pre-construction conferences as the project moves forward towards construction. This project is being funded through a grant provided by the Federal Aviation Administration (AIP No. Pending).

a. Contractor Progress Meetings - The project specifications require the construction contractor to attend bi-weekly progress meetings with representatives of the Airport and the Engineer present to discuss scheduling, safety compliance, operations, and progress across the project site.

b. **Scope or Schedule Changes -** Any scope or scheduling changes discussed at these meetings may necessitate a revision to this CSPP, and will be coordinated immediately following the progress meeting.

c. **FAA ATO Coordination** - Coordination of the project design and Construction Safety and Phasing Drawing will be made through the FAA Atlanta Area District Office. The Construction Safety and Phasing Drawing is attached to this CSPP (Attachment A). Construction will take place inside of the Taxiway 'F' Safety Areas (TSA) during Phase 2. No work inside the Runway 3-21 Runway Safety Area (RSA) is anticipated for this project.

The Contractor and RPR will coordinate with the airport management staff to verify that the proper NOTAMs are in place.

2. (2.6) Phasing

a. Locations, Durations, and Sequence of Work. The project is comprised of two (2) phases of work. Each area will include construction access and traffic control. The contract time for the entire project is 150 calendar days. Refer to the project plans for graphical depictions of the areas along with notes on operational requirements.

b. The Contractors superintendent shall have regular bi-weekly progress meetings with the Engineer and the airport management. The project schedule shall be reviewed at each meeting, as well as work anticipated for the week.

c. The Contractor shall submit a project schedule identifying the critical dates when work will occur in the safety areas. The project schedule shall be submitted prior to the start of construction outlining dates for taxilane and/or taxiway closures. The Contractor shall notify the Engineer 14 calendar days in advance of beginning construction in the work area.

d. The Contractor shall begin site demolition and installation as per the plans.

e. The Contractor shall follow all safety plan requirements as stated in the safety plan notes. No deviation will be allowed unless otherwise coordinated with the Engineer.

f. Low profile aviation barricades and closure markers shall be placed in the locations noted on the plan. The Contractor may be asked to relocate or place barricades in different locations in order to improve airport operations.

g. The Contractor shall verify location and placement of all low profile aviation barricades and closure markers in the field with the Owner. The condition and location of all lighted barricades and closure markers shall be checked daily by the Contractor.

h. Barricades and/or closure markers shall be placed prior to starting work impacting the respective safety area. The barricades and/or closure markers shall be removed prior to opening any runway or taxiway.

i. The Contractor shall assess the locations of haul roads in order to access construction areas. It is the Contractor's responsibility to respect all runway & taxiway safety areas as well as runway & taxiway object free areas for the safe operation of aircraft and construction equipment.

3. (2.7) Areas and Operations Affected by the Construction Activity.

a. Operational Impact

The work included in this project is divided into two phases. Phase 1 consists of all work outside the Taxiway 'F' Safety Area and Phase 2 will consist of all work inside of the Taxiway 'F' Safety Area. These phases are shown on the Construction and Safety Phasing Plan drawing (Attachment 'A').

Phase 1

Phase 1 consists of all work outside of the Taxiway 'F' Safety Area. No operational impacts are anticipated.

Phase 2

Phase 2 consists of all work inside of the Taxiway 'F' Safety Area. Taxiway 'F' will be closed from the Ramp 'D' entrance to the approach end of Runway 3. Connector taxiways 'F1' and 'F2' will be closed as well.

b. Operational Affect Table. Contained within Table 1 below are the anticipated operational impacts to the Hilton Head Island Airport during the course of the project. Impacts will vary based on normal operations of an area, construction phase, and duration of work. Contractor is required to coordinate with Airport Management as detailed in Sections 1 and 5 of this document prior to impacting operations on the airport. Cells left empty represent no change to the area.

Table 1. Airport Operations Affected by Construction

Operational Requirement	Normal	Phase 1	Phase 2
Runway 3-21	5,000' Length		
Runway 3 Approach Mins	302-1		
Runway 21 Approach Mins	382-1		
Taxiway A	ADG II		
Taxiway A1	ADG II		
Taxiway A2	ADG II		
Taxiway A3	ADG II		
Taxiway A4	ADG II		
Taxiway A5	ADG II		
Taxiway A6	ADG II		
Taxiway F	ADG II		Closed south of terminal ramp
Taxiway F1	ADG II		Closed
Taxiway F2	ADG II		Closed
Taxiway F3	ADG II		
Taxiway F4	ADG II		
Taxiway F5	ADG II		
Taxiway A7	ADG II		

c. Runway Safety Areas. No construction may occur within the existing RSA while the runway is open for aircraft operations. Contractor shall not enter into the safety area of any active runway or any movement area without prior coordination with Airport Management and Air Traffic Control. While the Air Traffic Control Tower is open, the contractor shall not enter into a movement area without prior permission from Air Traffic Control on the Hilton Head Island Ground frequency 121.1.

The Hilton Head Island Air Traffic Control Tower is attended from 7:00 am to 9:00 pm local time. The contractor shall monitor the Hilton Head Island Ground frequency at all times when the Tower

is open. While the Tower is closed, the contractor shall monitor the Common Traffic Advisory Frequency (CTAF) 118.975. Runway safety area dimensions are shown in Table 2 below and are depicted on the phasing plan sheets.

Table 2. Safety Area of Effected Active Runways

Runway	Aircraft Approach Category	Airplane Design Group	Runway Safety Area Distance From Runway Centerline
3-21	C	II	200'

d. Taxiway Safety Area. A taxiway safety area (TSA) is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. The taxiway safety area width varies by the size and group of aircraft using the taxiway or taxilane. Construction activities within the TSA area subject to the following conditions:

1) No construction may occur within the existing TSA while the taxiway is open for aircraft operations.

2) No anticipated adjustment to TSA width is anticipated for this project. Should the need for adjustment of the TSA width be required, the airport operator must coordinate the adjustment of the TSA width, as permitted in AC 150/5370-2G – Operational Safety on Airports during Construction, version 12/13/17, with the appropriate FAA Airports Regional or District Office. Airport Management shall issue a NOTAM if approved.

3) Excavations:

- Open trenches or excavations are not permitted within the TSA while the taxiway is open. If possible, backfill trenches before the taxiway is opened. If the taxiway must be opened before excavations are backfilled, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft.

- Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

4) Erosion Control. Soil erosion must be controlled to maintain TSA standards. The TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting the occasional passage of aircraft without causing structural damage to the aircraft.

e. Taxiway & Taxilane Object Free Area (TOFA). Unlike the Runway Object Free Area, aircraft wings regularly penetrate (extend into) the taxiway or taxilane object free area during normal operations. Thus, the restrictions are more stringent. Barricades will be used to segregate construction zones from areas open to aircraft.

1) No construction may occur within the existing TOFA while the taxiway is open for aircraft operations.

2) The airport operator must coordinate the adjustment of the TSA width, as permitted in AC 150/5370-2G – Operational Safety on Airports during Construction, version 12/13/17, with the appropriate FAA Airports Regional or District Office. Airport Management shall issue a NOTAM if approved.

3) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang).

f. Obstacle Free Zone (OFZ). All personnel, materials, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations.

g. Runway Approach Protection Area. No work is proposed in the runway approaches for this project. Therefore, all personnel, materials, and/or equipment shall remain clear of the applicable threshold siting surfaces as defined in under "Threshold Siting Requirements," of AC 150/5300-13.

4. (2.8) Navigational Aid (NAVAID) Protection

The Contractor staging and work areas are located outside of the Runway Safety Area (RSA) as shown on the Safety and Phasing Plan (see Attachment A of this document). General requirements for the protection of exiting utilities, including NAVAIDs, are presented in SAFE section of the project specifications.

All existing facilities will be carefully protected by the Contractor. Any facilities damaged by the Contractor will be repaired immediately and restored to original condition. The contractor shall be required to provide a private utility locating firm for all private utility locations. All runway lights, taxiway lights, signs, and concrete surfaces to remain exposed shall be protected from asphalt and paint spray by suitable means. These and any other above-ground facilities shall be cleaned, if asphalt or paint is deposited on them, to the satisfaction of the ENGINEER. It is understood and agreed that the OWNER does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of his/her responsibility to protect such existing features from damage or unscheduled interruption of service.

Should the Contractor damage or interrupt the operations of a utility service or facility outside the project limits by accident or otherwise, he shall immediately notify the proper authority and the ENGINEER and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the ENGINEER continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to his/her operations whether or not due to negligence or accident. The Contract Owner reserves the right to deduct such costs form any monies due or which may become due to the Contractor.

Construction will not occur within the Runway 21 Localizer Critical Area during the project. The Contractor shall coordinate the issuance of NOTAMs regarding the closure of navigational facilities with Airport Management, if required.

5. (2.9) Contractor Access

a. Locations of Stockpiled Construction Materials. All stockpiled material or equipment shall be located in the contractor's staging areas. Prior to leaving work each day the contractor shall return all construction material and equipment to the staging area or in areas approved by airport management. No trenches will be allowed remain open after working hours. All debris from the demolition and other construction debris shall be removed from the airport property in a location to be determined by the contractor unless otherwise shown on the plans.

b. Vehicle and Personnel Operations

1) **Construction site parking.** Personal vehicles shall be parked outside of the airport security fence. Only contractor vehicles will be allowed to enter the security fence.

2) **Construction Equipment Parking**. Prior to leaving work each day the Contractor shall return all construction equipment to the appropriate staging area. For location of the staging area see the Construction Safety and Phasing Plan drawing (Attachment A).

3) **Access and Haul Roads.** Access roads to be used under this contract shall be those approved by the airport management. In general, the Contractor shall confine his movement to the designated haul routes. If existing pavement is damaged by the contractor it shall be repaired to its original condition by the contractor at the contractor's expense. Metal track vehicles will not be permitted on existing pavements without protective matting to prevent marring of the surface. For the contractor's access routes see the Construction Safety and Phasing Plan drawing (Attachment A).

   The Contractor shall conduct his operations in such a manner as to assure that such operations do not impede owner access to any area of the airfield at any time.

4) **Marking and Lighting of Vehicles**. All equipment and vehicles operating within the project limits shall be marked with 3'x3' orange and white checkered flags at all times and each vehicle shall display company name and/or logo on each side for easy identification. During periods of low visibility (including nighttime), equipment and vehicles must be identified with a yellow flashing dome type light. All lights and flags shall meet FAA Advisory Circular 150\5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport. Copies of the Advisory Circular will be made available upon request.

5) **Description of proper vehicle operations.** All construction vehicles must be approved for access by the airport management.

6) **Required Escorts.** During work within the secure area, the contractor's employees shall be badged in accordance with Hilton Head Island Regional Airport requirements. Individuals without proper badging and requiring entrance into the secured area shall be escorted at all times by a badged employee.

7) **Training requirements for vehicle drivers.** Each contractor vehicle driver within the airport security fence must have completed (or be escorted by a contractor vehicle driver that has completed) the airport's ground vehicle driver training program.

8) **Situational awareness.** The Contractor shall maintain his own situational awareness for the duration of the project. This project is adjacent to active airfield pavements, so it will be imperative that an awareness of surroundings is maintained.

   Men, equipment, or other construction related material are not allowed with the Runway Safety Area of an active runway or Taxiway Safety Area of an active taxiway. Ensure that no construction employees, employees of subcontractors, or suppliers, or other persons enter any part of the airport outside of the construction site unless authorized.

During construction, adjacent aprons, taxilanes, taxiways, and runway will be open to aircraft unless otherwise noted. Aircraft have the right of way at all times. Contractor shall be aware of aircraft movements and the jet blast and/or prop-wash associated with these aircraft. The Contractor shall secure all loose items on the job site.

9) **Two-way radio communication procedures.** The Contractor shall provide his own two-way radios for communication throughout the project. The airport ground frequency is 121.1 MHz. The Contractor shall monitor this frequency to comply with instructions from airport management, and also for the safety of his personnel during a potential aircraft emergency. The Hilton Head Island Air Traffic Control Tower is attended from 7:00 am to 9:00 pm local time. The contractor shall monitor the Hilton Head Island Ground frequency at all times when the Tower is open. While the Tower is closed, the contractor shall monitor the Common Traffic Advisory Frequency (CTAF) 118.975.

10) **Maintenance of the secured area of the airport**

a) Fencing and gates - The Contractor shall be responsible for controlling access to the project site through the security fence. At the completion of each working day, the Contractor shall close and lock the construction entrance gates prior to departing the project site.

b) Badging requirements – During work within the secure area, the contractor's employees shall be badged in accordance with Hilton Head Island Airport requirements. The Contractor will be responsible for the actions of all laborers, sub-contractors, drivers, etc. working on the airport.

6. (2.10) Wildlife Management

a. Trash. The Contractor shall clean all construction areas of litter, including food items such as wrappers, bottles, etc. on a minimum daily basis. A more frequent basis may be required if so directed by the airport management or Engineer. The Contractor shall require his employee's and subcontractor's to clean-up and properly dispose of these items prior to departing the project site.

b. Standing Water. If wet conditions are encountered during construction, the contractor is responsible for dewatering areas to remove standing water.

c. Tall Grass and Seeds. For ground stabilization measures, only the use of the grass type and mulch type included in the project plans and specifications shall be used. Substitute grass and mulch types shall require review for comparison to known wildlife attractant materials and written approval from the Engineer prior to its use.

d. Poorly Maintained Fencing and Gates. The airports fencing and gates shall be protected at all times. Any damage to a gate or fence by the contractor shall be repaired immediately and reported to the Owner.

e. Disruption of Existing Wildlife Habitat. This project is not expected to disrupt any existing wildlife habitat. The Contractor shall notify the airport management immediately should this situation occur.

7. (2.11) Foreign Object Debris (FOD) Management

The Contractor shall keep all active airfield pavements and access roads clear of all debris, stone, dirt, mud, concrete, etc. during construction. All active pavements shall be cleaned of construction debris and spillage immediately. The Contractor shall visually inspect active pavements after each crossing by vehicles throughout the duration of the project.

The Contractor shall clean all construction areas of litter, loose papers, debris, etc. on a minimum daily basis. A more frequent basis may be required if so directed by the airport management or Engineer. The Contractor shall require his employee's and subcontractor's to clean-up and properly dispose of these items prior to departing the project site.

8. (2.12) Hazardous Material Management

No hazardous materials are anticipated to be implemented or removed with the construction project. Contractors operating construction vehicles and equipment on the job-site shall be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks. The availability of Contractor provided spill clean-up kits is recommended.

9. (2.13) Notification of Construction Activities

a. Notification of Construction Activities. The Contractor and all sub-contractors shall designate a representative and alternate to contact on 24 hours basis should problems arise. The point of contact provided must be able to coordinate an immediate response to correct any construction related activity that may adversely affect the operational safety of the airport. The Contractor shall provide a listing of all contact persons and all supervisory personnel and all sub-contractors at the pre-construction meeting, before any work begins.

b. NOTAMs. The owner will issue the necessary NOTAMs to reflect hazardous and operational conditions. The Contractor shall work with the engineer and owner to schedule NOTAM issuance regarding runway and taxiway closures. The Contractor shall not begin work unless and until 72-hours prior notice has been given the Engineer and airport management.

c. Emergency Notification Procedures. Emergency notification procedures shall initiate with the Contractor dialing 911 to report the emergency. Secondary notification shall be made to the airport operations, at (843) 255-2952. Airport management shall verify with Contractor that 911 has been dialed, and will provide further direction if necessary, to the Contractor. The Contractor shall cooperate with airport management and emergency personnel as needed.

d. Coordination with ARFF. This project will not deactivate any waterlines or use any hazardous materials. While work is performed in the apron and taxiway work areas, ARFF response routes may be affected. The Contractor shall coordinate with the Owner and ARFF personnel prior to closing any area of airfield pavement to ensure that ARFF routes are not affected or are temporarily rerouted accordingly.

e. Notification to the FAA.

1) **Part 77 -** If the Contractor utilizes cranes, bucket trucks or other equipment exceeding 25’ in height, the contractor will be responsible for filing a “Notice of Proposed Construction or Alteration (FAA Form 7460) with the FAA prior to erecting equipment. The Contractor should allow at least 30 days for FAA review. A 7460 has already been submitted for the overall project.

2) **Part 157** – Not applicable

3) **NAVAIDs**

- Airport owned – The Contractor shall coordinate with the airport management in advance of the temporary shutdown of all NAVAIDs. The NAVAIDs requiring temporary shutdowns include Runway Centerline and Edge Lights, Touchdown Zone Lights, PAPIs, Localizer, Glideslope, MALSR, REILs, and Taxiway Edge Lights. NAVAIDs shall only be deactivated while the associated pavement is closed to aircraft. All NAVAIDs associated with the runway shall be shutdown nightly as work is performed within the runway work area. Once work begins within the Localizer or Glideslope Critical Areas, the effected NAVAID shall remain shut down until all work within the associated critical area is completed and a flight check is performed and accepted. Portions of the taxiway lighting circuit shall be shut down during individual taxiway work areas. The contractor will provide temporary jumpers to allow the remainder of the circuit to be active. The airport management will be allowed to re-schedule the temporary shutdown should weather conditions require the use of the lighting system.
- FAA owned – No construction activities are anticipated within any FAA owned navaid critical area for the duration of this project.

10. (2.14) Inspection Requirements

a. Daily Inspections. Daily safety inspections shall be performed by the Contractor throughout the duration of the construction project. A Construction Project Daily Safety Inspection Checklist has been developed based on the guidelines included in Appendix 4 of AC 150/5370-2G. This checklist is included in Appendix 4 of this CSPP for the Contractor's use. The Engineer's on-site representative will be present during these daily safety inspections. Bi-weekly inspections are anticipated to be made by the Engineer throughout the project for verification of the Contractor's compliance with this CSPP. Additional inspections are anticipated to be made by airport management throughout the project.

b. Final Inspection. A final inspection shall be made by the Airport Sponsor, FAA, Engineer, and Contractor prior to acceptance of the construction project.

Prior to the opening of the closed section of apron/taxiway the contractor must perform a walkthrough of the construction area with airport personnel and the RPR to confirm that pavements are clear of FOD or other hazards.

The Contractor shall be required to remedy any deficiencies immediately, whether caused by negligence, oversight, or project scope change to the satisfaction of the airport management and the Engineer.

11. (2.15) Underground Utilities

The Contractor is required to contact South Carolina 811 by dialing 811 or 888-721-7877 prior to any excavation on the job-site for marking of these known utilities. The Contractor is also required to cooperate as necessary with the utility owners should relocation of an underground utility be necessary.

a. All existing facilities shall be carefully protected by the Contractor. Any facilities damaged by the Contractor will be repaired immediately and restored to original condition at the Contractor’s expense. All taxiway lights, signs, bituminous, and concrete surfaces to remain shall be protected by suitable means. If damaged by the Contractor, these and any other above or below ground facilities shall be repaired at the Contractor’s expense, to the satisfaction of the ENGINEER and the OWNER.

b. The Contractor shall be solely responsible for location and protecting all existing above and underground facilities and shall bear all associated costs within the Item “Mobilization”. The

Contractor shall employ a private utility locator service or shall obtain and utilize cable location equipment in order to field locate existing cable runs not to be disturbed/replaced by this project.

c. It is understood and agreed that the OWNER does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of his/her responsibility to protect such existing features from damage or unscheduled interruption of service.

d. Should the Contractor damage or interrupt the operations of a utility service or facility outside the project limits by accident or otherwise, he shall immediately notify the proper authority and the ENGINEER and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the ENGINEER continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

e. The Contractor shall bear all costs or damage and restoration of service to any utility service or facility due to his/her operations whether or not due to negligence or accident. The Contract OWNER reserves the right to deduct such costs from any monies due or which may become due to the Contractor.

12. (2.16) Penalties

Should the Contractor or other individuals at the project site not comply with the requirements of this CSPP and/or the airport's rules and regulations, the Hilton Head Island Regional Airport reserves the right to remove said individual(s) from the project site. Any individual removed from the project site shall not be allowed back on the project site unless expressly permitted by airport management.

13. (2.17) Special Provisions

The Contractors supervisory personnel are expected to become knowledgeable regarding the airport’s operational, safety and security requirements, actively participate in project meetings, establish effective communications with the RPR and airport management. Access will be restricted during the project. Schedule updates between the contractor/owner and RPR will be required on a weekly basis.

The Contractor shall cooperate with airport management should an emergency or other event occur that requires temporary suspension of construction operations. The Hilton Head Island Regional Airport is attended by airport personnel from 6:00 to 10:00pm, however, the airport is open to aircraft operations at all times. The Air Traffic Control tower is also attended between the hours of 7:00 AM and 9:00 PM.

14. (2.18) Runway and Taxiway Visual Aids

a. General. The apron/taxiway closure visual aids ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including but not limited to the noted closed runway/taxiway. Throughout the duration of the construction project the Contractor shall verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs and visual NAVAIDs remain in place and operational or areas of pavement open to aircraft.

b. Markings – Markings must be in compliance with AC 150/5340-1 at all times.

c. Signs – Signs must conform to AC 150/5345-44, Specification for Runway and Taxiway Signs, AC 150/5340-18, Standards for Airport Sign Systems, and AC 150/5345-53, Airport Lighting Certification Program.

d. Lighting and Visual Aids

Temporarily closed section of apron/taxiway/runway – All taxiway and runway lighting shall be in conformance with AC 150/5340-30, Design and Installation Details for Airport Visual Aids, AC 150/5345-53, Airport Lighting Certification Program, and AC 150/5345-50, Specification for Portable Runway and Taxiway Lights. When disconnecting taxiway or runway lighting fixtures, disconnect the associated isolation transformers. Alternately, cover the light fixture in such a way as to prevent light leakage. Avoid removing the lamp from energized fixtures because an excessive number of isolation transformers with open secondaries may damage the regulators and/or increase the current above its normal value. Secure, identify, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources. Low profile lighted barricades will be provided on the apron side of the construction to prevent access to the apron by construction equipment.

Lighted taxiway closure markers and barricades will be installed to indicate closed sections of the taxiways.

15. (2.19) Marking and Signs for Access Routes

The Contractor's access routes are shown on the Construction Safety and Phasing Plan drawing (Attachment A). Access points and on-airport access routes shall be discussed at the pre-construction meeting and at progress meetings to address construction needs and airport operational safety. The contractor is expected to maintain the haul routes in safe, clean and orderly condition at all times. All applicable signs to be installed at the RSA and the TOFA on the service roads, if applicable. Pavement markings and signs intended for construction personnel shall conform to AC 150/5340-18, Standards for Airport Sign Systems, and to the extent practicable, with the MUTCD and/or State highway specifications.

16. (2.20) Hazard Marking, Lighting, and Signing

a. Purpose. The hazard marking and lighting prevents pilots from entering areas closed to aircraft, and prevents construction personnel from entering areas open to aircraft. Hazard marking and lighting shall also identify inlets, manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. A contractor's representative shall be on call 24 hours per day for emergency maintenance of airport hazard lighting and barricades.

b. Equipment

1) **Lighted Barricades**. Low profile aviation barricades shall conform to the requirements of FAA Advisory Circular 150/5370-2 (current edition) "Operational Safety On Airports During Construction". The barricades shall be a minimum of 8' in length. The barricades should be marked with diagonal, alternating orange and white stripes and should be located to indicate construction locations in which no part of an aircraft may enter. See detail included on the Construction Safety and Phasing Plan drawing, if applicable.

2) **Lights must be red**. A steady burning red light shall be centered on each lighted barricade and must meet the luminance requirements of the South Carolina Department of Transportation. Lights must be securely mounted on barricades and spaced at no more than 10 feet. Alternately, to maintain proper light spacing, multiple lights may be installed on the same barricade. Lights must be operated between sunset and sunrise and during periods of low viability whenever the airport is open for operations.

3) **Supplemental barricades with signs**. No supplemental signs are anticipated for this project.

4) **Air Operations Area - General**. Barricades are not permitted in any active safety area. Within runway or taxiway object free areas and on aprons, collapsible barricades marked with diagonal, altering orange and white stripes shall be provided to separate all

construction/maintenance areas from the movement area. All barricades adjacent to any open runway or taxiway/taxilane safety area, or apron must be as low as possible to the ground, and no more than 18 inches high, exclusive of supplementary lights. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, or other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 inches above the ground.

5) **Air Operations Area - Runway/Taxiway Intersections.** Lighted barricades will be installed for all closed taxiway sections. Closed taxiway markers shall be installed at runway/taxiway intersections. See Closed Marker/Barricade Layout Detail on the Construction Safety and Phasing Plan drawing, if applicable.

17. (2.21) Work Zone Lighting for Nighttime Construction

Work areas must be adequately illuminated during nighttime hours of construction. It is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The spacing must be determined by trial. Light towers should be positioned and adjusted to aim away from ATCT cabs and active runways to prevent blinding effects. Shielding may be necessary. Light towers should be removed from the construction site when the area is reopened to aircraft operations.

18. (2.22) Protection of Runway and Taxiway Safety Areas

No anticipated adjustment to RSA/TSA widths is anticipated for this project. Should the need for adjustment of the RSA/TSA width be required, the airport operator must coordinate the adjustment of the RSA/TSA width, as permitted in AC 150/5370-2 – Operational Safety on Airports during Construction, latest version, with the appropriate FAA Airports Regional or District Office. Airport Management shall issue a NOTAM if approved.

a. **Runway Safety Area (RSA).** A Runway Safety Area is a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. No work is to be conducted within the RSA while a runway is open for aircraft operations.

b. **Runway Object Free Area (ROFA).** No material shall be stockpiled inside the limits of the active ROFA unless approved by air spacing through the appropriate FAA airports regional or district office. All equipment shall be removed from the ROFA when not in use.

c. **Taxiway Safety Area (TSA).** A taxiway safety area (TSA) is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. The taxiway safety area width varies by the size and group of aircraft using the taxiway or taxilane. No construction may occur within the existing TSA while the taxiway is open for aircraft operation.

d. Construction activities within the RSA/TSA areas are subject to the following conditions:

1) No construction may occur within the existing RSA/TSA while the runway/taxiway is open for aircraft operations.

2) Excavations:

- Open trenches or excavations are not permitted within the RSA/TSA while the taxiway is open. If possible, backfill trenches before the runway/taxiway is opened. If the runway/taxiway must be opened before excavations are backfilled, cover the

excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft.

- Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during house of restricted visibility or darkness.

3) Erosion Control. Soil erosion must be controlled to maintain RSA/TSA standards. The RSA/TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting the occasional passage of aircraft without causing structural damage to the aircraft.

4) There is no blasting permitted on this project.

e. Taxiway & Taxilane Object Free Area (TOFA). Unlike the Runway Object Free Area, aircraft wings regularly penetrate (extend into) the taxiway or taxilane object free area during normal operations. Thus, the restrictions are more stringent. Barricades will be used to segregate construction zones from areas open to aircraft.

1) No construction may occur within the existing TOFA while the taxiway is open for aircraft operations.

2) No adjustment to the TOFA width is anticipated for this project. Should the need for adjustment to the TOFA width be required, Airport management must coordinate the adjustment of the TOFA width as permitted above with the appropriate FAA Airports Regional or District Office and the FAA air traffic manager. Airport Management shall issue a NOTAM if approved.

3) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang).

f. Obstacle Free Zone (OFZ). All personnel, materials, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations.

g. Runway approach/departure surfaces. No work is proposed in the runway approaches for this project. Therefore, all personnel, materials, and/or equipment shall remain clear of the applicable threshold siting surfaces as defined in under "Threshold Siting Requirements," of AC 150/5300-13.

19. (2.23) Other Limitations on Construction.

a. Prohibitions

1) No use of tall equipment. If the contractor utilizes cranes, bucket trucks or other equipment exceeding 25' in height, the contractor will be responsible for filing a "Notice of Proposed Construction or Alteration (FAA Form 7460) with the FAA prior to erecting equipment. The Contractor should allow at least 30 days for FAA review.

2) No use of open flame welding torches.

3) No use of electrical blasting caps on/or within 1,000 ft. of the airport property.

4) No use of flare pots within the airport property.

b. Restrictions

All work outside of any active runway/taxiway/taxilane safety area may be completed at any time of day. The contractor must be in constant contact with the control tower if utilizing an open taxiway as a haul route. Otherwise, no vehicles may enter within an active safety area. The contractor shall coordinate with airport operations when working in safety areas.

Appendix 1 – Related Reading Material

Obtain the latest version of the following free publications from the FAA on its Web site at http://www.faa.gov/airports/.

AC	Title and Description
AC 150/2500-28	*Notices to Airmen (NOTAMs) for Airport Operators* Guidance for using the NOTAM System in airport reporting.
AC 150/5200-30	*Airport Field Condition Assessments and Winter Operations Safety* Guidance for airport owners/operators on the development of an acceptable airport snow and ice control program and on appropriate field condition reporting procedures.
AC 150/5200-33	*Hazardous Wildlife Attractants On or Near Airports* Guidance on locating certain land uses that might attract hazardous wildlife to public-use airports.
AC 150/5210-5	*Painting, Marking, and Lighting of Vehicles Used on an Airport.* Guidance, specifications, and standards for painting, marking, and lighting vehicles operating in the airport air operations areas.
AC 150/5210-20	*Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports* Guidance to airport operators on developing ground vehicle operation training programs.
AC 150/5300-13	*Airport Design* FAA standards and recommendations for airport design. Establishes approach visibility minimums as an airport design parameter, and contains the Object Free area and the
AC 150/5310-24	*Airport Foreign Object Debris (FOD) Management* Guidance for developing and managing an airport foreign object debris (FOD) program
AC 150/5320-15	*Management of Airport Industrial Waste* Basic information on the characteristics, management, and regulations of industrial wastes generated at airports. Guidance for developing a Storm Water Pollution Prevention Plan (SWPPP) that applies best management practices to eliminate, prevent, or reduce pollutants in storm water runoff with particular airport industrial
AC 150/5340-1	*Standards for Airport Markings* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5340-18	*Standards for Airport Sign Systems* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5345-28	*Precision Approach Path Indicator (PAPI) Systems* FAA standards for PAPI systems, which provide pilots with visual glide slope guidance during approach for landing.
AC 150/5340-30	*Design and Installation Details for Airport Visual Aids* Guidance and recommendations on the installation of airport visual aids.
AC 150/5345-39	Specification for L-853, Runway and Taxiway Retroreflective Markers

AC	Title and Description
AC 150/5345-44	*Specification for Runway and Taxiway Signs* FAA specifications for unlighted and lighted signs for taxiways and runways.
AC 150/5345-53	*Airport Lighting Equipment Certification Program* Details on the Airport Lighting Equipment Certification Program (ALECP).
AC 150/5345-50	*Specification for Portable Runway and Taxiway Lights* FAA standards for portable runway and taxiway lights and runway end identifier lights for temporary use to permit continued aircraft operations while all or part of a runway lighting system is inoperative
AC 150/5345-55	*Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure*
AC 150/5370-10	*Standards for Specifying Construction of Airports* Standards for construction of airports, including earthwork, drainage, paving, turfing, lighting, and incidental construction.
AC 150/5370-12	*Quality Management for Federally Funded Airport Construction Projects*
EB 93	*Guidance for the Assembly and Installation of Temporary Orange Construction Signs*
FAA Order 5200.11	*FAA Airports (ARP) Safety Management System (SMS)* Basics for implementing SMS within ARP. Includes roles and responsibilities of ARP management and staff as well as other FAA lines of business that contribute to the ARP SMS.
FAA Certalert 98-05	*Grasses Attractive to Hazardous Wildlife* Guidance on grass management and seed selection.
FAA Form 7460-1	Notice of Proposed Construction or Alteration
FAA Form 7480-1	Notice of Landing Area Proposal
FAA Form 6000.26	National NAS Strategic Interruption Service Level Agreement, Strategic Events Coordination, Airport Sponsor Form

Obtain the latest version of the following free publications from the Electronic Code of Federal Regulations at http://ecfr.gpoaccess.gov/.

Title 14 CFR Part 77	Safe, Efficient Use and Preservation of the Navigable Airspace
Title 14 CFR Part 139	Certification of Airports
Title 49 CFR Part	Airport Security

Obtain the latest version of the Manual on Uniform Traffic Control Devices from the Federal Highway Administration at http://mutcd.fhwa.dot.gov/.

Appendix 2 - Definition of Terms

Term	Definition
Form 7460-1	Notice Of Proposed Construction Or Alteration. For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, safe, efficient use, and preservation of the navigable airspace. (See guidance available on the FAA web site at oeaaa.faa.gov.) The form may be downloaded at http://www.faa.gov/airports/resources/forms/, or filed electronically at: https://oeaaa.faa.gov.
Form 7480-1	Notice Of Landing Area Proposal. Form submitted to the FAA Airports Regional Division Office or Airports District Office as formal written notification whenever a project without an airport layout plan on file with the FAA involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport The form may be downloaded at http://www.faa.gov/airports/resources/forms/.
Form 6000.26	Airport Sponsor Strategic Event Submission Form
AC	Advisory Circular
ACSI	Airport Certification Safety Inspector
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALECP	Airport Lighting Equipment Certification Program
ANG	Air National Guard
AOA	Air Operations Area, as defined in 14 CFR Part 107. Means a portion of an airport, specified in the airport security program, in which security measures are carried out. This area includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures. This area does not include the secured area of the airport terminal building.
ARFF	Aircraft Rescue and Fire Fighting
ARP	FAA Office of Airports
ASDA	Accelerate-Stop Distance Available
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
Certificated Airport	An airport that has been issued an Airport Operating Certificate by the FAA under the authority of 14 CFR Part 139, Certification of Airports.

Term	Definition
CFR	Code of Federal Regulations
Construction	The presence and movement of construction-related personnel, equipment, and materials in any location that could infringe upon the movement of aircraft.
CSPP	Construction Safety And Phasing Plan. The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
CTAF	Common Traffic Advisory Frequency
Displaced Threshold	A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold is available for takeoffs in either direction or landing from the opposite direction.
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FOD	Foreign Object Debris
FSS	Flight Service Station
GA	General Aviation
HAZMAT	Hazardous Materials
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LDA	Landing Distance Available
LOC	Localizer antenna array
Movement Area	The runways, taxiways, and other areas of an airport that are used for taxiing or hovertaxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading aprons and aircraft parking areas (reference 14 CFR Part 139).
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigation Aid
NAVAID Critical Area	An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.
Non-Movement Area	The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft.
NOTAM	Notices to Airmen

Term	Definition
Obstruction	Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77,subpart C.
OCC	Operations Control Center
OE / AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area. An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. (See AC 150/5300-13, for additional guidance on OFA standards and wingtip clearance criteria.)
OFZ	Obstacle Free Zone. The airspace below 150 ft (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway and for missed approaches. The OFZ is subdivided as follows: Runway OFZ, Inner Approach OFZ, Inner Transitional OFZ, and Precision OFZ. Refer to AC 150/5300-13 for guidance on OFZ.
OSHA	Occupational Safety and Health Administration
OTS	Out of Service
P&R	Planning and Requirements Group
NPI	NAS Planning & Integration
PAPI	Precision Approach Path Indicators
PFC	Passenger Facility Charge
PLASI	Pulse Light Approach Slope Indicators
Project Proposal Summary	A clear and concise description of the proposed project or change that is the object of Safety Risk Management.
RA	Reimbursable Agreement
RE	Resident Engineer
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
RSA	Runway Safety Area. A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway, in accordance with AC 150/5300-13.
SDS	Safety Data Sheet
SIDA	Security Identification Display Area

Term	Definition
SMS	Safety Management System
SPCD	Safety Plan Compliance Document. Details developed and submitted by a contractor to the airport operator for approval providing details on how the performance of a construction project will comply with the CSPP.
SRM	Safety Risk Management
SSC	System Support Center
Taxiway Safety Area	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway, in accordance with AC 150/5300-13
TDG	Taxiway Design Group
Temporary	Any condition that is not intended to be permanent.
Temporary Runway End	The beginning of that portion of the runway available for landing and taking off in one direction, and for landing in the other direction. Note the difference from a displaced threshold.
Threshold	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available. The length of the runway less any length of runway unavailable and/or unsuitable for takeoff run computations. See AC 150/5300-13 for guidance on declared distances.
TSA	Taxiway Safety Area Transportation Security Administration
UNICOM	A radio communications system of a type used at small airports.
VASI	Visual Approach Slope Indicators
VGSI	Visual Glide Slope Indicator. A device that provides a visual glide slope indicator to landing pilots. These systems include precision approach path indicators (PAPI), visual approach slope indicators (VASI), and pulse light approach slope indicators (PLASI).
VFR	Visual Flight Rules
VOR	VHF Omnidirectional Radio Range
VPD	Vehicle / Pedestrian Deviation

Appendix 3 - Safety and Phasing Plan Checklist

12/13/2017

AC 150/5370-2G
Appendix C

APPENDIX C. SAFETY AND PHASING PLAN CHECKLIST

This appendix is keyed to Chapter 2. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not a required submittal.

Table C-1. CSPP Checklist

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
General Considerations					
Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified.	2.5	✓			CSPP SECTION 1
Operational safety is a standing agenda item for construction progress meetings.	2.5	✓			CSPP SECTION 1.a
Scheduling of the construction phases is properly addressed.	2.6	✓			CSPP PLAN SHEET 150 PHASING NOTES
Any formal agreements are established.	2.5.3			✓	NO FORMAL AGREEMENTS REQUIRED
Areas and Operations Affected by Construction Activity					
Drawings showing affected areas are included.	2.7.1	✓			CSPP PLAN SHEET
Closed or partially closed runways, taxiways, and aprons are depicted on drawings.	2.7.1.1	✓			CSPP PLAN SHEET
Access routes used by ARFF vehicles affected by the project are addressed.	2.7.1.2	✓			CSPP SECTION 9.d
Access routes used by airport and airline support vehicles affected by the project are addressed.	2.7.1.3			✓	NO ROUTES AFFECTED
Underground utilities, including water supplies for firefighting and drainage.	2.7.1.4	✓			CSPP SECTION 11

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Approach/departure surfaces affected by heights of temporary objects are addressed.	2.7.1.5			✓	NO SURFACES AFFECTED
Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings.	2.7.1	✓			CSPP PLAN SHEET
Temporary changes to taxi operations are addressed.	2.7.2.1	✓			CSPP PLAN SHEET
Detours for ARFF and other airport vehicles are identified.	2.7.2.2	✓			CSPP SECTION 9.d
Maintenance of essential utilities and underground infrastructure is addressed.	2.7.2.3	✓			CSPP SECTION 11
Temporary changes to air traffic control procedures are addressed.	2.7.2.4	✓			CSPP SECTION 3.a CSPP PLAN SHEET FOR TAXIWAY CLOSURE
NAVAIDs					
Critical areas for NAVAIDs are depicted on drawings.	2.8	✓			CSPP PLAN SHEETS
Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.	2.8	✓			CSPP SECTION 4
Protection of NAVAID facilities is addressed.	2.8	✓			CSPP SECTION 4
The required distance and direction from each NAVAID to any construction activity is depicted on drawings.	2.8			✓	NO NAVAIDS IN VICINITY
Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.	2.8, 2.13.1, 2.13.5.3.1, 2.18.1	✓			CSPP SECTION 1.c
Contractor Access					
The CSPP addresses areas to which contractor will have access and how the areas will be accessed.	2.9	✓			CSPP PLAN SHEET 151 PHASING AND SAFETY NOTE 11, 12. 15, 23 CSPP SECTION 5

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.	2.9	✓			CSPP PLAN SHEET 151 PHASING AND SAFETY NOTE 9, 11, 14, 15, 18, 21, 23
The location of stockpiled construction materials is depicted on drawings.	2.9.1	✓			CSPP PLAN SHEETS
The requirement for stockpiles in the ROFA to be approved by FAA is included.	2.9.1			✓	NO STOCKPILE AREAS TO BE LOCATED IN ROFA
Requirements for proper stockpiling of materials are included.	2.9.1	✓			CSPP SECTION 5.a
Construction site parking is addressed.	2.9.2.1	✓			PLAN SHEET 151 PHASING AND SAFETY NOTE 15 CSPP SECTION 5.b-1
Construction equipment parking is addressed.	2.9.2.2	✓			PLAN SHEET 151 PHASING AND SAFETY NOTE 17 CSPP SECTION 5.b-2
Access and haul roads are addressed.	2.9.2.3	✓			PLAN SHEET 151 PHASING AND SAFETY NOTE 16 CSPP SECTION 5.b-3
A requirement for marking and lighting of vehicles to comply with AC 150/5210-5, *Painting, Marking and Lighting of Vehicles Used on an Airport*, is included.	2.9.2.4	✓			PLAN SHEET 151 PHASING AND SAFETY NOTE12 CSPP SECTION 5.b-4
Proper vehicle operations, including requirements for escorts, are described.	2.9.2.5, 2.9.2.6	✓			PLAN SHEET 151 PHASING AND SAFETY NOTE 14, 15, 16 CSPP SECTION 5.b
Training requirements for vehicle drivers are addressed.	2.9.2.7	✓			CSPP SECTION 5.b-7
Two-way radio communications procedures are described.	2.9.2.9	✓			CSPP SECTION 5.b-9 PLAN SHEET 151 PHASING AND SAFETY NOTE 26
Maintenance of the secured area of the airport is addressed.	2.9.2.10	✓			CSPP SECTION 5.b PLAN SHEET 151 PHASING AND SAFETY NOTE 11, 18
Wildlife Management					
The airport operator's wildlife management procedures are addressed.	2.1	✓			CSPP SECTION 6

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Foreign Object Debris Management					
The airport operator's FOD management procedures are addressed.	2.11	✓			CSPP SECTION 7 PLAN SHEET 150 PHASING NOTE 3 PLAN SHEET 151 PHASING AND SAFETY NOTE 25
Hazardous Materials Management					
The airport operator's hazardous materials management procedures are addressed.	2.12	✓			CSPP SECTION 8
Notification of Construction Activities					
Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.	2.13	✓			CSPP SECTION 9
Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified.	2.13.1	✓			CSPP SECTION 9.a
A list of local ATO/Technical Operations personnel is included.	2.13.1			✓	NOT APPLICABLE
A list of ATCT managers on duty is included.	2.13.1			✓	NOT APPLICABLE
A list of authorized representatives to the OCC is included.	2.13.2			✓	NOT APPLICABLE
Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.	2.8, 2.13.2, 2.18.3.3.9	✓			CSPP SECTION 9.a
Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.	2.13.2			✓	NOT APPLICABLE

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Emergency notification procedures for medical, fire fighting, and police response are addressed.	2.13.3	✓			CSPP SECTION 9.c PLAN SHEET 151 PHASING AND SAFETY NOTE 22
Coordination with ARFF personnel for non-emergency issues is addressed.	2.13.4	✓			CSPP SECTION 9.d
Notification to the FAA under 14 CFR parts 77 and 157 is addressed.	2.13.5	✓			CSPP SECTION 9.e
Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.	2.13.5.3.2			✓	NO FLIGHT CHECKS REQUIRED FOR THIS PROJECT
Inspection Requirements					
Daily and interim inspections by both the airport operator and contractor are specified.	2.14.1, 2.14.2	✓			CSPP SECTION 10.a
Final inspections at certificated airports are specified when required.	2.14.3	✓			CSPP SECTION 10.b
Underground Utilities					
Procedures for protecting existing underground facilities in excavation areas are described.	2.15	✓			CSPP SECTION 11
Penalties					
Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.	2.16	✓			CSPP SECTION 12 PLAN SHEET 151 PHASING AND SAFETY NOTE 13
Special Conditions					
Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed.	2.17	✓			CSPP SECTION 13
Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs					
The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.	2.18.1	✓			CSPP SECTION 14
Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.	2.18.1, 2.18.3, 2.18.4.2, 2.20.2.4	✓			CSPP SECTION 14

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
The requirement for markings to be in compliance with AC 150/5340-1, *Standards for Airport Markings*, is specified.	2.18.2	✓			CSPP SECTION 14.b
Detailed specifications for materials and methods for temporary markings are provided.	2.18.2			✓	NO TEMPORARY MARKINGS REQUIRED
The requirement for lighting to conform to AC 150/5340-30, *Design and Installation Details for Airport Visual Aids*; AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights*; and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.3	✓			CSPP SECTION 14.d
The use of a lighted X is specified where appropriate.	2.18.2.1.2, 2.18.3.2			✓	NOT APPLICABLE
The requirement for signs to conform to AC 150/5345-44, *Specification for Runway and Taxiway Signs*; AC 50/5340-18, *Standards for Airport Sign Systems*; and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.4	✓			CSPP SECTION 14.d
Marking and Signs For Access Routes					
The CSPP specifies that pavement markings and signs intended for construction personnel should conform to AC 150/5340-18 and, to the extent practicable, with the MUTCD and/or State highway specifications.	2.18.4.2	✓			CSPP SECTION 15
Hazard Marking and Lighting					
Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.	2.20.1	✓			CSPP SECTION 16 PLAN SHEET BARRICADE LOCATIONS

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.	2.20.1	✓			CSPP SECTION 16.a
The CSPP considers less obvious construction-related hazards.	2.20.1	✓			CSPP SECTION 16.b.4
Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.	2.20.2.1	✓			CSPP SECTION 16.b.4
The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.	2.20.2.1	✓			CSPP PLAN SHEET 150, LOW PROFILE BARRICADE DETAIL, NOTE 4 LOW PROFILE BARRICADE LAYOUT DETAIL
Red lights meeting the luminance requirements of the State Highway Department are specified.	2.20.2.2	✓			CSPP SECTION 16.b.2
Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 inch high.	2.20.2.3	✓			CSPP SECTION 16.b.4 CSPP PLAN SHEET 150, LOW PROFILE BARRICADE DETAIL DIMENSION
Barricades are specified to indicate construction locations in which no part of an aircraft may enter.	2.20.2.3	✓			CSPP SECTION 16.b.1 CSPP PLAN SHEET BARRICADE LOCATIONS
Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.	2.20.2.5	✓			CSPP PLAN SHEET BARRICADE LOCATIONS
Markings for temporary closures are specified.	2.20.2.5			✓	NO TEMPORARY MARKINGS REQUIRED
The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.	2.20.2.7	✓			CSPP SECTION 16.a

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Work Zone Lighting for Nighttime Construction					
If work is to be conducted at night, the CSPP identifies construction lighting units and their general locations and aiming in relationship to the ATCT and active runways and taxiways.	2.21	✓			CSPP SECTION 17
Protection of Runway and Taxiway Safety Areas					
The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.	2.22.1.1, 2.22.3.1	✓			CSPP SECTION 18.a AND 18.c
The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM.	2.22.1.2, 2.22.3.2			✓	NO ADJUSTMENTS TO RSA OR TSA ARE ANTICIPATED
Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.	2.22.3.3	✓			CSPP SECTION 18.d.4 NO BLASTING PERMITTED ON PROJECT
The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open, subject to approved exceptions.	2.22.1.4	✓			CSPP SECTION 18.d.2 PLAN SHEET 151 PHASING AND SAFETY NOTE 8
Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.	2.22.1.4	✓			CSPP SECTION 18.d.2 PLAN SHEET 151 PHASING AND SAFETY NOTE 8
The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.	2.22.1.4	✓			CSPP SECTION 18.d.2
Grading and soil erosion control to maintain RSA/TSA standards are addressed.	2.22.3.5	✓			CSPP SECTION 18.d.3

The CSPP specifies that equipment is to be removed from the ROFA when not in use.	2.22.2	✓			CSPP SECTION 18.b
The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.	2.22.3	✓			CSPP SECTION 18.c PLAN SHEET 151 PHASING AND SAFETY NOTE 3
Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.	2.22.4	✓			CSPP SECTION 18.e
Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included.	2.22.4.3.6	✓			CSPP SECTION 18.f
Provisions for protection of runway approach/departure areas and clearways are included.	2.22.6	✓			CSPP SECTION 18.g
Other Limitations on Construction					
The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.	2.23.1.2	✓			CSPP SECTION 19.a.2
The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.	2.23.1.3	✓			CSPP SECTION 19.a.3

Appendix 4 - Construction Project Daily Safety Inspection Checklist

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

Table D-1. Potentially Hazardous Conditions

Item	Action Required (Describe)	No Action Required (Check)
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.		
Runway resurfacing projects resulting in lips exceeding 3 inch (7.6 cm) from pavement edges and ends.		
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and		

D-1

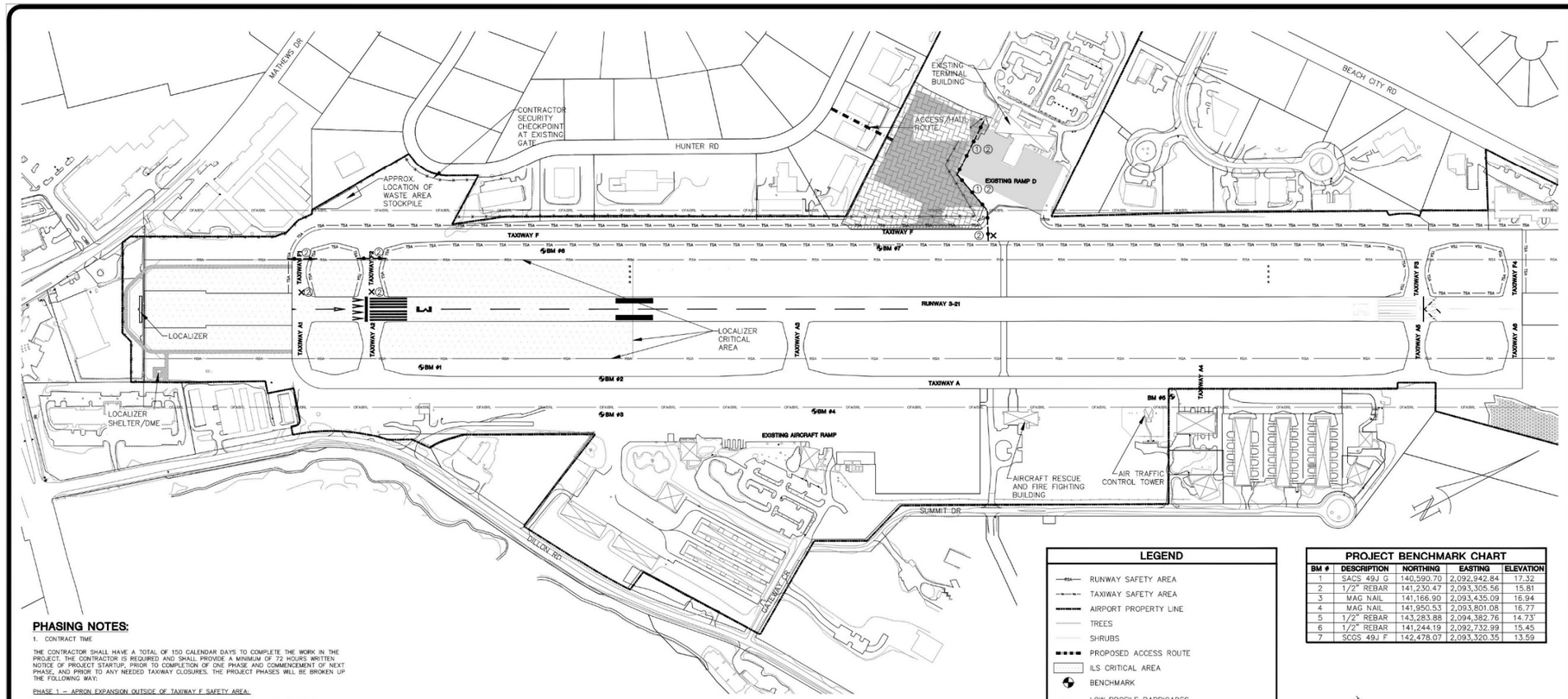
Item	Action Required (Describe)	No Action Required (Check)
approach zones.		
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		
Obliterated or faded temporary markings on active operational areas.		
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		

Item	Action Required (Describe)	No Action Required (Check)
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		
Lack of radio communications with construction vehicles in airport movement areas.		
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		

Item	Action Required (Describe)	No Action Required (Check)
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		
Site burning, which can cause possible obscuration.		
Construction work taking place outside of designated work areas and out of phase.		

ATTACHMENT A

CSPP DRAWING SET



PHASING NOTES:

1. CONTRACT TIME

THE CONTRACTOR SHALL HAVE A TOTAL OF 150 CALENDAR DAYS TO COMPLETE THE WORK IN THE PROJECT. THE CONTRACTOR IS REQUIRED AND SHALL PROVIDE A MINIMUM OF 72 HOURS WRITTEN NOTICE OF PROJECT STARTUP, PRIOR TO COMPLETION OF ONE PHASE AND COMMENCEMENT OF NEXT PHASE, AND PRIOR TO ANY NEEDED TAXIWAY CLOSURES. THE PROJECT PHASES WILL BE BROKEN UP THE FOLLOWING WAY:

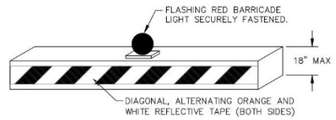
PHASE 1 – APRON EXPANSION OUTSIDE OF TAXIWAY F SAFETY AREA:

ALL WORK IN THIS PHASE MAY COMMENCE AND BE COMPLETED ANYTIME WITHIN THIS PHASE. THE CONTRACTOR IS NOTIFIED OF THE PRESENCE OF THE ACTIVE COMMERCIAL AIRCRAFT APRON ADJACENT TO THE WORK AREA. PARTICULAR ATTENTION SHALL BE PROVIDED TO DUST AND FOREIGN OBJECT DEBRIS (FOD) CONTROL. IT IS POSSIBLE THAT AIRCRAFT ACTIVITY FROM THE ADJACENT COMMERCIAL AIRCRAFT PARKING APRON WILL PRODUCE JET BLAST FROM AIRCRAFT ENTERING AND EXITING THE EXISTING APRON, AND CARE SHALL BE TAKEN TO PROPERLY SECURE MATERIALS AND EQUIPMENT FROM BEING MOVED BY SUCH JET BLAST DURING AND AFTER WORK HOURS.

PHASE 2 – APRON EXPANSION INSIDE TAXIWAY F SAFETY AREA:

THE CONTRACTOR WILL BE ALLOWED TO CLOSE TAXIWAY F DURING THIS PHASE TO MAKE REQUIRED TIE-INS TO TAXIWAY F, ALONG WITH ALL OTHER WORK WITHIN THE TAXIWAY F SAFETY AREA. ONCE THIS PHASE IS CLOSED TO AIRCRAFT WITH REQUIRED BARRICADES AND CONTRACTOR COMMENCES WORK IN THIS PHASE, ALL PAVEMENT REMOVAL AND OTHER WORK WITHIN THE CLOSED PHASE AREA MAY COMMENCE AND BE COMPLETED ANYTIME WITHIN THIS PHASE.

2. CLOSED AIRFIELD MARKERS AND DE-ENERGIZED AND/OR COVERED TAXIWAY LIGHTS SHALL BE INSTALLED AS THE FIRST TASK IN EACH PHASE REQUIRING A TAXIWAY CLOSURE. CLOSED AIRFIELD MARKERS SHALL BE REMOVED AS THE LAST TASK IN EACH PHASE REQUIRING A TAXIWAY CLOSURE. TRAFFIC BARRICADES SHALL NOT BE REMOVED UNTIL PAVEMENT AND TAXIWAY SAFETY AREAS ARE IN SERVICEABLE CONDITION.
3. THE CONTRACTOR SHALL SWEEP ALL AIRFIELD PAVEMENT PRIOR TO OPENING, TO CLEAR ANY FOREIGN OBJECT DEBRIS CAUSED BY THE WORK. THE SWEEPING WILL CONTINUE UNTIL APPROVED BY THE ENGINEER.
4. THE CONTRACTOR SHALL FOLLOW THE SAFETY GUIDELINES SET FORTH IN AC 150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
5. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE NEW DOUBLE SWING GATES INSTALLED IN THE EXISTING AIRPORT FENCE FOR TEMPORARY CONSTRUCTION ACCESS POINTS AND FOR THE INSTALLATION OF NEW CHAIN LINK FENCE, OR THE UNDAMAGED EXISTING CHAIN LINK FENCE REMOVED PRIOR TO THE TEMPORARY GATE INSTALLATION, IN ORDER TO RETURN THE AIRPORT FENCE TO ITS ORIGINAL SECURED CONDITION PRIOR TO THIS PROJECT.



LOW PROFILE BARRICADE DETAIL
NOT TO SCALE

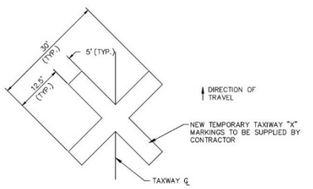
NOTES:
1. BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF FAA ADVISORY CIRCULAR 150/5370-2 (CURRENT EDITION) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
2. THE CONTRACTOR SHALL PROVIDE A SUFFICIENT NUMBER OF BARRICADES TO COMPLETE THE WORK. THIS ITEM IS INCIDENTAL TO THE PROJECT, INCLUDING MULTIPLE RELOCATIONS OF THE BARRICADES AS REQUIRED. NO SEPARATE PAY ITEM, AND ALL WORK ASSOCIATED WITH THIS ITEM SHALL BE INCIDENTAL TO THE PROJECT.
3. BARRICADES SHALL BE CONSTRUCTED OF MATERIAL THAT IS LOW IN MASS, EASILY COLLAPSIBLE UPON CONTACT WITH AN AIRCRAFT, AND WEIGHTED OR STURDILY ATTACHED TO THE SURFACE TO WITHSTAND HIGH WINDS AND/OR JET BLAST.
4. SPACING OF BARRICADES SHALL ENSURE THAT THE DISTANCE BETWEEN LIGHTS IS NO MORE THAN 10 FEET. INSTALLATION OF MULTIPLE LIGHTS ON A SINGLE BARRICADE MAY BE REQUIRED. THE BARRICADES SHALL BE A MINIMUM OF 8' IN LENGTH.
5. THE CONTRACTOR SHALL MAINTAIN AND MAKE FREQUENT INSPECTION OF THE BARRICADES THROUGHOUT THE DURATION OF THE PROJECT. PROMPT REPAIRS INCLUDING REPLACEMENT OF FLASHING RED LIGHTS SHALL BE MADE AS NECESSARY.
6. KNOWN MANUFACTURER AND MODEL: OTW SAFETY, AR10X96 O V.2.

LEGEND

- RUNWAY SAFETY AREA
- TAXIWAY SAFETY AREA
- AIRPORT PROPERTY LINE
- TREES
- SHRUBS
- PROPOSED ACCESS ROUTE
- ILS CRITICAL AREA
- BENCHMARK
- LOW PROFILE BARRICADES w/PHASE DESIGNATION
- DEMO, GRADING, DRAINAGE, PAVING PHASE 1
- DEMO, GRADING, DRAINAGE, PAVING PHASE 2
- WETLAND

PROJECT BENCHMARK CHART

BM #	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	SACS 49J G	140,590.70	2,092,942.84	17.32
2	1/2" REBAR	141,230.47	2,093,305.56	15.81
3	MAG NAIL	141,166.90	2,093,435.09	16.94
4	MAG NAIL	141,950.53	2,093,801.08	16.77
5	1/2" REBAR	143,283.88	2,094,382.76	14.73'
6	1/2" REBAR	141,244.19	2,092,732.99	15.45
7	SCGS 49J F	142,478.07	2,093,320.35	13.59



CLOSED MARKER DETAIL
NOT TO SCALE

NOTES:
1. CLOSED MARKERS SHALL BE INSTALLED AS THE FIRST ITEM OF WORK.
2. THE CONTRACTOR SHALL PROPERLY SECURE THE MARKINGS, AND MAKE FREQUENT INSPECTION OF THE MARKINGS AND MAKE PROMPT REPAIRS AS NECESSARY.
3. SEE ADVANCE NOTICE REQUIREMENTS FOR TAXIWAY CLOSURE PROVIDED ON THIS SHEET IN THE PHASING NOTES.
4. TAXIWAY CLOSED MARKERS SHALL BE PAY ITEMS.

200' 100' 0 200' 400' 600'
SCALE IN FEET
1"=200'

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

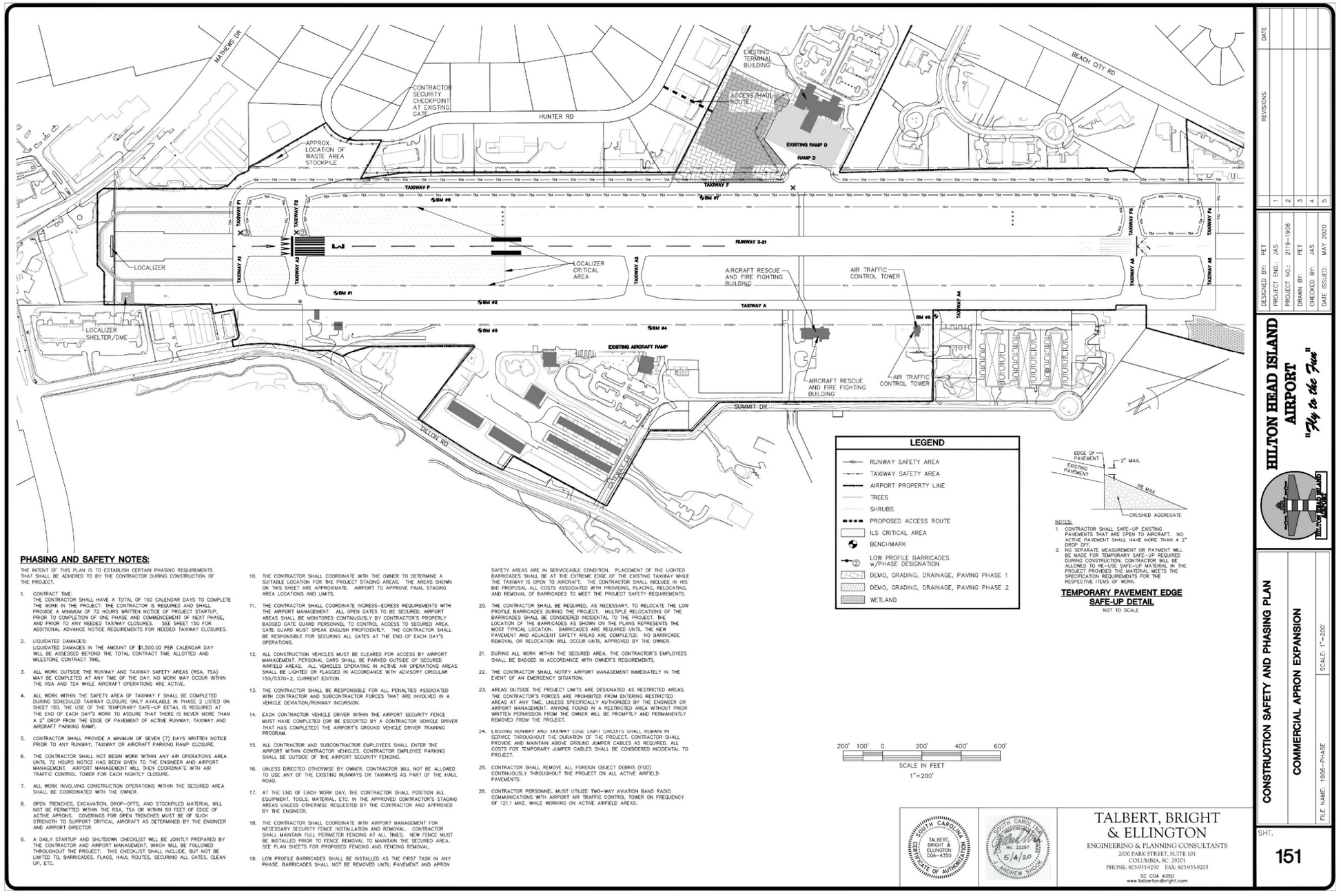
DESIGNED BY: PET
PROJECT ENG.: JAS
PROJECT NO.: 2119-1906
DRAWN BY: PET
CHECKED BY: JAS
DATE ISSUED: MAY 2020

REVISIONS | DATE
1 | 2 | 3 | 4 | 5

HILTON HEAD ISLAND AIRPORT
"Fly to the Sun"

CONSTRUCTION SAFETY AND PHASING PLAN
COMMERCIAL APRON EXPANSION
SCALE: 1"=200'
FILE NAME: 1906-PHASE

SHT. 150



NOTES:
1. CONTRACTOR SHALL SAFE-UP EXISTING PAVEMENTS THAT ARE OPEN TO AIRCRAFT. NO ACTIVE PAVEMENT SHALL HAVE MORE THAN A 2" DROP OFF.
2. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR TEMPORARY SAFE-UP REQUIRED DURING CONSTRUCTION. CONTRACTOR WILL BE ALLOWED TO RE-USE SAFE-UP MATERIAL IN THE PROJECT PROVIDED THE MATERIAL MEETS THE SPECIFICATION REQUIREMENTS FOR THE RESPECTIVE ITEMS OF WORK.

TEMPORARY PAVEMENT EDGE SAFE-UP DETAIL
NOT TO SCALE

PHASING AND SAFETY NOTES:

THE INTENT OF THIS PLAN IS TO ESTABLISH CERTAIN PHASING REQUIREMENTS THAT SHALL BE ADHERED TO BY THE CONTRACTOR DURING CONSTRUCTION OF THE PROJECT.

1. CONTRACT TIME:
   THE CONTRACTOR SHALL HAVE A TOTAL OF 150 CALENDAR DAYS TO COMPLETE THE WORK IN THE PROJECT. THE CONTRACTOR IS REQUIRED AND SHALL PROVIDE A MINIMUM OF 72 HOURS WRITTEN NOTICE OF PROJECT STARTUP, PRIOR TO COMPLETION OF ONE PHASE AND COMMENCEMENT OF NEXT PHASE, AND PRIOR TO ANY NEEDED TAXIWAY CLOSURES. SEE SHEET 150 FOR ADDITIONAL ADVANCE NOTICE REQUIREMENTS FOR NEEDED TAXIWAY CLOSURES.
2. LIQUIDATED DAMAGES:
   LIQUIDATED DAMAGES IN THE AMOUNT OF $1,500.00 PER CALENDAR DAY WILL BE ASSESSED BEYOND THE TOTAL CONTRACT TIME ALLOTTED AND MILESTONE CONTRACT TIME.
3. ALL WORK OUTSIDE THE RUNWAY AND TAXIWAY SAFETY AREAS (RSA, TSA) MAY BE COMPLETED AT ANY TIME OF THE DAY; NO WORK MAY OCCUR WITHIN THE RSA AND TSA WHILE AIRCRAFT OPERATIONS ARE ACTIVE.
4. ALL WORK WITHIN THE SAFETY AREA OF TAXIWAY F SHALL BE COMPLETED DURING SCHEDULED TAXIWAY CLOSURE ONLY AVAILABLE IN PHASE 2 LISTED ON SHEET 150. THE USE OF THE TEMPORARY SAFE-UP DETAIL IS REQUIRED AT THE END OF EACH DAY'S WORK TO ASSURE THAT THERE IS NEVER MORE THAN A 2" DROP FROM THE EDGE OF PAVEMENT OF ACTIVE RUNWAY, TAXIWAY AND AIRCRAFT PARKING RAMP.
5. CONTRACTOR SHALL PROVIDE A MINIMUM OF SEVEN (7) DAYS WRITTEN NOTICE PRIOR TO ANY RUNWAY, TAXIWAY OR AIRCRAFT PARKING RAMP CLOSURE.
6. THE CONTRACTOR SHALL NOT BEGIN WORK WITHIN ANY AIR OPERATIONS AREA UNTIL 72 HOURS NOTICE HAS BEEN GIVEN TO THE ENGINEER AND AIRPORT MANAGEMENT. AIRPORT MANAGEMENT WILL THEN COORDINATE WITH AIR TRAFFIC CONTROL TOWER FOR EACH NIGHTLY CLOSURE.
7. ALL WORK INVOLVING CONSTRUCTION OPERATIONS WITHIN THE SECURED AREA SHALL BE COORDINATED WITH THE OWNER.
8. OPEN TRENCHES, EXCAVATION, DROP-OFFS, AND STOCKPILED MATERIAL WILL NOT BE PERMITTED WITHIN THE RSA, TSA OR WITHIN 50 FEET OF EDGE OF ACTIVE APRONS. COVERINGS FOR OPEN TRENCHES MUST BE OF SUCH STRENGTH TO SUPPORT CRITICAL AIRCRAFT AS DETERMINED BY THE ENGINEER AND AIRPORT DIRECTOR.
9. A DAILY STARTUP AND SHUTDOWN CHECKLIST WILL BE JOINTLY PREPARED BY THE CONTRACTOR AND AIRPORT MANAGEMENT, WHICH WILL BE FOLLOWED THROUGHOUT THE PROJECT. THIS CHECKLIST SHALL INCLUDE, BUT NOT BE LIMITED TO, BARRICADES, FLAGS, HAUL ROUTES, SECURING ALL GATES, CLEAN UP, ETC.
10. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE A SUITABLE LOCATION FOR THE PROJECT STAGING AREAS. THE AREAS SHOWN ON THIS SHEET ARE APPROXIMATE. AIRPORT TO APPROVE FINAL STAGING AREA LOCATIONS AND LIMITS.
11. THE CONTRACTOR SHALL COORDINATE INGRESS-EGRESS REQUIREMENTS WITH THE AIRPORT MANAGEMENT. ALL OPEN GATES TO BE SECURED. AIRPORT AREAS SHALL BE MONITORED CONTINUOUSLY BY CONTRACTOR'S PROPERLY BADGED GATE GUARD PERSONNEL TO CONTROL ACCESS TO SECURED AREA. GATE GUARD MUST SPEAK ENGLISH PROFICIENTLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL GATES AT THE END OF EACH DAY'S OPERATIONS.
12. ALL CONSTRUCTION VEHICLES MUST BE CLEARED FOR ACCESS BY AIRPORT MANAGEMENT. PERSONAL CARS SHALL BE PARKED OUTSIDE OF SECURED AIRFIELD AREAS. ALL VEHICLES OPERATING IN ACTIVE AIR OPERATIONS AREAS SHALL BE LIGHTED OR FLAGGED IN ACCORDANCE WITH ADVISORY CIRCULAR 150/5370-2, CURRENT EDITION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PENALTIES ASSOCIATED WITH CONTRACTOR AND SUBCONTRACTOR FORCES THAT ARE INVOLVED IN A VEHICLE DEVIATION/RUNWAY INCURSION.
14. EACH CONTRACTOR VEHICLE DRIVER WITHIN THE AIRPORT SECURITY FENCE MUST HAVE COMPLETED (OR BE ESCORTED BY A CONTRACTOR VEHICLE DRIVER THAT HAS COMPLETED) THE AIRPORT'S GROUND VEHICLE DRIVER TRAINING PROGRAM.
15. ALL CONTRACTOR AND SUBCONTRACTOR EMPLOYEES SHALL ENTER THE AIRPORT WITHIN CONTRACTOR VEHICLES. CONTRACTOR EMPLOYEE PARKING SHALL BE OUTSIDE OF THE AIRPORT SECURITY FENCING.
16. UNLESS DIRECTED OTHERWISE BY OWNER, CONTRACTOR WILL NOT BE ALLOWED TO USE ANY OF THE EXISTING RUNWAYS OR TAXIWAYS AS PART OF THE HAUL ROAD.
17. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL POSITION ALL EQUIPMENT, TOOLS, MATERIAL, ETC. IN THE APPROVED CONTRACTOR'S STAGING AREAS UNLESS OTHERWISE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
18. THE CONTRACTOR SHALL COORDINATE WITH AIRPORT MANAGEMENT FOR NECESSARY SECURITY FENCE INSTALLATION AND REMOVAL. CONTRACTOR SHALL MAINTAIN FULL PERIMETER FENCING AT ALL TIMES. NEW FENCE MUST BE INSTALLED PRIOR TO FENCE REMOVAL TO MAINTAIN THE SECURED AREA. SEE PLAN SHEETS FOR PROPOSED FENCING AND FENCING REMOVAL.
19. LOW PROFILE BARRICADES SHALL BE INSTALLED AS THE FIRST TASK IN ANY PHASE. BARRICADES SHALL NOT BE REMOVED UNTIL PAVEMENT AND APRON SAFETY AREAS ARE IN SERVICEABLE CONDITION. PLACEMENT OF THE LIGHTED BARRICADES SHALL BE AT THE EXTREME EDGE OF THE EXISTING TAXIWAY WHILE THE TAXIWAY IS OPEN TO AIRCRAFT. THE CONTRACTOR SHALL INCLUDE IN HIS BID PROPOSAL ALL COSTS ASSOCIATED WITH PROVIDING, PLACING, RELOCATING, AND REMOVAL OF BARRICADES TO MEET THE PROJECT SAFETY REQUIREMENTS.
20. THE CONTRACTOR SHALL BE REQUIRED, AS NECESSARY, TO RELOCATE THE LOW PROFILE BARRICADES DURING THE PROJECT. MULTIPLE RELOCATIONS OF THE BARRICADES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. THE LOCATION OF THE BARRICADES AS SHOWN ON THE PLANS REPRESENTS THE MOST TYPICAL LOCATION. BARRICADES ARE REQUIRED UNTIL THE NEW PAVEMENT AND ADJACENT SAFETY AREAS ARE COMPLETED. NO BARRICADE REMOVAL OR RELOCATION WILL OCCUR UNTIL APPROVED BY THE OWNER.
21. DURING ALL WORK WITHIN THE SECURED AREA, THE CONTRACTOR'S EMPLOYEES SHALL BE BADGED IN ACCORDANCE WITH OWNER'S REQUIREMENTS.
22. THE CONTRACTOR SHALL NOTIFY AIRPORT MANAGEMENT IMMEDIATELY IN THE EVENT OF AN EMERGENCY SITUATION.
23. AREAS OUTSIDE THE PROJECT LIMITS ARE DESIGNATED AS RESTRICTED AREAS. THE CONTRACTOR'S FORCES ARE PROHIBITED FROM ENTERING RESTRICTED AREAS AT ANY TIME, UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER OR AIRPORT MANAGEMENT. ANYONE FOUND IN A RESTRICTED AREA WITHOUT PRIOR WRITTEN PERMISSION FROM THE OWNER WILL BE PROMPTLY AND PERMANENTLY REMOVED FROM THE PROJECT.
24. EXISTING RUNWAY AND TAXIWAY EDGE LIGHT CIRCUITS SHALL REMAIN IN SERVICE THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL PROVIDE AND MAINTAIN ABOVE GROUND JUMPER CABLES AS REQUIRED. ALL COSTS FOR TEMPORARY JUMPER CABLES SHALL BE CONSIDERED INCIDENTAL TO PROJECT.
25. CONTRACTOR SHALL REMOVE ALL FOREIGN OBJECT DEBRIS (FOD) CONTINUOUSLY THROUGHOUT THE PROJECT ON ALL ACTIVE AIRFIELD PAVEMENTS.
26. CONTRACTOR PERSONNEL MUST UTILIZE TWO-WAY AVIATION BAND RADIO COMMUNICATIONS WITH AIRPORT AIR TRAFFIC CONTROL TOWER ON FREQUENCY OF 121.1 MHZ. WHILE WORKING ON ACTIVE AIRFIELD AREAS.

REVISIONS	DATE
1	
2	
3	
4	
5	

DESIGNED BY: PET
PROJECT ENG.: JAS
PROJECT NO.: 2119-1906
DRAWN BY: PET
CHECKED BY: JAS
DATE ISSUED: MAY 2020

HILTON HEAD ISLAND AIRPORT
"Fly to the Sun"

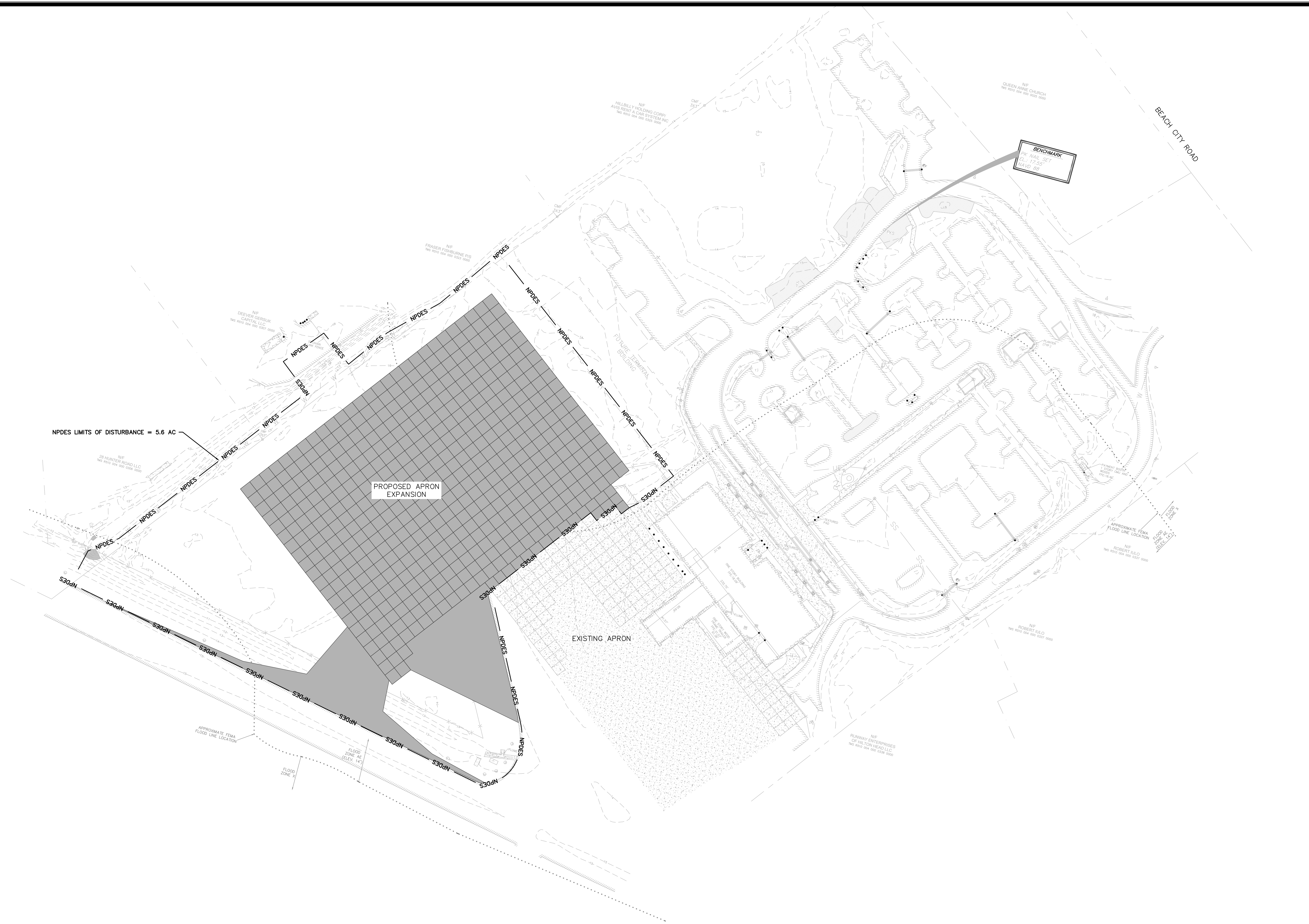
CONSTRUCTION SAFETY AND PHASING PLAN
COMMERCIAL APRON EXPANSION
FILE NAME: 1906-PHASE
SCALE: 1"=200'

SHT. 151

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

SOUTH CAROLINA — TALBERT, BRIGHT & ELLINGTON COA-4350 — CERTIFICATE OF AUTHORIZATION

REGISTERED LANDSCAPE ARCHITECT — No. 22297 — 5/4/20 — ANDREW SHORT



NOT FOR CONSTRUCTION

	REVISIONS	DATE
1	ADDENDUM NO. 1	05/18/2020
2		
3		
4		
5		

DESIGNED BY:	BCB
PROJECT ENG.:	PRM
PROJECT NO.:	100266J
DRAWN BY:	BCB
CHECKED BY:	PRM
DATE ISSUED:	05/18/20

HILTON HEAD ISLAND AIRPORT

"Fly to the Fun"

OVERALL SITE PLAN

COMMERCIAL APRON EXPANSION

SCALE: 1" = 60'

FILE NAME: 1906-GEOM

SHT. 101

Ward Edwards
ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA
WARD EDWARDS, INC.
No. C00152
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 22816
05/18/20
PAUL R. MOORE

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

TREE REMOVAL NOTES:

1. ALL WORK SHALL COMPLY WITH THE SAFETY PLAN AND FAA ADVISORY CIRCULAR AC 150/5370-2G, "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION."
2. AT NO TIME SHALL THE CONTRACTOR PARK ANY VEHICLES OR EQUIPMENT IN AIRPORT OR PUBLIC ROADWAYS, OR BLOCK IN ANY MANNER THE ACCESS ROADS TO AIRPORT FACILITIES, PARTICULARLY ACCESS ROADS AND FROM THE ARFF FACILITY.
3. CONTRACTOR TO PROVIDE NOTICE TO ENGINEER AND OWNER THREE (3) DAYS PRIOR TO BEGINNING TREE REMOVAL OPERATIONS.
4. PRIOR TO ANY TREE PRUNING OR REMOVAL THE CONTRACTOR SHALL FLAG THE AIRPORT AND OTHER PROPERTY LINES AND THE DESIGNATED WETLAND AREAS. NO TREES SHALL BE REMOVED UNTIL THE FLAGGING IS INSPECTED BY A DESIGNATED REPRESENTATIVE OF THE TOWN OF HILTON HEAD ISLAND TO ENSURE THAT IT IS ACCEPTABLE (REQUIRED 48 HOURS ADVANCE NOTIFICATION).
5. THE CONTRACTOR SHALL USE A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF SOUTH CAROLINA. THIS COST SHALL BE INCIDENTAL TO THE PROJECT. THE CONTRACTOR WILL RECEIVE A DIGITAL (CADD) FILE OF THIS TREE REMOVAL PLAN.
6. THE CONTRACTOR SHALL ENTER THE PROPERTY AT LOCATIONS APPROVED BY ENGINEER AND OWNER.
7. THE CONTRACTOR SHALL REMOVE ALL TIMBER, FOLIAGE AND VEGETATIVE DEBRIS UNLESS THE OWNER PROVIDES A WRITTEN NOTICE INDICATING OTHERWISE.
8. TREES REMOVED SHALL BE HARVESTED AND USED AS SAW TIMBER, PULPWOOD, OR CHIPS FOR BOILER FUEL IF ECONOMICALLY VIABLE. DISPOSE OF ANY VEGETATIVE DEBRIS OFFSITE IN A MANNER PERMITTED BY THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL.
9. STOP WORK IN THE VICINITY OF ANY PROTECTED SPECIES IF ENCOUNTERED UNTIL THE ISSUE IS RESOLVED WITH THE U.S. FISH AND WILDLIFE SERVICE.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF AIRPORT FACILITIES, INFRASTRUCTURE AND FACILITIES (E.G., PAVEMENT, PAVEMENT MARKING, FENCE UTILITIES, ETC.). ANY DAMAGE CAUSE BY CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO LIKE NEW CONDITION AS DIRECTED BY THE ENGINEER.
11. MECHANIZED VEHICLES ARE NOT ALLOWED ON PRIVATE PROPERTY UNLESS AUTHORIZED IN WRITING BY PROPERTY OWNER. CONTRACTOR SHALL ALWAYS BE REQUIRED TO RESTORE ALL PROPERTIES TO PRE-CONSTRUCTION CONDITION AT NO COST TO PROPERTY OWNER, AIRPORT SPONSOR OR PROJECT.
12. SEE PLAN SHEET 100 FOR ADDITIONAL TREE PROTECTION NOTES.

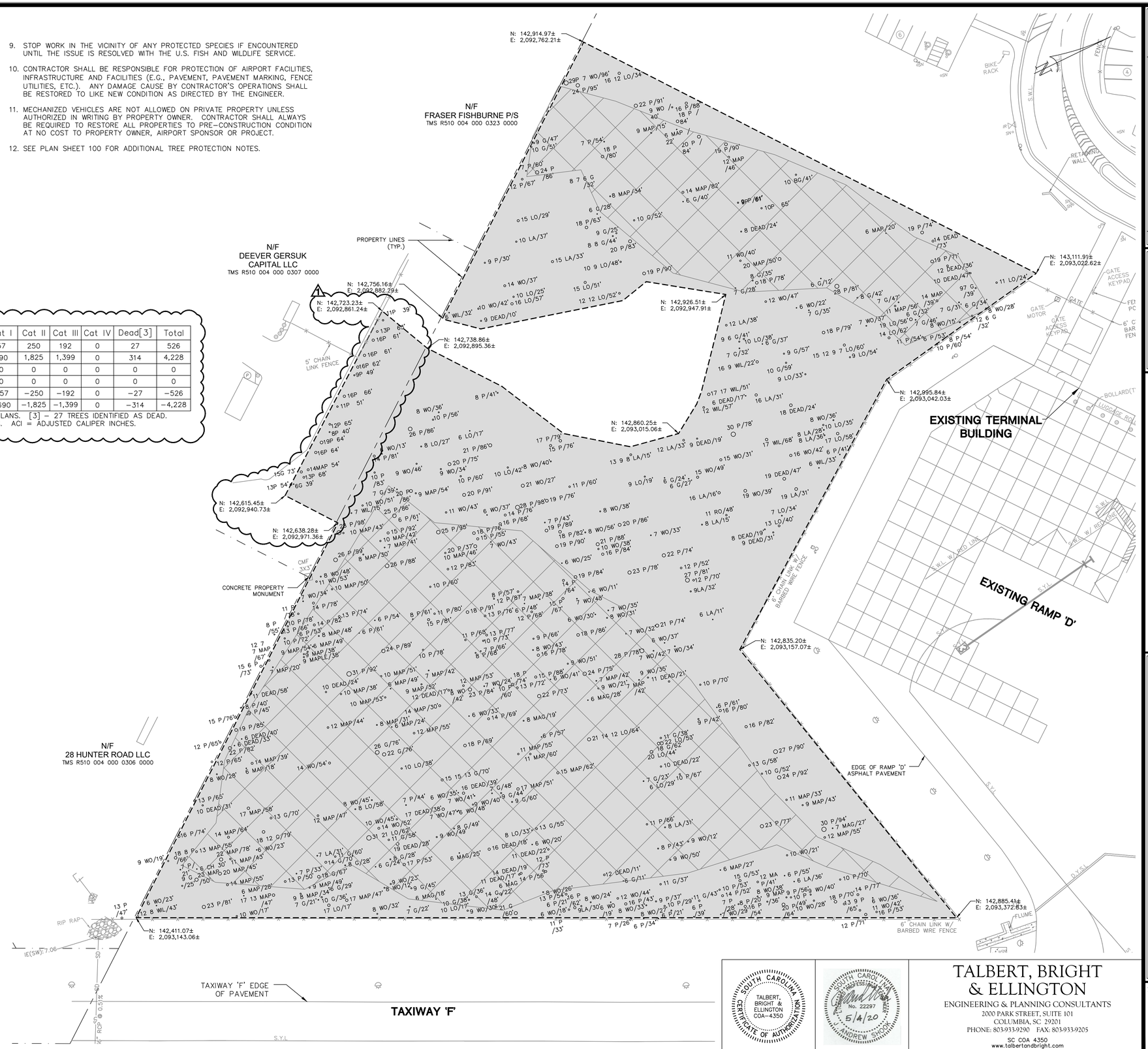
1

Description	Unit	Cat I	Cat II	Cat III	Cat IV	Dead[3]	Total
Pre-Removal (Existing Trees Prior to Removal)[1]	EA	57	250	192	0	27	526
	ACI	690	1,825	1,399	0	314	4,228
Post-Removal (Remaining Trees After Removal)[2]	EA	0	0	0	0	0	0
	ACI	0	0	0	0	0	0
Difference in Pre-Removal and Post-Removal	EA	-57	-250	-192	0	-27	-526
	ACI	-690	-1,825	-1,399	0	-314	-4,228

[1] - BASED UPON DESIGN SURVEY. [2] - BASED UPON DESIGN PLANS. [3] - 27 TREES IDENTIFIED AS DEAD. FINAL NUMBER WILL BE DERIVED FROM PROJECT ARBORIST RECORDS. ACI = ADJUSTED CALIPER INCHES.

LEGEND

	EXISTING WETLAND
	PROPOSED CLEARING AND GRUBBING
	PROPOSED CLEARING AND GRUBBING LIMITS
O o •	PROPOSED TREE TO BE REMOVED
P	PINE TREE TO BE REMOVED
WO	WATER OAK TREE TO BE REMOVED
LO	LIVE OAK TREE TO BE REMOVED
LA	LAUREL OAK TREE TO BE REMOVED
WIL	WILLOW OAK TREE TO BE REMOVED
RO	RED OAK TREE TO BE REMOVED
MAP	RED MAPLE TREE TO BE REMOVED
G	SWEET GUM TREE TO BE REMOVED
MAG	MAGNOLIA TREE TO BE REMOVED
BG	BLACK GUM TREE TO BE REMOVED
CH	CHERRY TREE TO BE REMOVED



30' 15' 0 30' 60' 90'
SCALE IN FEET
1"=30'

TALBERT, BRIGHT & ELLINGTON COA-4350 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 22297 ANDREW SHOCK 5/4/20

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

REVISIONS		DATE
1	ADDENDUM NUMBER ONE (1)	05-18-2020
2		
3		
4		
5		

DESIGNED BY: CEV
PROJECT ENG.: JAS
PROJECT NO.: 2119-1906
DRAWN BY: JPB
CHECKED BY: PET
DATE ISSUED: MAY 2020

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

TREE REMOVAL PLAN
COMMERCIAL APRON EXPANSION
SCALE: 1"=30'
FILE NAME: 1906-TREEDEMO

SHT. 201

LIMITS OF DISTURBANCE:	NPDES

EROSION PREVENTION

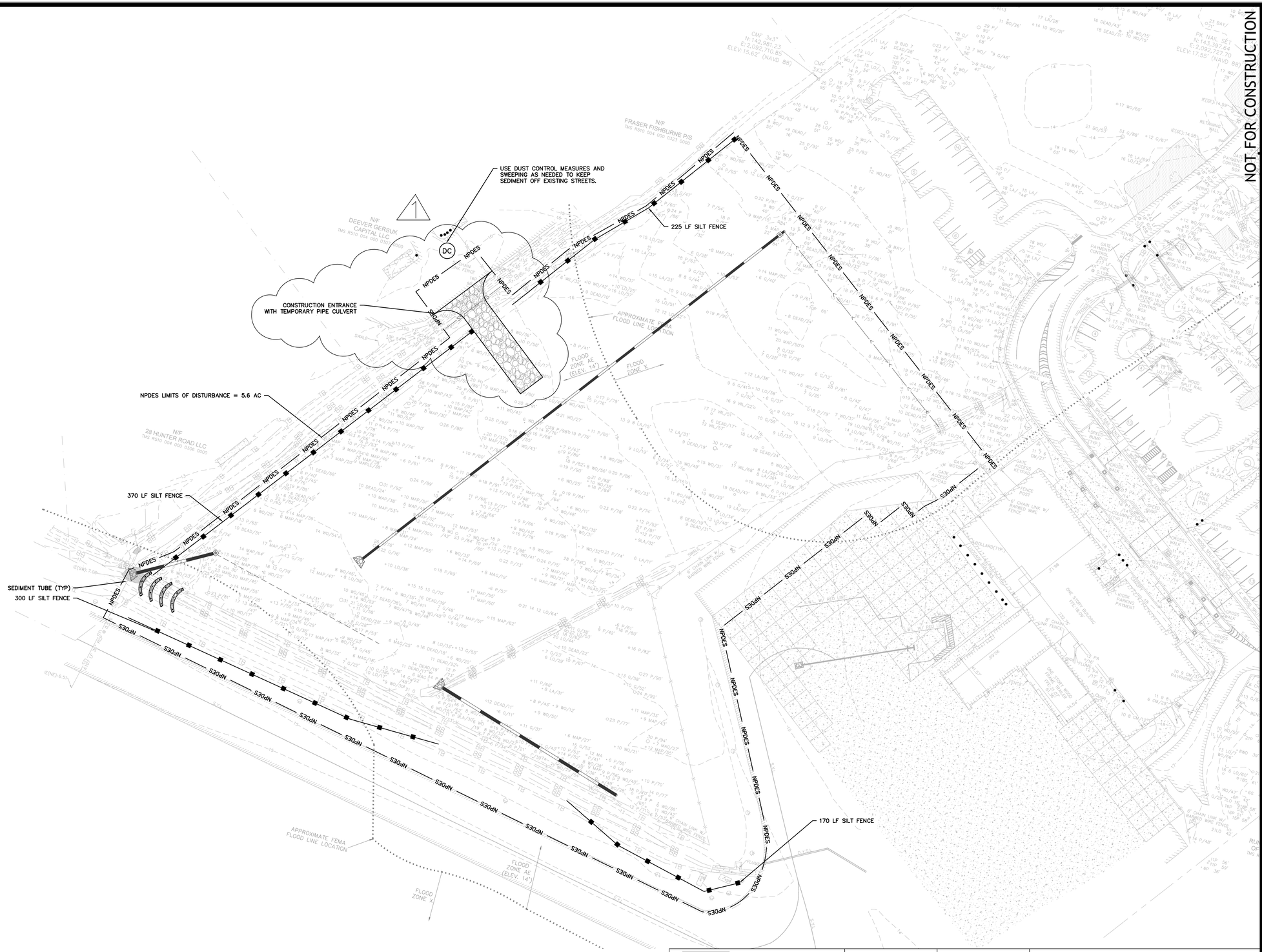
LAND GRADING:	LG OR MGE
SURFACE ROUGHENING:	SURF
TOPSOILING:	
TEMPORARY SEEDING:	TS
MULCHING:	M
ECB OR TRM:	
FGM:	FGM
BFM:	BFM
PERMANENT SEEDING:	PS
SODDING:	SO
RIPRAP:	
OUTLET PROTECTION:	RIPRAP ECB or TRM
DUST CONTROL:	DC
POLYACRYLAMIDE (PAM):	PAM

SEDIMENT CONTROL

SEDIMENT BASIN:	
TEMPORARY SEDIMENT TRAP:	
ROCK SEDIMENT DIKE:	
ROCK CHECK DAM:	OR
SEDIMENT TUBE:	
SILT FENCE:	
REINFORCED SILT FENCE:	
TYPE A–FABRIC INLET PROTECTION:	A
TYPE A–SEDIMENT TUBE INLET PROTECTION:	A
TYPE B – WIRE MESH AND STONE DROP INLET PROTECTION:	B
TYPE C – BLOCK AND GRAVEL INLET PROTECTION:	C
TYPE D – RIGID INLET FILTERS:	D
TYPE E – SURFACE COURSE CURB INLET FILTER:	E
TYPE F – INLET TUBE:	F
TYPE FC – FILTER BAG CURB INLET PROTECTION:	FC
TYPE FB – FILTER BAG CURB INLET PROTECTION:	FB
CONCRETE WASHOUT	CWS

RUNOFF CONVEYANCE MEASURES

VEGETATED CHANNELS:	
RIPRAP–LINED CHANNELS:	
ECB OR TRM–LINED CHANNELS:	
PAVED CHANNELS:	PC PC PC
PIPE SLOPE DRAINS:	
TEMPORARY STREAM CROSSING:	
TEMPORARY DIVERSION DITCH OR SWALE:	TD TD
PERMANENT DIVERSION DITCH:	PD PD
DIVERSION DIKE OR BERM:	DD DB
LEVEL SPREADER:	LS
SUBSURFACE DRAIN:	SSD SSD



NOT FOR CONSTRUCTION

	REVISIONS	DATE
1	ADDENDUM NO. 1	05/18/2020
2		
3		
4		
5		

DESIGNED BY:	BCB
PROJECT ENG.:	PRM
PROJECT NO.:	100266J
DRAWN BY:	BCB
CHECKED BY:	PRM
DATE ISSUED:	05/18/20

HILTON HEAD ISLAND AIRPORT

"Fly to the Fun"

HILTON HEAD ISLAND AIRPORT

INITIAL EROSION CONTROL PLAN

COMMERCIAL APRON EXPANSION

SCALE: 1" = 40'

FILE NAME: 1906-GEOM

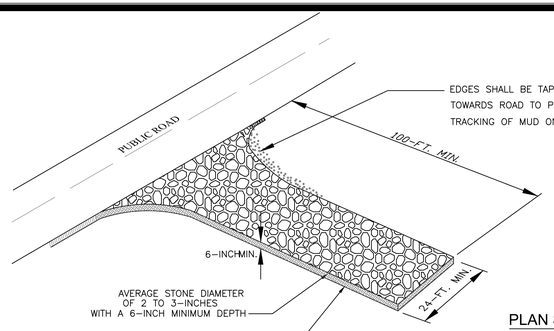
SHT. 400

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
WARD EDWARDS, INC. No. C00152

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 22816
PAUL R. MOORE
05/18/2020

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com



PLAN SYMBOL

SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE – GENERAL NOTES

1. Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
2. Install a non-woven geotextile fabric prior to placing any stone.
3. Install a culvert pipe across the entrance when needed to provide positive drainage.
4. The entrance shall consist of 2-inch to 3-inch D50 stone placed at a minimum depth of 6-inches.
5. Minimum dimensions of the entrance shall be 24-feet wide by 100-feet long, and may be modified as necessary to accommodate site constraints.
6. The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
8. Limestone may not be used for the stone pad.

CONSTR. ENTRANCE – INSPECTION & MAINTENANCE

1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
4. Reshape the stone pad as necessary for drainage and runoff control.
5. Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone pad.
6. Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
7. During maintenance activities, any broken pavement should be repaired immediately.
8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve post-construction.

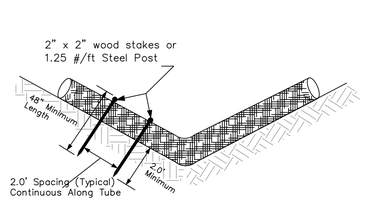
South Carolina Department of Health and Environmental Control

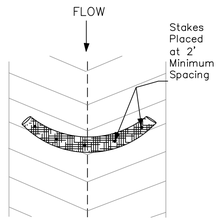
CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

SEDIMENT TUBE INSTALLATION





SEDIMENT TUBE SPACING

SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

PLAN SYMBOL

South Carolina Department of Health and Environmental Control

SEDIMENT TUBES

STANDARD DRAWING NO. SC-05 PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

SEDIMENT TUBES – GENERAL NOTES

1. Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off-site discharge of sediment-laden stormwater runoff.
2. Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch-filled sediment tubes are not permitted.
3. The outer netting of the sediment tube should consist of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material.
4. Sediment tubes, when used as checks within channels, should range between 18-inches and 24-inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
5. Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
6. Sediment tubes should be staked using wooden stakes (2-inch X 2-inch) or steel posts (standard "U" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48-inches in length placed on 2-foot centers.
7. Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
8. The ends of adjacent sediment tubes should be overlapped 6-inches to prevent flow and sediment from passing through the field joint.
9. Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
10. Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
11. Sediment tubes should continue up the side slopes a minimum of 1-foot above the design flow depth of the channel.
12. Install stakes at a diagonal facing incoming runoff.

SEDIMENT TUBES – INSPECTION & MAINTENANCE

1. The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Large debris, trash, and leaves should be removed from in front of tubes when found.
7. If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
8. Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

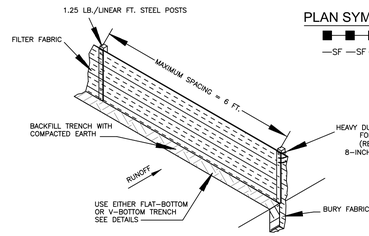
South Carolina Department of Health and Environmental Control

SEDIMENT TUBES

STANDARD DRAWING NO. SC-05 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

SILT FENCE INSTALLATION



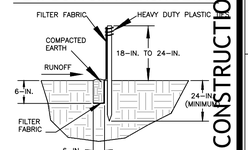
PLAN SYMBOL

—SF—SF—

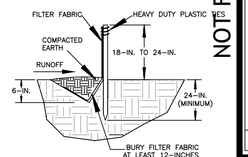
SILT FENCE – GENERAL NOTES

1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100-feet.
3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
   - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
   - Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

SILT FENCE – POST REQUIREMENTS

1. Silt fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6-feet on center.

SILT FENCE – FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

SILT FENCE – INSPECTION & MAINTENANCE

1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

NOT FOR CONSTRUCTION

	NO.	REVISIONS	DATE
	1	ADDENDUM NO. 1	05/18/2020
	2		
	3		
	4		
	5		

DESIGNED BY: BCB
PROJECT ENG.: PRM
PROJECT NO.: 100266J
DRAWN BY: BCB
CHECKED BY: PRM
DATE ISSUED: 05/18/20

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

INITIAL EROSION CONTROL DETAILS

COMMERCIAL APRON EXPANSION

SCALE: AS SHOWN

FILE NAME: 1906-GEOM

SHT. 401

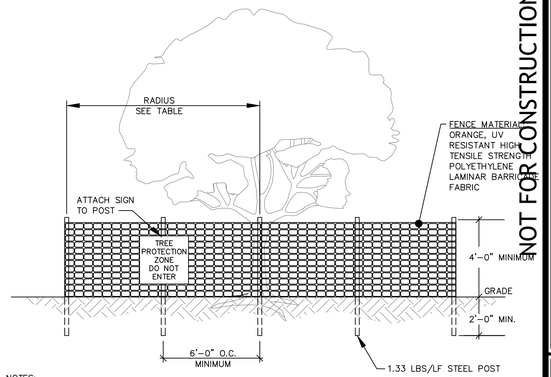
Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION WARD EDWARDS, INC. No. C00152

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER PAUL R. MOORE No. 22816 05/18/20

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

NOT FOR CONSTRUCTION



NOTES:

1. ALL TREES DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING.
2. INSTALL TREE PROTECTION FENCE TO RADIUS INDICATED IN TABLE UNLESS OTHERWISE INDICATED ON PLANS.
3. WARNING SIGNS TO BE MADE OF DURABLE WATERPROOF MATERIAL.
4. ALL WARNING SIGN LETTERS TO BE AT LEAST 3 INCHES HIGH, CLEARLY LEGIBLE AND SPACED A MINIMUM OF ONE EVERY 40 FT. FOR PROTECTION AREAS LESS THAN 40 FT IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER SIDE.
5. THE SIZE OF EACH WARNING SIGN MUST BE A MINIMUM OF 2' x 2' AND BE VISIBLE FROM BOTH SIDES OF THE FENCE.
6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
7. THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
8. TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. FENCING MUST REMAIN UPRIGHT AND SLACK FREE.

TABLE – RADIUS OF TREE PROTECTION ZONE (TPZ)

JURISDICTION	RADIUS OF CIRCULAR TPZ
BEAUFORT COUNTY BEAUFORT CO. DEV. CODE 5.11.100	1 FOOT PER INCH OF TRUNK DBH
TOWN OF BLUFFTON UDO 5.3.3	1.5 FEET PER INCH OF TRUNK DBH OR 10 FEET WHICHEVER IS GREATER
TOWN OF HILTON HEAD LMO 16-6-104, J-3A	FENCING AT DRIP LINE FOR ALL TREES TO BE RETAINED
CITY OF BEAUFORT BEAUFORT CODE 5.3.3	0.5 FOOT PER INCH OF TRUNK DBH
JASPER COUNTY ZONING ORD. ART. 13.5	FENCING AT DRIP LINE FOR ALL TREES TO BE RETAINED
TOWN OF PORT ROYAL PORT ROYAL CODE 5.7.70	1.5 FEET PER INCH OF TRUNK DBH OR 5 FEET WHICHEVER IS GREATER
CITY OF HARDEEVILLE MZ&DO 4.8, F-3	FENCING AT DRIP LINE FOR ALL TREES TO BE RETAINED

DBH = TRUNK DIAMETER AT BREAST HEIGHT

TREE PROTECTION FENCE

DETAIL #02915-008

	DATE
REVISIONS	
1 ADDENDUM NO. 1	05/18/2020
2	
3	
4	
5	

DESIGNED BY: BCB
PROJECT ENG.: PRM
PROJECT NO.: 100266J
DRAWN BY: BCB
CHECKED BY: PRM
DATE ISSUED: 05/18/20

HILTON HEAD ISLAND AIRPORT

"Fly to the Fun"

INITIAL EROSION CONTROL DETAILS

COMMERCIAL APRON EXPANSION

FILE NAME: 1906-GEOM | SCALE: AS SHOWN

SHT. 402

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA — WARD EDWARDS, INC. No. C00152 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — PAUL R. MOORE — No. 22816 — 05/18/2020

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

GRADING LEGEND

	PROPOSED
TOP OF PAVEMENT ELEVATION	⊗ TP: 22.50
TOP OF WALK ELEVATION	⊗ TW: 22.50
TOP OF CURB ELEVATION	⊗ TC: 22.50
FINISH GRADE	⊗ FG: 22.5
HIGH POINT	⊗ HP
LOW POINT	⊗ LP
CONTOUR	19
DITCH CENTERLINE	PD
DIRECTION OF FLOW	
DOORWAY	

STORM SEWER/DRAINAGE LEGEND

	PROPOSED
DROP INLET	DI: A1
CURB INLET (WITH GRATE)	CI: A1
TYPE 16 CURB INLET	CI: A1
VALLEY GUTTER INLET	VI: A1
TRENCH DRAIN	TD: A1
WEIR INLET	WI: A1
YARD INLET	YI: A1
JUNCTION BOX	JB: A1
CLEANOUT	CO
DOWNSPOUT	
STORM DRAIN	
UNDERDRAIN	
ROOF DRAIN COLLECTOR	
FLARED END SECTION	
HEADWALL	
HEADWALL WITH WINGS	
OUTLET CONTROL STRUCTURE	
DITCH CENTERLINE	PD
DIRECTION OF FLOW	

NOT FOR CONSTRUCTION

1

N/F DEEVER GERSUK CAPITAL LLC TMS R510 004 000 0307 0000

60 LF 36 RCP S= 0.10% TEMPORARY PIPE

IE:11.00

IE:10.90

NPDES LIMITS OF DISTURBANCE = 5.6 AC

N/F 28 HUNTER ROAD LLC TMS R510 004 000 0306 0000

N/F FRASER FISHBURNE P/S TMS R510 004 000 0323 0000

I.E.: 13.55
18" HDPE STUB-OUT FOR CONNECTION TO FUTURE ROOF UNDERDRAIN
5 LF 18" HDPE
S=1.00%
SDGI-A1
FR: 19.62
I.E. IN: 13.50
I.E. OUT: 13.10

GRADE TEMPORARY SWALE TO 18" HDPE STUB-OUT

455 LF 18" RCP S=1.02%

160 LF 4" PERFORATED UNDERDRAIN

OUTLET STRUCTURE SDB1
FR: 11.00
I.E. OUT: 7.50
WEIR: 10.00
SDPE B2
FR: 9.75
I.E. IN: 7.00
5 CY RIP RAP

71 LF 24" RCP S=0.71%

DRY DETENTION BASIN
BOTTOM: 8.00
TOP OF BANK: 12.00

I.E.: 8.50
CUT PIPE END TO MATCH BANK SLOPE
5 CY RIP RAP

I.E.: 8.00
CUT PIPE END TO MATCH BANK SLOPE
5 CY RIP RAP

177 LF 24" RCP S=1.13%

I.E.: 10.00
CUT PIPE END TO MATCH BANK SLOPE

APPROXIMATE FEMA FLOOD LINE LOCATION

FLOOD ZONE AE (ELEV. 14')

FLOOD ZONE X

0 40 80 Feet
SCALE: 1" = 40'

NO.	REVISIONS	DATE
1	ADDENDUM NO. 1	05/18/2020
2		
3		
4		
5		

DESIGNED BY: BCB
PROJECT ENG.: PRM
PROJECT NO.: 100266J
DRAWN BY: BCB
CHECKED BY: PRM
DATE ISSUED: 05/18/20

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

GRADING & DRAINAGE PLAN

COMMERCIAL APRON EXPANSION

SCALE: 1" = 40'

FILE NAME: 1906-GEOM

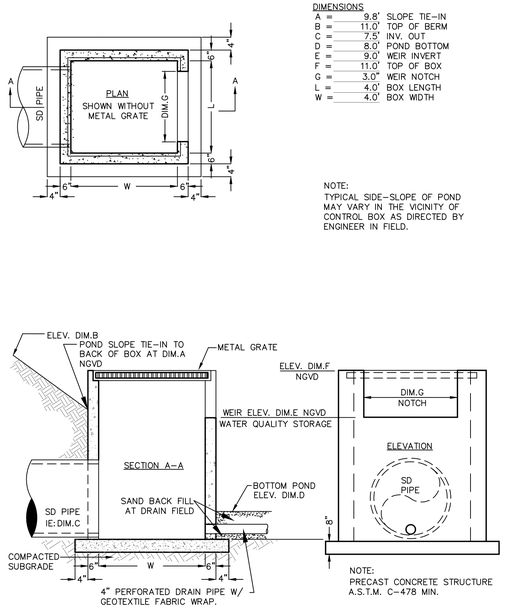
SHT. 450

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
WARD EDWARDS, INC.
No. C00152

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 22816
PAUL R. MOORE
09/16/20

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com



DIMENSIONS

A =	9.8'	SLOPE TIE–IN
B =	11.0'	TOP OF BERM
C =	7.5'	INV. OUT
D =	8.0'	POND BOTTOM
E =	9.0'	WEIR INVERT
F =	11.0'	TOP OF BOX
G =	3.0"	WEIR NOTCH
L =	4.0'	BOX LENGTH
W =	4.0'	BOX WIDTH

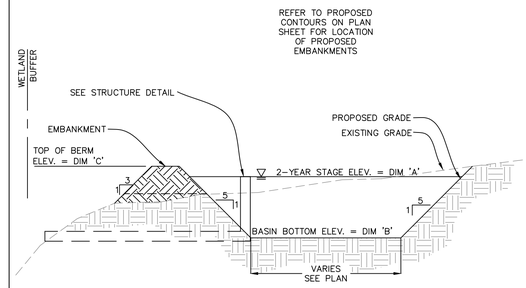
NOTE:
TYPICAL SIDE–SLOPE OF POND MAY VARY IN THE VICINITY OF CONTROL BOX AS DIRECTED BY ENGINEER IN FIELD.

NOTE:
PRECAST CONCRETE STRUCTURE A.S.T.M. C–478 MIN.

4" PERFORATED DRAIN PIPE W/ GEOTEXTILE FABRIC WRAP.

INFILTRATION STRUCTURE

DETAIL 02630-031



DIMENSION DATA

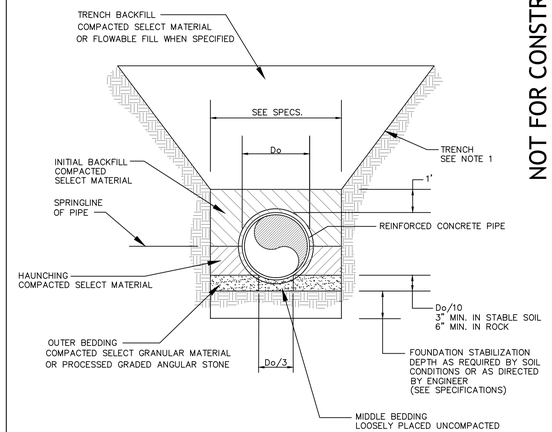
	BASIN 1	
DIM 'A'	10.92'	2 YR. PEAK
DIM 'B'	8.00'	BOTTOM ELEV
DIM 'C'	12.00'	TOP OF BERM

EMBANKMENT CONSTRUCTION NOTES:
1. ALL VEGETATION ROOTS, BRUSH, SOD, RUBBISH, DEBRIS, AND ALL OTHER UNSUITABLE MATERIALS SHALL BE STRIPPED AND REMOVED FROM THE LIMITS OF THE PROPOSED EMBANKMENT CONSTRUCTION.
2. THE MATERIAL FOR THE EMBANKMENT CONSTRUCTION SHALL CONSIST OF SAND–CLAY OR CLAYEY SAND. THE SOIL FILL SHALL BE FREE OF ORGANICS AND SENSITIVE CLAY MATERIALS.
3. THE EMBANKMENT AND BACKFILL MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY, AS DETERMINED BY THE STANDARD PROCTOR TEST. ALL FILL SHALL BE COMPACTED TO THE LINES, DEPTHS, AND GRADES AS INDICATED. EXCESS EXCAVATION OF THE EXISTING SOILS MAY BE NECESSSARY TO OBTAIN THE REQUIRED DENSITY AT THE LIMITS OF EXCAVATION.

EROSION & SEDIMENT CONTROL NOTE:
1. SEE PLANS FOR INDICATION OF EROSION CONTROL MEASURES AND SURFACE STABILIZATION METHOD TO BE USED

DRY DETENTION BASIN CROSS SECTION

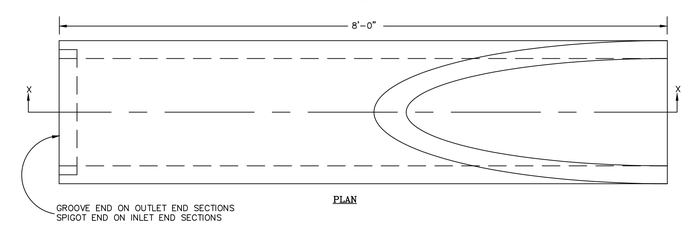
DETAIL 02630-033



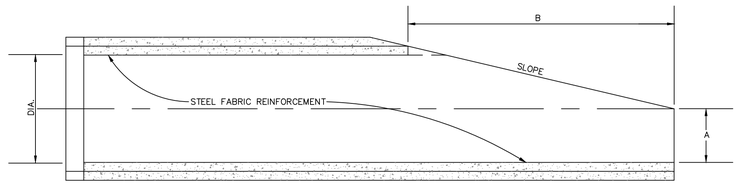
NOTES:
1: DEPTH OF VERTICAL TRENCH AND SIDE SLOPES OF TRENCH MAY VARY DEPENDING ON DEPTH OF EXCAVATION AND TRENCH PROTECTION SYSTEM USED. COMPLY WITH OSHA REGULATIONS (STANDARDS – 29 CFR) PART 1956 SUBPART P, EXCAVATIONS.

2. WHEN PROCESSED ANGULAR STONE IS USED FOR MIDDLE AND OUTER BEDDING, THE STONE SHALL BE COMPLETELY WRAPPED IN FILTER FABRIC TO PREVENT MIGRATION OF SURROUNDING SOILS.

EMBEDMENT DETAIL FOR REINFORCED CONCRETE PIPE



PLAN



SECTION X – X

NOTE:

BEVELED END SECTIONS WILL BE MANUFACTURED IN ACCORDANCE WITH SECTION 714 OF THE S.C. STATE HIGHWAY DEPARTMENT STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION. THESE SPECIAL PIPE SECTIONS WILL BE MADE DURING THE MANUFACTURING OF OTHER STATE APPROVED REINFORCED CONCRETE PIPE.

BEVELED ENDS ON ALUMINUM AND STEEL PIPE ARE TO CONFORM TO DIMENSIONS SHOWN FOR CONCRETE PIPE.

TOTAL LINE LENGTH OF ALTERNATE ALUMINUM AND STEEL PIPE MAY BE PLACED IN ONE OR TWO LENGTHS AT THE DISCRETION OF THE CONTRACTOR.

END SECTION DIMENSIONS

DIA.	A	B	SLOPE
15"	0'– 6"	2'– 0"	4 :1
18"	0'– 9"	3'– 0"	4 :1
24"	0'– 10"	3'– 4"	4 :1
30"	1'– 0"	4'– 6"	3 :1
36"	1'– 3"	5'– 3"	3 :1
42"	1'– 8"	5'– 6"	3 :1
48"	2'– 0"	6'– 0"	3 :1

BEVELED END PIPE SECTION

DETAIL 02630-026

NOT FOR CONSTRUCTION

	REVISIONS	DATE
1	ADDENDUM NO. 1	05/18/2020
2		
3		
4		
5		

DESIGNED BY: BCB
PROJECT ENG.: PRM
PROJECT NO.: 100266J
DRAWN BY: BCB
CHECKED BY: PRM
DATE ISSUED: 05/18/20

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

GRADING & DRAINAGE DETAILS
COMMERCIAL APRON EXPANSION
SCALE: AS SHOWN
FILE NAME: 1906-GEOM

SHT. 451

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
WARD EDWARDS, INC. No. C00152

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 22816
PAUL R. MOORE
05/18/2020

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

GENERAL NOTES:

1. BOUNDARY INFORMATION PROVIDED BY ATLAS SURVEYING THROUGH TALBERT, BRIGHT & ELLINGTON.
2. TOPOGRAPHIC DATA PROVIDED BY ATLAS SURVEYING THROUGH TALBERT, BRIGHT & ELLINGTON.
3. APPROXIMATE LOCATION OF CERTAIN EXISTING UNDERGROUND UTILITY LINES AND STRUCTURES ARE SHOWN ON THE PLANS FOR INFORMATION ONLY ADDITIONAL UNDERGROUND LINES OR STRUCTURES MAY EXIST THAT ARE NOT SHOWN. CALL SOUTH CAROLINA 811 AT 811 OR 1–888–721–7877 BETWEEN THE HOURS OF 7:00 AM AND 7:00 PM MONDAY THRU FRIDAY AT LEAST THREE WORKING DAYS BEFORE COMMENCING CONSTRUCTION. REQUEST UNDERGROUND UTILITIES TO BE LOCATED AND MARKED WITHIN AND NEAR THE CONSTRUCTION SITE.
4. COMPLY WITH "SOUTH CAROLINA UNDERGROUND FACILITY DAMAGE PREVENTION ACT (EFFECTIVE JUNE 7, 2012). NOTIFICATION OF INTENT TO EXCAVATE MAY BE GIVEN BY CALLING THE TOLL FREE NUMBER: 1–800–922–0983.
5. PROTECT BENCH MARKS AND PROPERTY MONUMENTS FROM DAMAGE DURING CONSTRUCTION OPERATIONS. REPLACE ANY BENCH MARKS OR MONUMENTS DAMAGED OR DESTROYED AS A RESULT OF CONTRACTOR'S OPERATIONS, AT NO COST TO THE OWNER, BY A LICENSED SURVEYOR IN THE STATE OF SOUTH CAROLINA.
6. OFF–STREET PARKING FOR THE CONTRACTOR'S EMPLOYEES AND AUTHORIZED VISITORS TO THE SITE MUST BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
7. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO WEIGHT LIMITS PRESCRIBED FOR ALL PUBLIC ROADS WHEN HAULING EQUIPMENT AND MATERIALS TO AND FROM THE PROJECT SITE. DAMAGES TO EXISTING PAVEMENT DUE TO THE CONTRACTOR'S CONSTRUCTION OPERATIONS OR IMPROPER TRANSPORTATION OF MATERIALS AND EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. AT LEAST ONE DRIVING LANE ON PUBLIC ROADS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. TRAFFIC LANES WILL ONLY BE CLOSED WITH THE EXPRESS WRITTEN CONSENT OF THE AGENCY HAVING JURISDICTION OVER THE ROADWAY. NOTIFY AGENCY HAVING JURISDICTION AT LEAST 5 DAYS BEFORE CLOSING ANY DRIVING LANES TO TRAFFIC. PROVIDE TRAFFIC CONTROL DEVICES, SIGNS AND FLAGMEN AS REQUIRED TO ENSURE PUBLIC SAFETY.
9. CONTRACTOR SHALL COORDINATE DEMOLITION, CLEARING AND CONSTRUCTION OF IMPROVEMENTS TO MINIMIZE INTERFERENCE WITH VEHICULAR AND PEDESTRIAN TRAFFIC AND WITH OPERATIONS OF EXISTING FACILITIES.

WATER AND SEWER LINE CONSTRUCTION:

1. ALL WATER AND SEWER LINE CONSTRUCTION SHALL CONFORM TO APPLICABLE STATE AND HILTON HEAD PUBLIC SERVICE DISTRICT (HHPSD) REQUIREMENTS, STANDARDS AND SPECIFICATIONS.
2. HHPSD WILL BE RESPONSIBLE FOR INSPECTION AND APPROVAL OF ALL WATER AND SEWER SYSTEM CONSTRUCTION AND FOR ACCEPTANCE FOR OPERATION AND MAINTENANCE.
3. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION OF ALL UTILITY OWNERS AND FOR FIELD VERIFICATION OF BOTH HORIZONTAL AND VERTICAL LOCATIONS PRIOR TO COMMENCING CONSTRUCTION. ANY DAMAGES TO EXISTING UTILITIES DUE TO THIS CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. NOTIFY THE PROJECT ENGINEER, IF CONFLICTS WITH EXISTING STRUCTURES REQUIRE THAT PROPOSED UTILITIES BE RELOCATED.
5. THE CONTRACTOR MUST NOTIFY HHPSD FORTY–EIGHT (48) HOURS PRIOR TO ANY CONSTRUCTION, INSPECTION OR TESTING OF THE WATER DISTRIBUTION SYSTEM.
6. PIPE, FITTINGS, VALVES AND APPURTENANCES FOR WATER AND SEWER LINES SHALL ALL BE IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN THE HHPSD TECHNICAL SPECIFICATIONS.
7. INSTALLATION OF WATER AND SEWER LINES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HHPSD STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
8. CONTRACTOR SHALL INSTALL MECHANICAL RESTRAINTS ON ALL BENDS, PLUGS AND TEES, 2" OR LARGER, ON WATERLINES AND SANITARY SEWER FORCE MAINS.
9. ALL WATER MAINS SHALL BE STERILIZED AND PRESSURE TESTED IN ACCORDANCE WITH HHPSD SPECIFICATIONS.
10. SEPARATION OF WATER MAINS AND SEWERS:
    - A. PARALLEL INSTALLATION: UNLESS OTHERWISE SPECIFICALLY SHOWN IN A SPECIAL DETAIL ON THE PLANS, INSTALL WATER MAINS AT LEAST 10–FT. HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY SEWER OR SANITARY SEWER FORCE MAIN, THE DISTANCE BEING MEASURED IN A HORIZONTAL PLANE BETWEEN THE OUTSIDE SURFACES OF THE PIPES.
    - B. CROSSINGS: UNLESS OTHERWISE SPECIFICALLY SHOWN IN A SPECIAL DETAIL ON THE PLANS, INSTALL WATER LINES CROSSING SANITARY SEWERS OR SANITARY SEWER FORCE MAINS TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18–INCHES BETWEEN THE OUTSIDE SURFACES OF THE PIPES. THIS SHALL BE THE CASE WHETHER THE WATER LINE IS ABOVE OR BELOW THE SANITARY SEWER LINE. WHENEVER POSSIBLE LOCATE THE WATER LINE ABOVE THE SEWER LINE. WHERE A NEW WATER LINE CROSSES A NEW SEWER LINE, PLACE A FULL LENGTH OF DUCTILE IRON PIPE FOR WATER LINE AT THE CROSSING WITH PIPE POSITIONED SO THAT THE JOINTS ARE AS FAR AS POSSIBLE FROM THE POINT OF CROSSING. WHERE A NEW WATER LINE CROSSES AN EXISTING SEWER LINE, PLACE ONE FULL LENGTH OF DUCTILE IRON PIPE WATER LINE SO THAT THE JOINTS ARE AS FAR FROM THE POINT OF CROSSING AS POSSIBLE.
11. THE CONTRACTOR SHALL CUT AND PATCH EXISTING PAVEMENT AS REQUIRED FOR THE INSTALLATION OF UTILITY LINES.
12. SANITARY MANHOLE RIM GRADES SHOWN ARE APPROXIMATE. ADJUST RIM ELEVATIONS TO BE FLUSH WITH FINISHED GRADE.
13. THE CONTRACTOR UNDER THIS CONTRACT SHALL NOT MAKE ANY CONNECTIONS TO THE EXISTING WATER OR SANITARY SEWER SYSTEMS UNLESS EXPRESSLY AUTHORIZED TO DO SO BY THE HHPSD. ALL WATER AND SEWER IMPROVEMENTS UNDER THIS CONTRACT MUST BE CONSTRUCTED COMPLETE, TESTED, INSPECTED AND APPROVED BY THE HHPSD BEFORE ANY AUTHORIZATION TO CONNECT WILL BE GIVEN. COORDINATION OF TESTING, INSPECTION AND CONNECTIONS WITH THE HHPSD IS THE RESPONSIBILITY OF THE CONTRACTOR UNDER THIS CONTRACT.
14. ALL WATER MAINS SHALL BE INSTALLED WITH THIRTY–SIX INCHES (36") MINIMUM COVER (FROM FINISHED GRADE). MAXIMUM DEPTH SHALL BE FIVE FEET (5'). WHERE WATER MAINS MAY CONFLICT WITH OTHER UTILITIES, THE WATER MAIN CROSSING SHALL BE CONSTRUCTED WITH DUCTILE IRON PIPE, MECHANICAL JOINT 45–DEG. BENDS AND MECHANICAL RESTRAINTS.

WORK ON SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY:

1. CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL CONDITIONS AND SPECIAL PROVISIONS CONTAINED IN THE SCDOT ENCROACHMENT PERMIT(S) ISSUED FOR THIS PROJECT.
2. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING CONSTRUCTION NOTIFICATION FORM (48 HOUR MINIMUM) AND COORDINATION OF ALL WORK WITHIN SCDOT RIGHTS–OF–WAY WITH THE LOCAL AND/OR DISTRICT SCDOT ENGINEERING REPRESENTATIVE.
3. CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING A TRAFFIC CONTROL PLAN TO SCDOT FOR APPROVAL MINIMUM 48 HOURS PRIOR TO CONDUCTING WORK IN THE RIGHT–OF–WAY. ALL TRAFFIC CONTROL PLANS SHALL CONFORM TO CURRENT MUTCD AND CURRENT SCDOT GUIDELINES AND SPECIFICATIONS.
4. ALL SIGNAGE, PAVEMENT MARKINGS, AND MARKERS SHALL CONFORM TO CURRENT MUTCD GUIDELINES AND CURRENT SCDOT STANDARD SPECIFICATIONS AND DRAWINGS.
5. ALL PAVING AND DRAINAGE CONSTRUCTION SHALL CONFORM TO CURRENT SCDOT STANDARD SPECIFICATIONS AND DRAWINGS.
6. ALL PAVEMENT MARKINGS IN SCDOT RIGHT–OF–WAY SHALL BE THERMOPLASTIC AND CONFORM TO CURRENT MUTCD GUIDELINES AND CURRENT SCDOT STANDARD SPECIFICATIONS AND DRAWINGS.
7. REMOVAL OF PAVEMENT MARKINGS SHALL CONFORM TO CURRENT SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 609.4.1.2.

TREE PROTECTION-HILTON HEAD ISLAND

1. ONLY THOSE TREES APPROVED FOR REMOVAL IN ACCORDANCE WITH THE TOWN OF HILTON HEAD ISLAND LAND MANAGEMENT ORDINANCE AND SO DESIGNATED ON THE DRAWINGS FOR REMOVAL ARE TO BE REMOVED AS PART OF THE SITE CLEARING OPERATIONS. ALL TREES NOT DESIGNATED ON THE PLANS FOR REMOVAL MUST BE PRESERVED.
2. THE CONTRACTOR IS RESPONSIBLE FOR MARKING THE TREES DESIGNATED TO BE PRESERVED AND THOSE TO BE REMOVED IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN SECTION 16–6–104 OF THE TOWN OF HILTON HEAD ISLAND LAND MANAGEMENT ORDINANCE.
3. PRIOR TO COMMENCING ANY CLEARING OR CONSTRUCTION OPERATIONS ON THE SITE, THE CONTRACTOR SHALL ERECT TREE PROTECTION BARRIERS AROUND EACH TREE OR GROUP OF TREES DESIGNATED FOR PRESERVATION IN ACCORDANCE WITH THE DETAILS ON THE PLANS AND THE REQUIREMENTS CONTAINED IN SECTION 16–6–404 OF THE TOWN OF HILTON HEAD ISLAND LAND MANAGEMENT ORDINANCE.
4. A TREE PROTECTION ZONE SHALL BE ESTABLISHED IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN SECTION 16–6–404 OF THE TOWN OF HILTON HEAD ISLAND LAND MANAGEMENT ORDINANCE FOR EACH EXISTING TREE DESIGNATED FOR PRESERVATION. THE MINIMUM TREE PROTECTION ZONE SHALL BE THE TREE DRIPLINE PLUS 1 FOOT. THE SIZE OR CONFIGURATION OF THE TREE PROTECTION ZONE MAY BE ADJUSTED AT THE DISCRETION OF THE TOWN OF HILTON HEAD ISLAND PLANNING DEPARTMENT DIRECTOR.
5. THE AREA WITHIN THE TREE PROTECTION ZONE MUST REMAIN OPEN AND UNPAVED. NO CHANGE OF GRADE WILL BE ALLOWED WITHIN THE TREE PROTECTION ZONE. ANY ACTIVITY WITHIN THE TREE PROTECTION ZONE IS SUBJECT TO APPROVAL BY THE TOWN OF HILTON HEAD ISLAND PLANNING DEPARTMENT DIRECTOR. THE FOLLOWING ACTIVITIES ARE PROHIBITED WITHIN THE TREE PROTECTION ZONE:
    - A. PLACEMENT OR STORAGE OF ANY SOIL, DEBRIS, OILS, FUEL, PAINTS, BUILDING MATERIALS OR ANY OTHER MATERIALS.
    - B. BURNING
    - C. VEHICLE PARKING
    - D. PAVING
    - E. TRENCHING FOR UTILITIES
6. WHERE UTILITY LINES MUST PASS THRU THE TREE PROTECTION ZONE, THEY SHALL BE INSTALLED BY HORIZONTAL BORING BENEATH THE ROOTS OF THE TREE.
7. WHERE IT IS NECESSARY FOR MACHINERY AND EQUIPMENT TO PASS WITHIN THE TREE PROTECTION ZONE, APPROVAL MUST BE OBTAINED FROM THE TOWN OF HILTON HEAD ISLAND PLANNING DEPARTMENT DIRECTOR. SPECIAL MEASURES WILL BE REQUIRED TO PROTECT THE ROOTS FROM EXCESSIVE COMPACTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING A STAKING INSPECTION WITH THE TOWN OF HILTON HEAD ISLAND PRIOR TO CLEARING. THE FOLLOWING MUST BE COMPLETED BEFORE THE INSPECTION:
    - A. ALL BUILDING EDGES, SIDEWALKS, PAVED AREAS AND UTILITY LINES STAKED.
    - B. TREE PROTECTION BARRIERS INSTALLED.
    - C. TREES TO BE PRESERVED MARKED WITH BLUE FLAGGING AND THOSE TO BE REMOVED MARKED WITH RED FLAGGING.
    - D. ALL SILT FENCE INSTALLED PER THE APPROVED PLAN.

SITE GRADING AND DRAINAGE:

1. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING 72–HOUR NOTICE TO ALL RESPECTIVE UTILITY COMPANIES FOR FIELD VERIFICATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ANY DAMAGES TO EXISTING UTILITIES DUE TO THIS CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. TEMPORARY CONTROL OF STORM WATER DRAINAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SEQUENCING AND CONSTRUCTION TECHNIQUES SHALL PREVENT OBSTRUCTION OF STORM SEWERS, PONDING IN TRAFFIC AREAS OR RISING OF WATER LEVELS WHICH WOULD ENTER ADJACENT BUILDINGS OR STRUCTURES.
3. FULL WIDTH OF STREET AND ROAD RIGHTS–OF–WAY MUST BE CLEARED AND GRADED AS SHOWN IN THE DETAILS ON THE DRAWINGS
4. SUBGRADE PREPARATION: TOP SOIL SHALL BE REMOVED FROM PAVED AREAS TO A MINIMUM DEPTH AS RECOMMENDED IN THE PROJECT'S GEOTECHNICAL REPORT. ALL EXCAVATION SHALL BE TO SUBGRADE LIMITS.
5. ALL UTILITY PIPE LINES, CONDUITS AND SLEEVES UNDER PAVED AREAS MUST BE IN PLACE PRIOR TO COMPLETION OF THE ROADWAY SUBGRADE COMPACTION.
6. FINISH GRADING SHALL INCLUDE THE PLACEMENT OF TOPSOIL OVER ALL UNPAVED AREAS NOT OCCUPIED BY BUILDINGS OR STRUCTURES AND FINE GRADING AROUND BUILDINGS, ADJACENT TO WALKS, CURBS, GUTTERS AND STRUCTURES TO ASSURE POSITIVE DRAINAGE.

SCDHEC/OCRM SEDIMENT AND EROSION CONTROL STANDARD NOTES (REVISED DEC-2012):

1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
    - A. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
    - B. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH–DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY, OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72–300 ET SEQ. AND SCR100000.
8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT–LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50–FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10–FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND–DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
    - A. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL.
    - B. WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS.
    - C. FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.
    - D. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
19. A PRE–CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON–SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON–LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON–SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

DRY UTILITY CONDUITS FOR ELECTRIC, TELEPHONE AND CABLE TV:

1. ALL DRY UTILITY CONDUIT ENDS SHALL BE CAPPED AND MARKED WITH A STEEL REBAR STAKE IMBEDDED ONE (1) FOOT BELOW GROUND SURFACE.
2. 48" MINIMUM BURY DEPTH FOR ALL ELECTRICAL CONDUITS.
3. MAINTAIN MINIMUM 12" VERTICAL CLEARANCE WHEN CROSSING WATER, SEWER, AND STORM DRAIN LINES.
4. MAINTAIN MINIMUM 18" HORIZONTAL CLEARANCE WHEN PARALLELING WATER, SEWER AND STORM DRAIN LINES.
5. EXTEND CONDUIT BEYOND PAVEMENT, CURB, AND SIDEWALKS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE INSTALLATION OF ALL UTILITY SERVICE CONNECTIONS. REFER TO APPROVED BUILDING PLANS FOR THE EXACT LOCATION OF ALL SERVICE CONNECTIONS. THE CONTRACTOR MUST INSTALL ALL CONDUITS, AS SHOWN ON THE PLANS OR AS REQUIRED BY RESPECTIVE UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE STRICT COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS WITH REGARDS TO THE INSTALLATION OF UTILITIES AND CONDUIT.
7. LOCATIONS SHOWN ON THE PLANS FOR PROPOSED DRY UTILITY CONDUITS ARE APPROXIMATE ONLY. ALL DIMENSIONING AND STAKING SHOULD BE BASED ON ECONOMICAL AND PRACTICAL CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE RESPECTIVE UTILITY REPRESENTATIVES, PRIOR TO ANY CONDUIT INSTALLATION.
8. TRANSFORMER PADS SHALL BE LOCATED AS DIRECTED BY THE RESPECTIVE UTILITY REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE CODE REQUIREMENTS.
9. NOTIFY THE ENGINEER IF CONFLICTS WITH EXISTING OR PROPOSED STRUCTURES REQUIRE PROPOSED UTILITIES BE RELOCATED.

SITE CLEARING AND DEMOLITION:

1. NO CLEARING SHALL OCCUR WITHIN DESIGNATED BUFFER ZONES, TREE PROTECTION ZONES, OUTSIDE OF THE PROPERTY LINES OR BEYOND THE CLEARING LIMITS UNLESS OTHERWISE SPECIFICALLY SHOWN ON THE PLANS.
2. ONLY THOSE TREES DESIGNATED ON THE DRAWINGS FOR REMOVAL ARE TO BE REMOVED AS PART OF THE SITE CLEARING OPERATIONS.
3. THE CONTRACTOR SHALL INSTALL A CONTINUOUS LINE OF FLAGGING OR FENCING ALONG THE LIMITS OF CLEARING PRIOR TO COMMENCING ANY CLEARING, DEMOLITION, OR CONSTRUCTION WORK ON THE PROJECT.
4. EXERCISE CAUTION DURING CLEARING OPERATIONS TO AVOID FELLING TREES INTO DESIGNATED TREE PROTECTION ZONES.
5. NO BURNING WILL BE ALLOWED WITHIN 50 FEET OF A TREE PROTECTION ZONE OR TREE DRIP LINE. CONTRACTOR SHALL COORDINATE ANY BURNING OPERATIONS WITH LOCAL JURISDICTION AND FIRE DEPARTMENTS.
6. SELECTIVE CLEARING AREAS SHALL BE CLEARED OF ALL BRUSH AND UNDERSTORY GROWTH.

UTILITY CONTACTS:

PALMETTO ELECTRIC	843–208–5512	1 COOPERATIVE WAY, HARDEEVILLE, SC 29927
DOMINION ENERGY	800–251–7234	PO BOX 100255 COLUMBIA, SC 29202
BROAD CREEK PSD	843–785–7582	PO BOX 5878, HILTON HEAD, SC 29938
SOUTH ISLAND PSD	843–785–6224	PO BOX 5148, HILTON HEAD, SC 29938
HILTON HEAD ISLAND PSD	843–681–5525	PO BOX 21264, HILTON HEAD, SC 29925
HARGRAY COMMUNICATIONS	843–815–1675	PO BOX 3380, BLUFFTON, SC 29910
TIME WARNER CABLE	843–913–7940	11 OFFICE PARK ROAD, HILTON HEAD, SC 29928
CENTURY LINK	843–525–0044	2127 BOUNDARY ST #16, BEAUFORT, SC 29902
SANTEE COOPER	843–761–8000	1 RIVERWOOD DRIVE, MONCKS CORNER, SC 29461

CONTRACTOR NOTE:

CONTRACTOR TO OBTAIN AND BECOME FAMILIAR WITH GEOTECHNICAL REPORT #HG205014 PREPARED BY TERRACON.

ALL WORK MUST CONFORM TO PROJECT TECHNICAL SPECIFICATIONS FOR COMMERCIAL APRON EXPANSION HILTON HEAD ISLAND AIRPORT PREPARED BY WARD EDWARDS ENGINEERING. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A COPY OF THE TECHNICAL SPECIFICATIONS IF NOT PROVIDED WITH THE DRAWINGS.

811 Know what's below. Call 811 before you dig.

PROJECT INFORMATION

DEVELOPER:
BEAUFORT COUNTY, SOUTH CAROLINA
120 BEACH CITY ROAD
HILTON HEAD ISLAND, SC 29926
JON REMBOLD
843.255.2952
JREMBOLD@BCGOV.NET

PROPERTY OWNER:
BEAUFORT COUNTY, SOUTH CAROLINA
120 BEACH CITY ROAD
HILTON HEAD ISLAND, SC 29926

SOURCE OF TITLE:
BEAUFORT COUNTY REGISTER OF DEEDS,
DEED BOOK 3644 PAGE 1816

PROJECT STREET ADDRESS:
27 DILLON ROAD

PROPERTY IDENTIFICATION NO.:
County I.D. #:R510 008 000 0085 0000

LATITUDE / LONGITUDE:
N 32° 13' 32"
W 80° 41' 48"

DEVELOPMENT PERMIT JURISDICTION:
TOWN OF HILTON HEAD ISLAND

PROPERTY ZONING:
IL LIGHT INDUSTRIAL

FLOOD ZONE:
A7, B, C (BASE FLOOD ELEV:14)

VERTICAL CONTROL DATUM:
CHOOSE NGVD29 / NAVD88

SITE AREA:

TOTAL:	193.93 ACRES
DISTURBED:	5.6 ACRES

USE:

EXISTING:	AIRPORT
PROPOSED:	AIRPORT

REQUIRED SETBACKS:

FRONT:	40 FEET
REAR:	N/A FEET
SIDE:	20 FEET
STREET:	40 FEET

REQUIRED BUFFERS:

FRONT:	15 FEET (TYPE B–OPTION 2)
REAR:	N/A
SIDE:	10 FEET (TYPE A OPTION 2)
STREET:	15 FEET (TYPE B–OPTION 2)

SURFACE COVERAGE:

MAX IMPERVIOUS ALLOWED:	65 %
EXISTING IMPERVIOUS:	58.50 AC. (30 %)
PROPOSED IMPERVIOUS:	62.21 AC (32 %)
OPEN SPACE PROVIDED:	131.72 AC. (68 %)

DESIGN TEAM

LAND SURVEYOR:
ATLAS SURVEYING INC.
843.654.9277

GEOTECHNICAL ENGINEER:
TERRACON
843.258.7070

WETLAND CONSULTANT:
JAMES GENTRY
843.893.6781

SEQUENCE OF CONSTRUCTION ACTIVITIES

ESTIMATED START DATE: 09–01–20 ESTIMATED COMPLETION DATE: 09–01–21

ITEMS MUST OCCUR IN THE ORDER LISTED; ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.

PHASE 1: (INITIAL)

1. RECEIVE NPDES COVERAGE FROM DHEC.
2. HOLD PRE–CONSTRUCTION MEETING.
3. NOTIFY DHEC EQC REGIONAL OFFICE OR OCRM OFFICE 48 HOURS PRIOR TO BEGINNING LAND–DISTURBING ACTIVITIES.
4. INSTALLATION OF CONSTRUCTION ENTRANCE.
5. CLEARING & GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
6. INSTALLATION OF PERIMETER CONTROLS (E.G. SILT FENCE).
7. INSTALL TREE PROTECTION.
8. INSTALL INLET PROTECTION.
9. INSTALL SEDIMENT TUBES.
10. CLEARING & GRUBBING ONLY IN AREAS OF BASIN.

PHASES 2 & 3: (INTERMEDIATE & FINAL)

11. INSTALLATION OF BASIN AND INSTALLATION OF DIVERSIONS TO THOSE STRUCTURES (OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED AS SHOWN ON THE DETAILS BEFORE PROCEEDING TO NEXT STEP; AREAS DRAINING TO THESE STRUCTURES CANNOT BE DISTURBED UNTIL THE STRUCTURES & DIVERSIONS TO THE STRUCTURES ARE COMPLETELY INSTALLED). INSTALL SURFACE DEWATERING SKIMMER PRIOR TO MOVING TO NEXT STEP.
12. CLEARING & GRUBBING OF SITE OR DEMOLITION (SEDIMENT & EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED).
13. ROUGH GRADING.
14. INSTALLATION OF STORM DRAIN SYSTEM AND PLACEMENT OF INLET PROTECTION AS EACH INLET IS INSTALLED.
15. INSTALL ALL REQUIRED UTILITIES AND CURBING.
16. FINE GRADING, PAVING, ETC.
17. PLACE TOPSOIL & ESTABLISH FINISH GRADES.
18. PERMEABLE PAVERS SHALL BE LAID WHEN ALL HEAVY CONSTRUCTION IS COMPLETED.
19. CLEAN–OUT OF DETENTION BASINS THAT WERE USED AS SEDIMENT CONTROL STRUCTURES AND RE–GRADING OF DETENTION POND BOTTOMS; IF NECESSARY, MODIFICATION OF SEDIMENT BASIN RISER TO CONVERT TO DETENTION BASIN OUTLET STRUCTURE.
20. INSTALL PERMANENT SEEDING.
21. FLUSH ANY SEDIMENT FROM STORM SEWER PIPES AND INLETS.
22. REMOVAL OF TEMPORARY SEDIMENT & EROSION CONTROL MEASURES (INCLUDING SKIMMER) AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER / OPERATOR HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES).
23. PERFORM AS–BUILT SURVEYS OF ALL DETENTION STRUCTURES AND SUBMIT TO DHEC OR MS4 FOR ACCEPTANCE.
24. SUBMIT NOTICE OF TERMINATION (NOT) TO DHEC AS APPROPRIATE.

- NOTE: PERFORM WEEKLY SITE INSPECTIONS DURING LAND DISTURBING ACTIVITIES AND MAKE RECOMMENDATIONS FOR ADDITIONAL BMPs OR MAINTENANCE OF EXISTING BMPs
- NOTE: ALL PUMPED DEWATERING SHALL BE PERFORMED USING AN APPROPRIATELY SIZED PUMPED WATER FILTER BAG.

SCDHEC-OCRM CERTIFICATION:

"I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72–300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCR100000."

Ward Edwards
ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

WARD EDWARDS, INC.
No. C00152

PAUL R. MOORE
No. 22816
05/18/20

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

NOT FOR CONSTRUCTION

	REVISIONS	DATE
1	ADDENDUM NO. 1	05/18/2020
2		
3		
4		
5		

DESIGNED BY: BCB
PROJECT ENG.: PRM
PROJECT NO.: 100266J
DRAWN BY: BCB
CHECKED BY: PRM
DATE ISSUED: 05/18/20

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

DRAINAGE & EROSION CONTROL NOTES

COMMERCIAL APRON EXPANSION

SCALE: N/A

FILE NAME: 1906–GEOM

SHT.
452

LIMITS OF DISTURBANCE:	NPDES

EROSION PREVENTION

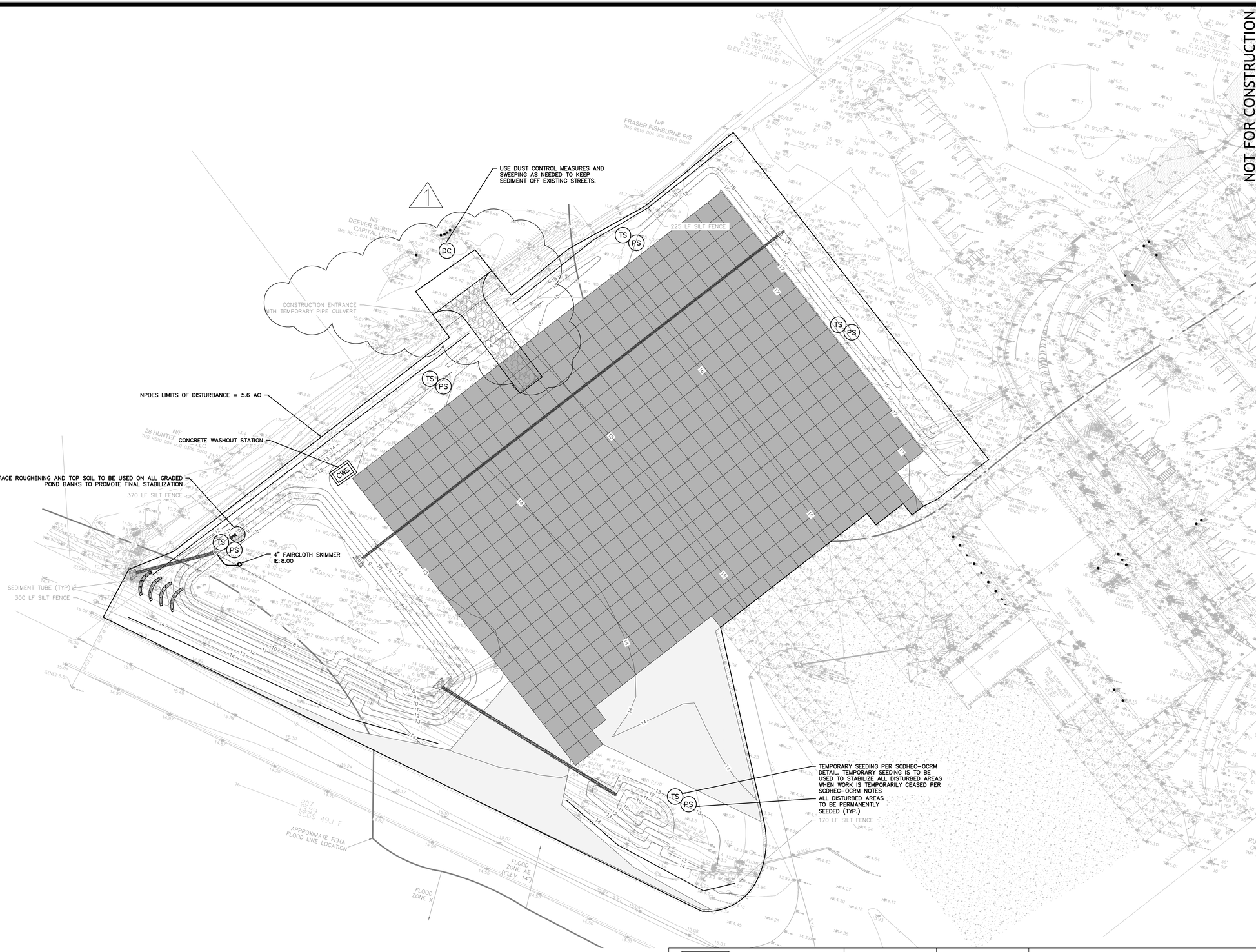
LAND GRADING:	LG OR HGM
SURFACE ROUGHENING:	SURF
TOPSOILING:	
TEMPORARY SEEDING:	TS
MULCHING:	M
ECB OR TRM:	
FGM:	FGM
BFM:	BFM
PERMANENT SEEDING:	PS
SODDING:	SO
RIPRAP:	
OUTLET PROTECTION:	RIPRAP / ECB or TRM
DUST CONTROL:	DC
POLYACRYLAMIDE (PAM):	PAM

SEDIMENT CONTROL

SEDIMENT BASIN:	
TEMPORARY SEDIMENT TRAP:	
ROCK SEDIMENT DIKE:	
ROCK CHECK DAM:	OR
SEDIMENT TUBE:	
SILT FENCE:	
REINFORCED SILT FENCE:	
TYPE A–FABRIC INLET PROTECTION:	A
TYPE A–SEDIMENT TUBE INLET PROTECTION:	A
TYPE B – WIRE MESH AND STONE DROP INLET PROTECTION:	B
TYPE C – BLOCK AND GRAVEL INLET PROTECTION:	C
TYPE D – RIGID INLET FILTERS:	D
TYPE E – SURFACE COURSE CURB INLET FILTER:	E
TYPE F – INLET TUBE:	F
TYPE FC – FILTER BAG CURB INLET PROTECTION:	FC
TYPE FB – FILTER BAG CURB INLET PROTECTION:	FB
CONCRETE WASHOUT	CWS

RUNOFF CONVEYANCE MEASURES

VEGETATED CHANNELS:	
RIPRAP–LINED CHANNELS:	
ECB OR TRM–LINED CHANNELS:	
PAVED CHANNELS:	PC PC PC
PIPE SLOPE DRAINS:	
TEMPORARY STREAM CROSSING:	
TEMPORARY DIVERSION DITCH OR SWALE:	TD TD
PERMANENT DIVERSION DITCH:	PD PD
DIVERSION DIKE OR BERM:	DD DB
LEVEL SPREADER:	
SUBSURFACE DRAIN:	SSD SSD



NOT FOR CONSTRUCTION

	NO.	REVISIONS	DATE
	1	ADDENDUM NO. 1	05/18/2020
	2		
	3		
	4		
	5		

DESIGNED BY:	BCB
PROJECT ENG.:	PRM
PROJECT NO.:	100266J
DRAWN BY:	BCB
CHECKED BY:	PRM
DATE ISSUED:	05/18/20

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

HILTON HEAD ISLAND AIRPORT

INTERMEDIATE & FINAL EROSION CONTROL PLAN

COMMERCIAL APRON EXPANSION

SCALE: 1" = 40'

FILE NAME: 1906-GEOM

SHT. 470

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
WARD EDWARDS, INC. No. C00152

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 22816
05/18/20
PAUL R. MOORE

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

PERMANENT SEEDING – COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET BAHIAGRASS	10 LBS/AC 40 LBS/AC												
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 LBS/AC 30 LBS/AC 40 LBS/AC												
BROWNTOP MILLET ATLANTIC COASTAL PANICGRASS	10 LBS/AC 15 LBS/AC PLS												
BROWNTOP MILLET SWITCHGRASS (ALAMO) LITTLE BLUESTEM SERICEA LESPEDEZA	10 LBS/AC 8 LBS/AC PLS 4 LBS/AC 20 LBS/AC												
BROWNTOP MILLET WEEPING LOVEGRASS	10 LBS/AC 8 LBS/AC												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET BAHIAGRASS	10 LBS/AC 40 LBS/AC												
RYE, GRAIN BAHIAGRASS CLOVER, CRIMSON (ANNUAL)	10 LBS/AC 40 LBS/AC 5 LBS/AC												
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 LBS/AC 30 LBS/AC 40 LBS/AC												
BROWNTOP MILLET BERMUDA, COMMON SERICEA LESPEDEZA	10 LBS/AC 10 LBS/AC 40 LBS/AC												
BROWNTOP MILLET BERMUDA, COMMON KOBE LESPEDEZA (ANNUAL)	10 LBS/AC 12 LBS/AC 10 LBS/AC												
BROWNTOP MILLET BAHIAGRASS BERMUDA, COMMON SERICEA LESPEDEZA	10 LBS/AC 20 LBS/AC 6 LBS/AC 40 LBS/AC												
BROWNTOP MILLET SWITCHGRASS LITTLE BLUESTEM INDIANGRASS	10 LBS/AC 8 LBS/AC PLS 3 LBS/AC PLS 3 LBS/AC PLS												

TEMPORARY SEEDING – COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40 LBS/AC												
RYE, GRAIN	56 LBS/AC												
RYEGRASS	50 LBS/AC												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET OR JAPANESE MILLET	40 LBS/AC												
RYE, GRAIN OR OATS	56 LBS/AC 75 LBS/AC												
RYEGRASS	50 LBS/AC												

NOT FOR CONSTRUCTION

	DATE
REVISIONS	
1 ADDENDUM NO. 1	05/18/2020
2	
3	
4	
5	

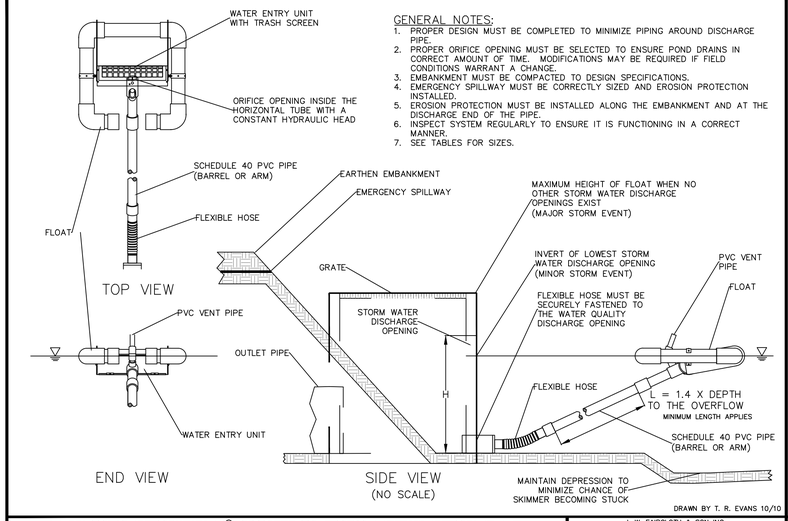
DESIGNED BY: BCB
PROJECT ENG.: PRM
PROJECT NO.: 100266J
DRAWN BY: BCB
CHECKED BY: PRM
DATE ISSUED: 05/18/20

HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

HILTON HEAD ISLAND AIRPORT

PS PERMANENT SEEDING - COASTAL
DETAIL 02370-010

TS TEMPORARY SEEDING - COASTAL
DETAIL 02370-011

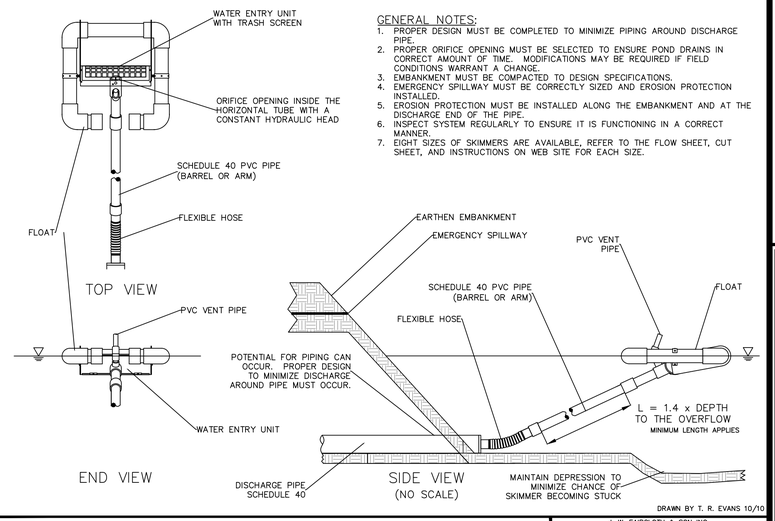


GENERAL NOTES:
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. SEE TABLES FOR SIZES.

DRAWN BY T. R. EVANS 10/10

FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (919) 732-1244
FAX: (919) 732-1266
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM



GENERAL NOTES:
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

DRAWN BY T. R. EVANS 10/10

FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH EMBANKMENT

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
TELEPHONE: (919) 732-1244
FAX: (919) 732-1266
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

INTERMEDIATE & FINAL EROSION CONTROL DETAILS

COMMERCIAL APRON EXPANSION

SCALE: AS SHOWN

FILE NAME: 1906-GEOM

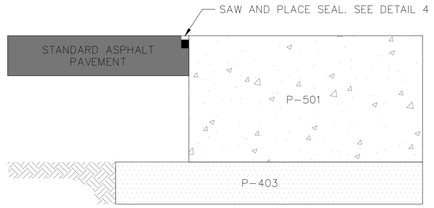
SHT.
471

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

SOUTH CAROLINA
WARD EDWARDS, INC.
No. C00152
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 22816
05/18/20
PAUL R. MOORE

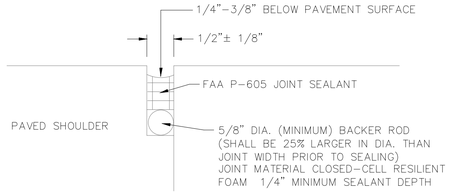
TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com



STANDARD ASPHALT JOINT DETAIL (TYPE S)

NOT TO SCALE

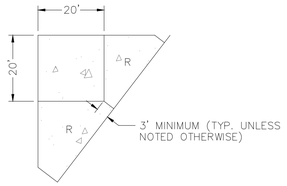
NOTE: ALL SILICONE SEALANT SHALL BE DOW CORNING PRODUCT NO.890SL OR EQUAL.



DETAIL 4 AT ASPHALT JOINTS

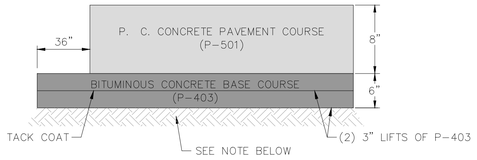
NOT TO SCALE

NOTE: ALL SILICONE SEALANT SHALL BE DOW CORNING PRODUCT NO.890SL OR EQUAL.



EDGE DETAIL (TYPICAL)

NOT TO SCALE

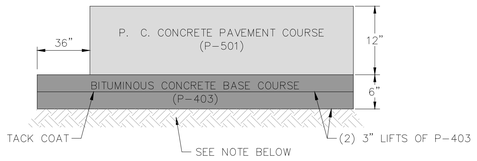


8" P.C. CONCRETE PAVEMENT SECTION

NOT TO SCALE

NOTES:

1. PREPARED SUBGRADE (P-152) COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.

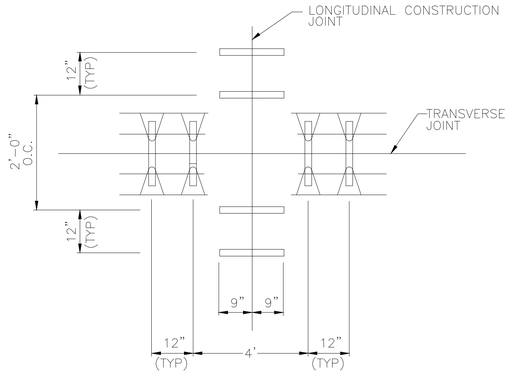


12" P.C. CONCRETE PAVEMENT SECTION

NOT TO SCALE

NOTES:

1. PREPARED SUBGRADE (P-152) COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.

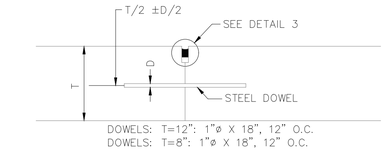


TYPICAL DOWEL BAR SPACING AT JOINT INTERSECTION

NOT TO SCALE

NOTE: DOWEL BAR SPACING ALONG LONGITUDINAL CONSTRUCTION JOINT IS ESTABLISHED BETWEEN INTERSECTING TRANSVERSE JOINTS USING DIMENSIONS IN THIS DETAIL.

1



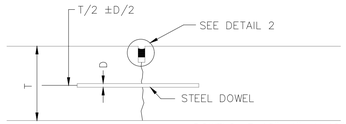
DOWELS: T=12": 1"ø X 18", 12" O.C.
DOWELS: T=8": 1"ø X 18", 12" O.C.

DOWELED CONSTRUCTION JOINT (TYPE E)

NOT TO SCALE

NOTES:

1. WHERE NEW PAVEMENT ADJOINS EXISTING PAVEMENT, SAW CUT EXISTING PAVEMENT FULL DEPTH TO A NEAT, UNIFORM EDGE PRIOR TO PAVING.
2. DRILL HOLES INTO EXISTING PAVEMENT AND THOROUGHLY CLEAN, FILL WITH EPOXY RESIN TO SET DOWEL.
3. GREASE ENTIRE DOWEL IN NEW PAVEMENTS.

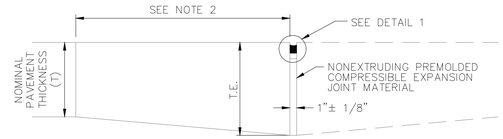


DOWELS: T=12": 1"ø X 18", 12" O.C.
DOWELS: T=8": 1"ø X 18", 12" O.C.

DOWELED CONTRACTION JOINT (TYPE C)

NOT TO SCALE

NOTE: 1. GREASE ENTIRE DOWEL IN NEW PAVEMENTS.



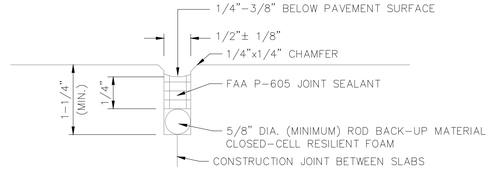
T = 12", T.E. = 15"
T = 8", T.E. = 15"

THICKENED EDGE ISOLATION JOINT (TYPE A)

NOT TO SCALE

NOTES:

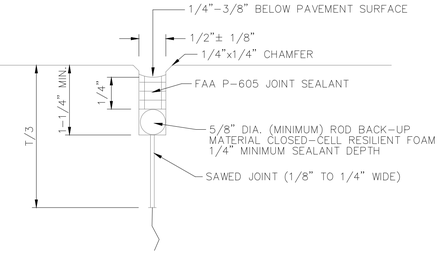
1. COST OF ADDITIONAL CONCRETE AT THICKENED EDGE TO BE INCLUDED IN COST OF 12" P.C. CONCRETE PAVEMENT AND 8" P.C. CONCRETE PAVEMENT.
2. 15' NORMAL (10' MIN.) TO NEAREST JOINT FOR 12" P.C.C.



DETAIL 3

NOT TO SCALE

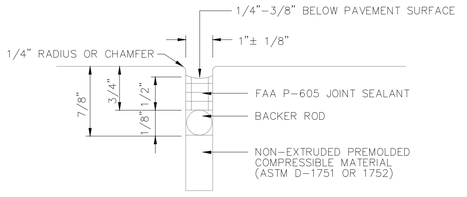
NOTE: ALL SILICONE SEALANT SHALL BE DOW CORNING PRODUCT NO.890SL OR NO.888



DETAIL 2

NOT TO SCALE

NOTE: ALL SILICONE SEALANT SHALL BE DOW CORNING PRODUCT NO.890SL OR NO.888



DETAIL 1

NOT TO SCALE

NOTE: ALL SILICONE SEALANT SHALL BE DOW CORNING PRODUCT NO.890SL OR NO.888

	DATE
REVISIONS	
1 ADDENDUM NUMBER ONE (1)	05-18-2020
2	
3	
4	
5	

DESIGNED BY: CEV
PROJECT ENG.: JAS
PROJECT NO.: 2119-1906
DRAWN BY: JPB
CHECKED BY: PET
DATE ISSUED: MAY 2020

HILTON HEAD ISLAND AIRPORT

"Fly to the Fun"

HILTON HEAD ISLAND AIRPORT

PAVEMENT DETAILS (SHEET 1 OF 2)

COMMERCIAL APRON EXPANSION

SCALE: N.T.S.

FILE NAME: 1906-PAVEDET

SHT. 600

SOUTH CAROLINA — TALBERT, BRIGHT & ELLINGTON COA-4350 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED LANDSCAPE ARCHITECT — No. 22297 — 5/4/20 — ANDREW SHOOK

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

STRIP DRAIN NOTES:

1. IT IS ANTICIPATED THAT ALL PROPOSED ELECTRICAL WORK WILL BE PERFORMED AFTER INSTALLATION OF THE PROPOSED STRIP DRAINS. HOWEVER, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING CABLE RUNS PRIOR TO BEGINNING STRIP DRAIN INSTALLATION WORK. WHERE CROSSINGS ARE REQUIRED, THE CONTRACTOR SHALL HAND DIG IN THE VICINITY OF THE CABLING/CONDUIT. ANY CABLING AND/OR CONDUIT COMPROMISED BY THE ACTIVITIES OF THE CONTRACTOR SHALL BE IMMEDIATELY REPAIRED OR REPLACED, AS NECESSARY, BY A QUALIFIED ELECTRICIAN AT NO ADDITIONAL COST TO THE OWNER.
2. THE CONTRACTOR SHALL BE REQUIRED TO USE ONLY POROUS SAND FOR STRIP DRAIN BACKFILL AND SHOULD PLAN AHEAD BY ACCOUNTING FOR THE HAULING DISTANCES NECESSARY TO OBTAIN THE REQUIRED QUANTITY OF MATERIAL OR BY STOCKPILING THE MATERIAL IN ADVANCE.
3. STRIP DRAIN OUTLETS SHALL BE CONSTRUCTED COINCIDENTAL WITH THE LONGITUDINAL PAVEMENT EDGE STRIP DRAINS TO PREVENT WATER BEING TRAPPED IN THE SYSTEM.
4. NO SEPARATE PAYMENT WILL BE MADE FOR ANY PIPE COLLARS, BENDS, TEES, TRENCHING, POROUS BACKFILL, NON-POROUS BACKFILL, FILTER FABRIC, CONCRETE CRADLES, CONCRETE COLLARS, SEALANT, GROUT AND STRIP DRAIN CONNECTIONS, BUT ALL COSTS THEREOF WILL BE CONSIDERED INCIDENTAL TO, AND INCLUDED IN, THE PRICES BID FOR THE STRIP DRAIN AND STRIP DRAIN PAY ITEMS.
5. THE CONTRACTOR SHALL PROVIDE AND INSTALL FITTINGS, AS REQUIRED, FOR HORIZONTAL BENDS, 'Y's, TEES AND CROSSINGS. ALL FITTINGS SHALL BE INCIDENTAL TO, AND INCLUDED IN, THE PRICES BID FOR THE STRIP DRAIN AND STRIP DRAIN COLLECTOR PIPE PAY ITEMS.
6. EXCEPT WHERE SPECIFICALLY IDENTIFIED OTHERWISE, CLEANOUTS SHALL BE LOCATED 5 FEET FROM THE PAVEMENT EDGE, DIRECTLY ABOVE THE COLLECTOR PIPES. THE DIRECTION OF EACH CLEANOUT SHALL BE TOWARD THE DRAINAGE STRUCTURE TIE-IN.
7. COLLECTOR PIPE CONNECTIONS TO STORM DRAINAGE STRUCTURES SHALL BE MADE BY CORING INTO STRUCTURE, INSTALLING COLLECTOR PIPE INTO STRUCTURE AND GROUTING OPENING WITH NON-SHRINK GROUT. ALL COSTS THEREOF WILL BE CONSIDERED INCIDENTAL TO, AND INCLUDED IN, THE PRICES BID FOR COLLECTOR PIPES PAY ITEMS.
8. SEE SHEET 701 FOR STRIP DRAIN AND COLLECTOR PIPE DETAILS.

LEGEND

PROPOSED BITUMINOUS PAVEMENT	PROPOSED DRAINAGE PIPE
11 EXISTING INTERMEDIATE CONTOUR	PROPOSED PAVEMENT EDGE STRIP DRAIN
15 EXISTING INDEX CONTOUR	1.50% PROPOSED 4" STRIP DRAIN COLLECTOR PIPE
13.5 PROPOSED INTERMEDIATE CONTOUR	⊗C.O. PROPOSED COLLECTOR PIPE CLEANOUT
10.0 PROPOSED INDEX CONTOUR	11.24 PROPOSED STRIP DRAIN INVERT
EXISTING DRAINAGE PIPE	

40' 20' 0 40' 80' 120'
SCALE IN FEET
1"=40'

SOUTH CAROLINA TALBERT, BRIGHT & ELLINGTON COA-4350 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22297 5/4/20 J. ANDREW SHOOK

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9200 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com

REVISIONS		DATE
1	ADDENDUM NUMBER ONE (1)	05-18-2020
2		
3		
4		
5		

DESIGNED BY:	CEV
PROJECT ENG.:	JAS
PROJECT NO.:	2119-1906
DRAWN BY:	JPB
CHECKED BY:	PET
DATE ISSUED:	APRIL 2020

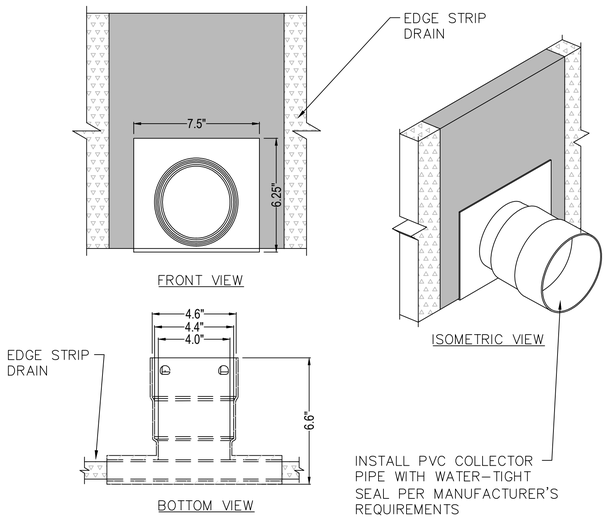
HILTON HEAD ISLAND AIRPORT
"Fly to the Fun"

HILTON HEAD ISLAND AIRPORT

SUBGRADE AND PAVEMENT EDGE STRIP DRAIN AND COLLECTOR PIPE PLAN
COMMERCIAL APRON EXPANSION

FILE NAME: 1906-BASE-EDGE DRAINS-ADD 1 | SCALE: 1"=40'

SHT.
700

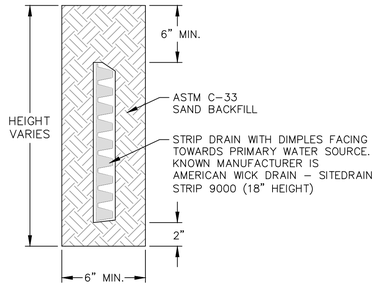


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. KNOWN MANUFACTURER IS AMERICAN WICK DRAIN. NO SEPARATE PAY ITEM – INCIDENTAL TO THE PROJECT.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 434–113.

UNIVERSAL TEE OUTLET COUPLING

NOT TO SCALE

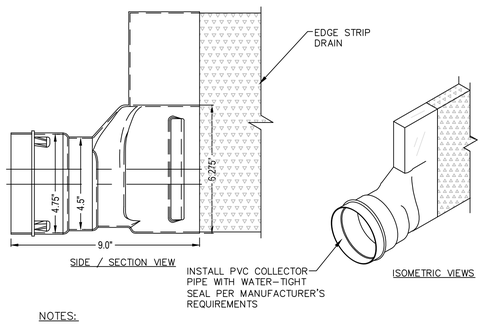


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT WWW.CADDETAILS.COM/INFO REFERENCE NUMBER 434–112.

PAVEMENT EDGE STRIP DRAIN DETAIL

NOT TO SCALE

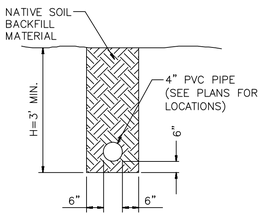


NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. KNOWN MANUFACTURER IS AMERICAN WICK DRAIN. NO SEPARATE PAY ITEM – INCIDENTAL TO THE PROJECT.
2. DO NOT SCALE DRAWINGS.
3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 434–114.

UNIVERSAL END OUTLET

NOT TO SCALE

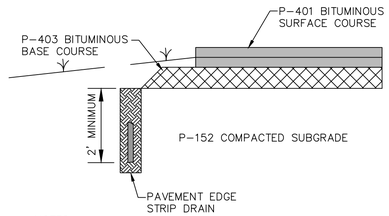


NOTES FOR STRIPDRAIN COLLECTOR PIPES

1. SEE PLANS FOR LOCATIONS OF 4" DIAMETER PVC STRIPDRAIN COLLECTOR PIPES.
2. ALL STRIPDRAIN COLLECTOR PIPE AND FITTINGS SHALL BE SCHEDULE 80 PVC.
3. STRIPDRAIN OUTLETS SHALL BE CONSTRUCTED COINCIDENTAL WITH THE LONGITUDINAL STRIPDRAINS TO PREVENT WATER BEING TRAPPED IN THE SYSTEM.
4. NO SEPARATE PAYMENT WILL BE MADE FOR ANY PIPE COLLARS, TRENCHING, NON–POUROUS BACKFILL, CONCRETE CRADLES, CONCRETE COLLARS, SEALANT, GROUT, AND STRIPDRAIN CONNECTIONS, BUT ALL COSTS THEREOF WILL BE CONSIDERED INCIDENTAL TO, AND INCLUDED IN, THE PRICES BID FOR THE STRIPDRAIN COLLECTOR PIPE ITEM OF WORK.

STRIPDRAIN COLLECTOR PIPE TRENCH

NOT TO SCALE

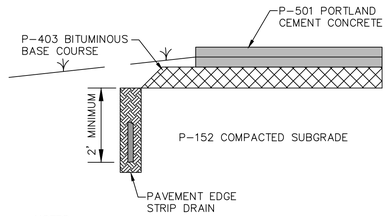


NOTES:

1. EDGE STRIP DRAIN TO BE INSTALLED AFTER TO PLACEMENT OF P–403 BASE AND AFTER GRADING OF SUBGRADE.
2. SEE PAVEMENT EDGE STRIP DRAIN DETAIL ABOVE.

BITUMINOUS PAVEMENT EDGE DETAIL

NOT TO SCALE

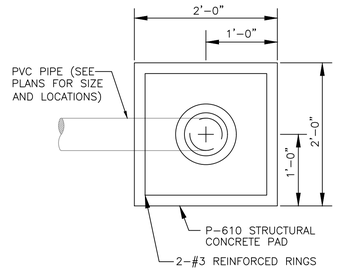


NOTES:

1. EDGE STRIP DRAIN TO BE INSTALLED AFTER TO PLACEMENT OF P–403 BASE AND AFTER GRADING OF SUBGRADE.
2. SEE PAVEMENT EDGE STRIP DRAIN DETAIL ABOVE.

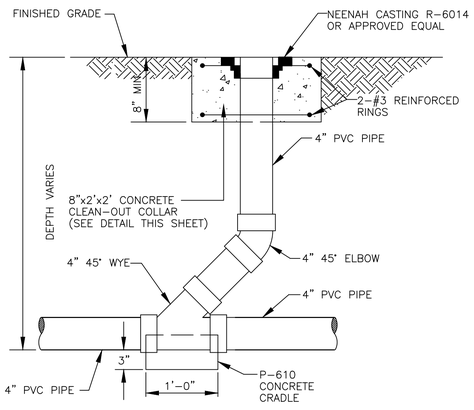
CONCRETE PAVEMENT EDGE DETAIL

NOT TO SCALE



TYPICAL PLAN VIEW UNDERDRAIN CLEANOUT COLLAR

NOT TO SCALE



NOTES FOR STRIPDRAIN CLEANOUT DETAIL

1. ALL GROUND AREA DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITION BY CONTRACTOR.
2. THE WORDS "STRIPDRAIN C.O." SHALL BE WELDED IN 1" LETTERS ONTO THE PLATE BY THE CONTRACTOR. AFTER WELDING, PLATE SHALL BE HOT–DIPPED GALVANIZED.
3. NO SEPARATE PAYMENT WILL BE MADE FOR ANY FITTINGS SUCH AS CLEANOUT RISERS, CAPS, SCREENS, TEES, WYES, ELBOWS, BENDS, CONCRETE CRADLES, CONCRETE SEALANT, GROUT AND STEEL COVERS, BUT ALL COSTS THEREOF WILL BE CONSIDERED INCIDENTAL TO, AND INCLUDED IN, THE PRICES BID FOR THE STRIPDRAIN CLEANOUT ITEM OF WORK.

STRIPDRAIN COLLECTOR PIPE CLEANOUT DETAIL

NOT TO SCALE

	REVISIONS	DATE
1	ADDENDUM NUMBER ONE (1)	05–18–2020
2		
3		
4		
5		

DESIGNED BY:	CEV
PROJECT ENG.:	JAS
PROJECT NO.:	2119–1906
DRAWN BY:	JPB
CHECKED BY:	PET
DATE ISSUED:	APRIL 2020

HILTON HEAD ISLAND AIRPORT

"Fly to the Fun"

SUBGRADE AND PAVEMENT EDGE STRIP DRAIN AND COLLECTOR PIPE DETAILS

COMMERCIAL APRON EXPANSION

FILE NAME: 1906–EDGE DRAIN DETAILS–ADD 1 | SCALE: AS SHOWN

SHT. 701

SOUTH CAROLINA CERTIFICATE OF AUTHORITY TALBERT, BRIGHT & ELLINGTON COA–4350

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 22297 5/4/20 ANDREW SHOOK

TALBERT, BRIGHT & ELLINGTON
ENGINEERING & PLANNING CONSULTANTS
2000 PARK STREET, SUITE 101
COLUMBIA, SC 29201
PHONE: 803-933-9290 FAX: 803-933-9205
SC COA 4350
www.talbertandbright.com